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(Starting with Section 33-24-05-403 through Appendix VIII)	



### 33-24-05-403. Standards - Closed-vent systems and control devices.

#### 1. Requirements for owners or operators of closed-vent systems and control devices.

a. Owners or operators of closed-vent systems and control devices used to comply with provisions of sections 33-24-05-400 through 33-24-05-449 shall comply with the provisions of this section.

b. ~~The owner or operator of an existing facility who cannot install a closed-vent system and control device to comply with the provisions of sections 33-24-05-400 through 33-24-05-449 on the effective date that the facility becomes subject to the provisions of sections 33-24-05-400 through 33-24-05-449 must prepare an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The controls must be installed as soon as possible, but the implementation schedule may allow up to thirty months after the effective date that the facility becomes subject to sections 33-24-05-400 through 33-24-05-429 for installation and start-up. All units that began operation after December 21, 1990, must comply with the rules immediately (for example, must have control devices installed and operating on start-up of the effective unit); the two-year implementation schedule does not apply to these units. For:~~

(1) The owner or operator of an existing facility who cannot install a closed-vent system and control device to comply with the provisions of sections 33-24-05-400 through 33-24-05-419 on the effective date that the facility becomes subject to the provisions of sections 33-24-05-400 through 33-24-05-419 must prepare an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The controls must be installed as soon as possible, but the implementation schedule may allow up to thirty months after the effective date that the facility becomes subject to sections 33-24-05-400 through 33-24-05-419 for installation and start-up.

(2) Any unit that begins operation after December 21, 1990, and is subject to the provisions of sections 33-24-05-400 through 33-24-05-419 when operation begins, must comply with the rules immediately (for example, must have control devices installed and operating on start-up of the affected unit); the thirty-month implementation schedule does not apply.

(3) The owner or operator of any facility in existence on the effective date of a statutory or regulatory amendment that renders the facility subject to sections 33-24-05-400 through 33-24-05-419 shall comply with all requirements of sections 33-24-05-400 through 33-24-05-419 as soon as practicable



but no later than thirty months after the amendment's effective date. When control equipment required by sections 33-24-05-400 through 33-24-05-419 cannot be installed and begin operation by the effective date of the amendment, the facility owner or operator shall prepare an implementation schedule that includes the following information: specific calendar dates for award of contracts or issuance of purchase orders for the control equipment, initiation of onsite installation of the control equipment, completion of the control equipment installation, and performance of any testing to demonstrate that the installed equipment meets the applicable standards of sections 33-24-05-400 through 33-24-05-419. The owner or operator shall enter the implementation schedule in the operating record or in a permanent, readily available file located at the facility.

- (4) Owners and operators of facilities and units that become newly subject to the requirements of sections 33-24-05-400 through 33-24-05-419 after December 8, 1997, due to an action other than those described in paragraph 3 must comply with all applicable requirements immediately (for example, must have control devices installed and operating on the date the facility or unit becomes subject to sections 33-24-05-400 through 33-24-05-419; the thirty-month implementation schedule does not apply).
2. A control device involving vapor recovery (for example, a condenser or absorber) must be designed and operated to recover the organic vapors vented to it with an efficiency of ninety-five weight percent or greater unless the total organic emission limits of subdivision a of subsection 1 of section 33-24-05-402 for all affected process vents can be attained at an efficiency less than ninety-five weight percent.
3. An enclosed combustion device (for example, a vapor incinerator, boiler, or process heater) must be designed and operated to reduce the organic emissions vented to it by ninety-five weight percent or greater; to achieve a total organic compound concentration of twenty parts per million volume, expressed as the sum of the actual compounds, not carbon equivalents, on a dry basis corrected to three percent oxygen; or to provide a minimum residence time of fifty hundredths seconds at a minimum temperature of seven hundred sixty degrees Centigrade Celsius. If a boiler or process heater is used as the control device, then the vent stream must be introduced into the flame zone of the boiler or process heater.
4. Flares.

  - a. A flare must be designed for and operated with no visible emissions as determined by the methods specified in subdivision a



of subsection 5, except for periods not to exceed a total of five minutes during any two consecutive hours.

- b. A flare must be operated with a flame present at all times, as determined by the methods specified in paragraph 3 of subdivision b of subsection 6.
- c. A flare must be used only if the net heating value of the gas being combusted is eleven and two-tenths mega joules per standard cubic meter at standard conditions (three hundred British thermal units per standard cubic foot at standard conditions) or greater if the flare is steam-assisted or air-assisted; or if the net heating value of the gas being combusted is seven and forty-five hundredths mega joules per cubic meter at standard conditions (two hundred British thermal units per standard cubic foot at standard conditions) or greater if the flare is nonassisted. The net heating value of the gas being combusted must be determined by the methods specified in subdivision b of subsection 5.
- d. Steam-assisted or nonassisted flare.
  - (1) A steam-assisted or nonassisted flare must be designed for and operated with an exit velocity, as determined by the methods specified in subdivision c of subsection 5, less than eighteen and three-tenths meters per second [sixty feet per second], except as provided in paragraphs 2 and 3 of ~~subdivision d of subsection 4~~.
  - (2) A steam-assisted or nonassisted flare designed for and operated with an exit velocity, as determined by the methods specified in subdivision c of subsection 5, equal to or greater than eighteen and three-tenths meters per second [sixty feet per second] but less than one hundred twenty-two meters per second [four hundred feet per second] is allowed if the net heating value of the gas being combusted is greater than thirty-seven and three-tenths mega joules per standard cubic meter at standard conditions [one thousand British thermal units per standard cubic foot at standard conditions].
  - (3) A steam-assisted or nonassisted flare designed for and operated with an exit velocity, as determined by the methods specified in subdivision c of subsection 5, less than the velocity  $V_{\max}$  as determined by the method specified in subdivision d of subsection 5 and less than one hundred twenty-two meters per second [four hundred feet per second] is allowed.

- e. An air-assisted flare must be designed and operated with an exit velocity less than the velocity,  $V_{\max}$  as determined by the method specified in subdivision e of subsection 5.
  - f. A flare used to comply with this section must be steam-assisted, air-assisted, or nonassisted.
5. Methods.
- a. Referenced method 22 in 40 CFR part 60 must be used to determine the compliance of a flare with the visible emissions provisions of sections 33-24-05-400 through 33-24-05-429. The observation period is two hours and must be used according to method 22.
  - b. The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \left[ \sum_{i=1}^n C_i H_i \right]$$

where:

$H_T$  = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to 1 mol is 20 °C;

$K$  = Constant,  $1.74 \times 10^{-7}$  (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 (incorporated by reference as specified in section 33-24-01-05); and

$H_i$  = Net heat of combustion of sample component  $i$ , kcal/g mol at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D 2382-83 (incorporated by reference as specified in section 33-24-01-05) if published values are not available or cannot be calculated.



- c. The actual exit velocity of a flare must be determined by dividing the volumetric flow rate (in units of standard temperature and pressure), as determined by reference methods 2, 2a, 2c, or 2d in 40 CFR part 60 as appropriate, by the unobstructed (free) cross-sectional area of the flare tip.
- d. The maximum allowed velocity in meters per second  $V_{\max}$  for a flare complying with paragraph 3 of subdivision d of subsection 4 must be determined by the following equation:

$$\log_{10} (V_{\max}) = (H_T + 28.8) / 31.7$$

where:

28.8 = constant,

31.7 = constant, and

$H_T$  = the net heating value as determined in subdivision b of ~~subsection 5~~.

- e. The maximum allowed velocity in meters per second  $V_{\max}$  for an air-assisted flare must be determined by the following equation:

$$V_{\max} = 8.706 + 0.7084 (H_T)$$

where:

8.706 = constant,

0.7084 = constant, and

$H_T$  = the net heating value as determined in subdivision b of ~~subsection 5~~.

- 6. The owner or operator shall monitor and inspect each control device required to comply with this section to ensure proper operation and maintenance of the control device by implementing the following requirements:
  - a. Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow indicator that provides a record of vent stream flow from each affected process vent to the control device at least once every hour. The flow indicator sensor must be installed in the vent stream at the nearest feasible point to the control device inlet but before the point at which the vent streams are combined.

- b. Install, calibrate, maintain, and operate according to the manufacturer's specifications a device to continuously monitor control device operation as specified below:
- (1) For a thermal vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device must have an accuracy of plus or minus one percent of the temperature being monitored in ~~Gentigrade~~ Celsius or plus or minus five-tenths degrees ~~Gentigrade~~ 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 ~~Gentigrade~~ Celsius or plus or minus five-tenths degrees ~~Gentigrade~~ Celsius, whichever is greater. One temperature sensor must be installed in the vent stream at the nearest feasible point to the catalyst bed inlet and a second temperature sensor must be installed in the vent stream at the nearest feasible point to the catalyst bed outlet.
  - (3) For a flare, a heat sensing monitoring device equipped with a continuous recorder that indicates the continuous ignition of the pilot flame.
  - (4) A boiler or process heater having a design heat input capacity less than forty-four megawatts a temperature monitoring device equipped with a continuous recorder. The device must have an accuracy of plus or minus one percent of the temperature being monitored in degrees ~~Gentigrade~~ Celsius or plus or minus five-tenths degrees ~~Gentigrade~~ Celsius, whichever is greater. The temperature sensor must be installed at a location in the furnace downstream of the combustion zone.
  - (5) For a boiler or process heater having a design heat input capacity greater than or equal to forty-four megawatts a monitoring device equipped with a continuous recorder to measure a parameter that indicates good combustion operating practices are being used.
  - (6) For a condenser, either:
    - (a) A monitoring device equipped with a continuous recorder to measure the concentration level of the



organic compounds, the exhaust vent stream from the condenser; or

- (b) A temperature monitoring device equipped with a continuous recorder. The device must be capable of monitoring temperature with an accuracy of plus or minus one percent of the temperature being monitored in degrees Celsius or plus or minus five-tenths degrees Celsius, whichever is greater. The temperature sensor shall be installed at a location in the exhaust vent stream from the condenser exit (for example, product side).

- (7) For a carbon adsorption system that regenerates the carbon bed directly in the control device such as a fixed-bed carbon adsorber either:

- (a) A monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds in the exhaust vent stream from the carbon bed; or

- (b) A monitoring device equipped with a continuous recorder to measure a parameter that indicates the carbon bed is regenerated in a regular predetermined time cycle.

- c. Inspect the readings from each monitoring device required by subdivisions a and b at least once each operating day to check control device operation and, if necessary, immediately implement the corrective measures necessary to ensure the control device operates in compliance with the requirements of this section.

- 7. An owner or operator using a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly onsite in the control device shall replace the existing carbon in the control device with fresh carbon at a regular predetermined time interval that is no longer than the carbon service life established as a requirement of subparagraph f of paragraph 3 of subdivision d of subsection 2 of section 33-24-05-405.

- 8. An owner or operator using a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly onsite in the control device shall replace the existing carbon in the control device with fresh carbon on a regular basis by using one of the following procedures:

- a. Monitor the concentration level of organic compounds in the exhaust vent stream from the carbon adsorption system on a

regular schedule, and replace the existing carbon with fresh carbon immediately when carbon breakthrough is indicated. The monitoring frequency must be daily or at an interval no greater than twenty percent of the time required to consume the total carbon working capacity established as a requirement of subparagraph g of paragraph 3 of subdivision d of subsection 2 of section 33-24-05-405, whichever is longer.

- b. Replace the existing carbon with fresh carbon at a regular, predetermined time interval that is less than the design carbon replacement interval established as a requirement of subparagraph g of paragraph 3 of subdivision d of subsection 2 of section 33-24-05-405.
9. An alternative operational or process parameter may be monitored if it can be demonstrated that another parameter will ensure that the control device is operated in conformance with these standards and the control ~~devices~~ device's design specifications.
10. An owner or operator of an affected facility seeking to comply with the provisions of sections 33-24-05-400 through 33-24-05-449 by using a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system is required to develop documentation, including sufficient information to describe the control device operation and identify the process parameter or parameters that indicate proper operation and maintenance of the control device.
11. A closed-vent system shall meet either of the following design requirements:
  - a. A closed-vent system shall be designed to operate with no detectable emissions, as indicated by an instrument reading of less than five hundred parts per million volume above background as determined by the procedure in subsection 2 of section 33-24-05-404, and by visual inspections; or
  - b. A closed-vent system shall be designed to operate at a pressure below atmospheric pressure. The system shall be equipped with at least one pressure gauge or other pressure measurement device that can be read from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the control device is operating.
  - c. Detectable emissions, as indicated by an instrument reading greater than five hundred parts per million and visual inspections, must be controlled as soon as practicable, but not later than fifteen calendar days after the emission is detected.



- d. A first attempt at repair must be made no later than five calendar days after the emission is detected.
12. The owner or operator shall monitor and inspect each closed-vent system required to comply with section 33-24-05-403 to ensure proper operation and maintenance of the closed-vent system by implementing the following requirements:
- a. Each closed-vent system that is used to comply with subdivision a of subsection 11 shall be inspected and monitored in accordance with the following requirements:
    - (1) An initial leak detection monitoring of the closed-vent system shall be conducted by the owner or operator on or before the date that the system becomes subject to this section. The owner or operator shall monitor the closed-vent system components and connections using the procedures specified in subsection 2 of section 33-24-05-404 to demonstrate that the closed-vent system operates with no detectable emissions, as indicated by an instrument reading of less than five hundred parts per million volume above background.
    - (2) After initial leak detection monitoring required in paragraph 1, the owner or operator shall inspect and monitor the closed-vent system as follows:
      - (a) Closed-vent system joints, seams, or other connections that are permanently or semipermanently sealed (for example, a welded joint between two sections of hard piping or a bolted and gasketed ducting flange) shall be visually inspected at least once per year to check for defects that could result in air pollutant emissions. The owner or operator shall monitor a component or connection using the procedures specified in subsection 2 of section 33-24-05-404 to demonstrate that it operates with no detectable emissions following any time the component is repaired or replaced (for example, a section of damaged hard piping is replaced with new hard piping) or the connection is unsealed (for example, a flange is unbolted).
      - (b) Closed-vent system components or connections other than those specified in subparagraph a shall be monitored annually and at other times as requested by the department, except as provided for in subsection 15, using the procedures specified in subsection 2 of section 33-24-05-404 to demonstrate that the components or connections operate with no detectable emissions.

- (3) In the event that a defect or leak is detected, the owner or operator shall repair the defect or leak in accordance with the requirements of subdivision c.
  - (4) The owner or operator shall maintain a record of the inspection and monitoring in accordance with the requirements specified in section 33-24-05-405.
- b. Each closed-vent system that is used to comply with subdivision b of subsection 11 shall be inspected and monitored in accordance with the following requirements:
  - (1) The closed-vent system shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in duct work or piping or loose connections.
  - (2) The owner or operator shall perform an initial inspection of the closed-vent system on or before the date that the system becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year.
  - (3) In the event that a defect or leak is detected, the owner or operator shall repair the defect in accordance with the requirements of subdivision c.
  - (4) The owner or operator shall maintain a record of the inspection and monitoring in accordance with the requirements specified in section 33-24-05-405.
- c. The owner or operator shall repair all detected defects as follows:
  - (1) Detectable emissions, as indicated by visual inspection, or by an instrument reading greater than five hundred parts per million volume above background, shall be controlled as soon as practicable, but not later than fifteen calendar days after the emission is detected, except as provided for in paragraph 3.
  - (2) A first attempt at repair shall be made no later than five calendar days after the emission is detected.
  - (3) Delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown, or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result



from delay of repair. Repair of such equipment shall be completed by the end of the next process unit shutdown.

- (4) The owner or operator shall maintain a record of the defect repair in accordance with the requirements specified in section 33-24-05-405.
- 13. Closed-vent systems and control devices used to comply with provisions of sections 33-24-05-400 through ~~33-24-05-429~~ 33-24-05-419 must be operated at all times when emissions may be vented to them.
- 14. The owner or operator using a carbon adsorption system to control air pollutant emissions shall document that all carbon that is a hazardous waste and that is removed from the control device is managed in one of the following manners, regardless of the average volatile organic concentration of the carbon:
  - a. Regenerated or reactivated in a thermal treatment unit that meets one of the following:
    - (1) The owner or operator of the unit has been issued a final permit under chapter 33-24-06 which implements the requirements of sections 33-24-05-300 through 33-24-05-303; or
    - (2) The unit is equipped with ~~and~~ operating air emission controls in accordance with the applicable requirements of sections 33-24-05-400 through 33-24-05-419 and sections 33-24-05-450 through 33-24-05-474 or the applicable requirements of subsection 5 of section 33-24-06-16; or
    - (3) The unit is equipped with ~~an~~ operating air emission controls in accordance with a national emission standard for hazardous air pollutants under 40 CFR part 61 or 40 CFR part 63.
  - b. Incinerated in a hazardous waste incinerator for which the owner or operator either:
    - (1) Has been issued a final permit under chapter 33-24-06 which implements the requirements of sections 33-24-05-144 through 33-24-05-159; or
    - (2) Has designed and operates the incinerator in accordance with the applicable interim status requirements of subsection 5 of section 33-24-06-16.
  - c. Burned in a boiler or industrial furnace for which the owner or operator either:

- (1) Has been issued a final permit under chapter 33-24-06 which implements the requirements of sections 33-24-05-525 through 33-24-05-549; or
  - (2) Has designed and operates the boiler or industrial furnace in accordance with the interim status requirements of ~~subsection 5 of section 33-24-06-16~~ sections 33-24-05-525 through 33-24-05-549.
15. Any components of a closed-vent system that are designated, as described in subdivision i of subsection 3 of section 33-24-05-405, as unsafe to monitor are exempt from the requirements of subparagraph b of paragraph 2 of subdivision a of subsection 12 if:
  - a. The owner or operator of the closed-vent system determines that the components of the closed-vent system are unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with subparagraph b of paragraph 2 of subdivision a of subsection 12; and
  - b. The owner or operator of the closed-vent system adheres to a written plan that requires monitoring the closed-vent system components using the procedures specified in subparagraph b of paragraph 2 of subdivision a of subsection 12 as frequently as practicable during safe-to-monitor times.

**History:** Effective December 1, 1991; amended effective January 1, 1994; July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

#### **33-24-05-404. Test methods and procedures.**

1. Each owner or operator subject to the provisions of sections 33-24-05-400 through 33-24-05-429 shall comply with the test methods and procedures requirements provided in this section.
2. When a closed-vent system is tested for compliance with no detectable emissions, as required in subsection 12 of section 33-24-05-403, the test must comply with the following requirements:
  - a. Monitoring must comply with referenced method 21 in 40 CFR part 60.
  - b. The detection instrument must meet the performance criteria of reference method 21.
  - c. The instrument must be calibrated before use on each day of its use by the procedures specified in reference method 21.



- d. Calibration gases must be:
    - (1) Zero air (less than ten parts per million hydrocarbon in air).
    - (2) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, ten thousand parts per million methane or n-hexane.
  - e. The background level must be determined as set forth in reference method 21.
  - f. The instrument probe must be traversed around all potential leak interfaces as close to the interface as possible as described in reference method 21.
  - g. The arithmetic difference between the maximum concentration indicated by the instrument and background level is compared with five hundred parts per million for determining compliance.
3. Performance tests to determine compliance with subsection 1 of section 33-24-05-402 and with the total organic compound concentration limit of subsection 3 of section 33-24-05-403 must comply with the following:
    - a. Performance tests to determine total organic compound concentrations and mass flow rates entering and exiting control devices must be conducted and data reduced in accordance with the following reference methods and calibration procedures:
      - (1) Method 2 in 40 CFR part 60 for velocity and volume flow rate.
      - (2) Method 18 in 40 CFR part 60 for organic content.
      - (3) Each performance test must consist of three separate runs; each run conducted for at least one hour under the conditions that exist when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur. For the purpose of determining total organic compound concentrations and mass flow rates, the average of results of all runs apply. The average must be computed on a time-weighted basis.
      - (4) Total organic mass flow rates must be determined by the following equation:

$$E_h = Q_{std} \left[ \sum_{i=1}^n C_i MW_i \right] [0.0416] [10^{-6}]$$

where:

$E_h$  = Total organic mass flow rate, kg/h;

$Q_{sd}$  = 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<sup>3</sup> [ $@293\text{ K}$  and 760 mm Hg];

$10^{-6}$  = Conversion from ppm, ppm<sup>-1</sup>.

- (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 of subdivision a of subsection 3) and by summing the annual total organic mass emission rates ( $E_A$ , as determined in paragraph 5 of subdivision a of subsection 3) for all affected process vents at the facility.
- b. The owner or operator shall record such process information as may be necessary to determine the conditions of the performance test. Operations during periods of startup, shutdown, and malfunction do not constitute representative conditions for the purpose of a performance test.



- c. The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:
    - (1) Sampling ports adequate for the test methods specified in subdivision a of subsection 3.
    - (2) Safe sampling platforms.
    - (3) Safe access to sampling platforms.
    - (4) Utilities for sampling and testing equipment.
  - d. For the purpose of making compliance determinations, the time-weighted average of the results of the three runs applies. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of force shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the owner's or operator's control, compliance may, upon the department's approval, be determined using the average of the results of the two other runs.
4. To show that a process vent associated with a hazardous waste distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation is not subject to the requirements of sections 33-24-05-400 through 33-24-05-419, the owner or operator must make an initial determination that the time-weighted, annual average total organic concentration of the waste managed by the waste management unit is less than ten parts per million weight using one of the following two methods:
- a. Direct measurement of the organic concentration of the waste using the following procedures:
    - (1) The owner or operator must take a minimum of four grab samples of waste for each waste stream managed in the ~~effected~~ affected unit under process conditions expected to cause the maximum waste organic concentration.
    - (2) For waste generated onsite, the grab samples must be collected at a point before the waste is exposed to the atmosphere such as in an enclosed pipe or other closed system that is used to transfer the waste after generation to the first affected distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation. For waste generated offsite, the grab samples must be collected at the inlet to the first waste management unit that receives the waste provided the waste has been

transferred to the facility in a closed system such as a tank truck and the waste is not diluted or mixed with other waste.

- (3) Each sample must be analyzed and the total organic concentration of the sample must be computed using method 9060 or ~~8240~~ 8260 of environmental protection agency publication SW-846 (incorporated by reference under section 33-24-01-05).
  - (4) The arithmetic mean of the results of the analysis of the four samples applies for each waste stream managed in the unit in determining the time-weighted annual average total organic concentration of the waste. The time-weighted average is to be calculated using the annual quantity of each waste stream processed and the mean organic concentration of each waste stream managed in the unit.
- b. Using knowledge of the waste to determine that its total organic concentration is less than ten parts per million weight. Documentation of the waste determination is required. Examples of documentation that must be used to support a determination under this provision include production process information documenting that no organic compounds are used, information that the waste is generated by a process that is identical to a process at the same or another facility that has previously been demonstrated by direct measurement to generate a waste stream having a total organic content less than ten parts per million weight, or prior speciation analysis results on the same waste stream where it can also be documented that no process changes have occurred since that analysis that could affect the waste total organic concentration.
5. The determination that distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations manage hazardous wastes with time-weighted, annual average total organic concentrations less than ten parts per million weight must be made as follows:
- a. By the effective date that the facility becomes subject to the provisions of sections 33-24-05-400 through 33-24-05-419 or by the date when the waste is first managed in a waste management unit, whichever is later; and
  - b. For continuously generated waste, annually; or
  - c. Whenever there is a change in the waste being managed or a change in the process that generates or treats the waste.



6. When an owner or operator and the department do not agree on whether a distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation manages a hazardous waste with organic concentrations of at least ten parts per million weight based on knowledge of the waste, the procedures in method 8240 8260 of environmental protection agency publication SW-846, as incorporated by reference in section 33-24-01-05, may be used to resolve the dispute.

**History:** Effective December 1, 1991; amended effective January 1, 1994; July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

### **33-24-05-405. Recordkeeping requirements.**

1. Applicability.
  - a. Each owner or operator subject to the provisions of sections 33-24-05-400 through 33-24-05-419 shall comply with the recordkeeping requirements of this section.
  - b. An owner or operator of more than one hazardous waste management unit subject to the provisions of sections 33-24-05-400 through 33-24-05-419 may comply with the recordkeeping requirements for these hazardous waste management units in one recordkeeping system if the system identifies each record by each hazardous waste management unit.
2. Owners and operators must record the following information in the facility operating record:
  - a. For facilities that comply with the provisions of subdivision b of subsection 1 of section 33-24-05-403, an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The schedule must also include a rationale of why the installation cannot be completed at an earlier date. The implementation schedule must be in the facility operating record by the effective date that the facility becomes subject to the provisions of sections 33-24-05-400 through 33-24-05-419.
  - b. Up-to-date documentation of compliance with the process vent standards in section 33-24-05-402, including:
    - (1) Information and data identifying all affected process vents, annual throughput and operating hours of each affected unit, estimated emission rates for each affected vent, and for the overall facility, namely, the total emissions for all affected

vents at the facility, and the approximate location within the facility of each affected unit, for example, identifying the hazardous waste management units on a facility plot plan.

- (2) Information and data supporting determinations of vent emissions and emission reductions achieved by add-on control devices based on engineering calculation or source tests. For the purpose of determining compliance, determinations of vent emissions and emission reductions must be made using operating parameter values, for example, temperatures, flow rates, or vent stream organic compounds and concentrations, that represent the conditions that result in maximum organic emissions, such as when the waste management unit is operating at the highest load or capacity level reasonably expected to occur. If the owner or operator takes any action, for example, managing a waste of different composition or increasing operating hours of affected waste management units, that would result in an increase in total organic emissions from affected process vents at the facility, then a new determination is required.
- c. Where an owner or an operator chooses to use test data to determine the organic removal efficiency or total organic compound concentration achieved by the control device, a performance test plan. The test plan must include:
- (1) A description of how it is determined that the planned test is going to be conducted when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur. This must include the estimated or design flow rate and organic content of each vent stream and define the acceptable operating ranges of key process and control device parameters during the test program.
  - (2) A detailed engineering description of the closed-vent system and control device, including:
    - (a) Manufacturer's name and model number of control device.
    - (b) Type of control device.
    - (c) Dimensions of the control device.
    - (d) Capacity.
    - (e) Construction materials.

- (3) A detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.
- d. Documentation of compliance with section 33-24-05-403 must include the following information:
- (1) A list of all information references and sources used in preparing the documentation.
  - (2) Records, including the dates, of each compliance test required by subsection 11 of section 33-24-05-403.
  - (3) If engineering calculations are used, a design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "Apti course 415: control of gaseous emissions" (incorporated by reference as specified in section 33-24-01-05) or other engineering texts acceptable to the department that present basic control device design information. Documentation provided by the control device manufacturer or vendor that describes the control device design in accordance with subparagraphs a through g of ~~paragraph 3 of subdivision d of subsection 2~~ may be used to comply with this requirement. The design analysis must address the vent stream characteristics and control device operation parameters as specified below:
    - (a) For a thermal vapor incinerator, the design analysis must consider the vent stream composition, constituent concentrations, and flow rate. The design analysis must also establish the design minimum and average temperature in the combustion zone and the combustion zone residence time.
    - (b) For a catalytic vapor incinerator, the design analysis must consider the vent stream composition, constituent concentrations, and flow rate. The design analysis must also establish the design minimum and average temperatures across the catalyst bed inlet and outlet.
    - (c) For a boiler or process heater, the design analysis must consider the vent stream composition, constituent concentrations, and flow rate. The design analysis must also establish the design minimum and average flame zone temperatures, combustion zone residence



time, and description of methods and location where the vent stream is introduced into the combustion zone.

- (d) For a flare, the design analysis must consider the vent stream composition, constituent concentration, and flow rate. The design analysis must also consider the requirements specified in subsection 4 of section 33-24-05-403.
  - (e) For a condenser, the design analysis must consider the vent stream composition, constituent concentration, flow rate, relative humidity, and temperature. The design analysis must also establish the design outlet organic compound concentration level, design average temperature of the condenser exhaust vent stream, and design average temperatures of the coolant fluid at the condenser inlet and outlet.
  - (f) For a carbon adsorption system such as a fixed-bed adsorber that regenerates the carbon bed directly onsite in the control device, the design analysis must consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis must also establish the design exhaust vent stream organic compound concentration level, the number and capacity of carbon beds, type and working capacity of activated carbon used for carbon beds, design total steam flow over the period of each complete carbon bed regeneration cycle, duration of the carbon bed steaming and cooling or drying cycle, design carbon bed temperature after regeneration, design carbon bed regeneration time, and design service life of carbon.
  - (g) For a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly onsite in the control device, the design analysis must consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis must also establish the design outlet organic concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule.
- (4) A statement signed and dated by the owner or operator certifying that the operating parameters used in the design

analysis reasonably represent the conditions that exist when the hazardous waste management unit is or would be operating at the highest load or capacity level reasonably expected to occur.

- (5) A statement signed and dated by the owner or operator certifying that the control device is designed to operate at an efficiency of ninety-five percent or greater unless the total organic concentration limit of subsection 1 of section 33-24-05-402 is achieved at an efficiency less than ninety-five weight percent or the total organic emission limits of subsection 1 of section 33-24-05-402 for affected process vents at the facility can be obtained by a control device involving vapor recovery and 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 33-24-05-400 through 33-24-05-419 must be recorded and up to date in the facility operating record. The information must include:
- a. Description and date of each modification that is made to the closed-vent system or control device design.
  - b. Identification of operating parameters, description of monitoring device, and diagram of monitoring sensor location or locations used to comply with subdivisions a and b of subsection 6 of section 33-24-05-403.
  - c. Monitoring, operating, and inspection information required by subsections 6 through 11 of section 33-24-05-403.
  - d. Date, time, and duration of each period that occurs while the control device is operating when any monitored parameter exceeds the value established in the control device design analysis as specified below:
    - (1) For a thermal vapor incinerator designed to operate with a minimum residence time of fifty hundredths seconds at a minimum temperature of seven hundred sixty degrees ~~Gentigrade~~ Celsius period when the combustion temperature is below seven hundred sixty degrees ~~Gentigrade~~ 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 ~~Gentigrade~~ Celsius below the designed average combustion zone temperature established as a requirement of subparagraph a of paragraph 3 of subdivision d of subsection 2.
- (3) For a catalytic vapor incinerator, period when:
  - (a) Temperature of the vent stream at the catalytic bed inlet is more than twenty-eight degrees ~~Gentigrade~~ 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 ~~Gentigrade~~ Celsius below the design average flame zone temperature established as a requirement of subparagraph c of paragraph 3 of subdivision 4 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 33-24-05-403 period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the condenser are more than twenty percent greater than the design outlet organic compound concentration level established as a requirement of subparagraph e of paragraph 3 of subdivision d of subsection 2.



- (7) For a condenser that complies with subparagraph b of paragraph 6 of subdivision b of subsection 6 of section 33-24-05-403, period when:
- (a) Temperature of the exhaust vent stream from the condenser is more than six degrees ~~Gentigrade~~ 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 ~~Gentigrade~~ Celsius above the design average coolant fluid temperature at the condenser outlet established as a requirement of subparagraph e of paragraph 3 of subdivision d of subsection 2.
- (8) For a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates carbon bed directly onsite in the control device and complies with subparagraph a of paragraph 7 of subdivision b of subsection 6 of section 33-24-05-403, period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the carbon bed are more than twenty percent greater than the design exhaust vent stream organic compound concentration level established as a requirement of subparagraph f of paragraph 3 of subdivision d of subsection 2.
- (9) For a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly onsite in the control device and complies with subparagraph b of paragraph 7 of subdivision b of subsection 6 of section 33-24-05-403, period when the vent stream continues to flow through the control device beyond the predetermined carbon bed regeneration time established as a requirement of subparagraph f of paragraph 3 of subdivision d of subsection 2.
- e. Explanation for each period recorded under subdivision d of the cause for control device operating parameter exceeding the design value and the measures implemented to correct the control device operation.
- f. For a carbon adsorption system operated subject to requirements specified in subsection 7 of section 33-24-05-403 or subdivision b of subsection 8 of section 33-24-05-403, date when existing carbon in the control device is replaced with fresh carbon.

9. For a carbon adsorption system operated subject to requirements specified in subdivision a of subsection 8 of section 33-24-05-403, a log that records:
  - (1) Date and time when control device is monitored for carbon breakthrough and the monitoring device reading.
  - (2) Date when existing carbon in the control device is replaced with fresh carbon.
- h. Date of each control device startup and shutdown.
- i. An owner or operator designating any components of a closed-vent system as unsafe to monitor pursuant to subsection 15 of section 33-24-05-403 shall record in a log that is kept in the facility operating record the identification of closed-vent system components that are designated as unsafe to monitor in accordance with the requirements of subsection 15 of section 33-24-05-403, an explanation for each closed-vent system component stating why the closed-vent system component is unsafe to monitor, and the plan for monitoring each closed-vent system component.
- j. When each leak is detected as specified in subsection 12 of section 33-24-05-403, the following information shall be recorded:
  - (1) The instrument identification number, the closed-vent system component identification number, and the operator name, initials, or identification number;
  - (2) The date the leak was detected and the date of first attempt to repair the leak;
  - (3) The date of successful repair of the leak;
  - (4) Maximum instrument reading measured by method 21 of 40 CFR part 60, appendix A, after it is successfully repaired or determined to be nonrepairable; and
  - (5) "Repair delayed" and the reason for the delay if a leak is not repaired within fifteen calendar days after discovery of the leak;
    - (a) The owner or operator may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.



- (b) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked onsite before depletion and the reason for depletion.
- 4. Records of the monitoring, operating, and inspection information required by subdivisions c through j of subsection 3 must be maintained by the owner or operator for at least three years following the date of each occurrence, measurement, maintenance, corrective action, or record.
- 5. For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, the department will specify the appropriate recordkeeping requirements.
- 6. To date information and data used to determine whether or not a process vent is subject to the requirements in section 33-24-05-402, including supporting documentation as required by subdivision b of subsection 4 of section 33-24-05-404 when application of the knowledge of the nature of the hazardous waste stream or the process by which it was produced is used, must be recorded in a log that is kept in the facility operating record.

**History:** Effective December 1, 1991; amended effective January 1, 1994; July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

#### **33-24-05-406. Reporting requirements.**

- 1. A semiannual report must be submitted by owners and operators subject to the requirements of sections 33-24-05-400 through 33-24-05-419 to the department by dates specified by the department. The report must include the following information:
  - a. The ~~state environmental protection agency~~ identification number, name, and address of the facility.
  - b. For each month during the semiannual reporting period, dates when the control device exceeded or operated outside of the design specifications as defined in subdivision d of subsection 3 of section 33-24-05-405 and as indicated by the control device monitoring required by subsection 6 of section 33-24-05-403 and such exceedances where not corrected within twenty-four hours, or that a flare operated with visible emissions as designed in subsection 4 of section 33-24-05-03 and as determined by method 22 monitoring, the duration and cause of each exceedance or visible emission, and any corrective measures taken.

2. If, during the semiannual reporting period, the control device does not exceed or operate outside of the design specifications as defined in subdivision d of subsection 3 of section 33-24-05-405 for more than twenty-four hours or a flare does not operate with visible emissions as defined in subsection 4 of section 33-24-05-403, a report to the department is not required.

**History:** Effective December 1, 1991; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-420. Applicability to air emission standards for equipment leaks.**

1. The regulations in sections 33-24-05-420 through 33-24-05-449 apply to owners and operators of facilities that treat, store, or dispose of hazardous wastes (except as provided in section 33-24-02-04).
2. Except as provided in subsection 11 of section 33-24-05-434, sections 33-24-05-420 through 33-24-05-449 ~~applies~~ apply to equipment that contains or contacts hazardous waste with organic concentrations of at least ten percent by weight that are managed in one of the following:
  - a. A unit that is subject to the permitting requirements of chapter 33-24-06; ~~or~~
  - b. A unit (including a hazardous waste recycling unit) that is not exempt from permitting under the provisions of subsection 1 of section 33-24-03-12 (for example, a hazardous waste recycling unit that is not a ninety-day tank or container) and that is located at a hazardous waste management facility otherwise subject to the permitting requirements of chapter 33-24-06; ~~or~~
  - c. A unit ~~(including a hazardous waste recycling unit)~~ that is exempt from permitting under the provisions of subsection 1 of section 33-24-03-12 (for example, a ninety-day tank or container) and is not a recycling unit under the provisions of section 33-24-02-06.
3. ~~If the owner or operator of equipment subject to the requirements of sections 33-24-05-422 through 33-24-05-435 has received a permit under this article prior to December 21, 1990, the requirements of sections 33-24-05-422 through 33-24-05-435 must be incorporated when the permit is reissued under section 33-24-07-11 or reviewed under section 33-24-06-06. For the owner or operator of a facility subject to sections 33-24-05-420 through 33-24-05-449 and who received a final state-issued hazardous waste permit under article 33-24 prior to December 6, 1996, the requirements of sections 33-24-05-420 through 33-24-05-449 shall be incorporated into the permit when the permit is reissued in accordance with the requirements of section~~



33-24-07-11 or reviewed in accordance with the requirements of section 33-24-06-06. Until such date when the owner or operator receives a final state-issued hazardous waste permit incorporating the requirements of sections 33-24-05-420 through 33-24-05-449, the owner or operator is subject to the applicable requirements of subsection 5 of section 33-24-06-16.

4. Each piece of equipment to which sections 33-24-05-420 through 33-24-05-449 ~~applies~~ apply must be marked in such a manner that it can be ~~extinguished~~ distinguished readily from other pieces of equipment.
5. Equipment that is in vacuum service is excluded from the requirements of sections 33-24-05-422 to 33-24-05-430 if it is identified as required in subdivision e of subsection 7 of section 33-24-05-434. [Note: The requirements of sections 33-24-05-422 through 33-24-05-435 apply to equipment associated with hazardous waste recycling units previously exempt under subdivision a of subsection 3. Other exemptions under sections 33-24-02-04, 33-24-03-12, and subsection 7 of section 33-24-05-01 are not affected by these requirements.]
6. Equipment that contains or contacts hazardous waste with an organic concentration of at least ten percent by weight for ~~a period of~~ less than three hundred hours per calendar year is excluded from the requirements of sections 33-24-05-422 through 33-24-05-430 if it is identified as required in subdivision f of subsection 7 of section 33-24-05-434.

[Note: The requirements of sections 33-24-05-422 through 33-24-05-435 apply to equipment associated with hazardous waste recycling units previously exempt under subdivision a of subsection 3 of section 33-24-02-06. Other exemptions under section 33-24-02-04 and subsection 7 of section 33-24-05-01 are not affected by these requirements.]

**History:** Effective December 1, 1991; amended effective January 1, 1994; July 1, 1997; ~~December 1, 2003.~~

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

#### **33-24-05-425. Standards - ~~Sampling connecting~~ connection systems.**

1. Each sampling connection system must be equipped with a closed-purge, closed-loop, or closed-vent system. This system must collect the sample purge for return to the process or for routing to the appropriate treatment system. Gases displaced during filling of the sample container are not required to be collected or captured.

2. Each closed-purge, closed-loop, or closed-vent system as required in subsection 1 must meet one of the following requirements:
  - a. Return the purged process fluid directly to the process line;
  - b. Collect and recycle the purged process fluid; or
  - c. Be designed and operated to capture and transport all the purged process fluid to a waste management unit that complies with the applicable requirements of sections 33-24-05-454 through 33-24-05-456 or a control device that complies with the requirements of section 33-24-05-430.
3. In situ sampling systems and sampling systems without purges are exempt from the requirements of subsections 1 and 2.

**History:** Effective December 1, 1991; amended effective July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-430. Standards - Closed-vent systems and control devices.**

~~Owners or operators of closed-vent systems and control devices shall comply with the provisions of section 33-24-05-403.~~

1. Owners and operators of closed-vent systems and control devices subject to sections 33-24-05-420 through 33-24-05-449 shall comply with the provisions of section 33-24-05-403.
2. For:
  - a. The owner or operator of an existing facility who cannot install a closed-vent system and control device to comply with the provisions of sections 33-24-05-420 through 33-24-05-449 on the effective date that the facility becomes subject to the provisions of sections 33-24-05-420 through 33-24-05-449 must prepare an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The controls must be installed as soon as possible, but the implementation schedule may allow up to thirty months after the effective date that the facility becomes subject to sections 33-24-05-420 through 33-24-05-449 for installation and start-up.
  - b. Any unit that begins operation after December 21, 1990, and is subject to the provisions of sections 33-24-05-420 through 33-24-05-449 when operation begins, must comply with the rules immediately (for example, must have control devices installed and operating on start-up of the affected unit); the thirty-month implementation schedule does not apply.



- c. The owner or operator of any facility in existence on the effective date of a statutory or regulatory amendment that renders the facility subject to sections 33-24-05-420 through 33-24-05-449 shall comply with all requirements of sections 33-24-05-420 through 33-24-05-449 as soon as practicable but no later than thirty months after the amendment's effective date. When control equipment required by sections 33-24-05-420 through 33-24-05-449 cannot be installed and begin operation by the effective date of the amendment, the facility owner or operator shall prepare an implementation schedule that includes the following information: specific calendar dates for award of contracts or issuance of purchase orders for the control equipment, initiation of onsite installation of the control equipment, completion of the control equipment installation, and performance of any testing to demonstrate that the installed equipment meets the applicable standards of sections 33-24-05-420 through 33-24-05-449. The owner or operator shall enter the implementation schedule in the operating record or in a permanent, readily available file located at the facility.
- d. Owners and operators of facilities and units that become newly subject to the requirements of sections 33-24-05-420 through 33-24-05-449 after December 8, 1997, due to an action other than those described in subdivision c must comply with all applicable requirements immediately (for example, must have control devices installed and operating on the date the facility or unit becomes subject to sections 33-24-05-420 through 33-24-05-449; the thirty-month implementation schedule does not apply).

**History:** Effective December 1, 1991; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-432. Alternative standard for valves in gas or vapor service or in light liquid service - Skip period leak detection and repair.**

**1. Alternatives.**

- a. An owner or operator subject to the requirements of section 33-24-05-427 may elect for all valves within a hazardous waste management unit to comply with one of the alternative work practices specified in subdivisions b and c of subsection 2.
- b. An owner or operator must notify the department before implementing one of the alternative work practices.

**2. Requirements.**

- a. An owner or operator shall comply with the requirements for valves, as described in section 33-24-05-427, except as described in subdivisions b and c of ~~subsection 2~~.
- b. After two consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than two percent, an owner or operator may begin to skip one of the quarterly leak detection periods (for example, monitor for leaks once every six months) for the valves subject to the requirements in section 33-24-05-427.
- c. After five consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than two percent, an owner or operator may begin to skip three of the quarterly leak detection periods (for example, monitor for leaks once every year) for the valves subject to the requirements in section 33-24-05-427.
- d. If the percentage of ~~values~~ valves leaking is greater than two percent, the owner or operator shall monitor monthly in compliance with the requirements in section 33-24-05-427, but may again elect to use this section after meeting the requirements of subdivision a of subsection 3 of section 33-24-05-427.

**History:** Effective December 1, 1991; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

### **33-24-05-433. Test methods and procedures.**

1. Each owner or operator subject to the provisions of sections 33-24-05-420 through 33-24-05-449 shall comply with the test methods and procedures requirements provided in this section.
2. Leak detection monitoring, as required in sections 33-24-05-422 through 33-24-05-432, must comply with the following requirements:
  - a. Monitoring must comply with reference method 21 in 40 CFR part 60.
  - b. The detection instrument must meet the performance criteria of reference method 21.
  - c. The instrument must be calibrated before use on each day of its use by the procedures specified in reference method 21.
  - d. Calibration gas must be:
    - (1) Zero air (less than ten parts per million of hydrocarbon in air).



- (2) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, ten thousand parts per million methane or n-hexane.
- e. The instrument probe must be traversed around all potential leak interfaces as close to the interface as possible as described in reference method 21.
- 3. When equipment is tested for compliance with no detectable emissions, as required in subsection 5 of section 33-24-05-422, subsection 9 of section 33-24-05-423, section 33-24-05-424, and subsection 6 of section 33-24-05-427, the test must comply with the following requirements:
  - a. The requirements of subdivisions a through d of subsection 2 apply.
  - b. The background level must be determined as set forth in reference method 21.
  - c. The instrument probe must be traversed around all potential leak interfaces as close to the interface as possible as described in reference method 21.
  - d. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with five hundred parts per million for determining compliance.
- 4. In accordance with the waste analysis plan required by subsection 2 of section 33-24-05-04, an owner or operator of the facility must determine, for each piece of equipment, whether the equipment contains or contacts a hazardous waste with organic concentration that equals or exceeds ten percent by weight using the following:
  - a. Methods described in American society for testing and materials methods D2267-88, E169-87, E168-88, E260-85 (incorporated by reference under section 33-24-01-05);
  - b. Method 9060 or ~~8240~~ 8260 of environmental protection agency publication SW-846 (incorporated by reference under section 33-24-01-05); or
  - c. Application of the knowledge of the nature of the hazardous waste stream or process by which it was produced. Documentation of a waste determination by knowledge is required. Examples of documentation that must be used to support a determination under the provision includes production process information documenting that no organic compounds are used, information that the waste is generated by a process that is identical to a process at the

same or another facility that has previously been demonstrated by direct measurement to have a total organic content less than ten percent, or prior speciation analysis results on the same waste stream where it can also be documented that no process changes have occurred since that analysis that could affect the waste total organic concentration.

5. If an owner or operator determines that a piece of equipment contains or contacts a hazardous waste with organic concentrations at least ten percent by weight, the determination can be revised only after following the procedures in subdivision a or b of subsection 4.
6. When an owner or operator and the department do not agree on whether a piece of equipment contains or contacts a hazardous waste with organic concentrations at least ten percent by weight, the procedures in subdivision a or b of subsection 4 can be used to resolve the dispute.
7. Samples used in determining the percent organic content must be representative of the highest total organic content hazardous waste that is expected to be contained or contact the equipment.
8. To determine if pump or valves are in light liquid service, the vapor pressures of constituents may be obtained from standard reference texts or may be determined by American society for testing and materials D-2879-86 (incorporated by reference under section 33-24-01-05).
9. Performance tests to determine if control device achieves ninety-five weight percent organic emission reduction shall comply with the procedures of subdivisions a through d of subsection 3 of section 33-24-05-404.

**History:** Effective December 1, 1991; amended effective January 1, 1994; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

#### **33-24-05-434. Recordkeeping requirements.**

1. Owner or operator.
  - a. Each owner or operator subject to the provisions of sections 33-24-05-420 through 33-24-05-449 shall comply with the recordkeeping requirements of this section.
  - b. An owner or operator of more than one hazardous waste management unit subject to the provisions of sections 33-24-05-420 through 33-24-05-449 may comply with the



recordkeeping requirements for these hazardous waste management units in one recordkeeping system if the system identifies each record by each hazardous waste management unit.

2. Owners and operators must record the following information in the facility operating record:
  - a. For each piece of equipment to which sections 33-24-05-420 through 33-24-05-449 applies:
    - (1) Equipment identification number and hazardous waste management unit identification.
    - (2) Approximate locations within the facility, for example, identify the hazardous waste management unit on a facility plot plan.
    - (3) Type of equipment, for example, a pump or pipeline valve.
    - (4) Percent-by-weight total organics in the hazardous waste stream at the equipment.
    - (5) Hazardous waste state at the equipment, for example, gas/vapor or liquid.
    - (6) Method of compliance with the standard, for example, "monthly leak detection and repair" or "equipped with dual mechanical seals".
  - b. For facilities that comply with the provisions of subdivision b of subsection 1 of section 33-24-05-403, an implementation schedule as specified in subdivision b of subsection 1 of section 33-24-05-403.
  - c. Where an owner or operator chooses to use test data to demonstrate the organic removal efficiency or total organic compound concentration achieved by the control device, a performance test plan as specified in subdivision c of subsection 2 of section 33-24-05-405.
  - d. Documentation of compliance with section 33-24-05-430, including the detailed design documentation or performance test results specified in subdivision d of subsection 2 of section 33-24-05-405.
3. When each leak is detected as specified in sections 33-24-05-422, 33-24-05-423, 33-24-05-427, and 33-24-05-428, the following requirements apply:
  - a. A weatherproof and fully visible identification, marked with the equipment identification number, the date evidence of a potential

leak was found in accordance with subsection 1 of section 33-24-05-428, and the date the leak was detected, must be attached to the leaking equipment.

- b. The identification on equipment, except on a valve, may be removed after it has been repaired.
  - c. The identification on a valve may be removed after it has been monitored for two successive months as specified in subsection 3 of section 33-24-05-427 and no leak has been detected during those two months.
4. When each leak is detected as specified in sections 33-24-05-422, 33-24-05-423, 33-24-05-427, and 33-24-05-428, the following information must be recorded in an inspection log and must be kept in the facility operating record:
- a. The instrument and operator identification numbers and the equipment identification number.
  - b. The date evidence of a potential leak was found in accordance with subsection 1 of section 33-24-05-428.
  - c. The date the leak was detected and the dates of each attempt to repair the leak.
  - d. Repair methods applied in each attempt to repair the leak.
  - e. "Above ten thousand" if the maximum instrument reading measured by the methods specified in subsection 2 of section 33-24-05-433 after each repair attempt is equal to or greater than ten thousand parts per million.
  - f. "Repair delayed" and the reason for the delay if a leak is not repaired within fifteen calendar days after discovery of the leak.
  - g. Documentation supporting the delay of repair of a valve in compliance with subsection 3 of section 33-24-05-429.
  - h. The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a hazardous waste management unit shutdown.
  - i. The expected date of successful repair of the leak if a leak is not repaired within fifteen calendar days.
  - j. The date of successful repair of the leak.



5. Design documentation and monitoring, operating, and inspection information for each closed-vent system and control device required to comply with the provisions of section 33-24-05-430 must be recorded and kept up-to-date in the facility operating record as specified in subsection 3 of section 33-24-05-405. Design documentation as specified in subdivisions a and b of subsection 3 of section 33-24-05-405 and monitoring, operating, and inspection information in subdivisions c through h of subsection 3 of section 33-24-05-405.
6. For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, the department will specify the appropriate recordkeeping requirements.
7. The following information pertaining to all equipment subject to the requirements in sections 33-24-05-422 through 33-24-05-430 must be recorded in a log that is kept in the facility operating record:
  - a. A list of identification numbers for equipment (except welded fitting) subject to the requirements of sections 33-24-05-420 through 33-24-05-449.
  - b. Equipment.
    - (1) A list of identification numbers for equipment that the owner or operator elects to designate for no detectable emissions, as indicated by an instrument reading of less than five hundred parts per million above background, under the provisions of subsection 5 of section 33-24-05-422, subsection 9 of section 33-24-05-423, and subsection 6 of section 33-24-05-427.
    - (2) The designation of this equipment as subject to the requirements of subsection 5 of section 33-24-05-422, subsection 9 of section 33-24-05-423, or subsection 6 of section 33-24-05-427 must be signed by the owner or operator.
  - c. A list of equipment identification numbers for pressure relief devices required to comply with subsection 1 of section 33-24-05-424.
  - d. Data.
    - (1) The dates of each compliance test required in subsection 5 of section 33-24-05-422, subsection 9 of section 33-24-05-423, section 33-24-05-424, and subsection 6 of section 33-24-05-427.
    - (2) The background level measured during each compliance test.

- (3) The maximum instrument reading measured at the equipment during each compliance test.
  - e. A list of identification numbers for equipment in vacuum service.
  - f. Identification, either by list or location (area or group) of equipment that contains or contacts hazardous waste with an organic concentration of at least ten percent by weight for less than three hundred hours per calendar year.
8. The following information pertaining to all valves subject to the requirements of subsections 7 and 8 of section 33-24-05-427 must be recorded in a log that is kept in the facility operating record.
- a. A list of identification numbers for valves that are designated as unsafe to monitor, an explanation for each valve stating why the valve is unsafe to monitor, and the plan for monitoring each valve.
  - b. A list of identification numbers for valves that are designated as difficult to monitor, an explanation for each valve stating why the valve is difficult to monitor, and the plan schedule for monitoring each valve.
9. The following information must be recorded in the facility operating record for valves complying with section 33-24-05-432:
- a. A schedule of the monitoring.
  - b. The percent of valves found leaking during each monitoring period.
10. The following information must be recorded in a log that is kept in the facility operating record:
- a. Criteria required in paragraph 2 of subdivision e of subsection 4 of section 33-24-05-422 and subdivision b of subsection 5 of section 33-24-05-423 and an explanation of the design criteria.
  - b. Any changes to these criteria and the reasons for the changes.
11. The following information must be recorded in a log that is kept in the facility operating record for use in determining exemptions as provided in the applicability section of sections 33-24-05-420 through 33-24-05-449 and other specific sections:
- a. An analysis determining the design capacity of the hazardous waste management unit.



- b. A statement listing the hazardous waste influent to and effluent from each hazardous waste management unit subject to the requirements in sections 33-24-05-422 through 33-24-05-430 and an analysis determining whether these hazardous wastes are heavy liquids.
  - c. An up-to-date analysis and the supporting information and data used to determine whether or not equipment is subject to the requirements in sections 33-24-05-422 through 33-24-05-430. The record must include supporting documentation as required by subdivision c of subsection 4 of section 33-24-05-433 when application of the knowledge of the nature of the hazardous waste stream or the process by which it was produced is used. If the owner or operator takes any action, for example, changing the process that produced the waste, that could result in an increase in the total organic content of the waste contained in or contacted by equipment determined not to be subject to the requirements in sections 33-24-05-422 through 33-24-05-430, then a new determination is required.
12. Records of the equipment leak information required by subsection 4 and the operating information required by subsection 5 need be kept only three years.
  13. The owner or operator of any facility with equipment that is subject to sections 33-24-05-420 through 33-24-05-449 and to the regulations at 40 CFR ~~part 60, subpart vv, or 40 CFR part 61, subpart v~~ parts 60, 61, or 63, may elect to determine compliance with sections 33-24-05-420 through 33-24-05-449 either by documentation ~~either~~ pursuant to section 33-24-05-434, or by documentation of compliance with the regulations at 40 CFR parts 60, 61, or 63, pursuant to those the relevant provisions of the regulations at 40 CFR part 60 or 61, to the extent that the documentation under the regulation at 40 CFR part 60 or part 61 duplicates the documentation required under sections 33-24-05-420 through 33-24-05-449 parts 60, 61, or 63. The documentation of compliance under the regulations at 40 CFR ~~part 60 or part 61~~ parts 60, 61, or 63 must be kept with or made readily available with the facility operating record.

**History:** Effective December 1, 1991; amended effective January 1, 1994; July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

### **33-24-05-435. Reporting requirements.**

1. A semiannual report must be submitted by owners and operators subject to the requirements of sections 33-24-05-420 through

33-24-05-449 to the department by dates specified by the department. The report must include the following information:

- a. The ~~state environmental protection agency~~ identification number, name, and address of the facility.
  - b. For each month during the semiannual reporting period:
    - (1) The equipment identification number of each valve for which a leak was not repaired as required in subsection 4 of section 33-24-05-427.
    - (2) The equipment identification number of each pump for which a leak was not repaired as required in subdivision f of subsection 4 of section 33-24-05-422 and subsection 3 of section 33-24-05-422.
    - (3) The equipment identification number of each compressor for which a leak was not repaired as required in subsection 7 of section 33-24-05-423.
  - c. Dates of hazardous waste management unit shutdowns that occurred within the semiannual reporting period.
  - d. For each month during the semiannual reporting period, dates when the control device installed as required by section 33-24-05-422, 33-24-05-423, 33-24-05-424, or 33-24-05-425 exceeded or operated outside of the design specifications as defined in subsection 5 of section 33-24-05-434 and as indicated by the control device monitoring required by section 33-24-05-430 and was not corrected within twenty-four hours, the duration and cause of each exceedance, and any corrective measures taken.
2. If, during the semiannual reporting period, leaks from valves, pumps, and compressors are repaired as required in subsection 4 of section 33-24-05-427, subdivision f of subsection 4 of section 33-24-05-422, subsection 3 of section 33-24-05-422, and subsection 7 of section 33-24-05-423, respectively, and the control device does not exceed or operate outside of the design specifications as defined in subsection 5 of section 33-24-05-434 for more than twenty-four hours, a report to the department is not required.

**History:** Effective December 1, 1991; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-450. Applicability to air emission standards for tanks, surface impoundments, and containers.**



1. The requirements of sections 33-24-05-450 through 33-24-05-474 apply to owners and operators of all facilities that treat, store, or dispose of hazardous waste in tanks, surface impoundments, or containers subject to either sections 33-24-05-89 through 33-24-05-129 or sections ~~33-24-05-560 through 33-24-05-574~~ except as section 33-24-05-01 and subsection 2 provide otherwise.
2. The requirements of sections 33-24-05-450 through 33-24-05-474 do not apply to the following waste management units at the facility:
  - a. A waste management unit that holds hazardous waste placed in the unit before December 6, 1996, and in which no hazardous waste is added to the unit on or after ~~this date~~; December 6, 1996.
  - b. A container that has a design capacity less than or equal to 26.417 gallons [0.1 meters<sup>3</sup>];<sub>1,2</sub>
  - c. A tank in which an owner or operator has stopped adding hazardous waste and the owner or operator has begun implementing or completed closure pursuant to an approved closure plan;<sub>1,2</sub>
  - d. A surface impoundment in which an owner or operator has stopped adding hazardous waste (except to implement an approved closure plan) and the owner or operator has begun implementing or completed closure pursuant to an approved closure plan;<sub>1,2</sub>
  - e. A waste management unit that is used solely for onsite treatment or storage of hazardous waste that is ~~generated as the~~ placed in the unit as a result of implementing remedial activities required under the corrective action authorities of RCRA Resource Conservation and Recovery Act sections 3004(u), 3004(v), or 3008(h); ~~CERCLA~~; Comprehensive Environmental Response, Compensation and Liability Act authorities, or similar federal or state authorities;<sub>1,2</sub>
  - f. A waste management unit that is used solely for the management of radioactive mixed waste in accordance with all applicable regulations under the authority of the Atomic Energy Act and the Nuclear Waste Policy Act;<sub>1,2</sub>
3. A hazardous waste management unit that the owner or operator certifies is equipped with and operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulation codified under 40 CFR part 60, part 61, or part 63. For the purpose of complying with this ~~paragraph~~ subdivision, a tank for which the air emission control includes an enclosure, as opposed to a cover, must be in compliance with the enclosure and control device requirements of subsection 9 of section 33-24-05-454,

except as provided in subdivision e of subsection 3 of section 33-24-05-452; and.

- h. A tank that has a process vent as defined in section 33-24-05-401.
3. For the owner and operator of a facility subject to ~~this subpart~~ sections 33-24-05-450 through 33-24-05-474, and who received a final state-issued hazardous waste permit prior to December 6, 1996, the requirements of sections 33-24-05-450 through ~~33-35-05-474~~ 33-24-05-474 shall be incorporated into the permit when the permit is reissued in accordance with the requirements of section ~~33-24-07-17~~ 33-24-07-11 or reviewed in accordance with the requirements of section ~~33-24-07-11~~ 33-24-06-06. Until such date when the owner and operator receives a final permit incorporating the requirements of sections 33-24-05-450 through 33-24-05-474 is reissued in accordance with the requirements of section 33-24-07-11 or reviewed in accordance with the requirements of section 33-24-06-06, the owner and operator is subject to the applicable requirements of subsection 5 of section 33-24-06-16.
  4. The requirements of ~~this subpart~~ sections 33-24-05-450 through 33-24-05-474, except for the recordkeeping requirements specified in subsection 9 of section 33-24-05-459, are administratively stayed for a tank or a container used for the management of hazardous waste generated by organic peroxide manufacturing and its associated laboratory operations when the owner or operator of the unit meets all of the following conditions:
    - a. The owner or operator identifies that the tank or container receives hazardous waste generated by an organic peroxide manufacturing process producing more than one functional family of organic peroxides or multiple organic peroxides within one functional family, that one or more of these organic peroxides could potentially undergo self-accelerating thermal decomposition at or below ambient temperatures, and that organic peroxides are the predominant products manufactured by the process. For the purpose of meeting the conditions of this ~~paragraph~~ subdivision, "organic peroxide" means an organic compound that contains the bivalent -O-O- structure and which may be considered to be a structural derivative of hydrogen peroxide where one or both of the hydrogen atoms has been replaced by an organic radical.
    - b. The owner or operator prepares documentation, in accordance with the requirements of subsection 9 of section 33-24-05-459, explaining why an undue safety hazard would be created if air emission controls specified in sections 33-24-05-454 through 33-24-05-457 are installed and operated on the tanks and containers used at the facility to manage the hazardous waste



generated by the organic peroxide manufacturing process or processes meeting the conditions of subdivision a of ~~subsection 4~~.

- c. The owner or operator notifies the department in writing that hazardous waste generated by an organic peroxide manufacturing process or processes meeting the conditions of subdivision a of ~~subsection 4~~ are managed at the facility in tanks or containers meeting the conditions of subdivision b of ~~subsection 4~~. The notification shall state the name and address of the facility, and be signed and dated by an authorized representative of the facility owner or operator.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC ~~23-20.3~~ 23-20.3-03

**Law Implemented:** NDCC ~~23-20.3, 23-20.4~~ 23-20.3-03, 23-20.3-04

**33-24-05-451. Definitions.** As used in sections 33-24-05-450 through 33-24-05-474, all terms shall have the meaning given to them as defined below or as defined elsewhere in this article.

1. "Average volatile organic concentration" or "average VO concentration" means the mass-weighted average volatile organic concentration of a hazardous waste as determined in accordance with the requirements of section 33-24-05-454.
2. "Closure device" means a cap, hatch, lid, plug, seal, valve, or other type of fitting that blocks an opening in a cover such that when the device is secured in the closed position it prevents or reduces air pollutant emissions to the atmosphere. Closure devices include devices that are detachable from the cover (for example, a sampling port cap), manually operated (for example, a hinged access lid or hatch), or automatically operated (for example, a spring-loaded pressure relief valve).
3. "Continuous seal" means a seal that forms a continuous closure that completely covers the space between the edge of the floating roof and the wall of a tank. A continuous seal may be a vapor-mounted seal, liquid-mounted seal, or metallic shoe seal. A continuous seal may be constructed of fastened segments so as to form a continuous seal.
4. "Cover" means a device that provides a continuous barrier over the hazardous waste managed in a unit to prevent or reduce air pollutant emissions to the atmosphere. A cover may have openings (such as access hatches, sampling ports, gauge wells) that are necessary for operation, inspection, maintenance, and repair of the unit on which the cover is used. A cover may be a separate piece of equipment which can be detached and removed from the unit or a cover may be formed by structural features permanently integrated into the design of the unit.



5. "Enclosure" means any structure that surrounds a tank or container, captures organic vapors emitted from the tank or container, and vents the captured vapors through a closed-vent system to a control device.
6. "External floating roof" means a pontoon or double-deck type cover that rests on the surface of a material managed in a tank with no fixed roof.
7. "Fixed roof" means a cover that is mounted on a unit in a stationary position and does not move with fluctuations in the level of the material managed in the unit.
8. "Floating membrane cover" means a cover consisting of a synthetic flexible membrane material that rests upon and is supported by the hazardous waste being managed in a surface impoundment.
9. "Floating roof" means a cover consisting of a double deck, pontoon single deck, or internal floating cover which rests upon and is supported by the material being contained, and is equipped with a continuous seal.
10. "Hard-piping" means pipe or tubing that is manufactured and properly installed in accordance with relevant standards and good engineering practices.
11. "In light material service" means the container is used to manage a material for which both of the following conditions apply: The vapor pressure of one or more of the organic constituents in the material is greater than 0.3 kilopascals at 20 degrees Celsius; and the total concentration of the pure organic constituents having a vapor pressure greater than 0.3 kilopascals at 20 degrees Celsius is equal to or greater than twenty percent by weight.
12. "Internal floating roof" means a cover that rests or floats on the material surface (but not necessarily in complete contact with it) inside a tank that has a fixed roof.
13. "Liquid-mounted seal" means a foam or liquid-filled primary seal mounted in contact with the hazardous waste between the tank wall and the floating roof continuously around the circumference of the tank.
14. "Malfunction" means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.
15. "Maximum organic vapor pressure" means the sum of the individual organic constituent partial pressures exerted by the material contained in a tank, at the maximum vapor pressure-causing conditions (for example, temperature, agitation, pH effects of combining wastes, etc.)

reasonably expected to occur in the tank. For the purpose of sections 33-24-05-450 through 33-24-05-474, maximum organic vapor pressure is determined using the procedures specified in subsection 3 of section 33-24-05-453.

16. "Metallic shoe seal" means a continuous seal that is constructed of metal sheets which are held vertically against the wall of the tank by springs, weighted levers, or other mechanisms and is connected to the floating roof by braces or other means. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.
17. "No detectable organic emissions" means no escape of organics to the atmosphere as determined using the procedure specified in subsection 4 of section 33-24-05-453.
18. "Point of waste origination" means as follows:
  - a. When the facility owner or operator is the generator of the hazardous waste, the point of waste origination means the point where a solid waste produced by a system, process, or waste management unit is determined to be a hazardous waste as defined in chapter 33-24-02.

[Note: In this case, this term is being used in a manner similar to the use of the term "point of generation" in air standards established for waste management operations under authority of the Clean Air Act in 40 CFR parts 60, 61, and 63.]
  - b. When the facility owner and operator are not the generator of the hazardous waste, point of waste origination means the point where the owner or operator accepts delivery or takes possession of the hazardous waste.
19. "Point of waste treatment" means the point where a hazardous waste to be treated in accordance with section 33-24-05-452 exits the treatment process. Any waste determination shall be made before the waste is conveyed, handled, or otherwise managed in a manner that allows the waste to volatilize to the atmosphere.
20. "Safety device" means a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device which functions exclusively to prevent physical damage or permanent deformation to a unit or its air emission control equipment by venting gases or vapors directly to the atmosphere during unsafe conditions resulting from an unplanned, accidental, or emergency event. For the purpose of sections 33-24-05-450 through 33-24-05-474, a safety device is not used for routine venting of gases or vapors from the vapor headspace underneath a cover such as during filling of the unit or to



adjust the pressure in this vapor headspace in response to normal daily diurnal ambient temperature fluctuations. A safety device is designed to remain in a closed position during normal operations and open only when the internal pressure, or another relevant parameter, exceeds the device threshold setting applicable to the air emission control equipment as determined by the owner or operator based on manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials.

21. "Single-seal system" means a floating roof having one continuous seal. This seal may be vapor-mounted, liquid-mounted, or a metallic shoe seal.
22. "Vapor-mounted seal" means a continuous seal that is mounted such that there is a vapor space between the hazardous waste in the unit and the bottom of the seal.
23. "Volatile organic concentration" or "VO concentration" means the fraction by weight of the volatile organic compounds contained in a hazardous waste expressed in terms of parts per million as determined by direct measurement or by knowledge of the waste in accordance with the requirements of section 33-24-05-453. For the purpose of determining the VO concentration of a hazardous waste, organic compounds with a Henry's law constant value of at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase ( $0.1 Y/X$ ) [which can also be expressed as  $1.8 \times 10^6$  atmospheres/gram-mole/ $m^3$ ] at 25 degrees Celsius must be included. Appendix VI of this subpart presents a list of compounds known to have a Henry's law constant value less than the cutoff level.
24. "Waste determination" means performing all applicable procedures in accordance with the requirements of section 33-24-05-454 to determine whether a hazardous waste meets standards specified in sections 33-24-05-450 through 33-24-05-474. Examples of a waste determination include performing the procedures in accordance with the requirements of section 33-24-05-454 to determine the average VO concentration of a hazardous waste at the point of waste origination; the average VO concentration of a hazardous waste at the point of waste treatment and comparing the results to the exit concentration limit specified for the process used to treat the hazardous waste; the organic reduction efficiency and the organic biodegradation efficiency for a biological process used to treat a hazardous waste and comparing the results to the applicable standards; or the maximum volatile organic vapor pressure for a hazardous waste in a tank and comparing the results to the applicable standards.



25. "Waste stabilization process" means any physical or chemical process used to either reduce the mobility of hazardous constituents in a hazardous waste or eliminate free liquids as determined by Test Method 9-95 (Paint Filter Liquids Test) in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846 as incorporated by reference in section 33-24-01-05. A waste stabilization process includes mixing the hazardous waste with binders or other materials, and curing the resulting hazardous waste and binder mixture. Other synonymous terms used to refer to this process are "waste fixation" or "waste solidification". This does not include the adding of absorbent materials to the surface of a waste, without mixing, agitation, or subsequent curing, to absorb free liquid.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC ~~23-20.3~~ 23-20.3-03

**Law Implemented:** NDCC ~~23-20.3, 23-20.4~~ 23-20.3-03, 23-20.3-04

#### **33-24-05-452. Standards - General.**

1. This section applies to the management of hazardous waste in tanks, surface impoundments, and containers subject to sections 33-24-05-450 through 33-24-05-474.
2. The owner or operator shall control air pollutant emissions from each hazardous waste management unit in accordance with standards specified in sections 33-24-05-454 through 33-24-05-457, as applicable to the hazardous waste management unit, except as provided for in subsection 3.
3. A tank, surface impoundment, or container is exempt from standards specified in sections 33-24-05-454 through 33-24-05-457, as applicable, provided that the waste management unit is one of the following:
  - a. A tank, surface impoundment, or container for which all hazardous waste entering the unit has an average VO concentration at the point of waste origination of less than five hundred parts per million by weight. The average VO concentration shall be determined using the procedures specified in subsection 1 of section 33-24-05-453. The owner or operator shall review and update, as necessary, this determination at least once every twelve months following the date of the initial determination for the hazardous waste streams entering the unit.
  - b. A tank, surface impoundment, or container for which the organic content of all the hazardous waste entering the waste management unit has been reduced by an organic destruction or removal process that achieves any one of the following conditions:

- (1) A process that removes or destroys the organics contained in the hazardous waste to a level such that the average VO concentration of the hazardous waste at the point of waste treatment is less than the exit concentration limit ( $C_t$ ) established for the process. The average VO concentration of the hazardous waste at the point of waste treatment and the exit concentration limit for the process shall be determined using the procedures specified in subsection 2 of section 33-24-05-453.
- (2) A process that removes or destroys the organics contained in the hazardous waste to a level such that the organic reduction efficiency (R) for the process is equal to or greater than ninety-five percent, and the average VO concentration of the hazardous waste at the point of waste treatment is less than one hundred parts per million weight. The organic reduction efficiency for the process and the average VO concentration of the hazardous waste at the point of waste treatment shall be determined using the procedures specified in subsection 2 of section 33-24-05-453.
- (3) A process that removes or destroys the organics contained in the hazardous waste to a level such that the actual organic mass removal rate (MR) for the process is equal to or greater than the required organic mass removal rate (RMR) established for the process. The required organic mass removal rate and the actual organic mass removal rate for the process shall be determined using the procedures specified in subsection 2 of section 33-24-05-453.
- (4) A biological process that destroys or degrades the organics contained in the hazardous waste, such that either of the following conditions is met:
  - (a) The organic reduction efficiency (R) for the process is equal to or greater than ninety-five percent, and the organic biodegradation efficiency ( $R_{bio}$ ) for the process is equal to or greater than ninety-five percent. The organic reduction efficiency and the organic biodegradation efficiency for the process shall be determined using the procedures specified in subsection 2 of section 33-24-05-453.
  - (b) The total actual organic mass biodegradation rate ( $MR_{bio}$ ) for all hazardous waste treated by the process is equal to or greater than the required organic mass removal rate (RMR). The required organic mass removal rate and the actual organic mass biodegradation rate for the process shall be determined



using the procedures specified in subsection 2 of section 33-24-05-453.

- (5) A process that removes or destroys the organics contained in the hazardous waste and meets all of the following conditions:
- (a) From the point of waste origination through the point where the hazardous waste enters the treatment process, the hazardous waste is managed continuously in waste management units which use air emission controls in accordance with the standards specified in sections 33-24-05-454 through 33-24-05-457, as applicable to the waste management unit.
  - (b) From the point of waste origination through the point where the hazardous waste enters the treatment process, any transfer of the hazardous waste is accomplished through continuous hard-piping or other closed system transfer that does not allow exposure of the waste to the atmosphere. The department considers a drain system that meets the requirements of 40 CFR part 63, subpart RR - national emission standards for individual drain systems to be a closed system.
  - (c) The average VO concentration of the hazardous waste at the point of waste treatment is less than the lowest average VO concentration at the point of waste origination determined for each of the individual waste streams entering the process or five hundred parts per million weight, whichever value is lower. The average VO concentration of each individual waste stream at the point of waste origination shall be determined using the procedures specified in subsection 1 of section 33-24-05-453. The average VO concentration of the hazardous waste at the point of waste treatment shall be determined using the procedures specified in subsection 2 of section ~~33-24-05-452~~ 33-24-05-453.
- (6) A process that removes or destroys the organics contained in the hazardous waste to a level such that the organic reduction efficiency (R) for the process is equal to or greater than ninety-five percent and the owner or operator certifies that the average VO concentration at the point of waste origination for each of the individual waste streams entering the process is less than ten thousand parts per million weight. The organic reduction efficiency for the process and the average VO concentration of the hazardous waste at the point of waste origination must be determined using

the procedures specified in subsections 1 and 2 of section 33-24-05-453, respectively.

- (7) A hazardous waste incinerator for which the owner or operator has either:
  - (a) Been issued a final permit under chapter 33-24-06 which implements the requirements of sections 33-24-05-144 through 33-24-05-159; or
  - (b) Has designed and operates the incinerator in accordance with the applicable interim status requirements of subsection 5 of section 33-24-06-16.
- (8) A boiler or industrial furnace for which the owner or operator has either:
  - (a) Been issued a final permit under chapter 33-24-06 which implements the requirements of sections 33-24-05-525 through 33-24-05-549; or
  - (b) Has designed and operates the boiler or industrial furnace in accordance with ~~the interim status requirements of subsection 5 of section 33-24-06-16~~ sections 33-24-05-525 through 33-24-05-549.
- (9) For the purpose of determining the performance of an organic destruction or removal process in accordance with the conditions in each of paragraphs 1 through 6, the owner or operator shall account for VO concentrations determined to be below the limit of detection of the analytical method by using the following VO concentration:
  - (a) If method 25D in 40 CFR part 60, appendix A, is used for the analysis, one-half the blank value determined in the method at section 4.4 of method 25D in 40 CFR part 60, appendix A, or a value of twenty-five parts per million by weight, whichever is less.
  - (b) If any other analytical method is used, one-half the ~~limit of detection established for the method~~ sum of the limits of detection established for each organic constituent in the waste that has a Henry's law constant value at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X) [which can also be expressed as  $1.8 \times 10^{-6}$  atmospheres/gram-mole/m<sup>3</sup>] at twenty-five degrees Celsius.

- c. A tank or surface impoundment used for biological treatment of hazardous waste in accordance with the requirements of paragraph 4 of subdivision b.
- d. A tank, surface impoundment, or container for which all hazardous waste placed in the unit either:
  - (1) Meets the numerical concentration limits for organic hazardous constituents, applicable to the hazardous waste, as specified in sections 33-24-05-250 through 33-24-05-299 under table "Treatment Standards for Hazardous Waste" in section 33-24-05-280; or
  - (2) ~~Has~~ The organic hazardous constituents in the waste have been treated by the treatment technology established by the environmental protection agency for the waste in subsection 1 of section 33-24-05-282, or ~~treated have been removed or destroyed~~ by an equivalent method of treatment approved by the department pursuant to subsection 2 of section 33-24-05-282.
- e. A tank used for bulk feed of hazardous waste to a waste incinerator and all of the following conditions are met:
  - (1) The tank is located inside an enclosure vented to a control device that is designed and operated in accordance with all applicable requirements specified under 40 CFR part 61, subpart RR ~~FF~~ - national emission standards for benzene waste operations for a facility at which the total annual benzene quantity from the facility waste is equal to or greater than ten megagrams per year;
  - (2) The enclosure and control device serving the tank were installed and began operation prior to ~~October 4~~ November 25, 1996; and
  - (3) The enclosure is designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical or electrical equipment; or to direct air flow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in section 5.0 to "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" annually.



4. The department may at any time perform or request that the owner or operator perform a waste determination for a hazardous waste managed in a tank, surface impoundment, or container exempted from using air emission controls under the provisions of this section as follows:
  - a. The waste determination for average VO concentration of a hazardous waste at the point of waste origination shall be performed using direct measurement in accordance with the applicable requirements of subsection 1 of section 33-24-05-453. The waste determination for a hazardous waste at the point of waste treatment shall be performed in accordance with the applicable requirements of subsection 2 of section 33-24-05-453.
  - b. In performing a waste determination pursuant to ~~subparagraph~~ subdivision a, the sample preparation and analysis shall be conducted as follows:
    - (1) In accordance with the method used by the owner or operator to perform the waste analysis, except in the case specified in paragraph 2.
    - (2) If the department determines that the method used by the owner or operator was not appropriate for the hazardous waste managed in the tank, surface impoundment, or container, then the department may choose an appropriate method.
  - c. In a case when the owner or operator is requested to perform the waste determination, the department may elect to have an authorized representative observe the collection of the hazardous waste samples used for the analysis.
  - d. In a case when the results of the waste determination performed or requested by the department do not agree with the results of a waste determination performed by the owner or operator using knowledge of the waste, then the results of the waste determination performed in accordance with the requirements of subdivision a shall be used to establish compliance with the requirements of sections 33-24-05-450 through 33-24-05-474.
  - e. In a case when the owner or operator has used an averaging period greater than one hour for determining the average VO concentration of a hazardous waste at the point of waste origination, the department may elect to establish compliance with sections 33-24-05-450 through 33-24-05-474 by performing or requesting that the owner or operator perform a waste determination using direct measurement based on waste samples collected within a one-hour period as follows:

- (1) The average VO concentration of the hazardous waste at the point of waste origination shall be determined by direct measurement in accordance with the requirements of subsection 1 of section 33-24-05-453.
- (2) Results of the waste determination performed or requested by the department showing that the average VO concentration of the hazardous waste at the point of waste origination is equal to or greater than five hundred parts per million weight shall constitute noncompliance with sections 33-24-05-450 through 33-24-05-474 except in a case as provided for in paragraph 3.
- (3) For the case when the average VO concentration of the hazardous waste at the point of waste origination previously has been determined by the owner or operator using an averaging period greater than one hour to be less than five hundred parts per million weight but because of normal operating process variations the VO concentration of the hazardous waste determined by direct measurement for any given one-hour period may be equal to or greater than five hundred parts per million weight, information that was used by the owner or operator to determine the average VO concentration of the hazardous waste (for example, test results, measurements, calculations, and other documentation) and recorded in the facility records in accordance with the requirements of subsection 1 of section 33-24-05-453 and section 33-24-05-459 shall be considered by the department together with the results of the waste determination performed or requested by the department in establishing compliance with sections 33-24-05-450 through 33-24-05-474.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC ~~23-20.3~~ 23-20.3-03

**Law Implemented:** NDCC ~~23-20.3, 23-20.4~~ 23-20.3-03, 23-20.3-04

### **33-24-05-453. Waste determination procedures.**

1. Waste determination procedure to determine average volatile organic (VO) concentration of a hazardous waste at the point of waste origination.
  - a. An owner or operator shall determine the average VO concentration at the point of waste origination for each hazardous waste placed in a waste management unit exempted under the provisions of subdivision a of subsection 2 3 of section 33-24-05-452 from using air emission controls in accordance

with standards specified in sections 33-24-05-454 through 33-24-05-457, as applicable to the waste management unit.

(1) An initial determination of the average VO concentration of the waste stream shall be made before the first time any portion of the material in the hazardous waste stream is placed in a waste management unit exempted under the provisions of subdivision a of subsection 3 of section 33-24-05-452 from using air emission controls, and thereafter an initial determination of the average VO concentration of the waste stream shall be made for each averaging period that a hazardous waste is managed in the unit; and

(2) Perform a new waste determination whenever changes to the source generating the waste stream are reasonably likely to cause the average VO concentration of the hazardous waste to increase to a level that is equal to or greater than the applicable VO concentration limits specified in section 33-24-05-452.

b. The For a waste determination that is required by subdivision a, the average VO concentration of a hazardous waste at the point of waste origination may be determined in accordance with the procedures specified in paragraphs 1 through 3.

(1) The average VO concentration of a hazardous waste at the point of waste origination must be determined using either direct measurement as specified in paragraph 2 or by knowledge as specified in paragraph 3.

(2) Direct measurement to determine average VO concentration of a hazardous waste at the point of waste origination.

(a) Identification. The owner or operator shall identify and record the point of waste origination for the hazardous waste.

(b) Sampling. Samples of the hazardous waste stream must be collected at the point of waste origination in a manner such that volatilization of organics contained in the waste and in the subsequent sample is minimized and an adequately representative sample is collected and maintained for analysis by the selected method.

[1] The averaging period to be used for determining the average VO concentration for the hazardous waste stream on a mass-weighted average basis must be designated and recorded. The averaging period can represent any time interval that the



owner or operator determines is appropriate for the hazardous waste stream but shall not exceed one year.

- [2] A sufficient number of samples, but no less than four samples, must be collected and analyzed for the a hazardous waste stream determination. All of the samples for a given waste determination shall be collected within a one-hour period. The average of the four or more sample results constitutes a waste determination for the waste stream. One or more waste determinations may be required to represent the complete range of waste compositions and quantities that occur during the entire averaging period due to normal variations in the operating conditions for the source or process generating the hazardous waste stream. Examples of such normal variations are seasonal variations in waste quantity or fluctuations in ambient temperature.
- [3] All samples must be collected and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan must describe the procedure by which representative samples of the hazardous waste stream are collected such that a minimum loss of organics occurs throughout the sample collection and handling process, and by which sample integrity is maintained. A copy of the written sampling plan must be maintained onsite in the facility operating records. An example of an acceptable sampling plan includes a plan incorporating sample collection and handling procedures in accordance with the requirements specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846 as incorporated by reference in section 33-24-01-05, or method 25D in 40 CFR part 60, appendix A.
- [4] Sufficient information, as specified in the "site sampling plan" required under item 3 of subparagraph b of paragraph 3 of subdivision b, shall be prepared and recorded to document the waste quantity represented by the samples and, as applicable, the operating conditions for

the source or process generating the hazardous waste represented by the samples.

- (c) Analysis. Each collected sample must be prepared and analyzed in accordance with one or more of the methods listed in items 1 through 9, including appropriate quality assurance and quality control checks and use of target compounds for calibration. If method 25D in 40 CFR part 60, appendix A, is not used, then one or more methods should be chosen that are appropriate to ensure that the waste determination accounts for and reflects all organic compounds in the waste with Henry's law constant values at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase  $(0.1 \frac{Y}{X})$  [which can also be expressed as  $1.8 \times 10^{-6}$  atmospheres/gram-mole meters<sup>3</sup>] at twenty-five degrees Celsius. Each of the analytical methods listed in items 2 through 7 has an associated list of approved chemical compounds, for which the department considers the method appropriate for measurement. If an owner or operator uses environmental protection agency method 624, 625, 1624, or 1625 in 40 CFR part 136, appendix A, to analyze one or more compounds that are not on that method's published list, the alternative test procedure contained in 40 CFR ~~part~~ parts 136.4 and 136.5 must be followed. If an owner or operator uses environmental protection agency method ~~8260(B)~~ 8260 or ~~8270(C)~~ 8270 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846 as incorporated by reference in section 33-24-01-05 to analyze one or more compounds that are not on that method's published list, the procedures in item 8 must be followed. At the owner's or operator's discretion, the ~~concentration of each individual chemical constituent~~ owner or operator may adjust test data measured in the waste by a method other than method 25D ~~may be corrected to the~~ to the corresponding average VO concentration had it been measured ~~value which would have been obtained had the waste samples been analyzed using method 25D by multiplying in 40 CFR part 60, appendix A. To adjust these data, the measured concentration of each individual chemical constituent contained in the waste is multiplied by the appropriate constituent-specific adjustment factor ( $f_{m25D}$ ) as specified in subparagraph e. If the owner or operator elects to adjust test data, the adjustment must be made to all individual chemical constituents with a~~



Henry's law constant value greater than or equal to 0.1 Y/X at twenty-five degrees Celsius contained in the waste. Constituent-specific adjustment factors ( $f_{m25D}$ ) can be obtained by contacting the Waste and Chemical Processes Group, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711.

- [1] Method 25D in 40 CFR part 60, appendix A.
- [2] Method 624 in 40 CFR part 136, appendix A.
- [3] Method 625 in 40 CFR part 136, appendix A. Perform corrections to the compounds for which the analysis is being conducted based on the "accuracy as recovery" using the factors in table 7 of the method.
- [4] Method 1624 in 40 CFR part 136, appendix A.
- [5] Method 1625 in 40 CFR part 136, appendix A.
- [6] Method ~~8260(B)~~ 8260 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846 as incorporated by reference in section 33-24-01-05. Maintain a formal quality assurance program consistent with the requirements of method ~~8260(B)~~ 8260. The quality assurance program shall include the following elements:
  - [a] Documentation of site-specific procedures to minimize the loss of compounds due to volatilization, biodegradation, reaction, or sorption during the sample collection, storage, preparation, introduction, and analysis steps.
  - [b] Measurement of the overall accuracy and precision of the specific procedures.
- [7] Method ~~8270(G)~~ 8270 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846 as incorporated by reference in section 33-24-01-05. Maintain a formal quality assurance program consistent with the requirements of method ~~8270(G)~~ 8270. The



quality assurance program shall include the following elements:

- [a] Documentation of site-specific procedures to minimize the loss of compounds due to volatilization, biodegradation, reaction, or sorption during the sample collection, storage, and preparation, introduction, and analysis steps.
  - [b] Measurement of the overall accuracy and precision of the specific procedures.
- [8] Any other environmental protection agency standard method that has been validated in accordance with "Alternative Validation Procedure for Environmental Protection Agency Waste and Wastewater Methods", 40 CFR part 63, appendix D. As an alternative, other environmental protection agency standard methods may be validated by the procedure specified in item 9.
- [9] Any other analysis method that has been validated in accordance with the procedures specified in section 5.1 or 5.3, and the corresponding calculations in section 6.1 or section 6.3, of method 301 in 40 CFR part 63, appendix A. The data are acceptable if they meet the criteria specified in section 6.1.5 or 6.3.3 of method 301. If correction is required under section 6.3.3 of method 301, the data are acceptable if the correction factor is within the range 0.7 to 1.30. Other sections of method 301 are not required.
- (d) ~~Calculations. The average VO concentration ( $\bar{C}$ ) on a mass-weighted basis must be calculated by using the results for all samples analyzed in accordance with subparagraph c and the following equation:~~
- [1] The average VO concentration ( $\bar{C}$ ) on a mass-weighted basis shall be calculated by using the results for all waste determinations conducted in accordance with subparagraphs b and c and the following equation:

$$\bar{C} = \frac{1}{Q_t} \times \sum_{i=1}^n (Q_i \times C_i)$$

where:

$\bar{C}$  = Average VO concentration of the hazardous waste at the point of waste origination on a mass-weighted basis, parts per million weight.

$i$  = Individual sample "i" of the hazardous waste.

$n$  = Total number of samples waste determinations of the hazardous waste collected (at least four) for the averaging period (not to exceed one year).

$Q_i$  = Mass quantity of hazardous waste stream represented by  $C_i$ , kilograms per hour.

$Q_t$  = Total mass quantity of hazardous waste during the averaging period, kilograms per hour.

$C_i$  = Measured VO concentration of sample waste determination "i" as determined in accordance with the requirements of subparagraph c (for example, the average of the four or more samples specified in item 2 of subparagraph b of paragraph 2), parts per million weight.

[2] For the purpose of determining  $C_i$  for individual waste samples analyzed in accordance with subparagraph c, the owner or operator shall account for VO concentrations determined to be below the limit of detection of the analytical method by using the following VO concentration:

[a] If method 25D in 40 CFR part 60, appendix A, is used for the analysis, one-half the blank value determined in the method at section 4.4 of method 25D in 40 CFR part 60, appendix A.

[b] If any other analytical method is used, one-half the sum of the limits of detection established for each organic constituent in the waste that has a Henry's law constant values at least



0.1 mole-fraction-in-the-gas-phase/  
mole-fraction-in-the-liquid-phase (0.1 Y/X)  
[which can also be expressed as  $1.8 \times 10^{-6}$   
atmospheres/gram-mole/m<sup>3</sup>] at twenty-five  
degrees Celsius.

- (e) Provided that the test method is appropriate for the waste as required under subparagraph c, the department will determine compliance based on the test method used by the owner or operator as recorded pursuant to subsection 5 of section 33-24-05-460.
- (3) Use of owner or operator knowledge to determine average VO concentration of a hazardous waste at the point of waste origination.
- (a) Documentation shall be prepared that presents the information used as the basis for the owner's or operator's knowledge of the hazardous waste stream's average VO concentration. Examples of information that may be used as the basis for knowledge include: material balances for the source or process generating the hazardous waste stream; constituent-specific chemical test data for the hazardous waste stream from previous testing that are still applicable to the current waste stream; previous test data for other locations managing the same type of waste stream; or other knowledge based on information included in manifests, shipping papers, or waste certification notices.
- (b) If test data are used as the basis for knowledge, then the owner or operator shall document the test method, sampling protocol, and the means by which sampling variability and analytical variability are accounted for in the determination of the average VO concentration. For example, an owner or operator may use organic concentration test data for the hazardous waste stream that are validated in accordance with method 301 in 40 CFR part 63, appendix A, as the basis for knowledge of the waste.
- (c) An owner or operator using chemical constituent-specific concentration test data as the basis for knowledge of the hazardous waste may adjust the test data to the corresponding average VO concentration value which would have been obtained had the waste samples been analyzed using method 25D and 40 CFR part 60, appendix A. To

adjust these data, the measured concentration for each individual chemical constituent contained in the waste is multiplied by the appropriate constituent-specific adjustment factor ( $f_{m25D}$ ).

- (d) In the event that the department and the owner or operator disagree on a determination of the average VO concentration for a hazardous waste stream using knowledge, then the results from a determination of average VO concentration using direct measurement as specified in paragraph 2 must be used to establish compliance with the applicable requirements in sections 33-24-05-450 through 33-24-05-474. The department may perform or request that the owner or operator perform this determination using direct measurement. The owner or operator may choose one or more appropriate methods to analyze each collected sample in accordance with the requirements of subparagraph c of paragraph 2.

2. Waste determination procedures for treated hazardous waste.

- a. An owner or operator shall perform the applicable waste ~~determination~~ determinations for each treated hazardous waste placed in ~~a~~ waste management unit units exempted under the provisions of paragraphs 1 through 6 of subdivision b of subsection 3 of section 33-24-05-452 from using air emission controls in accordance with standards specified in sections 33-24-05-454 through 33-24-05-457, as applicable to the waste management unit.
  - (1) An initial determination of the average VO concentration of the waste stream shall be made before the first time any portion of the material in the treated waste stream is placed in the exempt waste management unit, and thereafter update the information used for the waste determination at least once every twelve months following the date of the initial waste determination; and
  - (2) Perform a new waste determination whenever changes to the process generating or treating the waste stream are reasonably likely to cause the average VO concentration of the hazardous waste to increase to a level such that the applicable treatment conditions specified in subdivision b of subsection 3 of section 33-24-05-452 are not achieved.
- b. The waste determination for a treated hazardous waste must be performed in accordance with the procedures specified in

paragraphs 1 through 8, as applicable to the treated hazardous waste.

- (1) The owner or operator shall designate and record the specific provision in subdivision b of subsection 3 of section 33-24-05-453 under which the waste determination is being performed. The waste determination for the treated hazardous waste shall be performed using the applicable procedures specified in paragraphs 2 through 8.
- (2) Procedure to determine the average VO concentration of a hazardous waste at the point of waste treatment.
  - (a) Identification. The owner or operator shall identify and record the point of waste treatment for the hazardous waste.
  - (b) Sampling. Samples of the hazardous waste stream must be collected at the point of waste treatment in a manner such that volatilization of organics contained in the waste and in the subsequent sample is minimized and an adequately representative sample is collected and maintained for analysis by the selected method.
    - [1] The averaging period to be used for determining the average VO concentration for the hazardous waste stream on a mass-weighted average basis must be designated and recorded. The averaging period can represent any time interval that the owner or operator determines is appropriate for the hazardous waste stream but shall not exceed one.
    - [2] A sufficient number of samples, but no less than four samples, must be collected and analyzed for the a hazardous waste stream determination. All of the samples for a given waste determination shall be collected within a one-hour period. The average of the four or more sample results constitutes a waste determination for the waste stream. One or more waste determinations may be required to represent the complete range of waste compositions and quantities that occur during the entire averaging period due to normal variations in the operating conditions for the process treating the hazardous waste stream. Examples of such normal variations are seasonal variations in waste quantity or fluctuations in ambient temperature.



- [3] All samples must be collected and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan must describe the procedure by which representative samples of the hazardous waste stream are collected such that a minimum loss of organics occurs throughout the sample collection and handling process, and by which sample integrity is maintained. A copy of the written sampling plan must be maintained onsite in the facility operating records. An example of an acceptable sampling plan includes a plan incorporating sample collection and handling procedures in accordance with the requirements specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846 as incorporated by reference in section 33-24-01-05, or method 25D in 40 CFR part 60, appendix A.
- [4] Sufficient information, as specified in the "site sampling plan" required under item 3 of subparagraph b of paragraph 3 of subdivision b and subparagraph b of paragraph 2 of subdivision b shall be prepared and recorded to document the waste quantity represented by the samples and, as applicable, the operating conditions for the process treating the hazardous waste represented by the samples.
- (c) Analysis. Each collected sample must be prepared and analyzed in accordance with one or more of the methods listed in items 1 through 9, including appropriate quality assurance and quality control checks and use of target compounds for calibration. When the owner or operator is making a waste determination for a treated hazardous waste that is to be compared to an average VO concentration at the point of waste origination or the point of waste entry to the treatment system, to determine if the conditions of paragraphs 1 through 6 of subdivision b of subsection 3 of section 33-24-05-452 are met, then the waste samples shall be prepared and analyzed using the same method or methods as were used in making the initial waste determinations at the point of waste origination or at the point of entry to the treatment system. If method 25D in 40 CFR part 60, appendix A, is not used, then one or more methods should be

chosen that are appropriate to ensure that the waste determination accounts for and reflects all organic compounds in the waste with Henry's law constant values at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase ( $0.1 \frac{Y}{X}$ ) [which can also be expressed as  $1.8 \times 10^{-6}$  atmospheres/gram-mole meters<sup>3</sup>] at twenty-five degrees Celsius. Each of the analytical methods listed in items 2 through 7 has an associated list of approved chemical compounds, for which the department considers the method appropriate for measurement. If an owner or operator uses environmental protection agency method 624, 625, 1624, or 1625 in 40 CFR part 136, appendix A, to analyze one or more compounds that are not on that method's published list, the alternative test procedure contained in 40 CFR ~~part~~ parts 136.4 and 136.5 must be followed. If an owner or operator uses environmental protection agency method ~~8260(B)~~ 8260 or ~~8270(C)~~ 8270 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846 as incorporated by reference in section 33-24-01-05 to analyze one or more compounds that are not on that method's published list, the procedures in item 8 must be followed. At the owner's or operator's discretion, the ~~concentration of each individual chemical constituent~~ owner or operator may adjust test data measured in the waste by a method other than method 25D may be corrected to the to the corresponding average VO concentration had it been measured value which would have been obtained had the waste samples been analyzed using method 25D by multiplying in 40 CFR part 60, appendix A. To adjust these data the measured concentration of each individual chemical constituent contained in the waste is multiplied by the appropriate constituent-specific adjustment factor ( $f_{m25D}$ ) as specified in subparagraph a of paragraph 3 of subdivision b of subsection 1. If the owner or operator elects to adjust test data, the adjustment must be made to all individual chemical constituents with a Henry's law constant value greater than or equal to 0.1  $\frac{Y}{X}$  at twenty-five degrees Celsius contained in the waste. Constituent-specific adjustment factors ( $f_{m25D}$ ) can be obtained by contacting the Waste and Chemical Processes Group, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711.

[1] Method 25D in 40 CFR part 60, appendix A.

- [2] Method 624 in 40 CFR part 136, appendix A.
- [3] Method 625 in 40 CFR part 136, appendix A. Perform corrections to the compounds for which the analysis is being conducted based on the "accuracy as recovery" using the factors in table 7 of the method.
- [4] Method 1624 in 40 CFR part 136, appendix A.
- [5] Method 1625 in 40 CFR part 136, appendix A.
- [6] Method ~~8260(B)~~ 8260 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846 as incorporated by reference in section 33-24-01-05. Maintain a formal quality assurance program consistent with the requirements of method ~~8260(B)~~ 8260. The quality assurance program shall include the following elements:
  - [a] Documentation of site-specific procedures to minimize the loss of compounds due to volatilization, biodegradation, reaction, or sorption during the sample collection, storage, preparation, introduction, and analysis steps.
  - [b] Measurement of the overall accuracy and precision of the specific procedures.
- [7] Method ~~8270(G)~~ 8270 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846 as incorporated by reference in section 33-24-01-05. Maintain a formal quality assurance program consistent with the requirements of method ~~8270(G)~~ 8270. The quality assurance program must include the following elements:
  - [a] Documentation of site-specific procedures to minimize the loss of compounds due to volatilization, biodegradation, reaction, or sorption during the sample collection, storage, preparation, introduction, and analysis steps.



[b] Measurement of the overall accuracy and precision of the specific procedures.

[8] Any other environmental protection agency standard method that has been validated in accordance with "Alternative Validation Procedure for Environmental Protection Agency Waste and Wastewater Methods", 40 CFR part 63, appendix D. As an alternative, other environmental protection agency standard methods may be validated by the procedure specified in item 9.

[9] Any other analysis method that has been validated in accordance with the procedures specified in section 5.1 or 5.3 and the corresponding calculations in section 6.1 or section 6.3 of method 301 in 40 CFR part 63, appendix A. The data are acceptable if they meet the criteria specified in section 6.1.5 or 6.3.3 of method 301. If correction is required under section 6.3.3 of method 301, the data are acceptable if the correction factor is within the range 0.7 to 1.30. Other sections of method 301 are not required.

(d) Calculations. The average VO concentration ( $\bar{C}$ ) on a mass-weighted basis must be calculated by using the results for all ~~samples analyzed~~ waste determinations in accordance with ~~subparagraph~~ subparagraphs b and c and the following equation:

$$\bar{C} = \frac{1}{Q_t} \times \sum_{i=1}^n (Q_i \times C_i)$$

where:

$\bar{C}$  = Average VO concentration of the hazardous waste at the point of waste treatment on a mass-weighted basis, parts per million weight.

$i$  = Individual sample "i" of the hazardous waste.

$n$  = Total number of ~~samples~~ waste determinations of the hazardous waste collected ~~(at least four)~~ conducted for the averaging period (not to exceed one year).

$Q_i$  = Mass quantity of hazardous waste stream represented by  $C_i$ , kilograms per hour.

$Q_T$  = Total mass quantity of hazardous waste during the averaging period, kilograms per hour.

$C_i$  = Measured VO concentration of sample waste determination "i" as determined in accordance with the requirements of subparagraph c (for example, the average of the four or more samples specified in item 2 of subparagraph b of paragraph 3), parts per million weight.

(e) Provided that the test method is appropriate for the waste as required under paragraph 3, compliance shall be determined based on the test method used by the owner or operator as recorded pursuant to subsection 5 of section 33-24-05-460.

(3) Procedure to determine the exit concentration limit ( $C_t$ ) for a treated hazardous waste.

(a) The point of waste origination for each hazardous waste treated by the process at the same time must be identified.

(b) If a single hazardous waste stream is identified in subparagraph a, then the exit concentration limit ( $C_t$ ) must be five hundred parts per million weight.

(c) If more than one hazardous waste stream is identified in subparagraph a, then the average VO concentration of each hazardous waste stream at the point of waste origination must be determined in accordance with the requirements of subsection 1. The exit concentration limit ( $C_t$ ) must be calculated by using the results determined for each individual hazardous waste stream and the following equation:

$$C_t = \frac{\sum_{x=1}^m (Q_x \times \bar{C}_x) + \sum_{y=1}^n (Q_y \times 500 \text{ ppmw})}{\sum_{x=1}^m Q_x + \sum_{y=1}^n Q_y}$$

where:

$C_t$  = Exit concentration limit for treated hazardous waste, parts per million weight.

x = Individual hazardous waste stream "x" that has an average VO concentration less than five hundred parts per million weight at the point of waste origination as determined in accordance with the requirements of paragraph 1 of subdivision b of subsection 1.

y = Individual hazardous waste stream "y" that has an average VO concentration equal to or greater than five hundred parts per million weight at the point of waste origination as determined in accordance with the requirements of paragraph 1 of subdivision b of subsection 1.

m = Total number of "x" hazardous waste streams treated by process.

n = Total number of "y" hazardous waste streams treated by process.

$Q_x$  = Annual mass quantity of hazardous waste stream "x", kg/yr.

$Q_y$  = Annual mass quantity of hazardous waste stream "y", kg/yr.

$\bar{C}_x$  = Average VO concentration of hazardous waste stream "x" at the point of waste origination as determined in accordance with the requirements of paragraph 1 of subdivision b of subsection 1, parts per million weight.

(4) Procedure to determine the organic reduction efficiency (R) for a treated hazardous waste.

(a) The organic reduction efficiency (R) for a treatment process must be determined based on results for a minimum of three ~~consecutive~~ consecutive runs.

(b) All hazardous waste streams entering the treatment process and all hazardous waste streams exiting the treatment process must be identified. The owner or operator shall prepare a sampling plan for measuring these streams that accurately reflects the retention time of the hazardous waste in the process.

(c) For each run, information must be determined for each hazardous waste stream identified in subparagraph b using the following procedures:



- [1] The mass quantity of each hazardous waste stream entering the process ( $Q_b$ ) and the mass quantity of each hazardous waste stream exiting the process ( $Q_a$ ) must be determined.
  - [2] The average VO concentration at the point of waste origination of each hazardous waste stream entering the process ( $C_b$ ) during the run must be determined in accordance with the requirements of paragraph 2 of subdivision b of subsection 1. The average VO concentration at the point of waste treatment of each waste stream exiting the process ( $C_a$ ) during the run must be determined in accordance with the requirements of paragraph 2.
- (d) The waste volatile organic mass flow entering the process ( $E_b$ ) and the waste volatile organic mass flow exiting the process ( $E_a$ ) must be calculated by using the results determined in accordance with subparagraph c and the following equations:

$$E_b = \frac{1}{10^6} \sum_{j=1}^m (Q_{b_j} \times \overline{C_{b_j}})$$

$$E_a = \frac{1}{10^6} \sum_{j=1}^m (Q_{a_j} \times \overline{C_{a_j}})$$

where:

$E_a$  = Waste volatile organic mass flow exiting process, kilograms per hour.

$E_b$  = Waste volatile organic mass flow entering process, kilograms per hour.

$m$  = Total number of runs (at least three).

$j$  = Individual run "j".

$Q_b$  = Mass quantity of hazardous waste entering process during run "j", kilograms per hour.

$Q_a$  = Average mass quantity of hazardous waste exiting process during run "j", kilograms per hour.

$\bar{C}_a$  = Average VO concentration of hazardous waste exiting process during run "j" as determined in accordance with the requirements of paragraph 2, parts per million weight.

$\bar{C}_b$  = Average VO concentration of hazardous waste entering process during run "j" as determined in accordance with the requirements of paragraph 2 of subdivision b of subsection 1, parts per million weight.

- (e) The organic reduction efficiency of the process shall be calculated by using the results determined in accordance with subparagraph d and the following equation:

$$R = \frac{E_b - E_a}{E_b} \times 100\%$$

where:

R = Organic reduction efficiency, percent.

$E_b$  = Waste volatile organic mass flow entering process as determined in accordance with the requirements of subparagraph d, kilograms per hour.

$E_a$  = Waste volatile organic mass flow exiting process as determined in accordance with the requirements of subparagraph d, kilograms per hour.

- (5) Procedure to determine the organic biodegradation efficiency ( $R_{bio}$ ) for a treated hazardous waste.

(a) The fraction of organics biodegraded ( $F_{bio}$ ) must be determined using the procedure specified in 40 CFR part 63, appendix C.

(b) The  $R_{bio}$  must be calculated by using the following equation:

$$R_{bio} = F_{bio} \times 100\%$$

where:

$R_{\text{bio}}$  = Organic biodegradation efficiency, percent.

$F_{\text{bio}}$  = Fraction of organic biodegraded as determined in accordance with the requirements of subparagraph a.

- (6) Procedure to determine the required organic mass removal rate (RMR) for a treated hazardous waste.
- (a) All of the hazardous waste streams entering the treatment process must be identified.
  - (b) The average VO concentration of each hazardous waste stream at the point of waste origination must be determined in accordance with the requirements of paragraph 1 of subdivision b of subsection 1.
  - (c) For each individual hazardous waste stream that has an average VO concentration equal to or greater than five hundred parts per million weight at the point of waste origination, the average volumetric flow rate and the density of the hazardous waste stream at the point of waste origination must be determined.
  - (d) The RMR must be calculated by using the average VO concentration, average volumetric flow rate, and density determined for each individual hazardous waste stream, and the following equation:

$$\text{RMR} = \sum_{y=1}^n [V_y \times \rho_y \times \frac{(\bar{C}_y - 500 \text{ ppmw})}{10^6}]$$

where: RMR = Required organic mass removal rate, kilograms per hour.

y = Individual hazardous waste stream "y" that has an average VO concentration equal to or greater than five hundred parts per million weight at the point of waste origination as determined in accordance with the requirements of paragraph 1 of subdivision b of subsection 1.

n = Total number of "y" hazardous waste streams treated by process.

$V_y$  = Average volumetric flow rate of hazardous waste stream "y" at the point of waste origination, meters<sup>3</sup>/hr.



$K_y$  = Density of hazardous waste stream, "y", kg/meters<sup>3</sup>.

$\bar{C}_y$  = Average VO concentration of hazardous waste stream "y" at the point of waste origination as determined in accordance with the requirements of paragraph 1 of subdivision b of subsection 1, parts per million weight.

(7) Procedure to determine the actual organic mass removal rate (MR) for a treated hazardous waste.

- (a) The MR shall be determined based on results for a minimum of three consecutive runs. The sampling time for each run must be one hour.
- (b) The waste volatile organic mass flow entering the process ( $E_b$ ) and the waste volatile organic mass flow exiting the process ( $E_a$ ) must be determined in accordance with the requirements of subparagraph d of paragraph 4.
- (c) The MR must be calculated by using the mass flow rate determined in accordance with the requirements of subparagraph b and the following equation:

$$MR = E_b - E_a$$

where:

MR = Actual organic mass removal rate, kilograms per hour.

$E_b$  = Waste volatile organic mass flow entering process as determined in accordance with the requirements of subparagraph d of paragraph 4, kilograms per hour.

$E_a$  = Waste volatile organic mass flow exiting process as determined in accordance with the requirements of subparagraph d of paragraph 4, kilograms per hour.

(8) Procedure to determine the actual organic mass biodegradation rate ( $MR_{bio}$ ) for a treated hazardous waste.

- (a) The  $MR_{bio}$  must be determined based on results for a minimum of three consecutive runs. The sampling time for each run must be one hour.

- (b) The waste organic mass flow entering the process ( $E_b$ ) must be determined in accordance with the requirements of subparagraph d of paragraph 4.
- (c) The fraction of organic biodegraded ( $F_{bio}$ ) must be determined using the procedure specified in 40 CFR part 63, appendix C.
- (d) The  $MR_{bio}$  must be calculated by using the mass flow rates and fraction of organic biodegraded determined in accordance with the requirements of subparagraphs b and c, respectively, and the following equation:

$$MR_{bio} = E_b \times F_{bio}$$

where:

$MR_{bio}$  = Actual organic mass biodegradation rate, kilograms per hour.

$E_b$  = Waste organic mass flow entering process as determined in accordance with the requirements of subparagraph d of paragraph 4, kilograms per hour.

$F_{bio}$  = Fraction of organic biodegraded as determined in accordance with the requirements of subparagraph c.

3. Procedure to determine the maximum organic vapor pressure of a hazardous waste in a tank.
  - a. An owner or operator shall determine the maximum organic vapor pressure for each hazardous waste placed in a tank using tank level 1 controls in accordance with standards specified in subsection 3 of section 33-24-05-454.
  - b. The maximum organic vapor pressure of the hazardous waste may be determined in accordance with the procedures specified below:
    - (1) An owner or operator shall determine the maximum organic vapor pressure for each hazardous waste placed in a tank using tank level 1 controls in accordance with the standards specified in section 33-24-05-454.
    - (2) An owner or operator shall use either direct measurement as specified in paragraph 3 or knowledge of the waste as specified in paragraph 4 to determine the maximum organic

vapor pressure which is representative of the hazardous waste composition stored or treated in the tank.

(3) Direct measurement to determine the maximum organic vapor pressure of a hazardous waste.

(a) Sampling. A sufficient number of samples must be collected to be representative of the waste contained in the tank. All samples must be collected and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan must describe the procedure by which representative samples of the hazardous waste are collected such that a minimum loss of organics occurs throughout the sample collection and handling process and by which sample integrity is maintained. A copy of the written sampling plan must be maintained onsite in the facility operating records. An example of an acceptable sampling plan includes a plan incorporating sample collection and handling procedures in accordance with the requirements specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846, as incorporated by reference in section 33-24-01-05, or method 25D in 40 CFR part 60, appendix A.

(b) Analysis. Any appropriate one of the following methods may be used to analyze the samples and compute the maximum organic vapor pressure of the hazardous waste:

[1] Method 25E in 40 CFR part 60, appendix A;

[2] 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 33-24-01-05;

[3] Methods obtained from the standard reference texts;

[4] ASTM method 2879-92, as incorporated by reference in section 33-24-01-05; or

[5] Any other method approved by the department.



- (4) Use of knowledge to determine the maximum organic vapor pressure of the hazardous waste. Documentation must be prepared and recorded that presents the information used as the basis for the owner's or operator's knowledge that the maximum organic vapor pressure of the hazardous waste is less than the maximum vapor pressure limit listed in paragraph 1 of subdivision a of subsection 2 of section 33-24-05-454 for the applicable tank design capacity category. An example of information that may be used is documentation that the hazardous waste is generated by a process for which at other locations it previously has been determined by direct measurement that the waste maximum organic vapor pressure is less than the maximum vapor pressure limit for the appropriate tank design capacity category.
- 4. The procedure for determining no detectable organic emissions for the purpose of complying with sections 33-24-05-450 through 33-24-05-474 must be conducted in accordance with the procedures specified below:
  - a. The test must be conducted in accordance with the procedures specified in method 21 of 40 CFR part 60, appendix A. Each potential leak interface (for example, a location where organic vapor leakage could occur) on the cover and associated closure devices must be checked. Potential leak interfaces that are associated with covers and closure devices include, but are not limited to: the interface of the cover and its foundation mounting; the periphery of any opening on the cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure relief valve.
  - b. The test must be performed when the unit contains a hazardous waste having an organic concentration representative of the range of concentrations for the hazardous waste expected to be managed in the unit. During the test, the cover and closure devices must be secured in the closed position.
  - c. The detection instrument must meet the performance criteria of method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2(a) of method 21 must be for the average composition of the organic constituents in the hazardous waste placed in the waste management unit, not for each individual organic constituent.
  - d. The detection instrument must be calibrated before use on each day of its use by the procedures specified in method 21 of 40 CFR part 60, appendix A.
  - e. Calibration gases must be as follows:

- (1) Zero air (less than ten parts per million volume hydrocarbon in air); and
  - (2) A mixture of methane in 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 July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC ~~23-20.3, 23-20.4~~ 23-20.3-03, 23-20.3-04

#### **33-24-05-454. Standards - Tanks.**

1. The provisions of this section apply to the control of air pollutant emissions from tanks for which subsection 2 of section 33-24-05-452 references the use of this section for such air emission control.

2. The owner or operator shall control air pollutant emissions from each tank subject to this section in accordance with the following requirements as applicable:
  - a. For a tank that manages hazardous waste that meets all of the conditions specified in paragraphs 1 through 3, the owner or operator shall control air pollutant emissions from the tank in accordance with the tank level 1 controls specified in subsection 3 or the tank level 2 controls specified in subsection 4.
    - (1) The hazardous waste in the tank has a maximum organic vapor pressure which is less than the maximum organic vapor pressure limit for the tank's design capacity category as follows:
      - (a) For a tank design capacity equal to or greater than 5,330 feet<sup>3</sup> [151 meters<sup>3</sup>], the maximum organic vapor pressure limit for the tank is 5.2 kilopascals.
      - (b) For a tank design capacity equal to or greater than 2,650 feet<sup>3</sup> [75 meters<sup>3</sup>] but less than 5,330 feet<sup>3</sup> [151 meters<sup>3</sup>], the maximum organic vapor pressure limit for the tank is 27.6 kilopascals.
      - (c) For a tank design capacity less than 2,650 feet<sup>3</sup> [75 meters<sup>3</sup>], the maximum organic vapor pressure limit for the tank is 76.6 kilopascals.
    - (2) The hazardous waste in the tank is not heated by the owner or operator to a temperature that is greater than the temperature at which the maximum organic vapor pressure of the hazardous waste is determined for the purpose of complying with paragraph 1.
    - (3) The hazardous waste in the tank is not treated by the owner or operator using a waste stabilization process, as defined in section 33-24-05-451.
  - b. For a tank that manages hazardous waste that does not meet all of the conditions specified in paragraphs 1 through 3, the owner or operator shall control air pollutant emissions from the tank by using tank level 2 controls in accordance with the requirements of subsection 4. Examples of tanks required to use tank level 2 controls include: a tank used for a waste stabilization process; and a tank for which the hazardous waste in the tank has a maximum organic vapor pressure that is equal to or greater than the maximum organic vapor pressure limit for the tank's design capacity category as specified in paragraph 1.



3. Owners and operators controlling air pollutant emissions from a tank using tank level 1 controls shall meet the requirements specified in subdivisions a through d:
  - a. The owner or operator shall determine the maximum organic vapor pressure for a hazardous waste to be managed in the tank using tank level 1 controls before the first time the hazardous waste is placed in the tank. The maximum organic vapor pressure must be determined using the procedures specified in subsection 3 of section 33-24-05-453. Thereafter, the owner or operator shall perform a new determination whenever changes to the hazardous waste managed in the tank could potentially cause the maximum organic vapor pressure to increase to a level that is equal to or greater than the maximum organic vapor pressure limit for the tank design capacity category specified in paragraph 1 of subdivision a of subsection 2, as applicable to the tank.
  - b. The tank must be equipped with a fixed roof designed to meet the following specifications:
    - (1) The fixed roof and its closure devices must be designed to form a continuous barrier over the entire surface area of the hazardous waste in the tank. The fixed roof may be a separate cover installed on the tank (for example, a removable cover mounted on an open-top tank) or may be an integral part of the tank structural design (for example, a horizontal cylindrical tank equipped with a hatch).
    - (2) The fixed roof must be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between roof section joints or between the interface of the roof edge and the tank wall.
    - (3) Each opening in the fixed roof, and any manifold system associated with the fixed roof, must be either:
      - (a) Equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the opening and the closure device; or
      - (b) Connected by a closed-vent system that is vented to a control device. The control device must remove or destroy organics in the vent stream, and it must be operating whenever hazardous waste is managed in the tank, except as provided for in items 1 and 2.

[1] During periods when it is necessary to provide access to the tank for performing the activities of item 2, venting of the vapor headspace underneath the fixed roof to the control device is not required, opening of closure devices is allowed, and removal of the fixed roof is allowed. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, and resume operation of the control device.

[2] During periods of routine inspection, maintenance, or other activities needed for normal operations, and for removal of accumulated sludge or other residues from the bottom of the tank.

(4) The fixed roof and its closure devices must be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the fixed roof and closure devices throughout their intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices include: organic vapor permeability, the effects of any contact with the hazardous waste or its vapors managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.

c. Whenever a hazardous waste is in the tank, the fixed roof must be installed with each closure device secured in the closed position except as follows:

(1) Opening of closure devices or removal of the fixed roof is allowed at the following times:

(a) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample the liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.

- (b) To remove accumulated sludge or other residues from the bottom of the tank.
- (2) Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the tank internal pressure in accordance with the tank design specifications. The device must be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens must be established such that the device remains in the closed position whenever the tank internal pressure is within the internal pressure operating range determined by the owner or operator based on the tank manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the tank internal pressure exceeds the internal pressure operating range for the tank as a result of loading operations or diurnal ambient temperature fluctuations.
- (3) Opening of a safety device, as defined in section 33-24-05-451, is allowed at any time conditions require doing so to avoid an unsafe condition.
- d. The owner or operator shall inspect the air emission control equipment in accordance with the following requirements:
  - (1) The fixed roof and its closure devices must be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the tank wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.
  - (2) The owner or operator shall perform an initial inspection of the fixed roof and its closure devices on or before the date that the tank becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except under the special conditions provided for in subsection 12.



- (3) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of subsection 11.
  - (4) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in subsection 2 of section 33-24-05-459.
- 4. Owners and operators controlling air pollutant emissions from a tank using tank level 2 controls shall use one of the following tanks:
  - a. A fixed-roof tank equipped with an internal floating roof in accordance with the requirements specified in subsection 5;
  - b. A tank equipped with an external floating roof in accordance with the requirements specified in subsection 6;
  - c. A tank vented through a closed-vent system to a control device in accordance with the requirements specified in subsection 7;
  - d. A pressure tank designed and operated in accordance with the requirements specified in subsection 8; or
  - e. A tank located inside an enclosure that is vented through a closed-vent system to an enclosed combustion control device in accordance with the requirements specified in subsection 9.
- 5. The owner or operator who controls air pollutant emissions from a tank using a fixed-roof with an internal floating roof shall meet the requirements specified in subdivisions a through c.
  - a. The tank must be equipped with a fixed roof and an internal floating roof in accordance with the following requirements:
    - (1) The internal floating roof must be designed to float on the liquid surface except when the floating roof must be supported by the leg supports.
    - (2) The internal floating roof must be equipped with a continuous seal between the wall of the tank and the floating roof edge that meets either of the following requirements:
      - (a) A single continuous seal that is either a liquid-mounted seal or a metallic shoe seal, as defined in section 33-24-05-451; or
      - (b) Two continuous seals mounted one above the other. The lower seal may be a vapor-mounted seal.

- (3) The internal floating roof must meet the following specifications:
- (a) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.
  - (b) Each opening in the internal floating roof must be equipped with a gasketed cover or a gasketed lid except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains.
  - (c) Each penetration of the internal floating roof for the purpose of sampling must have a slit fabric cover that covers at least ninety percent of the opening.
  - (d) Each automatic bleeder vent and rim space vent must be gasketed.
  - (e) Each penetration of the internal floating roof that allows for passage of a ladder must have a gasketed sliding cover.
  - (f) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof must have a flexible fabric sleeve seal or a gasketed sliding cover.
- b. The owner or operator shall operate the tank in accordance with the following requirements:
- (1) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and must be completed as soon as practical.
  - (2) Automatic bleeder vents are to be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.
  - (3) Prior to filling the tank, each cover, access hatch, gauge float well, or lid on any opening in the internal floating roof must be bolted or fastened closed (for example, no visible gaps). Rim space vents are to be set to open only when the internal floating roof is not floating or when the pressure beneath the rim exceeds the manufacturer's recommended setting.

- c. The owner or operator shall inspect the internal floating roof in accordance with the procedures specified as follows:
- (1) The floating roof and its closure devices must be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to: the internal floating roof is not floating on the surface of the liquid inside the tank; liquid has accumulated on top of the internal floating roof; any portion of the roof seals have detached from the roof rim; holes, tears, or other openings are visible in the seal fabric; the gaskets no longer close off the hazardous waste surface from the atmosphere; or the slotted membrane has more than ten percent open area.
  - (2) The owner or operator shall inspect the internal floating roof components as follows except as provided in paragraph 3:
    - (a) Visually inspect the internal floating roof components through openings on the fixed roof (for example, manholes and roof hatches) at least once every twelve months after initial fill; and
    - (b) Visually inspect the internal floating roof, primary seal, secondary seal (if one is in service), gaskets, slotted membranes, and sleeve seals (if any) each time the tank is emptied and degassed and at least every ten years.
  - (3) As an alternative to performing the inspection specified in paragraph 2 for an internal floating roof equipped with two continuous seals mounted one above the other, the owner or operator may visually inspect the internal floating roof, primary and secondary seals, gaskets, slotted membranes, and sleeve seals (if any) each time the tank is emptied and degassed and at least every five years.
  - (4) Prior to each inspection required by paragraph 2 or 3, the owner or operator shall notify the department in advance of each inspection to provide the department with the opportunity to have an observer present during the inspection. The owner or operator shall notify the department of the date and location of the inspection as follows:
    - (a) Prior to each visual inspection of an internal floating roof in a tank that has been emptied and degassed, written notification must be prepared and sent by the owner or operator so that it is received by the department at least thirty calendar days before refilling the tank except



when an inspection is not planned as provided for in subparagraph b.

- (b) When a visual inspection is not planned and the owner or operator could not have known about the inspection thirty calendar days before refilling the tank, the owner or operator shall notify the department as soon as possible, but no later than seven calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the department at least seven calendar days before refilling the tank.

- (5) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of subsection 11.

- (6) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in subsection 2 of section 33-24-05-459.

d. Safety devices, as defined in section 33-24-05-451, may be installed and operated as necessary on any tank complying with the requirements of this subsection.

- 6. The owner or operator who controls air pollutant emissions from a tank using an external floating roof shall meet the requirements specified in subdivisions a through c.

- a. The owner or operator shall design the external floating roof in accordance with the following requirements:

- (1) The external floating roof must be designed to float on the liquid surface except when the floating roof must be supported by the leg supports.

- (2) The floating roof must be equipped with two continuous seals, one above the other, between the wall of the tank and the roof edge. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

- (a) The primary seal must be a liquid-mounted seal or a metallic shoe seal, as defined in section 33-24-05-451. The total area of the gaps between the tank wall and the primary seal may not exceed 25.5 10.0 inches<sup>2</sup> per foot [212 square centimeters per meter] of tank diameter,

and the width of any portion of these gaps may not exceed 1.5 inches [3.8 centimeters]. If a metallic shoe seal is used for the primary seal, the metallic shoe seal must be designed so that one end extends into the liquid in the tank and the other end extends a vertical distance of at least sixty-one centimeters above the liquid surface.

- (b) The secondary seal must be mounted above the primary seal and cover the annular space between the floating roof and the wall of the tank. The total area of the gaps between the tank wall and the secondary seal may not exceed ~~2.4~~ 1.0 inches<sup>2</sup> per foot [21.2 square centimeters per meter] of tank diameter, and the width of any portion of these gaps must not exceed 0.5 inches [1.3 centimeters].
- (3) The external floating roof must meet the following specifications:
- (a) Except for automatic bleeder vents (vacuum breaker vents) and rim space vents, each opening in a noncontact external floating roof must provide a projection below the liquid surface.
  - (b) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof must be equipped with a gasketed cover, seal, or lid.
  - (c) Each access hatch and each gauge float well must be equipped with a cover designed to be bolted or fastened when the cover is secured in the closed position.
  - (d) Each automatic bleeder vent and each rim space vent must be equipped with a gasket.
  - (e) Each roof drain that empties into the liquid managed in the tank must be equipped with a slotted membrane fabric cover that covers at least ninety percent of the area of the opening.
  - (f) Each unslotted and slotted guide pole well must be equipped with a gasketed sliding cover or a flexible fabric sleeve seal.
  - (g) Each unslotted guide pole must be equipped with a gasketed cap on the end of the pole.

- (h) Each slotted guide pole must be equipped with a gasketed float or other device which closes off the liquid surface from the atmosphere.
  - (i) Each gauge hatch and each sample well must be equipped with a gasketed cover.
- b. The owner or operator shall operate the tank in accordance with the following requirements:
  - (1) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling must be continuous and must be completed as soon as practical.
  - (2) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof must be secured and maintained in a closed position at all times except when the closure device must be open for access.
  - (3) Covers on each access hatch and each gauge float well must be bolted or fastened when secured in the closed position.
  - (4) Automatic bleeder vents must be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.
  - (5) Rim space vents must be set to open only at those times that the roof is being floated off the roof leg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.
  - (6) The cap on the end of each unslotted guide pole must be secured in the closed position at all times except when measuring the level or collecting samples of the liquid in the tank.
  - (7) The cover on each gauge hatch or sample well must be secured in the closed position at all times except when the hatch or well must be opened for access.
  - (8) Both the primary seal and the secondary seal must completely cover the annular space between the external floating roof and the wall of the tank in a continuous fashion except during inspections.
- c. The owner or operator shall inspect the external floating roof in accordance with the procedures specified as follows:



- (1) The owner or operator shall measure the external floating roof seal gaps in accordance with the following requirements:
  - (a) The owner or operator shall perform measurements of gaps between the tank wall and the primary seal within sixty calendar days after initial operation of the tank following installation of the floating roof and, thereafter, at least once every five years.
  - (b) The owner or operator shall perform measurements of gaps between the tank wall and the secondary seal within sixty calendar days after initial operation of the tank following installation of the floating roof and, thereafter, at least once every year.
  - (c) If a tank ceases to hold hazardous waste for a period of one year or more, subsequent introduction of hazardous waste into the tank must be considered an initial operation for the purposes of subparagraphs a and b.
  - (d) The owner or operator shall determine the total surface area of gaps in the primary seal and in the secondary seal individually using the following procedure:
    - [1] The seal gap measurements must be performed at one or more floating roof levels when the roof is floating off the roof supports.
    - [2] Seal gaps, if any, must be measured around the entire perimeter of the floating roof in each place where a 0.125-inch [0.32-centimeter] diameter uniform probe passes freely (without forcing or binding against the seal) between the seal and the wall of the tank and measure the circumferential distance of each such location.
    - [3] For a seal gap measured under this subdivision e, 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

perimeter diameter of the tank. These total gap areas for the primary seal and secondary seal are then compared to the respective standards for the seal type as specified in paragraph 2 of subdivision a.

- (e) If the seal gap measurements do not conform to the specifications in paragraph 2 of subdivision a, the owner or operator shall repair the defect in accordance with the requirements of subsection 11.
  - (f) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in subsection 2 of section 33-24-05-459.
- (2) The owner or operator shall visually inspect the external floating roof in accordance with the following requirements:
- (a) The floating roof and its closure devices must be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to: holes, tears, or other openings in the rim seal or seal fabric of the floating roof; a rim seal detached from the floating roof; all or a portion of the floating roof deck being submerged below the surface of the liquid in the tank; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.
  - (b) The owner or operator shall perform an initial inspection of the external floating roof and its closure devices on or before the date that the tank becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in subsection 12.
  - (c) If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of subsection 11.
  - (d) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in subsection 2 of section 33-24-05-459.
- (3) Prior to each inspection required by paragraph 1 or 2 of subdivision c ~~of subsection 6~~, the owner or operator shall notify the department in advance of each inspection to provide the department with the opportunity to have an

observer present during the inspection. The owner or operator shall notify the department of the date and location of the inspection as follows:

- (a) Prior to each inspection to measure external floating roof seal gaps as required under paragraph 1 of subdivision c ~~of subsection 6~~, written notification must be prepared and sent by the owner or operator so that it is received by the department at least thirty calendar days before the date the measurements are scheduled to be performed.
  - (b) Prior to each visual inspection of an external floating roof in a tank that has been emptied and degassed, written notification must be prepared and sent by the owner or operator so that it is received by the department at least thirty calendar days before refilling the tank except when an inspection is not planned as provided for in subparagraph c of paragraph 4 3 of subdivision c ~~of subsection 6~~.
  - (c) When a visual inspection is not planned and the owner or operator could not have known about the inspection thirty calendar days before refilling the tank, the owner or operator shall notify the department as soon as possible, but no later than seven calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the department at least seven calendar days before refilling the tank.
- d. Safety devices, as defined in section 33-24-05-451, may be installed and operated as necessary on any tank complying with the requirements of this subsection.
7. The owner or operator who controls air pollutant emissions from a tank by venting the tank to a control device shall meet the requirements specified in subdivisions a through c.
- a. The tank must be covered by a fixed roof and vented directly through a closed-vent system to a control device in accordance with the following requirements:
    - (1) The fixed roof and its closure devices must be designed to form a continuous barrier over the entire surface area of the liquid in the tank.



- (2) Each opening in the fixed roof not vented to the control device must be equipped with a closure device. If the pressure in the vapor headspace underneath the fixed roof is less than atmospheric pressure when the control device is operating, the closure devices must be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the fixed roof is equal to or greater than atmospheric pressure when the control device is operating, the closure device must be designed to operate with no detectable organic emissions.
  - (3) The fixed roof and its closure devices must be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the fixed roof and closure devices throughout their intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices include: organic vapor permeability, the effects of any contact with the liquid and its vapor managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.
  - (4) The closed-vent system and control device must be designed and operated in accordance with the requirements of section 33-24-05-457.
- b. Whenever a hazardous waste is in the tank, the fixed roof must be installed with each closure device secured in the closed position and the vapor headspace underneath the fixed roof vented to the control device except as follows:
- (1) Venting to the control device is not required, and opening of closure devices or removal of the fixed roof is allowed at the following times:
    - (a) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.

- (b) To remove accumulated sludge or other residues from the bottom of a tank.
  - (2) Opening of a safety device, as defined in section 33-24-05-451, is allowed at any time conditions require doing so to avoid an unsafe condition.
- c. The owner or operator shall inspect and monitor the air emission control equipment in accordance with the following procedures:
  - (1) The fixed roof and its closure devices must be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to: visible cracks, holes, or gaps in the roof sections or between the roof and the tank wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.
  - (2) The closed-vent system and control device must be inspected and monitored by the owner or operator in accordance with the procedures specified in section 33-24-05-457.
  - (3) The owner or operator shall perform an initial inspection of the air emission control equipment on or before the date that the tank becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in subsection 12.
  - (4) If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of subsection 11.
  - (5) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in subsection 2 of section 33-24-05-459.
- 8. The owner or operator who controls air pollutant emissions by using a pressure tank shall meet the following requirements:
  - a. The tank must be designed not to vent to the atmosphere as a result of compression of the vapor headspace in the tank during filling of the tank to its design capacity.
  - b. All tank openings must be equipped with closure devices designed to operate with no detectable organic emissions as determined using the procedure specified in subsection 4 of section ~~33-24-05-454~~ 33-24-05-453.

- c. Whenever a hazardous waste is in the tank, the tank must be operated as a closed system that does not vent to the atmosphere except ~~in the event that a safety device, as defined in section 33-24-05-451, is required to open to avoid an unsafe condition.~~ 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 33-24-05-451, is required to avoid an unsafe condition.
  - (2) At those times when purging of inerts from the tank is required and the purge stream is routed to a closed-vent system and control device designed and operated in accordance with the requirements of section 33-24-05-457.
- 9. The owner or operator who controls air pollutant emissions by using an enclosure vented through a closed-vent system to an enclosed combustion control device shall meet the requirements specified in subdivisions a through d.
  - a. The tank must be located inside an enclosure. The enclosure must be designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical means; entry of permanent mechanical or electrical equipment; or direct airflow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in section 5.0 to "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" initially when the enclosure is first installed and, thereafter, annually.
  - b. The enclosure must be vented through a closed-vent system to an enclosed combustion control device that is designed and operated in accordance with the standards for either a vapor incinerator, boiler, or process heater specified in section 33-24-05-457.
  - c. Safety devices, as defined in section 33-24-05-451, may be installed and operated as necessary on any enclosure, closed-vent system, or control device used to comply with the requirements of subdivisions a and b.
  - d. The owner or operator shall inspect and monitor the closed-vent system and control device as specified in section 33-24-05-457.



10. The owner or operator shall transfer hazardous waste to a tank subject to this section in accordance with the following requirements:
  - a. Transfer of hazardous waste, except as provided in subdivision b, to the tank from another tank subject to this section or from a surface impoundment subject to section 33-24-05-455 must be conducted using continuous hard-piping or another closed system that does not allow exposure of the hazardous waste to the atmosphere. For the purpose of complying with this provision, an individual drain system is considered to be a closed system when it meets the requirements of 40 CFR part 63, subpart RR - National Emission Standards for Individual Drain Systems.
  - b. The requirements of subdivision a do not apply when transferring a hazardous waste to the tank under any of the following conditions:
    - (1) The hazardous waste meets the average VO concentration conditions specified in subdivision a of subsection 3 of section 33-24-05-452 at the point of waste origination.
    - (2) The hazardous waste has been treated by an organic destruction or removal process to meet the requirements in subdivision a b of subsection 3 of section 33-24-05-452.
    - (3) The hazardous waste meets the requirements of subdivision d of subsection 3 of section 33-24-05-452.
11. The owner or operator shall repair each defect detected during an inspection performed in accordance with the requirements of subdivision d of subsection 6 3, subdivision c of subsection 5, subdivision c of subsection 6, or subdivision c of subsection 7 as follows:
  - a. The owner or operator shall make first efforts at repair of the defect no later than five calendar days after detection, and repair shall be completed as soon as possible but no later than forty-five calendar days after detection except as provided in subdivision b.
  - b. Repair of a defect may be delayed beyond forty-five calendar days if the owner or operator determines that repair of the defect requires emptying or temporary removal from service of the tank and no alternative tank capacity is available at the site to accept the hazardous waste normally managed in the tank. In this case, the owner or operator shall repair the defect the next time the process or unit that is generating the hazardous waste managed in the tank stops operation. Repair of the defect shall be completed before the process or unit resumes operation.

12. Following the initial inspection and monitoring of the cover as required by the applicable provisions of sections 33-24-05-450 through 33-24-05-474, subsequent inspection and monitoring may be performed at intervals longer than one year under the following special conditions:
  - a. If inspecting or monitoring the cover would expose a worker to dangerous, hazardous, or other unsafe conditions, then the owner or operator may designate a cover as an "unsafe to inspect and monitor cover" and comply with all of the following requirements:
    - (1) Prepare a written explanation for the cover stating the reasons why the cover is unsafe to visually inspect or to monitor, if required.
    - (2) Develop and implement a written plan and schedule to inspect and monitor the cover, using the procedures specified in the applicable section of sections 33-24-05-450 through 33-24-05-474, as frequently as practicable during those times when a worker can safely access the cover.
  - b. If a tank is buried partially or entirely underground, an owner or operator is required to inspect and monitor, as required by the applicable provisions of this section, only those portions of the tank cover and those connections to the tank (for example, fill ports, access hatches, gauge wells, etc.) that are located on or above the ground surface.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC ~~23-20.3~~ 23-20.3-03

**Law Implemented:** NDCC ~~23-20.3~~, ~~23-20.4~~ 23-20.3-03, 23-20.3-04

**33-24-05-455. Standards - Surface impoundments.**

1. The provisions of this section apply to the control of air pollutant emissions from surface impoundments for which subsection 2 of section 33-24-05-452 references the use of this section for such air emission control.
2. The owner or operator shall control air pollutant emissions from the surface impoundment by installing and operating either of the following:
  - a. A floating membrane cover in accordance with the provisions specified in subsection 3; or
  - b. A cover that is vented through a closed-vent system to a control device in accordance with the provisions specified in subsection 4.

3. The owner or operator who controls air pollutant emissions from a surface impoundment using a floating membrane cover shall meet the requirements specified in subdivisions a through c.
  - a. The surface impoundment shall be equipped with a floating membrane cover designed to meet the following specifications:
    - (1) The floating membrane cover must be designed to float on the liquid surface during normal operations and form a continuous barrier over the entire surface area of the liquid.
    - (2) The cover shall be fabricated from a synthetic membrane material that is either:
      - (a) High density polyethylene with a thickness no less than 0.1 inches [2.5 millimeters]; or
      - (b) A material or a composite of different materials determined to have both organic permeability properties that are equivalent to those of the material listed in subparagraph a and chemical and physical properties that maintain the material integrity for the intended service life of the material.
    - (3) The cover must be installed so there are no visible cracks, holes, gaps, or other open spaces between cover section seams or between the interface of the cover edge and its foundation mountings.
    - (4) Except as provided for in paragraph 5, each opening in the floating membrane cover must be equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device.
    - (5) The floating membrane cover may be equipped with one or more emergency cover drains for removal of stormwater. Each emergency cover drain shall be equipped with a slotted membrane fabric cover that covers at least ninety percent of the area of the opening or a flexible fabric sleeve seal.
    - (6) The closure devices must be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the closure devices throughout their intended service life. Factors to be considered when selecting the materials of construction and designing the cover and closure



devices include: organic vapor permeability; the effects of any contact with the liquid and its vapor managed in the surface impoundment; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the surface impoundment on which the floating membrane cover is installed.

b. Whenever a hazardous waste is in the surface impoundment, the floating membrane cover shall float on the liquid and each closure device shall be secured in the closed position except as follows:

(1) Opening of closure devices or removal of the cover is allowed at the following times:

(a) To provide access to the surface impoundment for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample the liquid in the surface impoundment, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly replace the cover and secure the closure device in the closed position, as applicable.

(b) To remove accumulated sludge or other residues from the bottom of a surface impoundment.

(2) Opening of a safety device, as defined in section 33-24-05-451, is allowed at any time conditions require doing so to avoid an unsafe condition.

c. The owner or operator shall inspect the floating membrane cover in accordance with the following procedures:

(1) The floating membrane cover and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the cover section seams or between the interface of the cover edge and its foundation mountings; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(2) The owner or operator shall perform an initial inspection of the floating membrane cover and its closure devices on or before the date that the surface impoundment becomes subject to this section. Thereafter, the owner or operator shall perform

the inspections at least once every year except for the special conditions provided for in subsection 7.

- (3) If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of subsection 6.
  - (4) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in subsection 3 of section 33-24-05-459.
4. The owner or operator who controls air pollutant emissions from a surface impoundment using a cover vented to a control device shall meet the requirements specified in subdivisions a through d.
  - a. The surface impoundment must be covered by a cover and vented directly through a closed-vent system to a control device in accordance with the following requirements:
    - (1) The cover and its closure devices must be designed to form a continuous barrier over the entire surface area of the liquid in the surface impoundment.
    - (2) Each opening in the cover not vented to the control device must be equipped with a closure device. If the pressure in the vapor headspace underneath the cover is less than atmospheric pressure when the control device is operating, the closure devices must be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the cover is equal to or greater than atmospheric pressure when the control device is operating, the closure device must be designed to operate with no detectable organic emissions using the procedure specified in subsection 4 of section 33-24-05-453.
    - (3) The cover and its closure devices must be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the cover and closure devices throughout their intended service life. Factors to be considered when selecting the materials for of construction and designing the cover and closure devices shall include: organic vapor permeability; the effects of any contact with the liquid or its vapors managed in the surface impoundment; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the surface impoundment on which the cover is installed.

- (4) The closed-vent system and control device must be designed and operated in accordance with the requirements of section 33-24-05-457.
- b. Whenever a hazardous waste is in the surface impoundment, the cover must be installed with each closure device secured in the closed position and the vapor headspace underneath the cover vented to the control device except as follows:
  - (1) Venting to the control device is not required, and opening of closure devices or removal of the cover is allowed at the following times:
    - (a) To provide access to the surface impoundment for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample liquid in the surface impoundment, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the surface impoundment.
    - (b) To remove accumulated sludge or other residues from the bottom of the surface impoundment.
  - (2) Opening of a safety device, as defined in section 33-24-05-451, is allowed at any time conditions require doing so to avoid an unsafe condition.
- c. The owner or operator shall inspect and monitor the air emission control equipment in accordance with the following procedures:
  - (1) The surface impoundment cover and its closure devices must be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the cover section seams or between the interface of the cover edge and its foundation mountings; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.
  - (2) The closed-vent system and control device must be inspected and monitored by the owner or operator in accordance with the procedures specified in section 33-24-05-457.



- (3) The owner or operator shall perform an initial inspection of the air emission control equipment on or before the date that the surface impoundment becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in subsection 7.
  - (4) If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of subsection 6.
  - (5) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in subsection 3 of section 33-24-05-459.
- 5. The owner or operator shall transfer hazardous waste to a surface impoundment subject to this section in accordance with the following requirements:
  - a. Transfer of hazardous waste, except as provided in subdivision b, to the surface impoundment from another surface impoundment subject to this section or from a tank subject to section 33-24-05-454 must be conducted using continuous hard-piping or another closed system that does not allow exposure of the waste to the atmosphere. For the purpose of complying with this provision, an individual drain system is considered to be a closed system when it meets the requirements of 40 CFR part 63, subpart RR - National Emission Standards for Individual Drain Systems.
  - b. The requirements of subdivision a do not apply when transferring a hazardous waste to the surface impoundment under ~~either~~ any of the following conditions:
    - (1) The hazardous waste meets the average VO concentration conditions specified in subdivision a of subsection 3 of section 33-24-05-452 at the point of waste origination.
    - (2) The hazardous waste has been treated by an organic destruction or removal process to meet the requirements in subdivision b of subsection 3 of section 33-24-05-452.
    - (3) The hazardous waste meets the requirements of subdivision d of subsection 3 of section 33-24-05-452.
- 6. The owner or operator shall repair each defect detected during an inspection performed in accordance with the requirements of subdivision c of subsection 3 or subdivision c of subsection 4 as follows:

- a. The owner or operator shall make first efforts at repair of the defect no later than five calendar days after detection and repair shall be completed as soon as possible but no later than forty-five calendar days after detection except as provided in subdivision b.
  - b. Repair of a defect may be delayed beyond forty-five calendar days if the owner or operator determines that repair of the defect requires emptying or temporary removal from service of the surface impoundment and no alternative capacity is available at the site to accept the hazardous waste normally managed in the surface impoundment. In this case, the owner or operator shall repair the defect the next time the process or unit that is generating the hazardous waste managed in the surface impoundment stops operation. Repair of the defect must be completed before the process or unit resumes operation.
- 7. Following the initial inspection and monitoring of the cover as required by the applicable provisions of sections 33-24-05-450 through 33-24-05-474, subsequent inspection and monitoring may be performed at intervals longer than one year in the case when inspecting or monitoring the cover would expose a worker to dangerous, hazardous, or other unsafe conditions. In this case, the owner or operator may designate the cover as an "unsafe to inspect and monitor cover" and comply with all of the following requirements:
  - a. Prepare a written explanation for the cover stating the reasons why the cover is unsafe to visually inspect or to monitor, if required.
  - b. Develop and implement a written plan and schedule to inspect and monitor the cover using the procedures specified in the applicable section of sections 33-24-05-450 through 33-24-05-474 as frequently as practicable during those times when a worker can safely access the cover.

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**General Authority:** NDCC ~~23-20.3~~ 23-20.3-03

**Law Implemented:** NDCC ~~23-20.3, 23-20.4~~ 23-20.3-03, 23-20.3-04

#### **33-24-05-456. Standards - Containers.**

- 1. The provisions of this section apply to the control of air pollutant emissions from containers for which subsection 2 of section 33-24-05-452 references the use of this section for such air emission control.
- 2. General requirements.
  - a. The owner or operator shall control air pollutant emissions from each container subject to this section in accordance with the

following requirements, as applicable to the container, except when the special provisions for waste stabilization processes specified in subdivision b apply to the container.

- (1) For a container having a design capacity greater than 3.5 feet<sup>3</sup> [0.1 meters<sup>3</sup> meter<sup>3</sup>] and less than or equal to 16.25 feet<sup>3</sup> [0.46 meters<sup>3</sup> meter<sup>3</sup>], the owner or operator shall control air pollutant emissions from the container in accordance with the container level 1 standards specified in subsection 3.
  - (2) For a container having a design capacity greater than 16.25 feet<sup>3</sup> [0.46 meters<sup>3</sup> meter<sup>3</sup>] that is not in light material service, the owner or operator shall control air pollutant emissions from the container in accordance with the container level 1 standards specified in subsection 3.
  - (3) For a container having a design capacity greater than 16.25 feet<sup>3</sup> [0.46 meters<sup>3</sup> meter<sup>3</sup>] that is in light material service, the owner or operator shall control air pollutant emissions from the container in accordance with the container level 2 standards specified in subsection 4.
- b. When a container having a design capacity greater than 3.5 feet<sup>3</sup> [0.1 meters<sup>3</sup> meter<sup>3</sup>] is used for treatment of a hazardous waste by a waste stabilization process, the owner or operator shall control air pollutant emissions from the container in accordance with the container level 3 standards specified in subsection 5 at those times during the waste stabilization process when the hazardous waste in the container is exposed to the atmosphere.

3. Container level 1 standards.

- a. A container using container level 1 controls is one of the following:
- (1) A container that meets the applicable department of transportation regulations on packaging hazardous materials for transportation as specified in subsection 6.
  - (2) A container equipped with a cover and closure devices that form a continuous barrier over the container openings such that when the cover and closure devices are secured in the closed position there are no visible holes, gaps, or other open spaces into the interior of the container. The cover may be a separate cover installed on the container (for example, a lid on a drum or a suitably secured tarp on a roll-off box) or may be an integral part of the container structural design (for example, a "portable tank" or bulk cargo container equipped with a screw-type cap).



- (3) An open-top container in which an organic-vapor suppressing barrier is placed on or over the hazardous waste in the container such that no hazardous waste is exposed to the atmosphere. One example of such a barrier is application of a suitable organic-vapor suppressing foam.
- b. A container used to meet the requirements of paragraph 2 or 3 of subdivision a must be equipped with covers and closure devices, as applicable to the container, that are composed of suitable materials to minimize exposure of the hazardous waste to the atmosphere and to maintain the equipment integrity for as long as it is in service. Factors to be considered in selecting the materials of construction and designing the cover and closure devices shall only include: organic vapor permeability; the effects of contact with the hazardous waste or its vapor managed in the container; the effects of outdoor exposure of the closure device or cover material to wind, moisture, and sunlight; and the operating practices for which the container is intended to be used.
- c. Whenever a hazardous waste is in a container using container level 1 controls, the owner or operator shall install all covers and closure devices for the container, as applicable to the container, and secure and maintain each closure device in the closed position except as follows:
  - (1) Opening of a closure device or cover is allowed for the purpose of adding hazardous waste or other material to the container as follows:
    - (a) In the case when the container is filled to the intended final level in one continuous operation, the owner or operator shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.
    - (b) In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within fifteen minutes; the person performing the loading operation leaving the immediate vicinity of the container; or the shutdown of the process generating the material being added to the container, whichever condition occurs first.

- (2) Opening of a closure device or cover is allowed for the purpose of removing hazardous waste from the container as follows:
- (a) For the purpose of meeting the requirements of this section, an empty container as defined in subsection 2 of section 33-24-02-07 may be open to the atmosphere at any time (for example, covers and closure devices are not required to be secured in the closed position on an empty container).
  - (b) In the case when discrete quantities or batches of material are removed from the container but the container does not meet the conditions to be an empty container as defined in subsection 2 of section 33-24-02-07, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within fifteen minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.
- (3) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of hazardous waste. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.
- (4) Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the internal pressure of the container in accordance with the container design specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the owner or operator based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard

engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.

- (5) Opening of a safety device, as defined in section 33-24-05-451, is allowed at any time conditions require doing so to avoid an unsafe condition.
- d. The owner or operator of containers using container level 1 controls shall inspect the containers and their covers and closure devices as follows:
- (1) In the case when a hazardous waste already is in the container at the time the owner or operator first accepts possession of the container at the facility and the container is not emptied (~~for example, does not meet the conditions for an empty container as specified in subsection 2 of section 33-24-02-07~~) within twenty-four hours after the container is accepted at the facility (~~for example, does not meet the conditions for an empty container as specified in subsection 2 of section 33-24-02-07~~), the owner or operator shall visually inspect the container and its cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. The container visual inspection shall be conducted on or before the date that the container is accepted at the facility (for example, the date the container becomes subject to the container standards in sections 33-24-05-450 through 33-24-05-474). For purposes of this requirement, the date of acceptance is the date of signature that the facility owner or operator enters on item 20 of the uniform hazardous waste manifest in appendix I to chapter 33-24-03 (environmental protection agency forms 8700-22 and 8700-22A), as required by section 33-24-05-38. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph 3.
  - (2) In the case when a container used for managing hazardous waste remains at the facility for a period of one year or more, the owner or operator shall visually inspect the container and its cover and closure devices initially and thereafter, at least once every twelve months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container



when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph 3.

- (3) When a defect is detected for the container, cover, or closure devices, the owner or operator shall make first efforts at repair of the defect no later than twenty-four hours after detection and repair shall be completed as soon as possible but no later than five calendar days after detection. If repair of a defect cannot be completed within five calendar days, then the hazardous waste shall be removed from the container and the container shall not be used to manage hazardous waste until the defect is repaired.

- e. The owner or operator shall maintain at the facility a copy of the procedure used to determine that containers with capacity of 16.25 feet<sup>3</sup> [0.46 meters<sup>3</sup> meter<sup>3</sup>] or greater, which do not meet applicable department of transportation regulations as specified in subsection 6, are not managing hazardous waste in light material service.

#### 4. Container level 2 standards.

- a. A container using container level 2 controls is one of the following:
  - (1) A container that meets the applicable department of transportation regulations on packaging hazardous materials for transportation as specified in subsection 6.
  - (2) A container that operates with no detectable organic emissions as defined in section 33-24-05-451 and determined in accordance with the procedure specified in subsection 7.
  - (3) A container that has been demonstrated within the preceding twelve months to be vapor-tight by using 40 CFR part 60, appendix A, method 27 in accordance with the procedure specified in subsection 8.
- b. Transfer of hazardous waste in or out of a container using container level 2 controls shall be conducted in such a manner as to minimize exposure of the hazardous waste to the atmosphere, to the extent practical, considering the physical properties of the hazardous waste and good engineering and safety practices for handling flammable, ignitable, explosive, reactive, or other hazardous materials. Examples of container loading procedures that the department considers to meet the requirements of this ~~paragraph~~ subdivision include using any one of the following: a

submerged-fill pipe or other submerged-fill method to load liquids into the container; a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations; or a fitted opening in the top of a container through which the hazardous waste is filled and subsequently purging the transfer line before removing it from the container opening.

- c. Whenever a hazardous waste is in a container using container level 2 controls, the owner or operator shall install all covers and closure devices for the container, and secure and maintain each closure device in the closed position except as follows:
  - (1) Opening of a closure device or cover is allowed for the purpose of adding hazardous waste or other material to the container as follows:
    - (a) In the case when the container is filled to the intended final level in one continuous operation, the owner or operator shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.
    - (b) In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within fifteen minutes; the person performing the loading operation leaving the immediate vicinity of the container; or the shutdown of the process generating the material being added to the container, whichever condition occurs first.
  - (2) Opening of a closure device or cover is allowed for the purpose of removing hazardous waste from the container as follows:
    - (a) For the purpose of meeting the requirements of this section, an empty container as defined in subsection 2 of section 33-24-02-07 may be open to the atmosphere at any time (for example, covers and closure devices are not required to be secured in the closed position on an empty container).

- (b) In the case when discrete quantities or batches of material are removed from the container but the container does not meet the conditions to be an empty container as defined in subsection 2 of section 33-24-02-07, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within fifteen minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.
- (3) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of hazardous waste. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.
- (4) Opening of a spring-loaded, pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the internal pressure of the container in accordance with the container design specifications. The device shall be designed to operate with no detectable organic emission when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the owner or operator based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.



- (5) Opening of a safety device, as defined in section 33-24-05-451, is allowed at any time conditions require doing so to avoid an unsafe condition.
- d. The owner or operator of containers using container level 2 controls shall inspect the containers and their covers and closure devices as follows:
  - (1) In the case when a hazardous waste already is in the container at the time the owner or operator first accepts possession of the container at the facility and the container is not emptied (~~for example, does not meet the conditions for an empty container as specified in subsection 2 of section 33-24-02-07~~) within twenty-four hours after the container arrives is accepted at the facility (for example, does not meet the conditions for an empty container as specified in subsection 2 of section 33-24-02-07), the owner or operator shall visually inspect the container and its cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. The container visual inspection shall be conducted on or before the date that the container is accepted at the facility (for example, the date the container becomes subject to the container standards in sections 33-24-05-450 through 33-24-05-474). For purposes of this requirement, the date of acceptance is the date of signature that the facility owner or operator enters on item 20 of the uniform hazardous waste manifest in appendix I to chapter 33-24-03 (environmental protection agency forms 8700-22 and 8700-22A), as required by section 33-24-05-38. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph 3.
  - (2) In the case when a container used for managing hazardous waste remains at the facility for a period of one year or more, the owner or operator shall visually inspect the container and its cover and closure devices initially and thereafter, at least once every twelve months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph 3.
  - (3) When a defect is detected for the container, cover, or closure devices, the owner or operator shall make first efforts at repair of the defect no later than twenty-four hours after detection, and repair shall be completed as soon as possible but no

later than five calendar days after detection. If repair of a defect cannot be completed within five calendar days, then the hazardous waste shall be removed from the container and the container shall not be used to manage hazardous waste until the defect is repaired.

5. Container level 3 standards.

a. A container using container level 3 controls is one of the following:

- (1) A container that is vented directly through a closed-vent system to a control device in accordance with the requirements of paragraph 2 of subdivision b.
- (2) A container that is vented inside an enclosure which is exhausted through a closed-vent system to a control device in accordance with the requirements of paragraphs 1 and 2 of ~~subsection~~ subdivision b.

b. The owner or operator shall meet the following requirements, as applicable to the type of air emission control equipment selected by the owner or operator:

- (1) The container enclosure shall be designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of containers through the enclosure by conveyor or other mechanical means; entry of permanent mechanical or electrical equipment; or direct airflow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in section 5.0 to "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" initially when the enclosure is first installed and, thereafter, annually.
- (2) The closed-vent system and control device shall be designed and operated in accordance with the requirements of section 33-24-05-457.

c. Safety devices, as defined in section 33-24-05-451, may be installed and operated as necessary on any container, enclosure, closed-vent system, or control device used to comply with the requirements of subdivision a.

d. Owners and operators using container level 3 controls in accordance with the provisions of sections 33-24-05-450 through

33-24-05-474 shall inspect and monitor the closed-vent systems and control devices as specified in section 33-24-05-457.

- e. Owners and operators that use container level 3 controls in accordance with the provisions of sections 33-24-05-450 through 33-24-05-474 shall prepare and maintain the records specified in subsection 4 of section 33-24-05-459.
  - f. Transfer of hazardous waste in or out of a container using container level 3 controls shall be conducted in such a manner as to minimize exposure of the hazardous waste to the atmosphere, to the extent practical, considering the physical properties of the hazardous waste and good engineering and safety practices for handling flammable, ignitable, explosive, reactive, or other hazardous materials. Examples of container loading procedures that the department considers to meet the requirements of this subdivision include using any one of the following: a submerged-fill pipe or other submerged-fill method to load liquids into the container; a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations; or a fitted opening in the top of a container through which the hazardous waste is filled and subsequently purging the transfer line before removing it from the container opening.
6. For the purpose of compliance with paragraph 1 of subdivision a of subsection 3 ~~of~~ or paragraph 1 of subdivision a of subsection 4, containers shall be used that meet the applicable department of transportation regulations on packaging hazardous materials for transportation as follows:
- a. The container meets the applicable requirements specified in 49 CFR part 178 - Specifications for Packaging or 49 CFR part 179 - Specifications for Tank Cars.
  - b. Hazardous waste is managed in the container in accordance with the applicable requirements specified in 49 CFR part 107, subpart B - Exemptions; 49 CFR part 172 - Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements; 49 CFR part 173 - Shippers - General Requirements for Shipments and Packages; and 49 CFR part 180 - Continuing Qualification and Maintenance of Packagings.
  - c. For the purpose of complying with sections 33-24-05-450 through 33-24-05-474, no exceptions to the 49 CFR part 178 or ~~part~~ 179 regulations are allowed except as provided for in subdivision d.
  - d. For a lab pack that is managed in accordance with the requirements of 49 CFR part 178 for the purpose of complying with sections



33-24-05-450 through 33-24-05-474, an owner or operator may comply with the exceptions for combination packagings specified in 49 CFR 173.12(b).

7. ~~The owner or operator shall use the procedure specified in subsection 4 of section 33-24-05-453 for determining a container operates~~ To determine compliance with the no detectable organic emissions for the purpose of complying with requirement of paragraph 2 of subdivision a of subsection 4, the procedure specified in subsection 4 of section 33-24-05-453 shall be used.
  - a. Each potential leak interface (for example, a location where organic vapor leakage could occur) on the container, its cover, and associated closure devices, as applicable to the container, shall be checked. Potential leak interfaces that are associated with containers include, but are not limited to: the interface of the cover rim and the container wall; the periphery of any opening on the container or container cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure-relief valve.
  - b. The test shall be performed when the container is filled with a material having a volatile organic concentration representative of the range of volatile organic concentrations for the hazardous waste expected to be managed in this type of container. During the test, the container cover and closure devices shall be secured in the closed position.
8. Procedure for determining a container to be vapor-tight using method 27 of 40 CFR part 60, appendix A, for the purpose of complying with paragraph 3 of subdivision a of subsection 4.
  - a. The test shall be performed in accordance with method 27 of 40 CFR part 60, appendix A.
  - b. A pressure measurement device shall be used that has a precision of plus or minus 0.1 ~~inches~~ inch [plus or minus 2.5 millimeters] water and that is capable of measuring above the pressure at which the container is to be tested for vapor tightness.
  - c. If the test results determined by method 27 indicate that the container sustains a pressure change less than or equal to seven hundred fifty pascals within five minutes after it is pressurized to a minimum of four thousand five hundred pascals, then the container is determined to be vapor-tight.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3 23-20.3-03

**Law Implemented:** NDCC 23-20.3, ~~23-20.4~~ 23-20.3-03, 23-20.3-04

**33-24-05-457. Standards - Closed-vent systems and control devices.**

1. This section applies to each closed-vent system and control device installed and operated by the owner or operator to control air emissions in accordance with standards of sections 33-24-05-450 through 33-24-05-474.
2. The closed-vent system shall meet the following requirements:
  - a. The closed-vent system shall route the gases, vapors, and fumes emitted from the hazardous waste in the waste management unit to a control device that meets the requirements specified in subsection 3.
  - b. The closed-vent system shall be designed and operated in accordance with the requirements specified in subsection 11 of section 33-24-05-403.
  - c. In the case when the closed-vent system includes bypass devices that could be used to divert the gas or vapor stream to the atmosphere before entering the control device, each bypass device shall be equipped with either a flow indicator as specified in paragraph 1 or a seal or locking device as specified in paragraph 2. For the purpose of complying with this subdivision, low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, spring-loaded pressure relief valves, and other fittings used for safety purposes are not considered to be bypass devices.
    - (1) If a flow indicator is used to comply with this subdivision, the indicator shall be installed at the inlet to the bypass line used to divert gases and vapors from the closed-vent system to the atmosphere at a point upstream of the control device inlet. For this paragraph, a flow indicator means a device which indicates the presence of either gas or vapor flow in the bypass line.
    - (2) If a seal or locking device is used to comply with this subdivision, the device shall be placed on the mechanism by which the bypass device position is controlled (for example, valve handle, damper lever) when the bypass device is in the closed position such that the bypass device cannot be opened without breaking the seal or removing the lock. Examples of such devices include, but are not limited to, a car-seal or a lock-and-key configuration valve. The owner or operator shall visually inspect the seal or closure mechanism at least once every month to verify that the bypass mechanism is maintained in the closed position.

- d. The closed-vent system shall be inspected and monitored by the owner or operator in accordance with the procedure specified in subsection 12 of section 33-24-05-403.
3. The control device shall meet the following requirements:
- a. The control device shall be one of the following devices:
    - (1) A control device designed and operated to reduce the total organic content of the inlet vapor stream vented to the control device by at least ninety-five percent by weight;
    - (2) An enclosed combustion device designed and operated in accordance with the requirements of subsection 3 of section 33-24-05-403; or
    - (3) A flare designed and operated in accordance with the requirements of subsection 4 of section 33-24-05-403.
  - b. The owner or operator who elects to use a closed-vent system and control device to comply with the requirements of this section shall comply with the requirements specified in paragraphs 1 through 6.
    - (1) Periods of planned routine maintenance of the control device, during which the control device does not meet the specifications of paragraph 1, 2, or 3 of subdivision a, as applicable, shall not exceed two hundred forty hours per year.
    - (2) The specifications and requirements in paragraphs 1, 2, and 3 of subdivision a for control devices do not apply during periods of planned routine maintenance.
    - (3) The specifications and requirements in paragraphs 1, 2, and 3 of subdivision a for control devices do not apply during a control device system malfunction.
    - (4) The owner or operator shall demonstrate compliance with the requirements of paragraph 1 (for example, planned routine maintenance of a control device, during which the control device does not meet the specifications of paragraph 1, 2, or 3 of subdivision a, as applicable, shall not exceed two hundred forty hours per year) by recording the information specified in paragraph 5 of subdivision a of subsection 5 of section 33-24-05-459.
    - (5) The owner or operator shall correct control device system malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of air pollutants.



- (6) The owner or operator shall operate the closed-vent system such that gases, vapors, or fumes are not actively vented to the control device during periods of planned maintenance or control device system malfunction (for example, periods when the control device is not operating or not operating normally) except in cases when it is necessary to vent the gases, vapors, and/or fumes to avoid an unsafe condition or to implement malfunction corrective actions or planned maintenance actions.
- c. The owner or operator using a carbon adsorption system to comply with subdivision a shall operate and maintain the control device in accordance with the following requirements:
  - (1) Following the initial startup of the control device, all activated carbon in the control device shall be replaced with fresh carbon on a regular basis in accordance with the requirements of subsection 7 or 8 of section 33-24-05-403.
  - (2) All carbon that is a hazardous waste and that is removed from the control device shall be managed in accordance with the requirements of subsection 14 of section 33-24-05-403, regardless of the average volatile organic concentration of the carbon.
- d. An owner or operator using a control device other than a thermal vapor incinerator, flare, boiler, process heater, condensor, 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 33-24-05-403.
- e. The owner or operator shall demonstrate that a control device achieves the performance requirements of subdivision a as follows:
  - (1) An owner or operator shall demonstrate using either a performance test as specified in paragraph 3 or a design analysis as specified in paragraph 4 the performance of each control device except for the following:
    - (a) A flare;
    - (b) A boiler or process heater with a design heat input capacity of 44 megawatts or greater;
    - (c) A boiler or process heater into which the vent stream is introduced with the primary fuel;

- (d) A boiler or industrial furnace burning hazardous waste for which the owner or operator has been issued a final permit under chapter 33-24-06 and has designed and operates the unit in accordance with the requirements of sections ~~33-24-05-144 through 33-24-05-159~~ 33-24-05-525 through 33-24-05-549; or
  - (e) A boiler or industrial furnace burning hazardous waste for which the owner or operator has designed and operates in accordance with ~~the interim status requirements of subsection 5 of section 33-24-06-16~~ sections 33-24-05-525 through 33-24-05-549.
- (2) An owner or operator shall demonstrate the performance of each flare in accordance with the requirements specified in subsection 5 of section 33-24-05-403.
- (3) For a performance test conducted to meet the requirements of paragraph 1, the owner or operator shall use the test methods and procedures specified in subdivisions a through d of subsection 3 of section 33-24-05-404.
- (4) For a design analysis conducted to meet the requirements of paragraph 1, the design analysis shall meet the requirements specified in paragraph 3 of subdivision d of subsection 2 of section 33-24-05-405.
- (5) The owner or operator shall demonstrate that a carbon adsorption system achieves the performance requirements of subdivision a based on the total quantity of organics vented to the atmosphere from all carbon adsorption system equipment that is used for organic adsorption, organic desorption or carbon regeneration, organic recovery, and carbon disposal.
- f. If the owner or operator and the department do not agree on a demonstration of control device performance using a design analysis, then the disagreement shall be resolved using the results of a performance test performed by the owner or operator in accordance with the requirements of paragraph 3 of subdivision e. The department may choose to have an authorized representative observe the performance test.
- 9. The closed-vent system and control device shall be inspected and monitored by the owner or operator in accordance with the procedures specified in subdivision b of subsection 6 and subsection 7 12 of section 33-24-05-403. The readings from each monitoring device required by subdivision b of subsection 6 of section 33-24-05-403 shall be inspected at least once each

operating day to check control device operation. Any necessary corrective measures shall be immediately implemented to ensure the control device is operated in compliance with the requirements of section 33-24-05-457.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC ~~23-20.3~~ 23-20.3-03

**Law Implemented:** NDCC ~~23-20.3, 23-20.4~~ 23-20.3-03, 23-20.3-04

### **33-24-05-459. Recordkeeping requirements.**

1. Each owner or operator of a facility subject to requirements in sections 33-24-05-450 through 33-24-05-474 shall record and maintain the information specified in subsections 2 through 9 10, as applicable to the facility. Except for air emission control equipment design documentation and information required by ~~subsection~~ subsections 9 and 10, records required by this section shall be maintained in the operating record for a minimum of three years. Air emission control equipment design documentation shall be maintained in the operating record until the air emission control equipment is replaced or otherwise no longer in service. Information required by ~~subsection~~ subsections 9 and 10 shall be maintained in the operating record for as long as the ~~tank or container~~ waste management unit is not using air emission controls specified in sections 33-24-05-454 through 33-24-05-457 in accordance with the conditions specified in subsection 4 or subdivision g of subsection 2 of section 33-24-05-454 33-24-05-450, respectively.
2. The owner or operator of a tank using air emission controls in accordance with the requirements of section 33-24-05-454 shall prepare and maintain records for the tank that include the following information:
  - a. For each tank using air emission controls in accordance with the requirements of section 33-24-05-454, the owner or operator shall record:
    - (1) A tank identification number (or other unique identification description as selected by the owner or operator).
    - (2) A record for each inspection required by section 33-24-05-454 that includes the following information:
      - (a) Date inspection was conducted.
      - (b) For each defect detected during the inspection, ~~the following information:~~ the location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the



event that repair of the defect is delayed in accordance with the provisions of section 33-24-05-454, the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected.

- b. In addition to the information required by subdivision a, the owner or operator shall record the following information, as applicable to the tank:
  - (1) The owner or operator using a fixed roof to comply with the tank level 1 control requirements specified in subsection 3 of section 33-24-05-454 shall prepare and maintain records for each determination for the maximum organic vapor pressure of the hazardous waste in the tank performed in accordance with the requirements of subsection 3 of section 33-24-05-454. The records shall include the date and time the samples were collected, the analysis method used, and the analysis results.
  - (2) The owner or operator using an internal floating roof to comply with the tank level 2 control requirements specified in subsection 5 of section 33-24-05-454 shall prepare and maintain documentation describing the floating roof design.
  - (3) Owners and operators using an external floating roof to comply with the tank level 2 control requirements specified in subsection 6 of section 33-24-05-454 shall prepare and maintain the following records:
    - (a) Documentation describing the floating roof design and the dimensions of the tank.
    - (b) Records for each seal gap inspection required by subdivision c of subsection 6 of section 33-24-05-454 describing the results of the seal gap measurements. The records shall include the date that the measurements were performed, the raw data obtained for the measurements, and the calculations of the total gap surface area. In the event that the seal gap measurements do not conform to the specifications in subdivision a of subsection 6 of section 33-24-05-454, the records shall include a description of the repairs that were made, the date the repairs were made, and the date the tank was emptied, if necessary.
  - (4) Each owner or operator using an enclosure to comply with the tank level 2 control requirements specified in subsection 9

of section 33-24-05-454 shall prepare and maintain the following records:

- (a) Records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B.
  - (b) Records required for the closed-vent system and control device in accordance with the requirements of subsection 5.
- 3. The owner or operator of a surface impoundment using air emission controls in accordance with the requirements of section 33-24-05-455 shall prepare and maintain records for the surface impoundment that include the following information:
  - a. A surface impoundment identification number (or other unique identification description as selected by the owner or operator).
  - b. Documentation describing the floating membrane cover or cover design, as applicable to the surface impoundment, that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the specifications listed in subsection 3 of section 33-24-05-455.
  - c. A record for each inspection required by section 33-24-05-455 that includes the following information:
    - (1) Date inspection was conducted.
    - (2) For each defect detected during the inspection the following information: the location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with the provisions of subsection 6 of section 33-24-05-455, the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected.
  - d. For a surface impoundment equipped with a cover and vented through a closed-vent system to a control device, the owner or operator shall prepare and maintain the record specified in subsection 5.

4. The owner or operator of containers using container level 3 air emission controls in accordance with the requirements of section 33-24-05-456 shall prepare and maintain records that include the following information:
  - a. Records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B.
  - b. Records required for the closed-vent system and control device in accordance with the requirements of subsection 5.
5. The owner or operator using a closed-vent system and control device in accordance with the requirements of section 33-24-05-457 shall prepare and maintain records that include the following information:
  - a. Documentation for the closed-vent system and control device that includes:
    - (1) Certification that is signed and dated by the owner or operator stating that the control device is designed to operate at the performance level documented by a design analysis as specified in paragraph 2 or by performance tests as specified in paragraph 3 when the tank, surface impoundment, or container is or would be operating at capacity or the highest level reasonably expected to occur.
    - (2) If a design analysis is used, then design documentation as specified in subdivision d of subsection 2 of section 33-24-05-405. The documentation shall include information prepared by the owner or operator or provided by the control device manufacturer or vendor that describes the control device design in accordance with paragraph 3 of subdivision d of subsection 2 of section 33-24-05-405 and certification by the owner or operator that the control equipment meets the applicable specifications.
    - (3) If performance tests are used, then a performance test plan as specified in subdivision c of subsection 2 of section 33-24-05-405 and all test results.
    - (4) Information as required by subdivisions a and b of subsection 3 of section 33-24-05-405, as applicable.
    - (5) An owner or operator shall record, on a semiannual basis, the information specified in subparagraphs a and b for those planned routine maintenance operations that would



require the control device not to meet the requirements of paragraph 1, 2, or 3 of subdivision a of subsection 3 of section 33-24-05-457, as applicable.

- (a) A description of the planned routine maintenance that is anticipated to be performed for the control device during the next six-month period. This description shall include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods.
    - (b) A description of the planned routine maintenance that was performed for the control device during the previous six-month period. This description shall include the type of maintenance performed and the total number of hours during those six months that the control device did not meet the requirements of paragraph 1, 2, or 3 of subdivision a of subsection 3 of section 33-24-05-457, as applicable, due to planned routine maintenance.
  - (6) An owner or operator shall record the information specified in subparagraphs a through c for those unexpected control device system malfunctions that would require the control device not to meet the requirements of paragraph 1, 2, or 3 of subdivision a of subsection 3 of section 33-24-05-457, as applicable.
    - (a) The occurrence and duration of each malfunction of the control device system.
    - (b) The duration of each period during a malfunction when gases, vapors, or fumes are vented from the waste management unit through the closed-vent system to the control device while the control device is not properly functioning.
    - (c) Actions taken during periods of malfunction to restore a malfunctioning control device to its normal or usual manner of operation.
  - (7) Records of the management of carbon removed from a carbon adsorption system conducted in accordance with paragraph 2 of subdivision c of subsection 3 of section 33-24-05-457.
6. The owner or operator of a tank, surface impoundment, or container exempted from standards in accordance with the provisions of subsection 3 of section 33-24-05-452 shall prepare and maintain the following records, as applicable:

- a. ~~For tanks, surface impoundments, or containers exempted under the hazardous waste organic concentration conditions specified in subdivision a or b of subsection 3 of section 33-24-05-452, the owner or operator shall record the information used for each waste determination (for example, test results, measurements, calculations, and other documentation) in the facility operating log. If analysis results for waste samples are used for the waste determination, then the owner or operator shall record the date, time, and location that each waste sample is collected in accordance with applicable requirements of section 33-24-05-453.~~ For tanks, surface impoundments, and containers exempted under the hazardous waste organic concentration conditions specified in subdivision a of subsection 3 or paragraphs 1 through 6 of subdivision b of subsection 3 of section 33-24-05-452, the owner or operator shall record information used for each waste determination (such as, test results, measurements, calculations, and other documentation) in the facility operating log. If analysis results for waste samples are used for the waste determination, then the owner or operator shall record the date, time, and location that each waste sample is collected in accordance with applicable requirements of section 33-24-05-453.
  - b. For tanks, surface impoundments, or containers exempted under the provisions of paragraph 7 or 8 of subdivision b of subsection 3 of section 33-24-05-452, the owner or operator shall record the identification number for the incinerator, boiler, or industrial furnace in which the hazardous waste is treated.
7. An owner or operator designating a cover as "unsafe to inspect and monitor" pursuant to subsection ~~44~~ 12 of section 33-24-05-454 or subsection 7 of section 33-24-05-455 shall record in a log that is kept in the facility operating record the following information: the identification numbers for waste management units with covers that are designated as "unsafe to inspect and monitor", the explanation for each cover stating why the cover is unsafe to inspect and monitor, and the plan and schedule for inspecting and monitoring each cover.
8. The owner or operator of a facility that is subject to sections 33-24-05-450 through 33-24-05-474 and to the control device standards in 40 CFR part 60, subpart VV, or 40 CFR part 61, subpart V, may elect to demonstrate compliance with the applicable sections of sections 33-24-05-450 through 33-24-05-474 by documentation either pursuant to sections 33-24-05-450 through 33-24-05-474, or pursuant to the provisions of 40 CFR part 60, subpart VV or 40 CFR part 61, subpart V, to the extent that the documentation required by 40 CFR ~~parts~~ part 60 or 61 duplicates the documentation required by this section.

9. For each tank or container not using air emission controls specified in sections 33-24-05-454 through 33-24-05-457 in accordance with the conditions specified in subsection 4 of section 33-24-05-450, the owner or operator shall record and maintain the following information:
  - a. A list of the individual organic peroxide compounds manufactured at the facility that meet the conditions specified in subdivision a of subsection 4 of section 33-24-05-450.
  - b. A description of how the hazardous waste containing the organic peroxide compounds identified in subdivision a are managed at the facility in tanks and containers. This description shall include:
    - (1) For tanks used at the facility to manage this hazardous waste, sufficient information shall be provided to describe for each tank: a facility identification number for the tank; the purpose and placement of this tank in the management train of this hazardous waste; and the procedures used to ultimately dispose of the hazardous waste managed in the tanks.
    - (2) For containers used at the facility to manage these hazardous wastes, sufficient information shall be provided to describe: a facility identification number for the container or group of containers; the purpose and placement of this container, or group of containers, in the management train of this hazardous waste; and the procedures used to ultimately dispose of the hazardous waste handled in the containers.
  - c. An explanation of why managing the hazardous waste containing the organic peroxide compounds identified in subdivision a in the tanks and containers as described in subdivision b would create an undue safety hazard if the air emission controls, as required under sections 33-24-05-454 through 33-24-05-457, are installed and operated on these waste management units. This explanation shall include the following information:
    - (1) For tanks used at the facility to manage these hazardous wastes, sufficient information shall be provided to explain: how use of the required air emission controls on the tanks would affect the tank design features and facility operating procedures currently used to prevent an undue safety hazard during the management of this hazardous waste in the tanks; and why installation of safety devices on the required air emission controls, as allowed under sections 33-24-05-450 through 33-24-05-474, will not address those situations in which evacuation of tanks equipped with these air emission controls is necessary and consistent with good engineering and safety practices for handling organic peroxides.



- (2) For containers used at the facility to manage these hazardous wastes, sufficient information shall be provided to explain: how use of the required air emission controls on the containers would affect the container design features and handling procedures currently used to prevent an undue safety hazard during the management of this hazardous waste in the containers; and why installation of safety devices on the required air emission controls as allowed under sections 33-24-05-450 through 33-24-05-474, will not address those situations in which evacuation of containers equipped with these air emission controls is necessary and consistent with good engineering and safety practices for handling organic peroxides.

10. For each hazardous waste management unit not using air emission controls specified in sections 33-24-05-454 through 33-24-05-457 in accordance with the requirements of subdivision g of subsection 2 of section 33-24-05-450, the owner and operator shall record and maintain the following information:

- a. Certification that the waste management unit is equipped with and operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulation codified under 40 CFR part 60, 61, or 63.
- b. Identification of the specific requirements codified under 40 CFR part 60, 61, or 63 with which the waste management unit is in compliance.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

#### **33-24-05-460. Reporting requirements.**

1. Each owner or operator managing hazardous waste in a tank, surface impoundment, or container exempted from using air emission controls under the provisions of subsection 3 of section 33-24-05-452 shall report to the department each occurrence when hazardous waste is placed in the waste management unit in noncompliance with the conditions specified in subdivision a or b of subsection 3 of section 33-24-05-452, as applicable. Examples of such occurrences include placing in the waste management unit a hazardous waste having an average VO concentration equal to or greater than five hundred parts per million weight at the point of waste origination; or placing in the waste management unit a treated hazardous waste of which the organic content has been reduced by an organic destruction or removal process that fails to achieve the applicable conditions specified in paragraphs 1 through 6 of subdivision b of subsection 3 of section

33-24-05-452. The owner or operator shall submit a written report within fifteen calendar days of the time that the owner or operator becomes aware of the occurrence. The written report shall contain the ~~environmental protection agency~~ identification number, facility name and address, a description of the noncompliance event and the cause, the dates of the noncompliance, and the actions taken to correct the noncompliance and prevent recurrence of the noncompliance. The report shall be signed and dated by an authorized representative of the owner or operator.

2. Each owner or operator using air emission controls on a tank in accordance with the requirements of subsection 3 of section 33-24-05-454 shall report to the department each occurrence when hazardous waste is managed in the tank in noncompliance with the conditions specified in subsection 2 of section 33-24-05-454. The owner or operator shall submit a written report within fifteen calendar days of the time that the owner or operator becomes aware of the occurrence. The written report shall contain the ~~environmental protection agency~~ identification number, facility name and address, a description of the noncompliance event and the cause, the dates of the noncompliance, and the actions taken to correct the noncompliance and prevent recurrence of the noncompliance. The report shall be signed and dated by an authorized representative of the owner or operator.
3. Each owner or operator using a control device in accordance with the requirements of section 33-24-05-457 shall submit a semiannual written report to the department except as provided for in subsection 4. The report must be signed and dated by the owner or operator or that person's designated representative and shall include the identification number, facility name and address, an explanation why the control device could not be returned to compliance within twenty-four hours, and actions taken to correct the noncompliance and shall describe each occurrence during the previous six-month period when either:
  - a. A control device is operated continuously for twenty-four hours or longer in noncompliance with the applicable operating values defined in subdivision d of subsection 3 of section 33-24-05-405; or
  - b. A flare is operated with visible emissions for five minutes or longer in a two-hour period, as defined in subsection 4 of section 33-24-05-403.
4. A report to the department in accordance with the requirements of subsection 3 is not required for a six-month period during which all control devices subject to sections 33-24-05-450 through 33-24-05-474 are operated by the owner or operator such that:



- a. During no period of twenty-four hours or longer did a control device operate continuously in noncompliance with the applicable operating values defined in subdivision d of subsection 3 of section 33-24-05-405; and
  - b. No flare was operated with visible emissions for five minutes or longer in a two-hour period, as defined in subsection 4 of section 33-24-05-403.
5. For tanks, surface impoundments, or containers exempted under the hazardous waste organic concentration conditions specified in subparagraph e of paragraph 1 of subdivision b of subsection 1 of section 33-24-05-453, the owner or operator shall record the information used for each waste determination (such as, test results, measurements, calculations, and other documentation) in the facility operating log. If analysis results for waste samples are used for the waste determination, then the owner or operator shall record the date, time, and location that each waste sample is collected in accordance with applicable requirements of section 33-24-05-454.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC ~~23-20.3~~ 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

#### **33-24-05-476. Design and operating standards.**

- 1. All containment buildings must comply with the following design standards:
  - a. The containment building must be completely enclosed with a floor, walls, and a roof to prevent exposure to the elements (for example, precipitation, wind, run-on); and to assure containment of managed wastes.
  - b. The floor and containment walls of the unit, including the secondary containment system if required under subsection 2, must be designed and constructed of materials of sufficient strength and thickness to support themselves, the waste contents, and any personnel and heavy equipment that operate within the unit, and to prevent failure due to pressure gradients, settlement, compression, or uplift, physical contact with the hazardous wastes to which they are exposed; climatic conditions; and the stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls. The unit must be designed so that it has sufficient structural strength to prevent collapse or other failure. All surfaces to be in contact with hazardous wastes must be chemically compatible with those wastes. The department will consider standards established by professional organizations generally recognized



by the industry such as the American concrete institute ~~and~~ or the American society of testing materials in judging the structural integrity requirements of this ~~paragraph~~ subdivision. If appropriate to the nature of the waste management operation to take place in the unit, an exception to the structural strength requirement may be made for lightweight doors and windows that meet these criteria:

- (1) They provide an effective barrier against fugitive dust emissions under paragraph 4 of subdivision a of subsection 3; and
    - (2) The unit is designed and operated in a fashion that assures that wastes will not actually come in contact with these openings.
  - c. Incompatible hazardous wastes or treatment reagents must not be placed in the unit or its secondary containment system if they could cause the unit or secondary containment system to leak, corrode, or otherwise fail.
  - d. A containment building must have a primary barrier designed to withstand the movement of personnel, waste, and handling equipment in the unit during the operating life of the unit and appropriate for the physical and chemical characteristics of the waste to be managed.
2. For a containment building used to manage hazardous wastes containing free liquids or treated with free liquids (the presence of which is determined by the paint filter test, a visual examination, or other appropriate means), the owner or operator must include:
- a. A primary barrier designed and constructed of materials to prevent the migration of hazardous constituents into the barrier (for example, a geomembrane covered by a concrete wear surface).
  - b. A liquid collection and removal system to minimize the accumulation of liquid on the primary barrier of the containment building:
    - (1) The primary barrier must be sloped to drain liquids to the associated collection system; and
    - (2) Liquids and waste must be collected and removed to minimize hydraulic head on the containment system at the earliest practicable time.
  - c. A secondary containment system including a secondary barrier designed and constructed to prevent migration of hazardous

constituents into the barrier, and a leak detection system that is capable of detecting failure of the primary barrier and collecting accumulated hazardous wastes and liquids at the earliest practicable time.

- (1) The requirements of the leak detection component of the secondary containment system are satisfied by installation of a system that is, at a minimum:
    - (a) Constructed with a bottom slope of one percent or more; and
    - (b) Constructed of a granular drainage material with a hydraulic conductivity of  $1 \times 10^{-2}$  centimeters per second or more and a thickness of twelve inches [30.5 centimeters] or more, or constructed of synthetic or geonet drain materials with a transmissivity of  $3 \times 10^{-5}$  square meters per second.
  - (2) If treatment is to be conducted in the building, an area in which such treatment will be conducted must be designed to prevent the release of liquids, wet materials, or liquid aerosols to other portions of the building.
  - (3) The secondary containment system must be constructed of materials that are chemically resistant to the waste and liquids managed in the containment building and of sufficient strength and thickness to prevent collapse under the pressure exerted by overlaying materials and by any equipment used in the containment building. (Containment buildings can serve as secondary containment systems for tanks placed within the building under certain conditions. A containment building can serve as an external liner system for a tank, provided it meets the requirements of subdivision a of subsection 4 of section 33-24-05-106. In addition, the containment building must meet the requirements of subsection 2 of section 33-24-05-106 and subdivisions a and b of subsection 3 of section 33-24-05-106 to be considered an acceptable secondary containment system for a tank.)
- d. For existing units other than ninety-day generator units, the department may delay the secondary containment requirement for up to two years, based on a demonstration by the owner or operator that the unit substantially meets the standards of this subpart sections 33-24-05-475 through 33-24-05-500. In making this demonstration, the owner or operator must:
- (1) Provide written notice to the department of ~~their~~ the request by November 16, 1992. This notification must describe the

unit and its operating practices with specific reference to the performance of existing containment systems, and specific plans for retrofitting the unit with secondary containment;

- (2) Respond to any comments from the department on these plans within thirty days; and
- (3) Fulfill the terms of the revised plans, if such plans are approved by the department.

3. Owners or operators of all containment buildings must:

- a. Use controls and practices to ensure containment of the hazardous waste within the unit; and, at a minimum:
  - (1) Maintain the primary barrier to be free of significant cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the primary barrier;
  - (2) Maintain the level of the stored or treated hazardous waste within the containment walls of the unit so that the height of any containment wall is not exceeded;
  - (3) Take measures to prevent the tracking of hazardous waste out of the unit by personnel or by equipment used in handling the waste. An area must be designated to decontaminate equipment and any rinsate must be collected and properly managed; and
  - (4) Take measures to control fugitive dust emissions such that any openings (doors, windows, vents, cracks, etc.) exhibit no visible emissions (see 40 CFR part 60, appendix A, method 22 Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares). In addition, all associated particulate collection devices (for example, fabric filter, electrostatic precipitator) must be operated and maintained with sound air pollution control practices (see 40 CFR part 60 subpart 292 for guidance). This state of no visible emissions must be maintained effectively at all times during routine operating and maintenance conditions, including when vehicles and personnel are entering and exiting the unit.
- b. Obtain certification by a qualified registered professional engineer that the containment building design meets the requirements of subsections 1, 2, and 3. For units placed into operation prior to February 18, 1993, this certification must be placed in the facility's operating record (onsite files for generators who are not formally required to have operating records) no later than sixty days after



the date of initial operation of the unit. After February 18, 1993, professional engineer certification will be required prior to operation of the unit.

- c. Throughout the active life of the containment building, if the owner ~~of~~ or operator detects a condition that could lead to or has caused a release of hazardous waste, must repair the condition promptly, in accordance with the following procedures.
  - (1) Upon detection of a condition that has lead to a release of hazardous waste (for example, upon detection of leakage from the primary barrier) the owner or operator must:
    - (a) Enter a record of the discovery in the facility operating record;
    - (b) Immediately remove the portion of the containment building affected by the condition from service;
    - (c) Determine what steps must be taken to repair the containment building, remove any leakage from the secondary collection system, and establish a schedule for accomplishing the cleanup and repairs; and
    - (d) Within seven days after the discovery of the condition, notify the department of the condition, and within fourteen working days, provide a written notice to the department with a description of the steps taken to repair the containment building, and the schedule for accomplishing the work.
  - (2) The department will review the information submitted, make a determination regarding whether the containment building must be removed from service completely or partially until repairs and cleanup are complete, and notify the owner or operator of the determination and the underlying rationale in writing.
  - (3) Upon completing all repairs and cleanup the owner or operator must notify the department in writing and provide a verification, signed by a qualified, registered professional engineer, that the repairs and cleanup have been completed according to the written plan submitted in accordance with subparagraph d of paragraph 1 of subdivision c of subsection 3.
- d. Inspect and record in the facility's operating record, at least once every seven days, data gathered from monitoring equipment and leak detection equipment as well as the containment building and

the area immediately surrounding the containment building to detect signs of releases of hazardous waste.

4. For containment buildings that contain areas both with and without secondary containment, the owner or operator must:
  - a. Design and operate each area in accordance with the requirements enumerated in subsections 1, 2, and 3;
  - b. Take measures to prevent the release of liquids or wet materials into areas without secondary containment; and
  - c. Maintain in the facility's operating log a written description of the operating procedures used to maintain the integrity of areas without secondary containment.
5. Notwithstanding any other provision of sections 33-24-05-475 through 33-24-05-500, the department may waive requirements for secondary containment for a permitted containment building where the owner or operator demonstrates that the only free liquids in the unit are limited amounts of dust suppression liquids required to meet occupational health and safety requirements, and where containment of managed wastes and liquids can be assured without a secondary containment system.

**History:** Effective January 1, 1994; amended effective July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-501. Applicability to drip pads.**

1. The requirements of sections 33-24-05-501 through 33-24-05-509 apply to owners and operators of facilities that use new or existing drip pads to convey treated wood drippage, precipitation, and surface water runoff, or any combination, to an associated collection system. Existing drip pads are those constructed before December 6, 1990, and those for which the owner or operator has a design and has entered into binding financial or other agreements for construction prior to December 6, 1990. All other drip pads are new drip pads. The requirement of subdivision c of subsection 2 of section 33-24-05-504 to install a leak collection system applies only to those drip pads that are constructed after December 24, 1992, except for those constructed after December 24, 1992, for which the owner or operator has a design and has entered into binding financial or other agreements for construction prior to December 24, 1992.
2. The owner or operator of any drip pad that is inside or under a structure that provides protection from precipitation so that neither runoff nor

run-on is generated is not subject to regulation under subsection 5 or 6 of section 33-24-05-504.

3. The requirements of sections 33-24-05-501 through 33-24-05-524 are not applicable to the management of infrequent and incidental drippage in storage yards provided that:
  - a. ~~The~~ the owner or operator maintains and complies with a written contingency plan that describes how the owner or operator will respond immediately to the discharge of such infrequent and incidental drippage. At a minimum, the contingency plan must describe how the owner or operator will do the following:
    - (1) a. Clean up the drippage;
    - (2) b. Document the cleanup of the drippage;
    - (3) c. Retain documents regarding cleanup for three years; and
    - (4) d. Manage the contaminated media in a manner consistent with federal regulations.

**History:** Effective January 1, 1994; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

#### **33-24-05-504. Design and operating requirements.**

1. Drip pads must:
  - a. Be constructed of nonearthen materials, excluding wood and nonstructurally supported asphalt;
  - b. Be sloped to free-drain treated wood drippage, rain and other waters, or solutions of drippage and water or other wastes to the associated collection system;
  - c. Have a curb or berm around the perimeter;
  - d. Drip pads must meet and have on file the following:
    - (1) Have a hydraulic conductivity of less than or equal to  $1 \times 10^{-7}$  centimeters per second (for example, existing concrete drip pads must be sealed, coated, or covered with a surface material with a hydraulic conductivity of less than or equal to  $1 \times 10^{-7}$  centimeters per second), such that the entire surface where drippage occurs or may run across is capable of containing such drippage and mixtures of drippage and precipitation, materials, or other wastes while being routed



to an associated collection system. This surface material must be maintained free of cracks and gaps that could adversely affect its hydraulic conductivity, and the material must be chemically compatible with the preservatives that contact the drip pad. The requirements of this provision apply only to existing drip pads and those drip pads for which the owner or operator elects to comply with subsection 2 of section 33-24-05-503 instead of subsection 1 of section 33-24-05-503.

- (2) The owner or operator must obtain and keep on file at the facility a written assessment of the drip pad, reviewed and certified by an independent, qualified registered professional engineer that attests to the results of the evaluation. The assessment must be reviewed, updated, and recertified annually. The evaluation must document the extent to which the drip pad meets the design and operating standards of this section, except for subsection 2.
- e. Be of sufficient structural strength and thickness to prevent failure due to physical contact, climatic conditions, the stress of daily operations (for example, variable and moving loads such as vehicle traffic, movement of wood, etc.).

Note: The department will generally consider applicable standards established by professional organizations generally recognized by the industry such as the American concrete institute (ACI) or the American society of testing and materials (ASTM) in judging the structural integrity requirement of this ~~paragraph~~ subdivision.

2. If an owner or operator elects to comply with subsection 1 of section 33-24-05-503 instead of subsection 2 of section 33-24-05-503, the drip pad must have:
  - a. A synthetic liner installed below the drip pad that is designed, constructed, and installed to prevent leakage from the drip pad into the adjacent subsurface soil or ground water or surface water at any time during the active life (including the closure period) of the drip pad. The liner must be constructed of materials that will prevent waste from being absorbed into the liner and to prevent releases into the adjacent subsurface soil or ground water or surface water during the active life of the facility. The liner must be:
    - (1) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or drip pad leakage to which they are exposed, climatic conditions, the stress of installation, and the stress

of daily operation (including stresses from vehicular traffic on the drip pad);

- (2) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift; and
  - (3) Installed to cover all surrounding earth that could come in contact with the waste or leakage; ~~and~~.
- b. A leakage detection system immediately above the liner that is designed, constructed, maintained, and operated to detect leakage from the drip pad. The leakage detection system must be:
- (1) Constructed of materials that are:
    - (a) Chemically resistant to the waste managed in the drip pad and the leakage that might be generated; and
    - (b) Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlaying materials and by any equipment used at the drip pad;
  - (2) Designed and operated to function without clogging through the scheduled closure of the drip pad; and
  - (3) Designed so that it will detect the failure of the drip pad or the presence of a release of hazardous waste or accumulated liquid at the earliest practicable time.
- c. A leakage collection system immediately above the liner that is designed, constructed, maintained, and operated to collect leakage from the drip pad such that it can be removed from below the drip pad. The date, time, and quantity of any leakage collected in this system and removed must be documented in the operating log.

3. Drip pads must be maintained such that they remain free of cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the drip pad.

Note: See subsection 13 of section 33-24-05-504 for remedial action required if deterioration or leakage is detected.

4. The drip pad and associated collection system must be designed and operated to convey, drain, and collect liquid resulting from drippage or precipitation in order to prevent runoff.

5. Unless protected by a structure, as described in subsection 2 of section 33-24-05-501, the owner or operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the drip pad during peak discharge from at least a twenty-four-hour, twenty-five-year storm, unless the system has sufficient excess capacity to contain any runoff that might enter the system.
6. Unless protected by a structure or cover as described in subsection 2 of section 33-24-05-501, the owner or operator, must design, construct, operate, and maintain a runoff management system to collect and control at least the water volume resulting from a twenty-four-hour, twenty-five-year storm.
7. The drip pad must be evaluated to determine that it meets the requirements of subsections 1 through 6 and the owner or operator must obtain a statement from an independent, qualified registered professional engineer certifying that the drip pad design meets the requirements.
8. Drippage and accumulated precipitation must be removed from the associated collection system as necessary to prevent overflow onto the drip pad.
9. The drip pad surface must be cleaned thoroughly in a manner and frequency such that accumulated residues of hazardous waste or other materials are removed, with residues being properly managed as hazardous waste, so as to allow weekly inspections of the entire drip pad surface without interference or hindrance from accumulated residues of hazardous waste or other materials on the drip pad. The owner or operator must document the date and time of each cleaning and the cleaning procedure used in the facility's operating log. The owner or operator must determine if the residues are hazardous as per section 33-24-03-02 and, if so, must manage them under article 33-24 and Resource Conservation and Recovery Act (RCRA) section 3010.
10. Drip pads must be operated and maintained in a manner to minimize tracking of hazardous waste or hazardous waste constituents off the drip pad as a result of activities by personnel or equipment.
11. After being removed from the treatment vessel, treated wood from pressure and nonpressure processes must be held on the drip pad until drippage has ceased. The owner or operator must maintain records sufficient to document that all treated wood is held on the pad following treatment in accordance with this requirement.
12. Collection and holding units associated with run-on and runoff control systems must be emptied or otherwise managed as soon as possible after storms to maintain design capacity of the system.



13. Throughout the active life of the drip pad and as specified in the permit, if the owner or operator detects a condition that may have caused or has caused a release of hazardous waste, the condition must be repaired within a reasonably prompt period of time following discovery, in accordance with the following procedures:
  - a. Upon detection of a condition that may have caused or has caused a release of hazardous waste (for example, upon detection of leakage in the leak detection system), the owner or operator must:
    - (1) Enter a record of the discovery in the facility operating log;
    - (2) Immediately remove the portion of the drip pad affected by the condition from service;
    - (3) Determine what steps must be taken to repair the drip pad and clean up any leakage from below the drip pad, and establish a schedule for accomplishing the repairs; and
    - (4) Within twenty-four hours after discovery of the condition, notify the department of the condition and, within ten working days, provide written notice to the department with a description of the steps that will be taken to repair the drip pad and clean up any leakage, and the schedule for accomplishing this work.
  - b. The department will review the information submitted, make a determination regarding whether the pad must be removed from service completely or partially until repairs and clean-up are complete, and notify the owner or operator of the determination and the underlying rationale in writing.
  - c. Upon completing all repairs and clean-up, the owner or operator must notify the department in writing and provide a certification signed by an independent, qualified registered professional engineer, that the repairs and clean-up have been completed according to the written plan submitted in accordance with paragraph 4 of subdivision a.
14. Should a permit be necessary, the department will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this section are satisfied.
15. The owner or operator must maintain, as part of the facility operating log, documentation of past operating and waste handling practices. This must include identification of preservative formulations used in the past,

a description of drippage management practices, and a description of treated wood storage and handling practices.

**History:** Effective January 1, 1994; amended effective July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-525. Applicability to hazardous waste burned in boilers and industrial furnaces.**

1. The regulations of sections 33-24-05-525 through 33-24-05-549 apply to hazardous waste burned or processed in a boiler or industrial furnace (as defined in section 33-24-01-04) irrespective of the purpose of burning or processing, except as provided by subsections 2, 3, 4, and 6 7, and 8. In sections 33-24-05-525 through 33-24-05-549, the term "burn" means burning for energy recovery or destruction, or processing for materials recovery or as an ingredient. The emissions standards of sections 33-24-05-529 through 33-24-05-532 apply to facilities operating under interim status or under a Resource Conservation and Recovery Act hazardous waste operating permit as specified in sections 33-24-05-527 and 33-24-05-528.
2. Integration of the maximum achievable control technology standards.
  - a. Except as provided by subdivision b, the standards of sections 33-24-05-525 through 33-24-05-549 no longer apply when an affected source demonstrates compliance with the maximum achievable control technology requirements of 40 CFR part 63, subpart EEE, by conducting a comprehensive performance test and submitting to the department a notification of compliance under 40 CFR sections 63.1207(j) and 63.1210(d) documenting compliance with the requirements of subpart EEE. Nevertheless, even after this demonstration of compliance with the maximum achievable control technology standards, permit conditions that were based on the standards of sections 33-24-05-525 through 33-24-05-549 will continue to be in effect until they are removed from the permit or the permit is terminated or revoked, unless the permit expressly provides otherwise.
  - b. The following standards continue to apply:
    - (1) If a permittee elects to comply with paragraph 1 of subdivision a of subsection 1 of section 33-24-06-100 to minimize emissions of toxic compounds from startup, shutdown, and malfunction events, subdivision a of subsection 5 of section 33-24-05-527 requiring operations in accordance with the operating requirements specified in the permit at all times that hazardous waste is in the

unit, and paragraph 3 of subdivision b of subsection 5 of section 33-24-05-527 requiring compliance with the emission standards and operating requirements during startup and shutdown if hazardous waste is in the combustion chamber, except for particular hazardous wastes. These provisions apply only during startup, shutdown, and malfunction events:

- (2) The closure requirements of subdivision k of subsection 5 of section 33-24-05-527 and subsection 12 of section 33-24-05-528;
- (3) The standards for direct transfer of section 33-24-05-536;
- (4) The standards for regulation of residues of section 33-24-05-537; and
- (5) The applicable requirements of sections 33-24-05-01 through 33-24-05-88, 33-24-05-420 through 33-24-05-474, and subsection 5 of section 33-24-06-16.

3. The following hazardous wastes and facilities are not subject to regulation under sections 33-24-05-525 through 33-24-05-549:

- a. Used oil burned for energy recovery that is also hazardous waste solely because it exhibits a characteristic of hazardous waste identified in sections 33-24-02-10 through 33-24-02-14. Such used oil is subject to regulation under sections 33-24-05-600 through 33-24-05-689;
- b. Gas recovered from hazardous or solid waste landfills when such gas is burned for energy recovery;
- c. Hazardous wastes that are exempt from regulation under section 33-24-02-04 and paragraphs 4 through 6 of subdivision c of subsection 1 of section 33-24-02-06, and hazardous wastes that are subject to the special requirements for conditionally exempt small quantity generators under section 33-24-02-05; and
- d. Coke ovens, if the only hazardous waste burned is hazardous waste number K087, decanter tank tar sludge from coking operations.

3- 4. Owners and operators of smelting, melting, and refining furnaces (including pyrometallurgical devices such as cupolas, sintering machines, roasters, and foundry furnaces, but not including cement kilns, aggregate kilns, or halogen acid furnaces burning hazardous waste) that process hazardous waste solely for metal recovery are conditionally exempt from regulation under sections 33-24-05-525



through 33-24-05-549, except for sections 33-24-05-526 and 33-24-05-537.

- a. To be exempt from sections 33-24-05-527 through 33-24-05-536, an owner or operator of a metal recovery furnace or mercury recovery furnace must comply with the following requirements, except that an owner or operator of a lead or a nickel-chromium recovery furnace, or a metal recovery furnace that burns baghouse bags used to capture metallic dusts emitted by steel manufacturing, must comply with the requirements of subdivision c, and owners or operators of lead recovery furnaces that are subject to regulation under the secondary lead smelting national emission standard for hazardous air pollutants must comply with the requirements of subsection 8:

- (1) Provide a one-time written notice to the department indicating the following:
  - (a) The owner or operator claims exemption under this subsection;
  - (b) The hazardous waste is burned solely for metal recovery consistent with the provisions of subdivision b ~~of subsection 3;~~
  - (c) The hazardous waste contains recoverable levels of metals; and
  - (d) The owner or operator will comply with the sampling and analysis and recordkeeping requirements of this subsection;
- (2) Sample and analyze the hazardous waste and other feedstocks as necessary to comply with the requirements of this subsection under procedures specified by test methods for evaluating solid waste, physical/chemical methods, environmental protection agency publication SW-846, incorporated by reference in section 33-24-01-05 or alternative methods that meet or exceed the environmental protection agency publication SW-846 method performance capabilities. If environmental protection agency publication SW-846 does not prescribe a method for a particular determination, the owner or operator shall use the best available method; and
- (3) Maintain at the facility until closure of the boiler or industrial furnace unit records to document compliance with the provisions of section 33-24-05-525, including limits on levels of toxic organic constituents and British thermal unit value of

the waste, and levels of recoverable metals in the hazardous waste compared to normal nonhazardous waste feedstocks.

- b. A hazardous waste meeting either of the following criteria is not processed solely for metal recovery:
  - (1) The hazardous waste has a total concentration of organic compounds listed in appendix V of chapter 33-24-02 exceeding five hundred parts per million by weight, as-fired, and so is considered to be burned for destruction. The concentration of organic compounds in a waste as-generated may be reduced to the five hundred parts per million limit by bona fide treatment that removes or destroys organic constituents. Blending for dilution to meet the five hundred parts per million limit is prohibited and documentation that the waste has not been impermissibly diluted must be retained in the records required by paragraph 3 of subdivision a; or
  - (2) The hazardous waste has a heating value of five thousand British thermal units per pound or more, as-fired, and so is considered to be burned as fuel. The heating value of a waste as-generated may be reduced to below the five thousand British thermal units per pound limit by bona fide treatment that removes or destroys organic constituents. Blending for dilution to meet the five thousand British thermal units per pound limit is prohibited and documentation that the waste has not been impermissibly diluted must be retained in the records required by paragraph 3 of subdivision a.
- c. To be exempt from sections 33-24-05-527 through 33-24-05-536, an owner or operator of a lead or nickel-chromium or mercury recovery furnace (except for owners or operators of lead recovery furnaces subject to regulation under the secondary lead smelting national emission standards for hazardous air pollutants), or a metal recovery furnace that burns baghouse bags used to capture metallic dusts emitted by steel manufacturing, must provide a one-time written notice to the department identifying each hazardous waste burned and specifying whether the owner or operator claims an exemption for each waste under this subdivision or subdivision a ~~of subsection 3~~. The owner or operator must comply with the requirements of subdivision a ~~of subsection 3~~ for those wastes claimed to be exempt under that subdivision and must comply with the requirements below for those wastes claimed to be exempt under this subdivision.
  - (1) The hazardous wastes listed in appendices XXVI, XXVII, and XXVIII of chapter 33-24-05, and baghouse bags used to capture metallic dusts emitted by steel manufacturing

are exempt from the requirements of subdivision a of ~~subsection 3~~, provided that:

- (a) A waste listed in appendix XXVI must contain recoverable levels of lead, a waste listed in appendix XXVII must contain recoverable levels of nickel or chromium, a waste listed in appendix XXVIII must contain recoverable levels of mercury and contain less than five hundred parts per million organic constituents listed in appendix V of chapter 33-24-02 and baghouse bags used to capture metallic dusts emitted by steel manufacturing must contain recoverable levels of metal; and
  - (b) The waste does not exhibit the toxicity characteristic of section 33-24-02-14 for an organic constituent; and
  - (c) The waste is not a hazardous waste listed in sections 33-24-02-15 through 33-24-02-19 because it is listed for an organic constituent as identified in appendix V of chapter 33-24-02; and
  - (d) The owner or operator certifies in the one-time notice that hazardous waste is burned under the provisions of subdivision c of ~~subsection 3~~ and that sampling and analysis will be conducted or other information will be obtained as necessary to ensure continued compliance with these requirements. Sampling and analysis shall be conducted according to paragraph 2 of subdivision a of ~~subsection 3~~ and records to document compliance with subdivision c of ~~subsection 3~~ shall be kept until closure of the boiler or industrial furnace unit.
- (2) The department may decide on a case-by-case basis that the toxic organic constituents in a material listed in appendix XXVI, XXVII, or XXVIII of chapter 33-24-05 that contains a total concentration of more than five hundred parts per million toxic organic compounds listed in appendix V of chapter 33-24-02, may pose a hazard to human health and the environment when burned in a metal recovery furnace exempt from the requirements of sections 33-24-05-525 through 33-24-05-549. In that situation, after adequate notice and opportunity for comment, the metal recovery furnace will become subject to the requirements of sections 33-24-05-525 through 33-24-05-549 when burning that material. In making the hazard determination, the department will consider the following factors:



- (a) The concentration and toxicity of organic constituents in the material; ~~and~~
  - (b) The level of destruction of toxic organic constituents provided by the furnace; and
  - (c) Whether the acceptable ambient levels established in appendix XIX or XX of chapter 33-24-05 may be exceeded for any toxic organic compound that may be emitted based on dispersion modeling to predict the maximum annual average offsite ground level concentration.
- 4. ~~5.~~ The standards for direct transfer operations under section 33-24-05-536 apply only to facilities subject to the permit standards of section 33-24-05-527 or the interim status standards of section 33-24-05-528.
- 5. ~~6.~~ The management standards for residues under section 33-24-05-537 apply to any boiler or industrial furnace burning hazardous waste.
- 6. ~~7.~~ Owners and operators of smelting, melting, and refining furnaces (including pyrometallurgical devices such as cupolas, sintering machines, roasters, and foundry furnaces) that process hazardous waste for recovery of economically significant amounts of the precious metals gold, silver, platinum, palladium, irridium, osmium, rhodium, or ruthenium, or any combination of these are conditionally exempt from regulation under sections 33-24-05-525 through 33-24-05-549, except for section 33-24-05-537. To be exempt from sections 33-24-05-526 through 33-24-05-536, an owner or operator must:
  - a. Provide a one-time written notice to the department indicating the following:
    - (1) The owner or operator claims exemption under this subsection 6;
    - (2) The hazardous waste is burned ~~solely for metal recovery consistent with the provisions of subdivision b of subsection 3~~ legitimate recovery of precious metal; and
    - (3) The owner or operator will comply with the sampling and analysis and recordkeeping requirements of this ~~section~~ subsection; ~~and~~
  - b. Sample and analyze the hazardous waste as necessary to document that the waste is burned for recovery of economically significant amounts of precious metal using procedures specified by Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, environmental protection agency publication SW-846,

incorporated by reference in section 33-24-01-05 or alternative methods that meet or exceed the environmental protection agency publication SW-846 method performance capabilities. If environmental protection agency publication SW-846 does not prescribe a method for a particular determination, the owner or operator shall use the best available method; and

- C. ~~Maintain at the facility until closure of the boiler or industrial furnace unit, for at least three years,~~ records to document that all hazardous wastes burned are burned for recovery of economically significant amounts of precious metal.
8. Starting June 23, 1997, owners or operators of lead recovery furnaces that process hazardous waste for recovery of lead and that are subject to regulation under the secondary lead smelting national emission standards for hazardous air pollutants are conditionally exempt from regulation under sections 33-24-05-525 through 33-24-05-549, except for section 33-24-05-526. To be exempt, an owner or operator must provide a one-time notice to the department identifying each hazardous waste burned and specifying that the owner or operator claims an exemption under this subsection. The notice also must state that the waste burned has a total concentration of nonmetal compounds listed in appendix V of chapter 33-24-02 of less than five hundred parts per million by weight as fired and as provided in paragraph 1 of subdivision b of subsection 4, or is listed in appendix XXVI of chapter 33-24-05.

**History:** Effective January 1, 1994; amended effective July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 23-20.3-10

**33-24-05-526. Management prior to burning.**

1. **Generators.** Generators of hazardous waste that is burned in a boiler or industrial furnace are subject to chapter 33-24-03.
2. **Transporters.** Transporters of hazardous waste that is burned in a boiler or industrial furnace are subject to chapter 33-24-04.
3. **Storage and treatment facilities.**
  - a. Owners and operators of facilities that store hazardous waste that is burned in a boiler or industrial furnace are subject to the applicable provisions of sections 33-24-05-01 through 33-24-05-190, sections 33-24-05-300 through 33-24-05-524, sections 33-24-05-550 through 33-24-05-559, and sections 33-24-05-800 through 33-24-05-819, subsection 5 of section 33-24-06-16, and chapter 33-24-06, except as provided by

subdivision b. These standards apply to storage by the burner as well as to storage and treatment facilities operated by intermediaries (processors, blenders, distributors, etc.) between the generator and the burner.

- b. Owners and operators of facilities that burn, in an onsite boiler or industrial furnace exempt from regulation under the small quantity burner provisions of section 33-24-05-533, hazardous waste that they generate are exempt from regulation under sections 33-24-05-01 through 33-24-05-190, sections 33-24-05-300 through 33-24-05-524, sections 33-24-05-550 through 33-24-05-559, and applicable requirements of subsection 5 of section 33-24-06-16, and chapter 33-24-06, applicable to storage units for those storage units that store mixtures of hazardous waste and the primary fuel to the boiler or industrial furnace in tanks that feed the fuel mixture directly to the burner. Storage of hazardous waste prior to mixing with the primary fuel is subject to regulation as prescribed in subdivision a.

**History:** Effective January 1, 1994; amended effective July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

### **33-24-05-527. Permit standards for burners.**

#### **1. Applicability.**

- a. General. Owners and operators of boilers and industrial furnaces burning hazardous waste and not operating under interim status must comply with the requirements of this section and subdivision ff of subsection 2 of section 33-24-06-17 and subsection 4 of section 33-24-06-19, unless exempt under the small quantity burner exemption of section 33-24-05-533.
- b. Applicability of sections 33-24-05-01 through 33-24-05-190, 33-24-05-300 through ~~33-24-05-554~~ 33-24-05-524, and 33-24-05-550 through 33-24-05-559 standards. Owners and operators of boilers and industrial furnaces that burn hazardous waste are subject to the following provisions of sections 33-24-05-01 through 33-24-05-190, 33-24-05-300 through 33-24-05-524, and 33-24-05-550 through 33-24-05-559, except as provided otherwise by sections 33-24-05-525 through 33-24-05-549:
  - (1) In section 33-24-05-01, subsection 9 Notwithstanding any other provisions of these regulations, enforcement actions may be brought pursuant to section 7003 of the Resource Conservation and Recovery Act;



- (2) In sections 33-24-05-02 through 33-24-05-14, sections 33-24-05-02 through 33-24-05-09;
- (3) In sections 33-24-05-15 through 33-24-05-25, sections 33-24-05-15 through 33-24-05-20;
- (4) In sections 33-24-05-26 through 33-24-05-36, sections 33-24-05-26 through 33-24-05-31;
- (5) In sections 33-24-05-37 through 33-24-05-46, the applicable provisions of sections 33-24-05-38 through 33-24-05-44;
- (6) In sections 33-24-05-47 through 33-24-05-58, sections 33-24-05-47 and 33-24-05-58;
- (7) In sections 33-24-05-59 through 33-24-05-73, sections 33-24-05-60 through 33-24-05-64;
- (8) In sections 33-24-05-74 through 33-24-05-88, 33-24-05-75, 33-24-05-76, 33-24-05-77, and 33-24-05-79 through 33-24-05-81, except that the state and federal governments are exempt from the requirements of sections 33-24-05-74 through 33-24-05-88; and
- (9) Sections 33-24-05-420 through 33-24-05-449, except subsection 1 of section 33-24-05-420.

## 2. Hazardous waste analysis.

- a. The owner or operator must provide an analysis of the hazardous waste that quantifies the concentration of any constituent identified in appendix V of chapter 33-24-02 that may reasonably be expected to be in the waste. Such constituents must be identified and quantified if present, at levels detectable by analytical procedures prescribed by Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, environmental protection agency publication SW-846 as incorporated by reference in section 33-24-01-05. Alternative methods that meet or exceed the method performance capabilities of environmental protection agency publication SW-846 methods may be used. If environmental protection agency publication SW-846 does not prescribe a method for a particular determination, the owner or operator shall use the best available method. The appendix V of chapter 33-24-02 constituents excluded from this analysis must be identified and the basis for their exclusion explained. This analysis will be used to provide all information required by sections 33-24-05-525 through 33-24-05-549 and subdivision ff of subsection 2 of section 33-24-06-17 and subsection 4 of section 33-24-06-19 and to enable the permit writer to prescribe such permit conditions as

necessary to protect human health and the environment. Such analysis must be included as a portion of the part B permit application, or, for facilities operating under the interim status standards of sections 33-24-05-525 through 33-24-05-549, as a portion of the trial burn plan that may be submitted before the part B application under provisions of subdivision g of subsection 4 of section 33-24-06-19 as well as any other analysis required by the permit authority in preparing the permit. Owners and operators of boilers and industrial furnaces not operating under the interim status standards must provide the information required by subdivision ff of subsection 2 of section 33-24-06-17 or subdivision c of subsection 4 of section 33-24-06-19 in the part B application to the greatest extent possible.

- b. Throughout normal operation, the owner or operator must conduct sampling and analysis as necessary to ensure that the hazardous waste, other fuels, and industrial furnace feedstocks fired into the boiler or industrial furnace are within the physical and chemical composition limits specified in the permit.
- 3. **Emissions standards.** Owners and operators must comply with emissions standards provided by sections 33-24-05-529 through 33-24-05-532.
- 4. **Permits.**
  - a. The owner or operator may burn only hazardous wastes specified in the facility permit and only under the operating conditions specified under subsection 5, except in approved trial burns under the conditions specified in subsection 4 of section 33-24-06-19.
  - b. Hazardous wastes not specified in the permit may not be burned until operating conditions have been specified under a new permit or permit modification, as applicable. Operating requirements for new wastes may be based on either trial burn results or alternative data included with part B of a permit application under subdivision ff of subsection 2 of section 33-24-06-17.
  - c. Boilers and industrial furnaces operating under the interim status standards of section 33-24-05-528 are permitted under procedures provided by subdivision g of subsection 4 of section 33-24-06-19.
  - d. A permit for a new boiler or industrial furnace (those boilers and industrial furnaces not operating under the interim status standards) must establish appropriate conditions for each of the applicable requirements, including but not limited to allowable hazardous waste firing rates and operating conditions necessary to meet the requirements of subsection 5, in order to comply with the following standards:

- (1) For the period beginning with initial introduction of hazardous waste and ending with initiation of the trial burn, and only for the minimum time required to bring the device to a point of operational readiness to conduct a trial burn, not to exceed a duration of seven hundred twenty hours operating time when burning hazardous waste, the operating requirements must be those most likely to ensure compliance with the emission standards of ~~sections~~ section 33-24-05-529 through 33-24-05-532, based on the department's engineering judgment. If the applicant is seeking a waiver from a trial burn to demonstrate conformance with a particular emission standard, the operating requirements during this initial period of operation shall include those specified by the applicable provisions of ~~sections~~ section 33-24-05-529, 33-24-05-530, 33-24-05-531, or 33-24-05-532. The department may extend the duration of this period for up to seven hundred twenty additional hours when good cause for the extension is demonstrated by the applicant.
- (2) For the duration of the trial burn, the operating requirements must be sufficient to demonstrate compliance with the emissions standards of sections 33-24-05-529 through 33-24-05-532 and must be in accordance with the approved trial burn plan;.
- (3) For the period immediately following completion of the trial burn, and only for the minimum period sufficient to allow sample analysis, data computation, submission of the trial burn results by the applicant, review of the trial burn results and modification of the facility permit by the department to reflect the trial burn results, the operating requirements must be those likely to ensure compliance with the emission standards sections 33-24-05-529 through 33-24-05-532 based on the department's engineering judgment.
- (4) For the remaining duration of the permit, the operating requirements must be those demonstrated in a trial burn or by alternative data specified in subdivision ff of subsection 2 of section 33-24-06-17, as sufficient to ensure compliance with the emissions standards of sections 33-24-05-529 through 33-24-05-532.

## **5. Operating requirements.**

- a. General. A boiler or industrial furnace burning hazardous waste must be operated in accordance with the operating requirements specified in the permit at all times where there is hazardous waste in the unit.



b. Requirements to ensure compliance with the organic emissions standards:

- (1) Destruction and removal efficiency standard. Operating conditions will be specified either on a case-by-case basis for each hazardous waste burned as those demonstrated (in a trial burn or by alternative data as specified in subdivision ff of subsection 2 of section 33-24-06-17) to be sufficient to comply with the destruction and removal efficiency performance standard of subsection 1 of section 33-24-05-529 or as those special operating requirements provided by subdivision d of subsection 1 of section 33-24-05-529 for the waiver of the destruction and removal efficiency trial burn. When the destruction and removal efficiency trial burn is not waived under subdivision d of subsection 1 of section 33-24-05-529, each set of operating requirements will specify the composition of the hazardous waste (including acceptable variations in the physical and chemical properties of the hazardous waste which will not affect compliance with the destruction and removal efficiency performance standard) to which the operating requirements apply. For each such hazardous waste, the permit will specify acceptable operating limits including, but not limited to, the following conditions as appropriate:
  - (a) Feed rate of hazardous waste and other fuels measured and specified as prescribed in subdivision f;
  - (b) Minimum and maximum device production rate when producing normal product expressed in appropriate units, measured and specified as prescribed in subdivision f;
  - (c) Appropriate controls of the hazardous waste firing system;
  - (d) Allowable variation in boiler or industrial furnace system design or operating procedures;
  - (e) Minimum combustion gas temperature measured at a location indicative of combustion chamber temperature, measured and specified as prescribed in subdivision f;
  - (f) An appropriate indicator of combustion gas velocity, measured and specified as prescribed in subdivision f, unless documentation is provided under subsection 4 of section 33-24-06-19 demonstrating adequate combustion gas residence time; and

- (g) Such other operating requirements as are necessary to ensure that the destruction and removal efficiency performance standards of subsection 1 of section 33-24-05-529 ~~is~~ are met.
  - (2) Carbon monoxide and hydrocarbon standards. The permit must incorporate a carbon monoxide limit and, as appropriate, a hydrocarbon limit as provided by subsections 2 through 6 of section 33-24-05-529. The permit limits will be specified as follows:
    - (a) When complying with the carbon monoxide standard of subdivision a of subsection 2 of section 33-24-05-529, the permit limit is one hundred parts per million by volume;
    - (b) When complying with the alternative carbon monoxide standard under subsection 3 of section 33-24-05-529, the permit limit for carbon monoxide is based on the trial burn and is established as the average overall valid runs of the highest hourly rolling average carbon monoxide level of each run, and the permit limit for hydrocarbon is twenty parts per million by volume (as defined in subdivision a of subsection 3 of section 33-24-05-529), except as provided in subsection 6 of section 33-24-05-529.
    - (c) When complying with the alternative hydrocarbon limit for industrial furnaces under subsection 6 of section 33-24-05-529, the permit limit for hydrocarbon and carbon monoxide is the baseline level when hazardous waste is not burned as specified by that subsection.
  - (3) Startup and shutdown. During startup and shutdown of the boiler or industrial furnace, hazardous waste (except waste fed solely as an ingredient under the tier I (or adjusted tier I) feed rate screening limits for metals and chloride/chlorine, and except low risk waste exempt from the trial burn requirements under subdivision e of subsection 1 of section 33-24-05-529 and sections 33-24-05-530, 33-24-05-531, and 33-24-05-532) must not be fed into the device unless the device is operating within the conditions of operation specified in the permit.
- c. Requirements to ensure conformance with the particulate standard.
- (1) Except as provided in paragraphs 2 and 3, the permit shall specify the following operating requirements to ensure

conformance with the particulate standard specified in section 33-24-05-530:

- (a) Total ash feed rate to the device from hazardous waste, other fuels, and industrial furnace feedstocks, measured and specified as prescribed in subdivision f;
  - (b) Maximum device production rate when producing normal product expressed in appropriate units, and measured and specified as prescribed in subdivision f;
  - (c) Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;
  - (d) Allowable variation in boiler or industrial furnace system design, including any air pollution control system or operating procedures; and
  - (e) Such other operating requirements as are necessary to ensure that the particulate standard in subsection 2 of section 33-24-05-536 is met.
- (2) Permit conditions to ensure conformance with the particulate matter standard shall not be provided for facilities exempt from the particulate matter standard under subsection 2 of section 33-24-05-530;
- (3) For cement kilns and lightweight aggregate kilns, permit conditions to ensure compliance with the particulate standard shall not limit the ash content of hazardous waste or other feed materials.
- d. Requirements to ensure conformance with the metals emissions standard.
- (1) For conformance with the tier I (or adjusted tier I) metals feed rate screening limits of subsection 2 or 5 of section 33-24-05-531, the permit shall specify the following operating requirements:
- (a) Total feed rate of each metal in hazardous waste, other fuels, and industrial furnace feedstocks measured and specified under provisions of subdivision f;
  - (b) Total feed rate of hazardous waste measured and specified as prescribed in subdivision f; and



- (c) A sampling and metals analysis program for the hazardous waste, other fuels, and industrial furnace feedstocks;
- (2) For conformance with the tier II metals emission rate screening limits under subsection 3 of section 33-24-05-531 and the tier III metals controls under subsection 4 of section 33-24-05-531, the permit shall specify the following operating requirements:
- (a) Maximum emission rate for each metal specified as the average emission rate during the trial burn;
  - (b) Feed rate of total hazardous waste and pumpable hazardous waste, each measured and specified as prescribed in paragraph 1 of subdivision f; and
  - (c) Feed rate of each metal in the following feedstreams, measured and specified as prescribed in subdivision f:
    - [1] Total feedstreams;
    - [2] Total hazardous waste feed;
    - [3] Total pumpable hazardous waste feed;
    - [4] Total feed rate of chlorine and chloride in total feedstreams measured and specified as prescribed in subdivision f;
    - [5] Maximum combustion gas temperature measured at a location indicative of combustion chamber temperature, and measured and specified as prescribed in subdivision f;
    - [6] Maximum flue gas temperature at the inlet to the particulate matter air pollution control system measured and specified as prescribed in subdivision f;
    - [7] Maximum device production rate when producing normal product expressed in appropriate units and measured and specified as prescribed in subdivision f;
    - [8] Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;

[9] Allowable variation in boiler or industrial furnace system design including any air pollution control system or operating procedures; and

[10] Such other operating requirements as are necessary to ensure that the metal standards under subsection 3 of section 33-24-05-531 or subsection 4 of section 33-24-05-531 are met; and

(3) For conformance with an alternative implementation approach approved by the department under subsection 6 of section 33-24-05-531, the permit will specify the following operating requirements:

(a) Maximum emission rate for each metal specified as the average emission rate during the trial burn;

(b) Feed rate of total hazardous waste and pumpable hazardous waste, each measured and specified as prescribed in paragraph 1 of subdivision f;

(c) Feed rate of each metal in the following feedstreams, measured and specified as prescribed in subdivision f:

[1] Total hazardous waste feed; and

[2] Total pumpable hazardous waste feed;

(d) Total feed rate of chlorine and chloride in total feedstreams measured and specified as prescribed in subdivision f;

(e) Maximum combustion gas temperature measured at a location indicative of combustion chamber temperature, and measured and specified as prescribed in subdivision f;

(f) Maximum flue gas temperature at the inlet to the particulate matter air pollution control system measured and specified as prescribed in subdivision f;

(g) Maximum device production rate when producing normal product expressed in appropriate units and measured and specified as prescribed in subdivision f;

(h) Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;

- (i) Allowable variation in boiler or industrial furnace system design including any air pollution control system or operating procedures; and
  - (j) Such other operating requirements as are necessary to ensure that the metals standards under subsection 3 of section 33-24-05-531 or subsection 4 of section 33-24-05-531 are met.
- e. Requirements to ensure conformance with the hydrogen chloride and chlorine gas standards.
  - (1) For conformance with the tier I total chloride and chlorine feed rate screening limits of subdivision a of subsection 2 of section 33-24-05-532, the permit will specify the following operating requirements:
    - (a) Feed rate of total chloride and chlorine in hazardous waste, other fuels, and industrial furnace feedstocks measured and specified as prescribed in subdivision f;
    - (b) Feed rate of total hazardous waste measured and specified as prescribed in subdivision f; and
    - (c) A sampling and analysis program for total chloride and chlorine for the hazardous waste, other fuels, and industrial furnace feedstocks; and
  - (2) For conformance with the tier II hydrogen chloride and for chlorine emission rate screening limits under subdivision b of subsection 2 of section 33-24-05-532 and the tier III hydrogen chloride and chlorine controls under subsection 3 of section 33-24-05-532, the permit will specify the following operating requirements:
    - (a) Maximum emission rate for hydrogen chloride and for chlorine specified as the average emission rate during the trial burn;
    - (b) Feed rate of total hazardous waste measured and specified as prescribed in subdivision f;
    - (c) Total feed rate of chlorine and chloride in total feedstreams, measured and specified as prescribed in subdivision f;
    - (d) Maximum device production rate when producing normal product expressed in appropriate units, measured and specified as prescribed in subdivision f;



- (e) Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;
  - (f) Allowable variation in boiler or industrial furnace system design including any air pollution control system or operating procedures; and
  - (g) Such other operating requirements as are necessary to ensure that the hydrogen chloride and chlorine standards under subdivision b of subsection 2 or subsection 3 of section 33-24-05-532 are met.
- f. Measuring parameters and establishing limits based on trial burn data.
- (1) General requirements. As specified in subdivisions b through e, each operating parameter shall be measured, and permit limits on the parameter shall be established, according to either of the following procedures:
    - (a) Instantaneous limits. A parameter may be measured and recorded on an instantaneous basis (for example, the value that occurs at any time) and the permit limit specified as the time-weighted average during all valid runs of the trial burn; or
    - (b) Hourly rolling average.
      - [1] The limit for a parameter may be established and continuously monitored on an hourly rolling average basis defined as follows:
        - [a] A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each fifteen seconds, and computes and records the average value at least every sixty seconds.
        - [b] An hourly rolling average is the arithmetic mean of the sixty most recent one-minute average values recorded by the continuous monitoring system.
      - [2] The permit limit for the parameter shall be established based on trial burn data as the

average overall valid test runs of the highest hourly rolling average value for each run.

- (2) Rolling average limits for carcinogenic metals and lead. Feed rate limits for the carcinogenic metals (for example, arsenic, beryllium, cadmium, and chromium) and lead may be established either on an hourly rolling average basis as prescribed by paragraph 1 of subdivision f or on (up to) a twenty-four hour rolling average basis. If the owner or operator elects to use an average period from two to twenty-four hours:
  - (a) The feed rate of each metal shall be limited at any time to ten times the feed rate that would be allowed on an hourly rolling average basis;
  - (b) The continuous monitor shall meet the following specifications:
    - [1] A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each fifteen seconds, and computes and records the average value at least every sixty seconds;
    - [2] The rolling average for the selected averaging period is defined as the arithmetic mean of one-hour block averages for the averaging period. A one-hour block average is the arithmetic mean of the one-minute averages recorded during the sixty-minute averages recorded during the sixty-minute period beginning at one minute after the beginning of preceding clock hour; and
  - (c) The permit limit for the feed rate of each metal shall be established based on trial burn data as the average overall valid test runs of the highest hourly rolling average feed rate for each run.
- (3) Feed rate limits for metals, total chloride and chlorine, and ash. Feed rate limits for metals, total chlorine and chloride, and ash are established and monitored by knowing the concentration of the substance (for example, metals, chloride and chlorine, and ash) in each feedstream and the flow rate of the feedstream. To monitor the feed rate of these substances, the flow rate of each feedstream must be monitored under the continuous monitoring requirements of paragraphs 1 and 2.

(4) Conduct of trial burn testing.

- (a) If compliance with all applicable emissions standards of sections 33-24-05-529 through 33-24-05-532 is not demonstrated simultaneously during a set of test runs, the operating conditions of additional test runs required to demonstrate compliance with remaining emissions standards must be as close as possible to the original operating conditions.
- (b) Prior to obtaining test data for purposes of demonstrating compliance with the emissions standards of sections 33-24-05-529 through 33-24-05-532 or establishing limits on operating parameters under this section, the facility must operate under trial burn conditions for a sufficient period to reach steady-state operations. The department may determine, however, that industrial furnaces that recycle collected particulate matter back into the furnace and that comply with an alternative implementation approach for metals under subsection 6 of section 33-24-05-531 need not reach steady-state conditions with respect to the flow of metals in the system prior to beginning compliance testing for metals emissions.
- (c) Trial burn data on the level of an operating parameter for which a limit must be established in the permit must be obtained during emission sampling for the pollutant(s) (for example, metals, particulate matter, hydrogen chloride, and chlorine organic compounds) for which the parameter must be established as specified by this subsection.

9. General requirements.

- (1) Fugitive emissions. Fugitive emissions must be controlled by:
  - (a) Keeping the combustion zone totally sealed against fugitive emissions; or
  - (b) Maintaining the combustion zone pressure lower than atmospheric pressure; or
  - (c) An alternate means of control demonstrated (with part B of the permit application) to provide fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure.



- (2) Automatic waste feed cutoff. A boiler or industrial furnace must be operated with a functioning system that automatically cuts off the hazardous waste feed when operating conditions deviate from those established under this section. The department may limit the number of cutoffs per an operating period on a case-by-case basis. In addition:
  - (a) The permit limit for (the indicator of) minimum combustion chamber temperature must be maintained while hazardous waste or hazardous waste residues remain in the combustion chamber;
  - (b) Exhaust gases must be ducted to the air pollution control system operated in accordance with the permit requirements while hazardous waste or hazardous waste residues remain in the combustion chamber; and
  - (c) Operating parameters for which permit limits are established must continue to be monitored during the cutoff, and the hazardous waste feed shall not be restarted until the levels of those parameters comply with the permit limits. For parameters that may be monitored on an instantaneous basis, the department will establish a minimum period of time after a waste feed cutoff during which the parameter must not exceed the permit limit before the hazardous waste feed may be restarted.
- (3) Changes. A boiler or industrial furnace must cease burning hazardous waste when changes in combustion properties, or feed rates of the hazardous waste, other fuels or industrial furnace feedstocks, or changes in the boiler or industrial furnace design or operating conditions deviate from the limits as specified in the permit.

h. Monitoring and inspections.

- (1) The owner or operator must monitor and record the following, at a minimum, while burning hazardous waste:
  - (a) If specified by the permit, feed rates and composition of hazardous waste, other fuels, and industrial furnace feedstocks, and feed rates of ash, metals, and total chloride and chlorine;
  - (b) If specified by the permit, carbon monoxide, hydrocarbons, and oxygen on a continuous basis at a common point in the boiler or industrial furnace

downstream of the combustion zone and prior to release of stack gases to the atmosphere in accordance with operating requirements specified in paragraph 2 of subdivision b. Carbon monoxide, hydrocarbon, and oxygen monitors must be installed, operated, and maintained in accordance with methods specified in appendix XXIV of chapter 33-24-05; and

- (c) Upon the request of the department, sampling and analysis of the hazardous waste (and other fuels and industrial furnace feedstocks as appropriate), residues, and exhaust emissions must be conducted to verify that the operating requirements established in the permit achieve the applicable standards of sections 33-24-05-529, 33-24-05-530, 33-24-05-531, and 33-24-05-532.
- (2) All monitors shall record data in units corresponding to the permit limit unless otherwise specified in the permit.
- (3) The boiler or industrial furnace and associated equipment (pumps, valves, pipes, fuel storage tanks, et cetera) must be subjected to thorough visual inspection when it contains hazardous waste, at least daily for leaks, spills, fugitive emissions, and signs of tampering.
- (4) The automatic hazardous waste feed cutoff system and associated alarms must be tested at least once every seven days when hazardous waste is burned to verify operability, unless the applicant demonstrates to the department that weekly inspections will unduly restrict or upset operations and that less frequent inspections will be adequate. At a minimum, operational testing must be conducted at least once every thirty days.
- (5) These monitoring and inspection data must be recorded and the records must be placed in the operating record required by section 33-24-05-40.
- i. Direct transfer to the burner. If hazardous waste is directly transferred from a transport vehicle to a boiler or industrial furnace without the use of a storage unit, the owner and operator must comply with section 33-24-05-536.
- j. Recordkeeping. The owner or operator must keep in the operating record of the facility all information and data required by this section until closure of the facility.

- k. Closure. At closure, the owner or operator must remove all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) from the boiler or industrial furnace.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC ~~23-20.3~~ 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-528. Interim status standards for burners.**

**1. Purpose, scope, applicability.**

**a. General.**

- (1) The purpose is to establish minimum national standards for owners and operators of "existing" boilers and industrial furnaces that burn hazardous waste where such standards define the acceptable management of hazardous waste during the period of interim status. The standards apply to owners and operators of existing facilities until either a permit is issued under subsection 4 of section 33-24-05-527 or until closure responsibilities identified in this section are fulfilled.
- (2) Existing or in existence means a boiler or industrial furnace that on or before August 1, 1991, is either in operation burning or processing hazardous waste or for which construction (including the ancillary facilities to burn or to process the hazardous waste) has commenced. A facility has commenced construction if the owner or operator has obtained the federal, state, and local approvals or permits necessary to begin physical construction; and either:
  - (a) A continuous onsite, physical construction program has begun; or
  - (b) The owner or operator has entered into contractual obligations, which cannot be canceled or modified without substantial loss, for physical construction of the facility to be completed within a reasonable time.
- (3) If a boiler or industrial furnace is located at a facility that already has a permit or interim status, then the facility must comply with the applicable regulations dealing with permit modifications in section 33-24-06-14 or changes in interim status in subsection 5 of section 33-24-06-16.

- b. Exemptions. The requirements of this section do not apply to hazardous waste and facilities exempt under subsection 2 of section 33-24-05-525, or section 33-24-05-533.
- c. Prohibition ~~of on~~ burning dioxin-listed wastes. The following hazardous waste listed for dioxin and hazardous waste derived from any of these wastes may not be burned in a boiler or industrial furnace operating under interim status: F020, F021, F022, F023, F026, and F027.
- d. Applicability of interim status standards. Owners and operators of boilers and industrial furnaces that burn hazardous waste and are operating under interim status are subject to the following provisions of subsection 5 of section 33-24-06-16:
  - (1) Notwithstanding any other provisions of these regulations, enforcement actions may be brought pursuant to section 7003 of the Resource Conservation and Recovery Act;
  - (2) General facility standards, sections 33-24-05-02 through 33-24-05-08;
  - (3) Preparedness and prevention, sections 33-24-05-15 through 33-24-05-20;
  - (4) Contingency plan and emergency procedures, sections 33-24-05-26 through 33-24-05-31;
  - (5) Manifest system, recordkeeping and reporting, sections 33-24-05-38 through 33-24-05-44, except that sections 33-24-05-38, 33-24-05-39, and 33-24-05-43 do not apply to owners and operators of onsite facilities that do not receive any hazardous waste from offsite sources;
  - (6) Closure and postclosure, sections 33-24-05-60 through 33-24-05-64;
  - (7) Financial requirements, sections 33-24-05-75 through 33-24-05-77 and sections 33-24-05-79 through 33-24-05-81, except that states and the federal government are exempt from the financial requirements; and
  - (8) Air emission standards for equipment leaks, sections 33-24-05-420 through 33-24-05-435, except subsection 1 of section 33-24-05-420.
- e. Special requirements for furnaces. The following controls apply during interim status to industrial furnaces (for example, kilns, cupolas) that feed hazardous waste for a purpose other than solely



as an ingredient (see paragraph 2 of ~~subdivision e of subsection 1~~) at any location other than the hot end where products are normally discharged or where fuels are normally fired:

(1) Controls.

- (a) The hazardous waste shall be fed at a location where combustion gas temperatures are at least one thousand eight hundred degrees Fahrenheit [982.2 degrees Celsius];
- (b) The owner or operator must determine that adequate oxygen is present in combustion gases to combust organic constituents in the waste and retain documentation of such determination in the facility record;
- (c) For cement kiln systems, the hazardous waste shall be fed into the kiln; and
- (d) The hydrocarbon controls of subsection 3 of section 33-24-05-529 or subdivision e of subsection 3 of this section apply upon certification of compliance under subsection 3 irrespective of the carbon monoxide level achieved during the compliance test.

(2) Burning hazardous waste solely as an ingredient. A hazardous waste is burned for a purpose other than solely as an ingredient if it meets either of these criteria:

- (a) The hazardous waste has a total concentration of nonmetal compounds listed in appendix V of chapter 33-24-02 exceeding five hundred parts per million by weight, as-fired, and so is considered to be burned for destruction. The concentration of nonmetal compounds in a waste as-generated may be reduced to the five hundred parts per million limit by bona fide treatment that removes or destroys nonmetal constituents. Blending for dilution to meet the five hundred parts per million limit is prohibited and documentation that the waste has not been impermissibly diluted must be retained in the facility record; or
- (b) The hazardous waste has a heating value of five thousand British thermal units per pound or more, as-fired, and so is considered to be burned as fuel. The heating value of a waste as-generated may be reduced to below the five thousand British thermal units per pound limit by bona fide treatment that removes or

destroys organic constituents. Blending to augment the heating value to meet the five thousand British thermal units per pound limit is prohibited and documentation that the waste has not been impermissibly blended must be retained in the facility record.

- f. Restrictions on burning hazardous waste that is not a fuel. Prior to certification of compliance under subsection 3, owners and operators shall not feed hazardous waste that has a heating value less than five thousand British thermal units per pound as-generated (except that the heating value of a waste as-generated may be increased to above the five thousand British thermal units per pound limit by bona fide treatment; however, blending to augment the heating value to meet the five thousand British thermal units per pound limit is prohibited and records must be kept to document that impermissible blending has not occurred) in a boiler or industrial furnace, except that:
  - (1) Hazardous waste may be burned solely as an ingredient;
  - (2) Hazardous waste may be burned for purposes of compliance testing (or testing prior to compliance testing) for a total period of time not to exceed seven hundred twenty hours;
  - (3) Such waste may be burned if the department has documentation to show that, prior to August 21, 1991:
    - (a) The boiler or industrial furnace is operating under the interim status standards for incinerators or thermal treatment units provided by subsection 5 of section 33-24-06-16; and
    - (b) The boiler or industrial furnace met the interim status eligibility requirements under subsection 5 of section 33-24-06-16; and
    - (c) Hazardous waste with a heating value less than five thousand British thermal units per pound was burned prior to that date; or
  - (4) Such waste may be burned in a halogen acid furnace if the waste was burned as an excluded ingredient under subsection 5 of section 33-24-02-02 prior to February 21, 1991, and documentation is kept on file supporting this claim.
- 9. Direct transfer to the burner. If hazardous waste is directly transferred from a transport vehicle to a boiler or industrial furnace without the use of a storage unit, the owner and operator must comply with section 33-24-05-536.

## 2. Certification of precompliance.

- a. General. The owner or operator must provide complete and accurate information specified in subdivision b to the department on or before August 21, 1991, and must establish limits for the operating parameters specified in subdivision c. Such information is termed a "certification of precompliance" and constitutes a certification that the owner or operator has determined that, when the facility is operated within the limits specified in subdivision c, the owner or operator believes that, using best engineering judgment, emissions of particulate matter, metals, and hydrogen chloride and chlorine are not likely to exceed the limits provided by sections 33-24-05-530, 33-24-05-531, and 33-24-05-532. The facility may burn hazardous waste only under the operating conditions that the owner or operator establishes under subdivision c until the owner or operator submits a revised certification of precompliance under subdivision h or a certification of compliance under subsection 3, or until a permit is issued.
- b. Information required. The following information must be submitted with the certification of precompliance to support the determination that the limits established for the operating parameters identified in subdivision c are not likely to result in an exceedance of the allowable emission rates for particulate matter, metals, and hydrogen chloride and chlorine:
  - (1) General facility information:
    - (a) ~~EPA identification~~ Identification number;
    - (b) Facility name, contact person, telephone number, and address;
    - (c) Description of boilers and industrial furnaces burning hazardous waste, including type and capacity of device;
    - (d) A scaled plot plan showing the entire facility and location of the boilers and industrial furnaces burning hazardous waste; and
    - (e) A description of the air pollution control system on each device burning hazardous waste, including the temperature of the flue gas at the inlet to the particulate matter control system.
  - (2) Except for facilities complying with the tier I or adjusted tier I feed rate screening limits for metals or total chlorine and chloride provided by subsection 2 or 5 of section 33-24-05-531 and subdivision a of subsection 2 or

subsection 5 of section 33-24-05-532 respectively, the estimated uncontrolled (at the inlet to the air pollution control system) emissions of particulate matter, each metal controlled by section 33-24-05-531, and hydrogen chloride and chlorine, and the following information to support such determinations:

- (a) The feed rate (pound per hour) of ash, chlorine, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium in each feedstream (hazardous waste, other fuels, industrial furnace feedstocks).
  - (b) The estimated partitioning factor to the combustion gas for the materials identified in subparagraph a ~~of paragraph 2 of subdivision b of subsection 2~~ and the basis for the estimate and an estimate of the partitioning to hydrogen chloride and ~~chloride~~ chlorine of total chloride and chlorine in feed materials. To estimate the partitioning factor, the owner or operator must use either best engineering judgment or the procedures specified in appendix XXIV of chapter 33-24-05.
  - (c) For industrial furnaces that recycle collected particulate matter back into the furnace and that will certify compliance with the metals emissions standards under subparagraph a of paragraph 2 of subdivision c of subsection 3, the estimated enrichment factor for each metal. To estimate the enrichment factor, the owner or operator must use either best engineering judgment or the procedures specified in "Alternative Methodology for Implementing Metals Controls" in appendix XXIV of chapter 33-24-05.
  - (d) If best engineering judgment is used to estimate partitioning factors or enrichment factors under subparagraph b or c ~~of paragraph 2 of subdivision b of subsection 2 or respectively~~, the basis for the judgment. When best engineering judgment is used to develop or evaluate data or information and make determinations under this section, the determinations must be made by a qualified, registered professional engineer and a certification of his or her determinations in accordance with subsection 4 of section 33-24-06-03 must be provided in the certification of precompliance.
- (3) For facilities complying with the tier I or adjusted tier I feed rate screening limits for metals or total chlorine and chloride



provided by subsection 2 or 5 of section 33-24-05-531 and subdivision a of subsection 2 or subsection 5 of section 33-24-05-532, the feed rate (pound per hour) of total chloride and chlorine, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium in each feedstream (hazardous waste, other fuels, industrial furnace feedstocks).

- (4) For facilities complying with the tier II or tier III emission limits for metals or hydrogen chloride and chlorine (under subsection 3 or 4 of section 33-24-05-531 or subdivision b of subsection 2 or subsection 3 of section 33-24-05-532), the estimated controlled (outlet of the air pollution control system) emissions rates of particulate matter, each metal controlled by section 33-24-05-531, and hydrogen chloride and chlorine, and the following information to support such determinations:
  - (a) The estimated air pollution control system removal efficiency for particulate matter, hydrogen chloride and chlorine, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium.
  - (b) To estimate air pollution control system removal efficiency, the owner or operator must use either best engineering judgment or the procedures prescribed in appendix XXIV of chapter 33-24-05.
  - (c) If best engineering judgment is used to estimate air pollution control system removal efficiency, the basis for the judgment. Use of best engineering judgment must be in conformance with provisions of subparagraph d of paragraph 2 of subdivision b of subsection 2.
- (5) Determination of allowable emissions rates for hydrogen chloride, chlorine, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium, and the following information to support such determinations:
  - (a) For all facilities:
    - [1] Physical stack height;
    - [2] Good engineering practice stack height as defined by 40 CFR 51.100(ii);
    - [3] Maximum flue gas flow rate;

- [4] Maximum flue gas temperature;
  - [5] Attach a United States geological service topographic map (or equivalent) showing the facility location and surrounding land within five kilometers of the facility;
  - [6] Identify terrain type: complex or noncomplex; and
  - [7] Identify land use: urban or rural.
- (b) For owners and operators using tier III site-specific dispersion modeling to determine allowable levels under subsection 4 of section 33-24-05-531 or subsection 3 of section 33-24-05-532, or adjusted tier I feed rate screening limits under subsection 5 of section 33-24-05-531 or subsection 5 of section 33-24-05-532:
- [1] Dispersion model and version used;
  - [2] Source of meteorological data;
  - [3] The dilution factor in micrograms per cubic meter per gram per second of emissions for the maximum annual average offsite (unless onsite is required) ground level concentration (maximum exposed individual location); and
  - [4] Indicate the maximum exposed individual location on the map required under item 5 of subparagraph a;
- (6) For facilities complying with the tier II or tier III emissions rate controls for metals or hydrogen chloride and chlorine, a comparison of the estimated controlled emissions rates determined under paragraph 4 with the allowable emission rates determined under paragraph 5;
- (7) For facilities complying with the tier I (or adjusted tier I) feed rate screening limits for metals or total chloride and chlorine, a comparison of actual feed rates of each metal and total chloride and chlorine determined under paragraph 3 to the tier I allowable feed rates;
- (8) For industrial furnaces that feed hazardous waste for any purpose other than solely as an ingredient (as defined by paragraph 2 of subdivision e of subsection 1) at any location other than the product discharge end of the device,

documentation of compliance with the requirements of subparagraph a, b, or c of paragraph 1 of subdivision e of subsection 1; and

- (9) For industrial furnaces that recycle collected particulate matter back into the furnace and that will certify compliance with the metals emissions standards under subparagraph a of paragraph 2 of subdivision c of subsection 3:
  - (a) The applicable particulate matter standard in pound per hour; and
  - (b) The precompliance limit on the concentration of each metal in collected particulate matter.
- c. Limits on operating conditions. The owner and operator shall establish limits on the following parameters consistent with the determinations made under subdivision b and certify (under provisions of subdivision i) to the department that the facility will operate within the limits during interim status when there is hazardous waste in the unit until revised certification of precompliance under subdivision h or certification of compliance under subsection 3:
  - (1) Feed rate of total hazardous waste and (unless complying with the tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33-24-05-531) pumpable hazardous waste;
  - (2) Feed rate of each metal in the following feedstreams:
    - (a) Total feedstreams, except that industrial furnaces that comply with the alternative metals implementation approach under subdivision d must specify limits on the concentration of each metal in collected particulate matter in lieu of feed rate limits for total feedstreams;
    - (b) Total hazardous waste feed, unless complying with the tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33-24-05-531; and
    - (c) Total pumpable hazardous waste feed, unless complying with the tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33-24-05-531;
  - (3) Total feed rate of chlorine and chloride in total feedstreams;

- (4) Total feed rate of ash in total feedstreams, except that the ash feed rate for cement kilns and lightweight aggregate kilns is not limited; and
  - (5) Maximum production rate of the device in appropriate units when producing normal product, unless complying with the tier I or adjusted tier I feed rate screening limits for chlorine under subdivision a of subsection 2 or subsection 5 of section 33-24-05-532 and for all metals under subsection 2 or 5 of section 33-24-05-531, and the uncontrolled particulate emissions do not exceed the standard under section 33-24-05-530.
- d. Operating requirements for furnaces that recycle particulate matter. Owners and operators of furnaces that recycle collected particulate matter back into the furnace and that will certify compliance with the metals emissions controls under subparagraph a of paragraph 2 of subdivision c of subsection 3 must comply with the special operating requirements provided in "Alternative Methodology for Implementing Metals Controls" in appendix XXIV of chapter 33-24-05.
- e. Measurement of feed rates and production rate.
  - (1) General requirements. Limits on each of the parameters specified in subdivision c (except for limits on metals concentrations in collected particulate matter for industrial furnaces that recycle collected particulate matter) must be established and continuously monitored under either of the following methods:
    - (a) Instantaneous limits. A limit for a parameter may be established and continuously monitored and recorded on an instantaneous basis (for example, the value that occurs at any time) not to be exceeded at any time; or
    - (b) Hourly rolling average limits. A limit for a parameter may be established and continuously monitored on an hourly rolling average basis defined as follows:
      - [1] A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each fifteen seconds, and computes and records the average value at least every sixty seconds.



- [2] An hourly rolling average is the arithmetic mean of the sixty most recent one-minute average values recorded by the continuous monitoring system.
  - (2) Rolling average limits for carcinogenic metals and lead. Feed rate limits for the carcinogenic metals (arsenic, beryllium, cadmium, and chromium) and lead may be established either on an hourly rolling average basis as prescribed by subparagraph b of paragraph 1 or on (up to) a twenty-four hour rolling average basis. If the owner or operator elects to use an averaging period from two to twenty-four hours:
    - (a) The feed rate of each metal shall be limited at any time to ten times the feed rate that would be allowed on an hourly rolling average basis; and
    - (b) The continuous monitor shall meet the following specifications:
      - [1] A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each fifteen seconds, and computes and records the average value at least every sixty seconds.
      - [2] The rolling average for the selected averaging period is defined as the arithmetic mean of one-hour block averages for the averaging period. A one-hour block average is the arithmetic mean of the one-minute averages recorded during the sixty-minute period beginning at one minute after the beginning of preceding clock hour.
  - (3) Feed rate limits for metals, total chloride and chlorine, and ash. Feed rate limits for metals, total chlorine and chloride, and ash are established and monitored by knowing the concentration of the substance (for example, metals, chloride or chlorine, and ash) in each feedstream and the flow rate of the feedstream. To monitor the feed rate of these substances, the flow rate of each feedstream must be monitored under the continuous monitoring requirements of paragraphs 1 and 2.
- f. Public notice requirements at precompliance. On or before August 21, 1991, the owner or operator must submit a notice with the following information for publication in a major local newspaper of general circulation and send a copy of the notice to the appropriate units of state and local government. The owner or

operator must provide to the department with the certification of precompliance evidence of submitting the notice for publication. The notice, which shall be entitled "Notice of Certification of Precompliance with Hazardous Waste Burning Requirements of subsection 2 of section 33-24-05-528", must include:

- (1) Name and address of the owner and operator of the facility as well as the location of the device burning hazardous waste;
- (2) Date that the certification of precompliance is submitted to the department;
- (3) Brief description of the regulatory process required to comply with the interim status requirements including required emissions testing to demonstrate conformance with emissions standards for organic compounds, particulate matter, metals, and hydrogen chloride and chlorine;
- (4) Types and quantities of hazardous waste burned including source, whether solids or liquids, as well as an appropriate description of the waste;
- (5) Type of device or devices in which the hazardous waste is burned including a physical description and maximum production rate of each device;
- (6) Types and quantities of other fuels and industrial furnace feedstocks fed to each unit;
- (7) Brief description of the basis for this certification of precompliance as specified in subdivision b of ~~subsection 2~~;
- (8) Locations where the record for the facility can be viewed and copied by interested parties. These records and locations shall at a minimum include:
  - (a) The administrative record kept by the department where the supporting documentation was submitted or another location designated by the department; and
  - (b) The boiler and industrial furnace correspondence file kept at the facility site where the device is located. The correspondence file must include all correspondence between the facility and the department and local regulatory officials, including copies of all certifications and notifications, such as the precompliance certification, precompliance public notice, notice of compliance testing, compliance test report, compliance certification, time extension

requests and approvals or denials, enforcement notifications of violations, and copies of state site visit reports submitted to the owner or operator;

- (9) Notification of the establishment of a facility mailing list whereby interested parties shall notify the department that they wish to be placed on the mailing list to receive future information and notices about this facility; and
  - (10) Location (mailing address) of the department, where further information can be obtained on regulation of hazardous waste burning.
9. Monitoring other operating parameters. When the monitoring systems for the operating parameters listed in paragraphs 5 through 13 of subdivision a of subsection 3 are installed and operating in conformance with vendor specifications or (for carbon monoxide, hydrocarbon, and oxygen) specifications provided by appendix XXIV of chapter 33-24-05, as appropriate, the parameters shall be continuously monitored and records shall be maintained in the operating record.
- h. Revised certification of precompliance. The owner or operator may revise at any time the information and operating conditions documented under subdivisions b and c of ~~subsection 2~~ in the certification of precompliance by submitting a revised certification of precompliance under procedures provided by those paragraphs.
- (1) The public notice requirements of subdivision f of ~~subsection 2~~ do not apply to recertifications.
  - (2) The owner and operator must operate the facility within the limits established for the operating parameters under subdivision c of ~~subsection 2~~ until a revised certification is submitted under this paragraph or a certification of compliance is submitted under subsection 3.
- i. Certification of precompliance statement. The owner or operator must include the following signed statement with the certification of precompliance submitted to the department:
- "I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information and supporting documentation. Copies of all emissions tests, dispersion modeling results and other information used to determine conformance with the requirements of subsection 2 of section 33-24-05-528 are available at the facility and can be obtained from the facility contact person listed above.

Based on my inquiry of the person or persons who manages the facility, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also acknowledge that the operating limits established in this certification pursuant to paragraphs c and d of subsection 2 of section 33-24-05-528 are enforceable limits at which the facility can legally operate during interim status until: (1) A revised certification of precompliance is submitted, (2) a certification of compliance is submitted, or (3) an operating permit is issued."

3. **Certification of compliance.** The owner or operator shall conduct emissions testing to document compliance with the emissions standards of subsections 2 through 5 of section 33-24-05-529, sections 33-24-05-530, 33-24-05-531, and 33-24-05-532, and subparagraph d of paragraph 1 of subdivision e of subsection 1, under the procedures prescribed by this paragraph, except under extensions of time provided by subdivision g ~~of subsection 3~~. Based on the compliance test, the owner or operator shall submit to the department, on or before August 21, ~~1994~~ 1992, a complete and accurate "certification of compliance" (under subdivision d ~~of subsection 3~~) with those emission standards establishing limits on the operating parameters specified in subdivision a ~~of subsection 3~~.
- a. Limits on operating conditions. The owner or operator shall establish limits on the following parameters based on operations during the compliance test (under procedures prescribed in paragraph 4 of subdivision d ~~of subsection 3~~) and include these limits with the certification of compliance. The boiler or industrial furnace must be operated in accordance with these operating limits and all applicable emissions standards of subsections 2 through 5 of section 33-24-05-529, sections 33-24-05-530 through 33-24-05-532, and subparagraph d of paragraph 1 of subdivision e of subsection 1 of section 33-24-05-528 at all times when there is hazardous waste in the unit until an operating permit is issued.
  - (1) Feed rate of total hazardous waste and (unless complying the tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33-24-05-531), pumpable hazardous waste;
  - (2) Feed rate of each metal in the following feedstreams:
    - (a) Total feedstreams, except that:



- [1] Facilities that comply with tier I or adjusted tier I metals feed rate screening limits may set their operating limits at the metals feed rate screening limits determined under subsection 2 or 5 of section 33-24-05-531; and
  - [2] Industrial furnaces that must comply with the alternative metals implementation approach under paragraph 2 of subdivision c of subsection 3 must specify limits on the concentration of each metal in collected particulate matter in lieu of feed rate limits for total feedstreams;
- (b) Total hazardous waste feed (unless complying with the tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33-24-05-531); and
  - (c) Total pumpable hazardous waste feed (unless complying with the tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33-24-05-531);
- (3) Total feed rate of chlorine and chloride in total feedstreams, except that facilities that comply with tier I or adjusted tier I feed rate screening limits may set their operating limits at the total chlorine and chloride feed rate screening limits determined under subdivision a of subsection 1 or subsection 5 of section 33-24-05-532;
  - (4) Total feed rate of ash in total feedstreams, except that the ash feed rate for cement kilns and lightweight aggregate kilns is not limited;
  - (5) Carbon monoxide concentration, and where required, hydrocarbon concentration in stack gas. When complying with the carbon monoxide controls of subsection 2 of section 33-24-05-529, the carbon monoxide limit is one hundred parts per million by volume, and when complying with the hydrocarbon controls of subsection 3 of section 33-24-05-529, the hydrocarbon limit is twenty parts per million by volume. When complying with the carbon monoxide controls of subsection 3 of section 33-24-05-529, the carbon monoxide limit is established based on the compliance test;
  - (6) Maximum production rate of the device in appropriate units when producing normal product, except that facilities that comply with tier I or adjusted tier I feed rate screening limits may set their operating limits at the total chlorine and chloride

feed rate screening limits determined under subdivision a of subsection 1 or subsection 5 of section 33-24-05-532 and for all metals under subsection 2 or 5 of section 33-24-05-531, and the uncontrolled particulate emissions do not exceed the standard under section 33-24-05-530;

- (7) Maximum combustion chamber temperature where the temperature measurement is as close to the combustion zone as possible and is upstream of any quench water injection; (unless complying with the tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33-24-05-531);
- (8) Maximum flue gas temperature entering a particulate matter control device (unless complying with tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33-24-05-531) and the total chlorine and chloride feed rate screening limits under subsection 2 or 5 of section 33-24-05-532);
- (9) For systems using wet scrubbers, including wet ionizing scrubbers (unless complying with the tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33-24-05-531 and the total chlorine and chloride feed rate screening limits under subdivision a of subsection 2 or subsection 5 of section 33-24-05-531);
  - (a) Minimum liquid to flue gas ratio;
  - (b) Minimum scrubber blowdown from the system or maximum suspended solids content of scrubber water; and
  - (c) Minimum pH level of the scrubber water;
- (10) For systems using venturi scrubbers, the minimum differential gas pressure across the venturi (unless complying with the tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33-24-05-531 and the total chlorine and chloride feed rate screening limits under subdivision a of subsection 2 or subsection 5 of section 33-24-05-532);
- (11) For systems using dry scrubbers (unless complying with the tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33-24-05-531 and the total chlorine and chloride feed rate screening limits under subdivision a of subsection 2 or subsection 5 of section 33-24-05-532);

- (a) Minimum caustic feed rate; and
    - (b) Maximum flue gas flow rate;
  - (12) For systems using wet ionizing scrubbers or electrostatic precipitators (unless complying with the tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33-24-05-531 and the total chlorine and chloride feed rate screening limits under subdivision a of subsection 2 or subsection 5 of section 33-24-05-532):
    - (a) Minimum electrical power in kilovolt amperes (kVA) to the precipitator plates; and
    - (b) Maximum flue gas flow rate;
  - (13) For systems using fabric filters (baghouses), the minimum pressure drop (unless complying with the tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33-24-05-531 and the total chlorine and chloride feed rate screening limits under subdivision a of subsection 2 of subsection 5 of section 33-24-05-532).
- b. Prior notice of compliance testing. At least thirty days prior to the compliance testing required by subdivision c of subsection 3, the owner or operator shall notify the department and submit the following information:
- (1) General facility information including:
    - (a) ~~EPA identification~~ Identification number;
    - (b) Facility name, contact person, telephone number, and address;
    - (c) Person responsible for conducting compliance test, including company name, address, and telephone number, and a statement of qualifications; and
    - (d) Planned date of the compliance test;
  - (2) Specific information on each device to be tested including:
    - (a) Description of boiler or industrial furnace;
    - (b) A scaled plot plan showing the entire facility and location of the boiler or industrial furnace;
    - (c) A description of the air pollution control system;

(d) Identification of the continuous emission monitors that are installed, including:

[1] Carbon monoxide monitor;

[2] Oxygen monitor; and

[3] Hydrocarbon monitor, specifying the minimum temperature of the system and, if the temperature is less than one hundred fifty degrees Celsius, an explanation of why a heated system is not used (see subdivision e of ~~subsection 3~~) and a brief description of the sample gas conditioning system;

(e) Indication of whether the stack is shared with another device that will be in operation during the compliance test; and

(f) Other information useful to an understanding of the system design or operation-; and

(3) Information on the testing planned, including a complete copy of the test protocol and quality assurance/quality control plan, and a summary description for each test providing the following information at a minimum:

(a) Purpose of the test (for example, demonstrate compliance with emissions of particulate matter); and

(b) Planned operating conditions, including levels for each pertinent parameter specified in subdivision a of ~~subsection 3~~.

c. Compliance testing.

(1) General. Compliance testing must be conducted under conditions for which the owner or operator has submitted a certification of precompliance under subsection 2 and under conditions established in the notification of testing required by subdivision b of ~~subsection 3~~. The owner or operator may seek approval on a case-by-case basis to use compliance test data from one unit in lieu of testing a similar onsite unit. To support the request, the owner or operator must provide a comparison of the hazardous waste burned and other feedstreams, and the design, operation, and maintenance of both the tested unit and the similar unit. The department shall provide a written approval to use compliance test



data in lieu of testing a similar unit if the department finds that the hazardous wastes, the devices, and the operating conditions are sufficiently similar, and the data from the other compliance test is adequate to meet the requirements of subsection 3 of section 33-24-05-528.

- (2) Special requirements for industrial furnaces that recycle collected particulate matter. Owners and operators of industrial furnaces that recycle back into the furnace particulate matter from the air pollution control system must comply with one of the following procedures for testing to determine compliance with the metals standards of subsection 3 or 4 of section 33-24-05-531:

- (a) The special testing requirements prescribed in "Alternative Method for Implementing Metals Controls" in appendix XXIV of chapter 33-24-05; or
- (b) Stack emissions testing for a minimum of six hours each day while hazardous waste is burned during interim status. The testing must be conducted when burning normal hazardous waste for that day at normal feed rates for that day and when the air pollution control system is operated under normal conditions. During interim status, hazardous waste analysis for metals content must be sufficient for the owner or operator to determine if changes in metals content may affect the ability of the facility to meet the metals emissions standards established under subsection 3 or 4 of section 33-24-05-531. Under this option, operating limits (under subdivision a of subsection 3) must be established during compliance testing under subdivision c of subsection 3 only on the following parameters:

- [1] Feed rate of total hazardous waste;
- [2] Total feed rate of chlorine and chloride in total feedstreams;
- [3] Total feed rate of ash in total feedstreams, except that the ash feed rate for cement kilns and lightweight aggregate kilns is not limited;
- [4] Carbon monoxide concentration, and where required, hydrocarbon concentration in stack gas; and

[5] Maximum production rate of the device in appropriate units when producing normal product; or

- (c) Conduct compliance testing to determine compliance with the metals standards to establish limits on the operating parameters of subdivision a ~~of subsection 3~~ only after the kiln system has been conditioned to enable it to reach equilibrium with respect to metals fed into the system and metals emissions. During conditioning, hazardous waste and raw materials having the same metals content as will be fed during the compliance test must be fed at the feed rates that will be fed during the compliance test.

(3) Conduct of compliance testing.

- (a) If compliance with all applicable emissions standards of sections 33-24-05-529 through 33-24-05-532 is not demonstrated simultaneously during a set of test runs, the operating conditions of additional test runs required to demonstrate compliance with remaining emissions standards must be as close as possible to the original operating conditions.
  - (b) Prior to obtaining test data for purposes of demonstrating compliance with the applicable emissions standards of sections 33-24-05-529 through 33-24-05-532 or establishing limits on operating parameters under this section, the facility must operate under compliance test conditions for a sufficient period to reach steady-state operations. Industrial furnaces that recycle collected particulate matter back into the furnace and that comply with subparagraph a or b of paragraph 2 of subdivision c ~~of subsection 3~~, however, need not reach steady-state conditions with respect to the flow of metals in the system prior to beginning compliance testing for metals.
  - (c) Compliance test data on the level of an operating parameter for which a limit must be established in the certification of compliance must be obtained during emissions sampling for the pollutant or pollutants (for example, metals, particulate matter, hydrogen chloride and chlorine, organic compounds) for which the parameter must be established as specified by subdivision a ~~of subsection 3~~.
- d. Certification of compliance. Within ninety days of completing compliance testing, the owner or operator must certify to

the department compliance with the emissions standards of subsections 2, 3, and 5 of section 33-24-05-529, sections 33-24-05-530, 33-24-05-531, and 33-24-05-532, and subparagraph d of paragraph 1 of subdivision e of subsection 1. The certification of compliance must include the following information:

- (1) General facility and testing information including:
  - (a) ~~EPA/state identification~~ Identification number;
  - (b) Facility name, contact person, telephone number, and address;
  - (c) Person responsible for conducting compliance testing, including company name, address, and telephone number, and a statement of qualifications;
  - (d) Date or dates of each compliance test;
  - (e) Description of boiler or industrial furnace tested;
  - (f) Person responsible for quality assurance/quality control, title, and telephone number, and statement that procedures prescribed in the quality assurance/quality control plan submitted under paragraph 3 of subdivision b of subsection 3 of section 33-24-05-528 have been followed, or a description of any changes and an explanation of why changes were necessary;
  - (g) Description of any changes in the unit configuration prior to or during testing that would alter any of the information submitted in the prior notice of compliance testing under subdivision b of ~~subsection 3~~, and an explanation of why the changes were necessary;
  - (h) Description of any changes in the planned test conditions prior to or during the testing that alter any of the information submitted in the prior notice of compliance testing under subdivision b of ~~subsection 3~~, and an explanation of why the changes were necessary; and
  - (i) The complete report on results of emissions testing.
- (2) Specific information on each test including:
  - (a) Purpose or purposes of test (for example, demonstrate conformance with the emissions limits for particulate

matter, metals, hydrogen chloride, chlorine, and carbon monoxide).

- (b) Summary of test results for each run and for each test including the following information:
  - [1] Date of run;
  - [2] Duration of run;
  - [3] Time-weighted average and highest hourly rolling average carbon monoxide level for each run and for the test;
  - [4] Highest hourly rolling average hydrocarbon level, if hydrocarbon monitoring is required for each run and for the test;
  - [5] If dioxin and furan testing is required under subsection 5 of section 33-24-05-529, time-weighted average emissions for each run and for the test of chlorinated dioxin and furan emissions, and the predicted maximum annual average ground level concentration of the toxicity equivalency factor;
  - [6] Time-weighted average particulate matter emissions for each run and for the test;
  - [7] Time-weighted average hydrogen chloride and chlorine emissions for each run and for the test;
  - [8] Time-weighted average emissions for the metals subject to regulation under section 33-24-05-531 for each run and for the test; and
  - [9] Quality assurance and quality control results.
- (3) Comparison of the actual emissions during each test with the emissions limits prescribed by subsections 2, 3, and 5 of section 33-24-05-529 and sections 33-24-05-530, 33-24-05-531, and 33-24-05-532 and established for the facility in the certification of precompliance under subsection 2.
- (4) Determination of operating limits based on all valid runs of the compliance test for each applicable parameter listed in subdivision a of ~~subsection 3~~ using either of the following procedures:



(a) Instantaneous limits. A parameter may be measured and recorded on an instantaneous basis (for example, the value that occurs at any time) and the operating limit specified as the time-weighted average during all runs of the compliance test; or

(b) Hourly rolling average basis.

[1] The limit for a parameter may be established and continuously monitored on an hourly rolling average basis defined as follows:

[a] A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each fifteen seconds, and computes and records the average value at least every sixty seconds.

[b] An hourly rolling average is the arithmetic mean of the sixty most recent one-minute average values recorded by the continuous monitoring system.

[2] The operating limit for the parameter shall be established based on compliance test data as the average overall test runs of the highest hourly rolling average value for each run.

(c) Rolling average limits for carcinogenic metals and lead. Feed rate limits for the carcinogenic metals (for example, arsenic, beryllium, cadmium, and chromium) and lead may be established either on an hourly rolling average basis as prescribed by subparagraph b of paragraph 4 of subdivision d of ~~subsection 3~~ or on (up to) a twenty-four hour rolling average basis. If the owner or operator elects to use an averaging period from two to twenty-four hours:

[1] The feed rate of each metal shall be limited at any time to ten times the feed rate that would be allowed on an hourly rolling average basis;

[2] The continuous monitor shall meet the following specifications:

[a] A continuous monitor is one which continuously samples the regulated

parameter without interruption, and evaluates the detector response at least once each fifteen seconds, and computes and records the average value at least every sixty seconds; and

[b] The rolling average for the selected averaging period is defined as the arithmetic mean of one-hour block averages for the averaging period. A one-hour block average is the arithmetic mean of the one-minute averages recorded during the sixty-minute period beginning at one minute after the beginning of preceding clock hour; and

[3] The operating limit for the feed rate of each metal shall be established based on compliance test data as the average overall test runs of the highest hourly rolling average feed rate for each run.

(d) Feed rate limits for metals, total chloride and chlorine, and ash. Feed rate limits for metals, total chlorine and chloride, and ash are established and monitored by knowing the concentration of the substance (for example, metals, chloride/chlorine, and ash) in each feedstream and the flow rate of the feedstream. To monitor the feed rate of these substances, the flow rate of each feedstream must be monitored under the continuous monitoring requirements of subparagraphs a through c of paragraph 4 of ~~subdivision d of subsection 3.~~

(5) Certification of compliance statement. The following statement shall accompany the certification of compliance:

"I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information and supporting documentation. Copies of all emissions tests, dispersion modeling results and other information used to determine conformance with the requirements of subsection 3 of section 33-24-05-528 are available at the facility and can be obtained from the facility contact person listed above. Based on my inquiry of the person or persons who manages the facility, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true,

accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also acknowledge that the operating conditions established in this certification pursuant to paragraph 4 of subdivision d of subsection 3 of section 33-24-05-528 are enforceable limits at which the facility can legally operate during interim status until a revised certification of compliance is submitted."

- e. Special requirements for hydrocarbon monitoring systems. When an owner or operator is required to comply with the hydrocarbon controls provided by subsection 3 of section 33-24-05-529 or subparagraph d of paragraph 1 of subdivision e of subsection 1, a conditioned gas monitoring system may be used in conformance with specifications provided in appendix XXIV of chapter 33-24-05 provided that the owner or operator submits a certification of compliance without using extensions of time provided by subdivision g of subsection 3.
- f. Special operating requirements for industrial furnaces that recycle collected particulate matter. Owners and operators of industrial furnaces that recycle back into the furnace particulate matter from the air pollution control system must:
  - (1) When complying with the requirements of subparagraph a of paragraph 2 of subdivision c of subsection 3, comply with the operating requirements prescribed in "Alternative Method to Implement the Metals Controls" in appendix XXIV of chapter 33-24-05; and
  - (2) When complying with the requirements of subparagraph b of paragraph 2 of subdivision c of subsection 3, comply with the operating requirements prescribed by that subparagraph.
- g. Extensions of time.
  - (1) If the owner or operator does not submit a complete certification of compliance for all of the applicable emissions standards of sections 33-24-05-529, 33-24-05-530, 33-24-05-531, and 33-24-05-532 by August 21, 1992, an owner or operator must either:
    - (a) Stop burning hazardous waste and begin closure activities under subsection 12 for the hazardous waste portion of the facility; or
    - (b) Limit hazardous waste burning only for purposes of compliance testing (and pretesting to prepare for

compliance testing) a total period of seven hundred twenty hours for the period of time beginning August 21, 1992, submit a notification to the department by August 21, 1992, stating that the facility is operating under restricted interim status and intends to resume burning hazardous waste, and submit a complete certification of compliance by August 23, 1993; or

- (c) Obtain a case-by-case extension of time under paragraph 2 of subdivision g ~~of subsection 3~~.
- (2) The owner or operator may request a case-by-case extension of time to extend any time limit provided by this subsection 3 if compliance with the time limit is not practicable for reasons beyond the control of the owner or operator.
- (a) In granting an extension, the department may apply conditions as the facts warrant to ensure timely compliance with the requirements of this section and that the facility operates in a manner that does not pose a hazard to human health and the environment;
  - (b) When an owner and operator request an extension of time to enable ~~them~~ the facility to comply with the alternative hydrocarbon provision of subsection 6 of section 33-24-05-529 and to obtain a Resource Conservation and Recovery Act hazardous waste operating permit because the facility cannot meet the hydrocarbon limit of subsection 3 of section 33-24-05-529:

[1] The department shall, in considering whether to grant the extension:

- [a] Determine whether the owner and operator have submitted in a timely manner a complete part B permit application that includes information required under subdivision ff of subsection 2 of section 33-24-06-17; and
- [b] Consider whether the owner or operator have made a good-faith effort to certify compliance with all other emission controls, including the controls on dioxins and furans of subsection 5 of section 33-24-05-529 and the controls on particulate matter, metals, and hydrogen chloride and chlorine.



[2] If an extension is granted, the department shall, as a condition of the extension, require the facility to operate under flue gas concentration limits on carbon monoxide and hydrocarbon that, based on available information, including information in the part B permit application, are baseline carbon monoxide and hydrocarbon levels as defined by subdivision a of subsection 6 of section 33-24-05-529.

h. Revised certification of compliance. The owner or operator may submit at any time a revised certification of compliance (recertification of compliance) under the following procedures:

- (1) Prior to submittal of a revised certification of compliance, hazardous waste may not be burned for more than a total of seven hundred twenty hours under operating conditions that exceed those established under a current certification of compliance, and such burning may be conducted only for purposes of determining whether the facility can operate under revised conditions and continue to meet the applicable emissions standards of sections 33-24-05-529 through 33-24-05-532;
- (2) At least thirty days prior to first burning hazardous waste under operating conditions that exceed those established under a current certification of compliance, the owner or operator shall notify the department and submit the following information:
  - (a) ~~EPA identification~~ Identification number, and facility name, contact person, telephone number, and address;
  - (b) Operating conditions that the owner or operator is seeking to revise and description of the changes in facility design or operation that prompted the need to seek to revise the operating conditions;
  - (c) A determination that when operating under the revised operating conditions, the applicable emissions standards of sections 33-24-05-529 through 33-24-05-532 are not likely to be exceeded. To document this determination, the owner or operator shall submit the applicable information required under subdivision b of subsection 2; and
  - (d) Complete emissions testing protocol for any pretesting and for a new compliance test to determine compliance with the applicable emissions standards of sections

33-24-05-529, 33-24-05-530, 33-24-05-531, and 33-24-05-532 when operating under revised operating conditions. The protocol shall include a schedule of pretesting and compliance testing. If the owner or operator revises the scheduled date for the compliance test, the owner or operator shall notify the department in writing at least thirty days prior to the revised date of the compliance test;

- (3) Conduct a compliance test under the revised operating conditions and the protocol submitted to the department to determine compliance with the applicable emissions standards of sections 33-24-05-529, 33-24-05-530, 33-24-05-531, and 33-24-05-532; and
  - (4) Submit a revised certification of compliance under subdivision d ~~of subsection 3~~.
4. **Periodic recertifications.** The owner or operator must conduct compliance testing and submit to the department a recertification of compliance under provisions of subsection 3 within three years from submitting the previous certification or recertification. If the owner or operator seeks to recertify compliance under new operating conditions, the owner or operator must comply with the requirements of subdivision h of subsection 3.
5. **Noncompliance with certification schedule.** If the owner or operator does not comply with the interim status compliance schedule provided by subsections 2 through 4, hazardous waste burning must terminate on the date that the deadline is missed, closure activities must begin under subsection 12, and hazardous waste burning may not resume except under an operating permit issued under subsection 4 of section 33-24-06-19. For purposes of compliance with the closure provisions of subsection 12 and subsection 5 of section 33-24-06-16 the boiler or industrial furnace has received "the known final volume of hazardous waste" on the date that the deadline is missed.
6. **Startup and shutdown.** Hazardous waste (except waste fed solely as an ingredient under the tier I (or adjusted tier I) feed rate screening limits for metals and chloride/chlorine) must not be fed into the device during startup and shutdown of the boiler or industrial furnace, unless the device is operating within the conditions of operation specified in the certification of compliance.
7. **Automatic waste feed cutoff.** During the compliance test required by subdivision c of subsection 3, and upon certification of compliance under subsection 3, a boiler or industrial furnace must be operated with a functioning system that automatically cuts off the hazardous waste feed when the applicable operating conditions specified in paragraphs 1

and 5 through 13 of subdivision a of subsection 3 deviate from those established in the certification of compliance. In addition:

- a. To minimize emissions of organic compounds, the minimum combustion chamber temperature (or the indicator of combustion chamber temperature) that occurred during the compliance test must be maintained while hazardous waste or hazardous waste residues remain in the combustion chamber, with the minimum temperature during the compliance test defined as either:
  - (1) If compliance with the combustion chamber temperature limit is based on ~~a~~ an hourly rolling average, the minimum temperature during the compliance test is considered to be the average overall runs of the lowest hourly rolling average for each run; or
  - (2) If compliance with the combustion chamber temperature limit is based on an instantaneous temperature measurement, the minimum temperature during the compliance test is considered to be the time-weighted average temperature during all runs of the test; and
- b. Operating parameters limited by the certification of compliance must continue to be monitored during the cutoff, and the hazardous waste feed shall not be restarted until the levels of those parameters comply with the limits established in the certification of compliance.

8. **Fugitive emissions.** Fugitive emissions must be controlled by:

- a. Keeping the combustion zone totally sealed against fugitive emissions; ~~or~~
- b. Maintaining the combustion zone pressure lower than atmospheric pressure; or
- c. An alternate means of control that the owner or operator can demonstrate provide fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure. Support for such demonstration shall be included in the operating record.

9. **Changes.** A boiler or industrial furnace must cease burning hazardous waste when changes in combustion properties, or feed rates of the hazardous waste, other fuels, or industrial furnace feedstocks, or changes in the boiler or industrial furnace design or operating conditions deviate from the limits specified in the certification of compliance.

10. **Monitoring and inspections.**



- a. The owner or operator must monitor and record the following, at a minimum, while burning hazardous waste:
    - (1) Feed rates and composition of hazardous waste, other fuels, and industrial furnace feedstocks, and feed rates of ash, metals, and total chloride and chlorine as necessary to ensure conformance with the certification of precompliance or certification of compliance;
    - (2) Carbon monoxide, oxygen, and if applicable, hydrocarbons, on a continuous basis at a common point in the boiler or industrial furnace downstream of the combustion zone and prior to release of stack gases to the atmosphere in accordance with the operating limits specified in the certification of compliance. Carbon monoxide, hydrocarbon, and oxygen monitors must be installed, operated, and maintained in accordance with methods specified in appendix XXIV of chapter 33-24-05.
    - (3) Upon the request of the department, sampling and analysis of the hazardous waste (and other fuels and industrial furnace feed stocks as appropriate) and the stack gas emissions must be conducted to verify that the operating conditions established in the certification of precompliance or certification of compliance achieve the applicable standards of sections 33-24-05-529 through 33-24-05-532.
  - b. The boiler or industrial furnace and associated equipment (pumps, valves, pipes, fuel storage tanks, et cetera) must be subjected to thorough visual inspection when they contain hazardous waste, at least daily for leaks, spills, fugitive emissions, and signs of tampering.
  - c. The automatic hazardous waste feed cutoff system and associated alarms must be tested at least once every seven days when hazardous waste is burned to verify operability, unless the owner or operator can demonstrate that weekly inspections will unduly restrict or upset operations and that less frequent inspections will be adequate. Support for such demonstration shall be included in the operating record. At a minimum, operational testing must be conducted at least once every thirty days.
  - d. These monitoring and inspection data must be recorded and the records must be placed in the operating log.
11. **Recordkeeping.** The owner or operator must keep in the operating record of the facility all information and data required by this section until closure of the boiler or industrial furnace unit.



12. **Closure.** At closure, the owner or operator must remove all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) from the boiler or industrial furnace and must comply with the applicable standards of subsection 5 of section 33-24-06-16.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05, 23-20.3-10

### **33-24-05-529. Standards to control organic emissions.**

#### **1. Destruction and removal efficiency standard.**

- a. General. Except as provided in subdivision c ~~of subsection a~~, a boiler or industrial furnace burning hazardous waste must achieve a destruction and removal efficiency ~~(destruction and removal efficiency)~~ of 99.99 percent for all organic hazardous constituents in the waste feed. To demonstrate conformance with this requirement, 99.99 percent destruction and removal efficiency must be demonstrated during a trial burn for each ~~principle~~ principal organic hazardous constituent designated (under subdivision b ~~of subsection 1~~) in its permit for each waste feed. Destruction and removal efficiency is determined for each ~~principle~~ principal organic hazardous constituent from the following equation:

$$\frac{W_{out}}{W_{in}}$$

$$\text{Destruction and removal efficiency} = [1 - ] \times 100$$

$$\frac{W_{out}}{W_{in}}$$

$$\text{destruction and removal efficiency} = \left( 1 - \frac{W(out)}{W(in)} \right) \times 100$$

where:

$W_{in}$  = Mass feed rate of one ~~principle~~ principal organic hazardous constituent in the hazardous waste fired to the boiler or industrial furnace; and

$W_{out}$  = Mass emission rate of the same ~~principle~~ principal organic hazardous constituent present in stack gas prior to release to the atmosphere.

- b. Designation of ~~principle~~ principal organic hazardous constituents. ~~Principle~~ Principal organic hazardous constituents are those compounds for which compliance with the destruction and removal efficiency requirements shall be demonstrated in a trial burn in conformance with procedures prescribed in subsection 4 of section 33-24-06-19. One or more ~~principle~~ principal organic hazardous constituents shall be designated by the department for each waste feed to be burned. ~~Principle~~ Principal organic hazardous constituents shall be designated based on the degree of difficulty of destruction of the organic constituents in the waste and on their concentrations or mass in the waste feed considering the results of waste analyses submitted with part B of the permit application. ~~Principle~~ Principal organic hazardous constituents are most likely to be selected from among those compounds listed in appendix V of chapter 33-24-02 that are also present in the normal waste feed. However, if the applicant demonstrates to the department's satisfaction that a compound not listed in appendix ~~XXIII~~ V of chapter ~~33-24-05~~ 33-24-02 or not present in the normal waste feed is a suitable indicator of compliance with the destruction and removal efficiency requirements, that compound may be designated as a ~~principle~~ principal organic hazardous constituent. Such ~~principle~~ principal organic hazardous constituents need not be toxic or organic compounds.
- c. Dioxin-listed waste. A boiler or industrial furnace burning hazardous waste containing (or derived from) hazardous waste number F020, F021, F022, F023, F026, or F027 must achieve a destruction and removal efficiency (destruction and removal efficiency) of 99.9999 percent for each ~~principle~~ principal organic hazardous constituent designated (under subdivision b ~~of subsection 4~~) in its permit. This performance must be demonstrated on ~~principle~~ principal organic hazardous constituents that are more difficult to burn than tetra-, penta-, and hexachlorodibenzo-p-dioxins and dibenzofurans. Destruction and removal efficiency is determined for each ~~principle~~ principal organic hazardous constituent from the equation in subdivision a ~~of subsection 4~~. In addition, the owner or operator of the boiler or industrial furnace must notify the department of intent to burn hazardous waste number F020, F021, F022, F023, F026, or F027.
- d. Automatic waiver of destruction and removal efficiency trial burn. Owners and operators of boilers operated under the special operating requirements provided by section 33-24-05-535 are considered to be in compliance with the destruction and removal efficiency standard of subdivision a ~~of subsection 4~~ and are exempt from the destruction and removal efficiency trial burn.
- e. Low risk waste. Owners and operators of boilers or industrial furnaces that burn hazardous waste in compliance with the

requirements of subsection 1 of section 33-24-05-534 are considered to be in compliance with the destruction and removal efficiency standard of subdivision a of ~~subsection 1~~ and are exempt from the destruction and removal efficiency trial burn.

**2. Carbon monoxide standard.**

- a. Except as provided in subsection 3, the stack gas concentration of carbon monoxide from a boiler or industrial furnace burning hazardous waste cannot exceed one hundred parts per million by volume on an hourly rolling average basis (for example, over any sixty-minute period), continuously corrected to seven percent oxygen, dry gas basis.
- b. Carbon monoxide and oxygen shall be continuously monitored in conformance with "Performance Specifications for Continuous Emission Monitoring of Carbon Monoxide and Oxygen for ~~Hazardous Waste~~ Incinerators, Boilers, and Industrial Furnaces Burning Hazardous Waste" in appendix XXIV of chapter 33-24-05.
- c. Compliance with the one hundred parts per million by volume carbon monoxide limit must be demonstrated during the trial burn (for new facilities or an interim status facility applying for a permit) or the compliance test (for interim status facilities). To demonstrate compliance, the highest hourly rolling average carbon monoxide level during any valid run of the trial burn or compliance test must not exceed one hundred parts per million by volume.

**3. Alternative carbon monoxide standard.**

- a. The stack gas concentration of carbon monoxide from a boiler or industrial furnace burning hazardous waste may exceed the one hundred parts per million by volume limit provided that stack gas concentrations of hydrocarbons do not exceed twenty parts per million by volume, except as provided by subsection 6 for certain industrial furnaces.
- b. Hydrocarbon limits must be established under this section on an hourly rolling average basis (for example, over any sixty-minute period), reported as propane, and continuously corrected to seven percent oxygen, dry gas basis.
- c. Hydrocarbon shall be continuously monitored in conformance with "Performance Specifications for Continuous Emission Monitoring of Hydrocarbons for Incinerators, Boilers, and Industrial Furnaces Burning Hazardous Waste" in appendix XXIV of chapter 33-24-05. Carbon monoxide and oxygen shall be continuously monitored in conformance with subdivision b of subsection 2.



- d. The alternative carbon monoxide standard is established based on carbon monoxide data during the trial burn (for a new facility) and the compliance test (for an interim status facility). The alternative carbon monoxide standard is the average overall valid runs of the highest hourly average carbon monoxide level for each run. The carbon monoxide limit is implemented on an hourly rolling average basis, and continuously corrected to seven percent oxygen, dry gas basis.
4. **Special requirements for furnaces.** Owners and operators of industrial furnaces (for example, kilns, cupolas) that feed hazardous waste for a purpose other than solely as an ingredient (see paragraph 2 of subdivision e of subsection 1 of section 33-24-05-528) at any location other than the end where products are normally discharged and where fuels are normally fired must comply with the hydrocarbon limits provided by subsection 3 or 6 irrespective of whether stack gas carbon monoxide concentrations meet the one hundred parts per million by volume limit of subsection 2.
  5. **Controls for dioxins and furans.** Owners and operators of boilers and industrial furnaces that are equipped with a dry particulate matter control device that operates within the temperature range of four hundred fifty degrees to seven hundred fifty degrees Fahrenheit [232.2 to 398.9 degrees Celsius], and industrial furnaces operating under an alternative hydrocarbon limit established under subsection 6 must conduct a site-specific risk assessment as follows to demonstrate that emissions of chlorinated dibenzo-p-dioxins and dibenzofurans do not result in an increased lifetime cancer risk to the hypothetical maximum exposed individual exceeding one in one hundred thousand:
    - a. During the trial burn (for new facilities or an interim status facility applying for a permit) or compliance test (for interim status facilities), determine emission rates of the tetra-octa congeners of chlorinated dibenzo-p-dioxins and dibenzofurans (CDDs/CDFs) using method 23, "~~Determination of Polychlorinated Dibenzo-p-Dioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) from Stationary Sources~~", in ~~appendix XXIV of chapter 33-24-05 0023A, "Sampling Method for Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans Emissions from Stationary Sources"~~, environmental protection agency publication SW-846, incorporated by reference in section 33-24-01-05;
    - b. Estimate the 2,3,7,8-TCDD toxicity equivalence of the tetra-octa chlorinated dibenzo-p-dioxins and ~~dibenzofurans~~ dibenzofurans congeners using "Procedures for Estimating the Toxicity Equivalence of Chlorinated Dibenzo-p-Dioxin and Dibenzofuran Congeners" in appendix XXIV of chapter 33-24-05. Multiply the emission rates of chlorinated dibenzo-p-dioxins and ~~dibenzofurans~~



dibenzofurans congeners with a toxicity equivalence greater than zero (see the procedure) by the calculated toxicity equivalence factor to estimate the equivalent emission rate if of 2,3,7,8-TCDD;

- c. Conduct dispersion modeling using methods recommended in guideline on air quality models (revised) or appendix W of 40 CFR part 51 ("Guidelines on Air Quality Models (Revised)" (1986) and its supplements), the "Hazardous Waste Combustion Air Quality Screening Procedure", which are provided in appendices XXV or appendix XXIV, respectively or "EPA SCREEN Screening Procedure" as described in "Screening Procedures for Estimating Air Quality Impact of Stationary Sources", revised as incorporated by reference in section 33-24-01-05 to predict the maximum annual average offsite ground level concentration of 2,3,7,8-TCDD equivalents determined under subdivision b of subsection 5. The maximum annual average onsite concentration must be used when a person resides onsite; and
  - d. The ratio of the predicted maximum annual average ground level concentration of 2,3,7,8-TCDD equivalents to the risk-specific dose for 2,3,7,8-TCDD provided in appendix XX of chapter 33-24-05 ( $2.2 \times 10^{-7}$ ) shall not exceed 1.0.
6. ~~**Alternative hydrocarbon limit for furnaces with organic matter in raw material.**~~ For industrial furnaces that cannot meet the twenty parts per million by volume hydrocarbon limit because of organic matter in normal raw material, the department may establish an alternative hydrocarbon limit on a case-by-case basis (under a part B permit proceeding) at a level that ensures that flue gas hydrocarbon (and carbon monoxide) concentrations when burning hazardous waste are not greater than when not burning hazardous waste (the baseline hydrocarbon level) provided that the owner or operator complies with the following requirements. However, cement kilns equipped with a bypass duct meeting the requirements of subsection 7, are not eligible for an alternative hydrocarbon limit.
- a. ~~The owner or operator must demonstrate that the facility is designed and operated to minimize hydrocarbon emissions from fuels and raw materials when the baseline hydrocarbon (and carbon monoxide) level is determined. The baseline hydrocarbon (and carbon monoxide) level is defined as the average overall valid test runs of the highest hourly rolling average value for each run when the facility does not burn hazardous waste, and produces normal products under normal operating conditions feeding normal feedstocks and fuels. More than one baseline level may be determined if the facility operates under different modes that may generate significantly different hydrocarbon (and carbon monoxide) levels;~~

- b. ~~The owner or operator must develop an approach to monitor over time changes in the operation of the facility that could reduce the baseline hydrocarbon level;~~
- c. ~~The owner or operator must conduct emissions testing during the trial burn to:~~
  - (1) ~~Determine the baseline hydrocarbon (and carbon monoxide) level;~~
  - (2) ~~Demonstrate that, when hazardous waste is burned, hydrocarbon (and carbon monoxide) levels do not exceed the baseline level; and~~
  - (3) ~~Identify the types and concentrations of organic compounds listed in appendix V of chapter 33-24-02, that are emitted and conduct dispersion modeling to predict the maximum annual average ground level concentration of each organic compound. Onsite ground level concentrations must be considered for this evaluation if a person resides on site.~~
    - (a) ~~Sampling and analysis of organic emissions shall be conducted using procedures prescribed by the department.~~
    - (b) ~~Dispersion modeling shall be conducted according to procedures provided by subdivision b of subsection 5; and~~
  - (4) ~~Demonstrate that maximum annual average ground level concentrations of the organic compounds identified in paragraph 3 do not exceed the following levels:~~
    - (a) ~~For the noncarcinogenic compounds listed in appendix XIX of chapter 33-24-05, the levels established in appendix XIX of chapter 33-24-05;~~
    - (b) ~~For the carcinogenic compounds listed in appendix XX of chapter 33-24-05, the sum for all compounds of the ratios of the actual ground level concentration to the level established in appendix XX of chapter 33-24-05 cannot exceed 1.0. To estimate the health risk from chlorinated dibenzo-p-dioxins and dibenzofuran congeners, use the procedures prescribed by subdivision c of subsection 5 to estimate the 2,3,7,8-TCDD toxicity equivalence of the congeners.~~

~~(e) For compounds not listed in appendix XIX or XX of chapter 33-24-05, 0.1 micrograms per cubic meter.~~

~~d. All hydrocarbon levels specified in this subsection are to be monitored and reported as specified in subdivisions a and b of subsection 3.~~

~~7.~~ **6. Monitoring carbon monoxide and hydrocarbon in the bypass duct of a cement kiln.** Cement kilns may comply with the carbon monoxide and hydrocarbon limits provided by subsections 2 through 4 by monitoring in the bypass duct provided that:

a. Hazardous waste is fired only into the kiln and not at any location downstream from the kiln exit relative to the direction of gas flow; and

b. The bypass duct diverts a minimum of ten percent of kiln off-gas into the duct.

~~8.~~ **7. Use of emissions test data to demonstrate compliance and establish operating limits.** Compliance with the requirements of this section must be demonstrated simultaneously by emissions testing or during separate runs under identical operating conditions. Further, data to demonstrate compliance with the carbon monoxide and hydrocarbon limits or to establish alternative carbon monoxide or hydrocarbon limits under this section must be obtained during the time that destruction and removal efficiency testing, and where applicable, CCD/CDF testing under subsection 5 and comprehensive organic emissions testing under subsection 6 is conducted.

~~9.~~ **8. Enforcement.** For the purposes of permit enforcement, compliance with the operating requirements specified in the permit (under section 33-24-05-527) will be regarded as compliance with this section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the requirements of this section may be "information" justifying modification or revocation and reissuance of a permit under section 33-24-06-12.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05, 23-20.3-10

### **33-24-05-530. Standards to control particulate matter.**

1. A boiler or industrial furnace burning hazardous waste may not emit particulate matter in excess of one hundred eighty milligrams per dry standard cubic meter [0.08 grains per dry standard cubic foot] after correction to a stack gas concentration of seven percent oxygen, using

procedures prescribed in 40 CFR part 60, appendix A, methods 1 through 5, and appendix XXIV of chapter 33-24-05.

2. An owner or operator meeting the requirements of subsection 2 of section 33-24-05-534 for the low risk waste exemption is exempt from the particulate matter standard.
3. Oxygen correction.

- a. Measured pollutant levels must be corrected for the amount of oxygen in the stack gas according to the formula:

$$P_c = P_m \times 14 / (E - Y)$$

where:

P<sub>c</sub> is the corrected concentration of the pollutant in the stack gas;

P<sub>m</sub> is the measured concentration of the pollutant in the stack gas;

E is the oxygen concentration on a dry basis in the combustion air fed to the device; and

Y is the measured oxygen concentration on a dry basis in the stack.

- b. For devices that feed normal combustion air, E will equal twenty-one percent. For devices that feed oxygen-enriched air for combustion (that is, air with an oxygen concentration exceeding twenty-one percent), the value of E will be the concentration of oxygen in the enriched air.
  - c. Compliance with all emission standards provided by sections 33-24-05-525 through 33-24-05-549 must be based on correcting to seven percent oxygen using this procedure.
4. For the purposes of permit enforcement, compliance with the operating requirements specified in the permit (under section 33-24-05-527) will be regarded as compliance with this section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the requirements of this section may be "information" justifying modification or revocation and reissuance of a permit under section 33-24-06-12.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 33-20.3-05, 23-20.3-09

### **33-24-05-531. Standards to control metals emission.**



1. **General.** The owner or operator must comply with the metals standards provided by subsections 2 through 6 for each metal listed in subsection 2 that is present in the hazardous waste at detectable levels using analytical procedures specified in ~~test methods for evaluating solid waste, physical/chemical methods (SW-846)~~ Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, environmental protection agency publication SW-846, incorporated by reference in section 33-24-01-05.
2. **Tier I feed rate screening limits.** Feed rate screening limits for metals are specified in appendix XVI as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. Criteria for facilities that are not eligible to comply with the screening limits are provided in subdivision g ~~of subsection 2~~.
  - a. **Noncarcinogenic metals.** The feed rates of antimony, barium, lead, mercury, thallium, and silver in all feedstreams, including hazardous waste, fuels, and industrial furnace feedstocks shall not exceed the screening limits specified in appendix ~~†~~ XVI of chapter 33-24-05.
    - (1) The feed rate screening limits for antimony, barium, mercury, thallium, and silver are based on either:
      - (a) An hourly rolling average as defined in subparagraph b of paragraph 1 of subdivision f of subsection 5 of section 33-24-05-527; or
      - (b) An instantaneous limit not to be exceeded at any time.
    - (2) The feed rate screening limit for lead is based on one of the following:
      - (a) An hourly rolling average as defined in subparagraph b of paragraph 1 of subdivision f of subsection 5 of section 33-24-05-527;
      - (b) An averaging period of two to twenty-four hours as defined in paragraph 2 of subdivision f of subsection 5 of section 33-24-05-527 with an instantaneous feed rate limit not to exceed ten times the feed rate that would be allowed on an hourly rolling average basis; or
      - (c) An instantaneous limit not to be exceeded at any time.
  - b. **Carcinogenic metals.**
    - (1) The feed rates of arsenic, cadmium, beryllium, and chromium in all feedstreams, including hazardous waste, fuels, and

industrial furnace feedstocks shall not exceed values derived from the screening limits specified in appendix XVI of chapter 33-24-05. The feed rate of each of these metals is limited to a level such that the sum of the ratios of the actual feed rate to the feed rate screening limit specified in appendix XVI of chapter 33-24-05 shall not exceed 1.0, as provided by the following equation:

$$\sum_{i=1}^n \frac{AFR_{(i)}}{FRSL_{(i)}} \leq 1.0$$

where:

n = number of carcinogenic metals

AFR = actual feed rate to the device for metal "i"

FRSL = feed rate screening limit provided by appendix XVI of chapter 33-24-05 for metal "i".

- (2) The feed rate screening limits for the carcinogenic metals are based on either:
  - (a) An hourly rolling average; or
  - (b) An averaging period of two to twenty-four hours as defined in paragraph 2 of subdivision f of subsection 5 of section 33-24-05-527 with an instantaneous feed rate limit not to exceed ten times the feed rate that would be allowed in an hourly rolling average basis.

c. Terrain-adjusted effective stack height (TESH).

- (1) The terrain-adjusted effective stack height is determined according to the following equation:

$$TESH = Ha + H1 - Tr$$

where:

Ha = Actual physical stack height

H1 = Plume rise as determined from appendix XXI of chapter 33-24-05 as a function of stack flow rate and stack gas exhaust temperature.

Tr = Terrain rise within five kilometers of the stack.

- (2) The stack height ( $H_a$ ) may not exceed good engineering practice as specified in 40 CFR 51.100(ii).
  - (3) If the terrain-adjusted effective stack height for a particular facility is not listed in the table in the appendices, the nearest lower terrain-adjusted effective stack height listed in the table shall be used. If the terrain-adjusted effective stack height is four meters or less, a value of four meters shall be used.
- d. Terrain type. The screening limits are a function of whether the facility is located in noncomplex or complex terrain. A device located where any part of the surrounding terrain within five kilometers of the stack equals or exceeds the elevation of the physical stack height ( $H_a$ ) is considered to be in complex terrain and the screening limits for complex terrain apply. Terrain measurements are to be made from United States geological survey 7.5-minute topographic maps of the area surrounding the facility.
  - e. Land use. The screening limits are a function of whether the facility is located in an area where the land use is urban or rural. To determine whether land use in the vicinity of the facility is urban or rural, procedures provided in ~~appendices~~ appendix XXIV or XXV of chapter 33-24-05 shall be used.
  - f. Multiple stacks. Owners and operators of facilities with more than one onsite stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls of metals emissions under a hazardous waste operating permit or interim status controls must comply with the screening limits for all such units assuming all hazardous waste is fed into the device with the worst-case stack based on dispersion characteristics. The worst-case stack is determined from the following equation as applied to each stack:

$$K = HVT$$

where:

$K$  = a parameter accounting for relative influence of stack height and plume rise;

$H$  = physical stack height (meters);

$V$  = stack gas flow rate ( $\text{m}^3/\text{second}$ ); and

$T$  = exhaust temperature ( $^{\circ}\text{Kelvin}$ ).

The stack with the lowest value of  $K$  is the worst-case stack.

9. Criteria for facilities not eligible for screening limits. If any criteria below are met, the tier I (and tier II) screening limits do not apply. Owners and operators of such facilities must comply with either the tier III standards provided by subsection 4 or with the adjusted tier I feed rate screening limits provided by subsection 5.
    - (1) The device is located in a narrow valley less than one kilometer wide;
    - (2) The device has a stack taller than twenty meters and is located such that the terrain rises to the physical height within one kilometer of the facility;
    - (3) The device has a stack taller than twenty meters and is located within five kilometers of a shoreline of a large body of water such as an ocean or large lake;
    - (4) The physical stack height of any stack is less than 2.5 times the height of any building within five building heights or five projected building widths of the stack and the distance from the stack to the closest boundary is within five building heights or five projected building widths of the associated building; or
    - (5) The department determines that standards based on site-specific dispersion modeling are required.
  - h. Implementation. The feed rate of metals in each feedstream must be monitored to ensure that the feed rate screening limits are not exceeded.
3. **Tier II emission rate screening limits.** Emission rate screening limits are specified in appendix XVI of chapter 33-24-05 as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. Criteria for facilities that are not eligible to comply with the screening limits are provided in subdivision g of subsection 2.
    - a. Noncarcinogenic metals. The emission rates of antimony, barium, lead, mercury, thallium, and silver shall not exceed the screening limits specified in appendix XVI of chapter 33-24-05.
    - b. Carcinogenic metals. The emission rates of arsenic, cadmium, ~~barium~~ beryllium, and chromium shall not exceed values derived from the screening limits specified in appendix XVI of chapter 33-24-05. The emission rate of each of these metals is limited to a level such that the sum of the ratios of the actual emission rate to the emission rate screening limit specified in appendix XVI of chapter 33-24-05 shall not exceed 1.0, as provided by the following equation:



$$\sum_{i=1}^n \frac{AFR_{(i)}}{FRSL_{(i)}} \leq 1.0$$

where:

n = number of carcinogenic metals

AER = actual emission rate for metal "i"

ERSL = emission rate screening limit provided by appendix XVI for metal "i".

- c. Implementation. The emission rate limits must be implemented by limiting feed rates of the individual metals to levels during the trial burn (for new facilities or an interim status facility applying for a permit) or the compliance test (for interim status facilities). The feed rate averaging periods are the same as provided by paragraphs 1 and 2 of subdivision a of subsection 2 and paragraph 2 of subdivision b of subsection 2. The feed rate of metals in each feedstream must be monitored to ensure that the feed rate limits for the feedstreams specified under section 33-24-05-527 or ~~section~~ 33-24-05-528 are not exceeded.
- d. Definitions and limitations. The definitions and limitations provided by subsection 2 for the following terms also apply to the tier II emission rate screening limits provided by this subsection 3: terrain-adjusted effective stack height, good engineering practice stack height, terrain type, land use, and criteria for facilities not eligible to use the screening limits.
- e. Multiple stacks.
  - (1) Owners and operators of facilities with more than one onsite stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on metals emissions under a hazardous waste operating permit or interim status controls must comply with the emissions screening limits for any such stacks assuming all hazardous waste is fed into the device with the worst-case stack based on dispersion characteristics.
  - (2) The worst-case stack is determined by procedures provided in subdivision f of subsection 2.
  - (3) For each metal, the total emissions of the metal from those stacks shall not exceed the screening limit for the worst-case stack.

4. **Tier III and adjusted tier I site-specific risk assessment.**

- a. General. Conformance with the tier III or adjusted tier I metals controls must be demonstrated by emissions testing to determine the emission rate for each metal; In addition, conformance with either the tier III or adjusted tier I metals controls must be determined by air dispersion modeling to predict the maximum annual average offsite ground level concentration for each metal, and a demonstration that acceptable ambient levels are not exceeded.
- b. Acceptable ambient levels. Appendices XIX and XX of chapter 33-24-05 list the acceptable ambient levels for purposes of this rule. Reference air concentrations are listed for the noncarcinogenic metals and  $10^{-5}$  risk-specific doses are listed for the carcinogenic metals. The risk-specific dose for a metal is the acceptable ambient level for that metal provided that only one of the four carcinogenic metals is emitted. If more than one carcinogenic metal is emitted, the acceptable ambient level for the carcinogenic metals is a fraction of the risk-specific dose as described in subdivision c of subsection 4.
- c. Carcinogenic metals. For the carcinogenic metals; arsenic, cadmium, beryllium, and chromium, the sum of the ratios of the predicted maximum annual average offsite ground level concentrations (except that onsite concentrations must be considered if a person resides onsite) to the risk-specific dose for all carcinogenic metals emitted shall not exceed 1.0 as determined by the following equation:

$$\sum_{i=1}^n \frac{\text{Predicted Ambient Concentration}_{(i)}}{\text{Risk-Specific Dose}_{(i)}} \leq 1.0$$

where:

$n$  = number of carcinogenic metals

$$\sum_{i=1}^n \frac{\text{Predicted Ambient Concentration (i)}}{\text{Risk - Specific Dose (i)}} \leq 1.0$$

- d. Noncarcinogenic metals. For the noncarcinogenic metals, the predicted maximum annual average offsite ground level concentration for each metal shall not exceed the reference air concentration.
  - e. Multiple stacks. Owners and operators of facilities with more than one onsite stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on metals emissions under a hazardous waste operating permit or interim status controls must conduct emissions testing (except that facilities complying with adjusted tier I controls need not conduct emissions testing) and dispersion modeling to demonstrate that the aggregate emissions from all such onsite stacks do not result in an exceedance of the acceptable ambient levels.
  - f. Implementation. Under tier III, the metals controls must be implemented by limiting feed rates of the individual metals to levels during the trial burn (for new facilities or an interim status facility applying for a permit) or the compliance test (for interim status facilities). The feed rate averaging periods are the same as provided by paragraphs 1 and 2 of subdivision a of subsection 2 and paragraph 2 of subdivision b of subsection 2. The feed rate of metals in each feedstream must be monitored to ensure that the feed rate limits for the feedstreams specified under section 33-24-05-527 or ~~section~~ 33-24-05-528 are not exceeded.
5. **Adjusted tier I feed rate screening limits.** The owner or operator may adjust the feed rate screening limits provided by appendix XVI of chapter 33-24-05 to account for site-specific dispersion modeling. Under this approach, the adjusted feed rate screening limit for a metal is determined by back-calculating from the acceptable ambient level provided by appendices XIX and XX of chapter 33-24-05 using dispersion modeling to determine the maximum allowable emission rate. This emission rate becomes the adjusted tier I feed rate screening limit. The feed rate screening limits for carcinogenic metals are implemented as prescribed in subdivision b of subsection 2.
6. **Alternative implementation approaches.**
- a. The department may approve on a case-by-case basis approaches to implement the tier II or tier III metals emission limits provided by subsection 3 or 4 alternative to monitoring the feed rate of metals in each feedstream.
  - b. The emission limits provided by subsection 4 must be determined as follows:
    - (1) For each noncarcinogenic metal, by back-calculating from the reference air concentration provided in appendix XIX of

chapter 33-24-05 to determine the allowable emission rate for each metal using the dilution factor for the maximum annual average ground level concentration predicted by dispersion modeling in conformance with subsection 8; and

(2) For each carcinogenic metal by:

- (a) Back-calculating from the risk-specific dose provided in appendix XX of chapter 33-24-05 to determine the allowable emission rate for each metal if that metal were the only carcinogenic metal emitted using the dilution factor for the maximum annual average ground level concentration predicted by dispersion modeling in conformance with subsection 8; and
- (b) If more than one carcinogenic metal is emitted, selecting an emission limit for each carcinogenic metal not to exceed the emission rate determined by subparagraph a such that the sum for all carcinogenic metals of the ratios of the selected emission limit to the emission rate determined by that paragraph does not exceed 1.0.

**7. Emission testing.**

- a. General. Emission testing for metals shall be conducted using ~~the multiple metals train as described in appendix XXIV of chapter 33-24-05~~ method 0060, "Determinations of Metals in Stack Emissions", environmental protection agency publication SW-846, incorporated by reference in section 33-24-01-05.
- b. Hexavalent chromium. Emissions of chromium are assumed to be hexavalent chromium unless the owner or operator conducts emissions testing to determine hexavalent chromium emissions using procedures prescribed in ~~appendix XXIV of chapter 33-24-05~~ method 0061, "Determination of Hexavalent Chromium Emissions from Stationary Sources", environmental protection agency publication SW-846, incorporated by reference in section 33-24-01-05.

8. **Dispersion modeling.** Dispersion modeling required under this section shall be conducted according to methods recommended in ~~appendix XXV of chapter 33-24-05~~ W of 40 CFR part 51, the "Hazardous Waste Combustion Air Quality Screening Procedure" described in appendix XXIV of chapter 33-24-05, or ~~"EPA SCREEN Screening Procedure" as described in "Screening Procedures for Estimating Air Quality Impact of Stationary Sources, revised"~~ (the latter document is incorporated by reference, see section 33-24-01-05) to predict the maximum annual average offsite ground level concentration.



However, onsite concentrations must be considered when a person resides onsite.

9. **Enforcement.** For the purposes of permit enforcement, compliance with the operating requirements specified in the permit (under section 33-24-05-527) will be regarded as compliance with this section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the requirements of this section may be "information" justifying modification or revocation and reissuance of a permit under section 33-24-06-12.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05, 23-20.3-09

**33-24-05-532. Standards to control hydrogen chloride (HCl) and chlorine gas (Cl<sub>2</sub>) emissions.**

1. **General.** The owner or operator must comply with the hydrogen chloride and chlorine controls provided by subsection 2, 3, or 5.
2. **Screening limits.**
  - a. Tier I feed rate screening limits. Feed rate screening limits are specified for total chlorine in appendix XVII as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. The feed rate of total chlorine and chloride, both organic and inorganic, in all feedstreams, including hazardous waste, fuels, and industrial furnace feedstocks, shall not exceed the levels specified.
  - b. Tier II emission rate screening limits. Emission rates screening limits for hydrogen chloride and chlorine are specified in appendix XVIII as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. The stack emission rates of hydrogen chloride and chlorine shall not exceed the levels specified.
  - c. Definitions and limitations. The definitions and limitations provided by subsection 2 of section 33-24-05-531 for the following terms also apply to the screening limits provided by this subsection: terrain-adjusted effective stack height, good engineering practice stack height, terrain type, land use, and criteria for facilities not eligible to use the screening limits.
  - d. Multiple stacks. Owners and operators of facilities with more than one onsite stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on hydrogen chloride or chlorine, emissions under a hazardous waste operating

permit or interim status controls must comply with the tier I and tier II screening limits for those stacks assuming all hazardous waste is fed into the device with the worst-case stack based on dispersion characteristics.

- (1) The worst-case stack is determined by procedures provided in subdivision f of subsection 2 of section 33-24-05-531.
- (2) Under tier I, the total feed rate of chlorine and chloride to all subject devices shall not exceed the screening limit for the worst-case stack.
- (3) Under tier II, the total emissions of hydrogen chloride and chlorine from all subject stacks shall not exceed the screening limit for the worst-case stack.

**3. Tier III site-specific risk assessments.**

- a. General. Conformance with the tier III controls must be demonstrated by emissions testing to determine the emission rate for hydrogen chloride and chlorine, air dispersion modeling to predict the maximum annual average offsite ground level concentration for each compound, and a demonstration that acceptable ambient levels are not exceeded.
  - b. Acceptable ambient levels. Appendix XIX of chapter 33-24-05 lists the reference air concentrations for hydrogen chloride (7 micrograms per cubic meter) and chlorine (0.4 micrograms per cubic meter).
  - c. Multiple stacks. Owners and operators of facilities with more than one onsite stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on hydrogen chloride or chlorine, emissions under a hazardous waste operating permit or interim status controls must conduct emissions testing and dispersion modeling to demonstrate that the aggregate emissions from all such onsite stacks do not result in an exceedance of the acceptable ambient levels for hydrogen chloride and chlorine.
- 4. Averaging periods.** The hydrogen chloride and chlorine controls are implemented by limiting the feed rate of total chlorine and chloride in all feedstreams, including hazardous waste, fuels, and industrial furnace feedstocks. Under tier I, the feed rate of total chloride and chlorine is limited to the tier I screening limits. Under tier II and tier III, the feed rate of total chloride and chlorine is limited to the feed rates during the trial burn (for new facilities or an interim status facility applying for a permit) or the compliance test (for interim status facilities). The feed rate limits are based on either:

- a. An hourly rolling average as defined in subdivision f of subsection 5 of section 33-24-05-527; or
  - b. An instantaneous basis not to be exceeded at any time.
5. **Adjusted tier I feed rate screening limits.** The owner or operator may adjust the feed rate screening limit provided by appendix XVII of chapter 33-24-05 to account for site-specific dispersion modeling. Under this approach, the adjusted feed rate screening limit is determined by back-calculating from the acceptable ambient level for chlorine provided by appendix XIX of chapter 33-24-05 using dispersion modeling to determine the maximum allowable emission rate. This emission rate becomes the adjusted tier I feed rate screening limit.
6. **Emissions testing.** Emissions testing for hydrogen chloride and chlorine shall be conducted using the procedures described in ~~appendix XXIV of chapter 33-24-05 methods 0050 or 0051,~~ environmental protection agency publication SW-846, incorporated by reference in section 33-24-01-05.
7. **Dispersion modeling.** Dispersion modeling shall be conducted according to the provisions of subsection 8 of section 33-24-05-531.
8. **Enforcement.** For the purposes of permit enforcement, compliance with the operating requirements specified in the permit (under section 33-24-05-527) will be regarded as compliance with this section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the requirements of this section may be "information" justifying modification or revocation and reissuance of a permit under section 33-24-06-12.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05, 23-20.3-09

**33-24-05-533. Small quantity onsite burner exemption.**

1. **Exempt quantities.** Owners and operators of facilities that burn hazardous waste in an onsite boiler or industrial furnace are exempt from the requirements of sections 33-24-05-525 through 33-24-05-549 provided that:
  - a. The quantity of hazardous waste burned in a device for a calendar month does not exceed the limits provided in the following table based on the terrain-adjusted effective stack height as defined in subdivision c of subsection 2 of section 33-24-05-531:



<u>Exempt Quantities for Small Quantity Burner Exemption</u>			
<u>Terrain-Adjusted Effective Stack Height of Device (Meters)</u>	<u>Allowable Hazardous Waste Burning Rate (Gallons/Month)</u>	<u>Terrain-Adjusted Effective Stack Height of Device (Meters)</u>	<u>Allowable Hazardous Waste Burning Rate (Gallons/Month)</u>
<u>0 to 3.9</u>	<u>0</u>	<u>40.0 to 44.9</u>	<u>210</u>
<u>4.0 to 5.9</u>	<u>13</u>	<u>45.0 to 49.9</u>	<u>260</u>
<u>6.0 to 7.9</u>	<u>18</u>	<u>50.0 to 54.9</u>	<u>330</u>
<u>8.0 to 9.9</u>	<u>27</u>	<u>55.0 to 59.9</u>	<u>400</u>
<u>10.0 to 11.9</u>	<u>40</u>	<u>60.0 to 64.9</u>	<u>490</u>
<u>12.0 to 13.9</u>	<u>48</u>	<u>65.0 to 69.9</u>	<u>610</u>
<u>14.0 to 15.9</u>	<u>59</u>	<u>70.0 to 74.9</u>	<u>680</u>
<u>16.0 to 17.9</u>	<u>69</u>	<u>75.0 to 79.9</u>	<u>760</u>
<u>18.0 to 19.9</u>	<u>76</u>	<u>80.0 to 84.9</u>	<u>850</u>
<u>20.0 to 21.9</u>	<u>84</u>	<u>85.0 to 89.9</u>	<u>960</u>
<u>22.0 to 23.9</u>	<u>93</u>	<u>90.0 to 94.9</u>	<u>1,100</u>
<u>24.0 to 25.9</u>	<u>100</u>	<u>95.0 to 99.9</u>	<u>1,200</u>
<u>26.0 to 27.9</u>	<u>110</u>	<u>100.0 to 104.9</u>	<u>1,300</u>
<u>28.0 to 29.9</u>	<u>130</u>	<u>105.0 to 109.9</u>	<u>1,500</u>
<u>30.0 to 34.9</u>	<u>140</u>	<u>110.0 to 114.9</u>	<u>1,700</u>
<u>35.0 to 39.9</u>	<u>170</u>	<u>115.0 or greater</u>	<u>1,900</u>

- b. The maximum hazardous waste firing rate does not exceed at any time one percent of the total fuel requirements for the device (hazardous waste plus other fuel) on a total heat input or mass input basis, whichever results in the lower mass feed rate of hazardous waste;
  - c. The hazardous waste has a minimum heating value of five thousand British thermal units per pound as generated; and
  - d. The hazardous waste fuel does not contain (and is not derived from) hazardous waste number F020, F021, F022, F023, F026, or F027.
2. **Mixing with nonhazardous fuels.** If hazardous waste fuel is mixed with a nonhazardous fuel, the quantity of hazardous waste before such mixing is used to comply with subsection 1.
3. **Multiple stacks.** If an owner or operator burns hazardous waste in more than one onsite boiler or industrial furnace exempt under this



section, the quantity limits provided by subdivision a of subsection 1 are implemented according to the following equation:

$$\sum_{i=1}^n \frac{\text{Actual Quantity Burned}_{(i)}}{\text{Allowable Quantity Burned}_{(i)}} \leq 1.0$$

where:

n = number of stacks;

Actual quantity burned means the waste quantity burned per month in device "i";

Allowable quantity burned means the maximum allowable exempt quantity for stack "i" from the table in subdivision a of subsection 1 above.

Note: Hazardous wastes that are subject to the special requirements for small quantity generators under section 33-24-02-05 may be burned in an offsite device under the exemption provided by section 33-24-05-533, but must be included in the quantity determination for the exemption.

4. **Notification requirements.** The owner or operator of facilities qualifying for the small quantity burner exemption under this section must provide a one-time signed, written notice to the department indicating the following:
  - a. The combustion unit is operating as a small quantity burner of hazardous waste;
  - b. The owner and operator are in compliance with the requirements of this section; and
  - c. The maximum quantity of hazardous waste that the facility may burn per month as provided by subdivision a of subsection 1 of section 33-24-05-533.
5. **Recordkeeping requirements.** The owner or operator must maintain at the facility ~~until closure of the boiler or industrial furnace unit for at least three years~~ sufficient records documenting compliance with the hazardous waste quantity, firing rate, and heating value limits. At a minimum, these records must indicate the quantity of hazardous waste

and other fuel burned in each unit per calendar month, and the heating value of the hazardous waste.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-536. Standards for direct transfer.**

1. **Applicability.** The regulations in this section apply to owners and operators of boilers and industrial furnaces subject to section 33-24-05-527 or 33-24-05-528 if hazardous waste is directly transferred from a transport vehicle to a boiler or industrial furnace without the use of a storage unit.
2. **Definitions.**
  - a. When used in this section, the following terms have the meanings given below:
    - (1) Direct transfer equipment means any device (including but not limited to, such devices as piping, fittings, flanges, valves, and pumps) that is used to distribute, meter, or control the flow of hazardous waste between a container (for example, transport vehicle) and a boiler or industrial furnace.
    - (2) Container means any portable device in which hazardous waste is transported, stored, treated, or otherwise handled, and includes transport vehicles that are containers themselves (for example, tank trucks, tanker-trailers, and rail tank cars), and containers placed on or in a transport vehicle.
  - b. This section references several requirements provided in sections 33-24-05-89 through 33-24-05-117 and subsection 5 of section 33-24-06-16. For purposes of this section, the term "tank systems" in those referenced requirements means direct transfer equipment as defined in subdivision a.
3. **General operating requirements.**
  - a. No direct transfer of a pumpable hazardous waste shall be conducted from an open-top container to a boiler or industrial furnace.
  - b. Direct transfer equipment used for pumpable hazardous waste shall always be closed, except when necessary to add or remove the waste, and shall not be opened, handled, or stored in a manner that may cause any rupture or leak.

- c. The direct transfer of hazardous waste to a boiler or industrial furnace shall be conducted so that it does not:
  - (1) Generate extreme heat or pressure, fire, explosion, or violent reaction;
  - (2) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health;
  - (3) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;
  - (4) Damage the structural integrity of the container or direct transfer equipment containing the waste;
  - (5) Adversely affect the capability of the boiler or industrial furnace to meet the standards provided by sections 33-24-05-529 through 33-24-05-632; or
  - (6) Threaten human health or the environment.
- d. Hazardous waste shall not be placed in direct transfer equipment if it could cause the equipment or its secondary containment system to rupture, leak, corrode, or otherwise fail.
- e. The owner or operator of the facility shall use appropriate controls and practices to prevent spills and overflows from the direct transfer equipment or its secondary containment systems. These include at a minimum:
  - (1) Spill prevention controls (for example, check valves, dry discount couplings); and
  - (2) Automatic waste feed cutoff to use if a leak or spill occurs from the direct transfer equipment.
- 4. **Areas where direct transfer vehicles (containers) are located.** Applying the definition of container under this section, owners and operators must comply with the following requirements:
  - a. The containment requirements of section 33-24-05-94;
  - b. The use and management requirements of subsection 5 of section 33-24-06-16, except that in lieu of the special requirements for ignitable or reactive waste, the owner or operator may comply with the requirements of this section for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjacent property line that can be built upon as required in tables 2-1 through 2-6 of the National Fire

Protection Association's (NFPA) "Flammable and Combustible Liquids Code", (1977 or 1981), as incorporated by reference, see section 33-24-01-05. The owner or operator must obtain and keep on file at the facility a written certification by the local fire ~~marshall~~ marshal that the installation meets the subject National Fire Protection Association codes; and

- c. The closure requirements of section 33-24-05-97.
5. **Direct transfer equipment.** Direct transfer equipment must meet the following requirements:
- a. Secondary containment. Owners and operators shall comply with the secondary containment requirements of subsection 5 of section 33-24-06-16:
    - (1) For all new direct transfer equipment, prior to their being put into service; and
    - (2) For existing direct transfer equipment within two years after August 21, 1991.
  - b. Requirements prior to meeting secondary containment requirements.
    - (1) For existing direct transfer equipment that does not have secondary containment, the owner or operator shall determine whether the equipment is leaking or is unfit for use. The owner or operator shall obtain and keep on file at the facility a written assessment reviewed and certified by a qualified, registered professional engineer in accordance with subsection 4 of section 33-24-06-02 that attests to the equipment's integrity by August 21, 1992.
    - (2) This assessment shall determine whether the direct transfer equipment is adequately designed and has sufficient structural strength and compatibility with the waste or wastes to be transferred to ensure that it will not collapse, rupture, or fail. At a minimum, this assessment shall consider the following:
      - (a) Design standard or standards, if available according to which the direct transfer equipment was constructed;
      - (b) Hazardous characteristics of the waste or wastes that have been or will be handled;
      - (c) Existing corrosion protection measures;



- (d) Documented age of the equipment, if available, (otherwise, an estimate of the age); and
    - (e) Results of a leak test or other integrity examination such that the effects of temperature variations, vapor pockets, cracks, leaks, corrosion, and erosion are accounted for.
  - (3) If, as a result of the assessment specified above, the direct transfer equipment is found to be leaking or unfit for use, the owner or operator shall comply with the applicable requirements of subsection 5 of section 33-24-06-16.
- c. Inspections and recordkeeping.
  - (1) The owner or operator must inspect at least once each operating hour when hazardous waste is being transferred from the transport vehicle (container) to the boiler or industrial furnace:
    - (a) Overfill/spill control equipment (for example, waste-feed cutoff systems, bypass systems, and drainage systems) to ensure that it is in good working order;
    - (b) The aboveground portions of the direct transfer equipment to detect corrosion, erosion, or releases of waste (for example, wet spots, dead vegetation); and
    - (c) Data gathered from monitoring equipment and leak-detection equipment (for example, pressure and temperature gauges) to ensure that the direct transfer equipment is being operated according to its design.
  - (2) The owner or operator must inspect cathodic protection systems, if used, to ensure that they are functioning properly according to the schedule provided by subsection 5 of section 33-24-06-16.
  - (3) Records of inspections made under this subdivision shall be maintained in the operating record at the facility, and available for inspection for at least three years from the date of the inspection.
- d. Design and installation of new ancillary equipment. Owners and operators must comply with the applicable requirements of subsection 5 of section 33-24-06-16.

- e. Response to leaks or spills. Owners and operators must comply with the applicable requirements of subsection 5 of section 33-24-06-16.
- f. Closure. Owners and operators must comply with the applicable requirements of subsection 5 of section 33-24-06-16.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-537. Regulation of residues.** A residue derived from the burning or processing of hazardous waste in a boiler or industrial furnace is not excluded from the definition of a hazardous waste under subdivision d, g, or h of subsection 2 of section 33-24-02-04 unless the device and the owner or operator meet the following requirements:

1. The device meets the following criteria:
  - a. Boilers. Boilers must burn at least fifty percent coal on a total heat input or mass input basis, whichever results in the greater mass feed rate or coal;
  - b. Ore or mineral furnaces. Industrial furnaces subject to subdivision g of subsection 2 of section 33-24-02-04 must process at least fifty percent by weight normal, nonhazardous raw materials; and
  - c. Cement kilns. Cement kilns must process at least fifty percent by weight normal cement-production raw materials;
2. The owner or operator demonstrates that the hazardous waste does not significantly affect the residue by demonstrating conformance with either of the following criteria:
  - a. Comparison of waste-derived residue with normal residue. The waste-derived residue must not contain appendix V of chapter 33-24-02 constituents (toxic constituents) that could reasonably be attributable to the hazardous waste at concentrations significantly higher than in residue generated without burning or processing of hazardous waste, using the following procedure. Toxic compounds that could reasonably be attributable to burning or processing the hazardous waste (constituents of concern) include toxic constituents in the hazardous waste, and the organic compounds listed in appendix XXIII of chapter 33-24-05 that may be generated as products of incomplete combustion. Sampling and analyses shall be in conformance with procedures prescribed in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, environmental protection

agency publication SW-846, incorporated by reference in section 33-24-01-05. For polychlorinated dibenzo-p-dioxins and polychlorinated dibenzo-furans, analyses must be performed to determine specific congeners and homologues, and the results converted to 2,3,7,8-TCDD equivalent values using the procedure specified in section 4.0 of appendix XXIV of chapter 33-24-05.

- (1) Normal residue. Concentrations of toxic constituents of concern in normal residue shall be determined based on analyses of a minimum of ten samples representing a minimum of ten days of operation. Composite samples may be used to develop a sample for analysis provided that the compositing period does not exceed twenty-four hours. The upper tolerance limit (at ninety-five percent confidence with a ninety-five percent proportion of the sample distribution) of the concentration in the normal residue shall be considered the statistically derived concentration in the normal residue. If changes in raw materials or fuels reduce the statistically derived concentrations of the toxic constituents of concern in the normal residue, the statistically derived concentrations must be revised or statistically derived concentrations of toxic constituents in normal residue must be established for a new mode of operation with the new raw material or fuel. To determine the upper tolerance limit in the normal residue, the owner or operator shall use statistical procedures prescribed in "Statistical Methodology for Bevill Residue Determinations" in appendix XXIV of chapter 33-24-05.
- (2) Waste-derived residue. Waste-derived residue shall be sampled and analyzed as often as necessary to determine whether the residue generated during each twenty-four-hour period has concentrations of toxic constituents that are higher than the concentrations established for the normal residue under paragraph 1. If so, hazardous waste burning has significantly affected the residue and the residue shall not be excluded from the definition of a hazardous waste. Concentrations of toxic constituents of concern in the waste-derived residue shall be determined based on analysis of one or more samples obtained over a twenty-four-hour period. Multiple samples may be analyzed, and multiple samples may be taken to form a composite sample for analysis provided that the sampling period does not exceed twenty-four hours. If more than one sample is analyzed to characterize waste-derived residues generated over a twenty-four-hour period, the concentration of each toxic constituent shall be the arithmetic mean of the concentrations in the samples. No results may be disregarded; or



b. Comparison of waste-derived residue concentrations with health-based limits.

- (1) Nonmetal constituents. The concentrations of each nonmetal toxic constituents constituent of concern (specified in subdivision a) in the waste-derived residue must not exceed the health-based levels specified in appendix XXII of chapter 33-24-05, or the detection level (using analytical procedures prescribed in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, environmental protection agency publication SW-846), whichever is higher. If a health-based limit for a constituent of concern is not listed in appendix XXII of chapter 33-24-05, then a limit of 0.002 micrograms per kilogram or the level of detection (using analytical procedures prescribed in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, environmental protection agency publication SW-846, or other appropriate methods), whichever is higher, shall be used; and, The levels specified in appendix XXII of chapter 33-24-05 (and the default level of 0.002 micrograms per kilogram or the level of detection for constituents as identified in note 1 of appendix XXII of chapter 33-24-05 are administratively stayed under the condition, for those constituents specified in subdivision a, that the owner or operator complies with alternative levels defined as the land disposal restriction limits specified in section 33-24-05-283 for F039 nonwastewaters. In complying with those alternative levels, if an owner or operator is unable to detect a constituent despite documenting use of best good-faith efforts as defined by applicable department guidance or standards, the owner or operator is deemed to be in compliance for that constituent. Until new guidelines or standards are developed, the owner or operator may demonstrate such good-faith efforts by achieving a detection limit for the constituent that does not exceed an order of magnitude above the level provided by section 33-24-05-283 for F039 nonwastewaters. In complying with the section 33-24-05-283 F039 nonwastewater levels for polychlorinated dibenzo-p-dioxins and polychlorinated dibenzo-furans, analyses must be performed for total hexachlorodibenzo-p-dioxins, total hexachlorodibenzofurans, total pentachlorodibenzo-p-dioxins, total pentachlorodibenzofurans, total tetrachlorodibenzo-p-dioxins, and total tetrachlorodibenzofurans;

Note to this paragraph: The administrative stay, under the condition that the owner or operator complies with the alternative



levels defined as the land disposal restriction limits specified in section 33-24-05-283 for F039 nonwastewaters, remains in effect until further administrative action is taken and notice is published in the federal register and the code of federal regulations.

- (2) Metal constituents. The concentration of metals in an extract obtained using the toxicity characteristic leaching procedure of section 33-24-02-14 must not exceed the levels specified in appendix XXII of chapter 33-24-05; and
  - (3) Sampling and analysis. Waste-derived residue shall be sampled and analyzed as often as necessary to determine whether the residue generated during each twenty-four-hour period has concentrations of toxic constituents that are higher than the health-based levels. Concentrations of toxic constituents of concern in the waste-derived residue shall be determined based on analysis of one or more samples obtained over a ~~twenty-four-period~~ twenty-four-hour period. Multiple samples may be analyzed, and multiple samples may be taken to form a composite sample for analysis provided that the sampling period does not exceed twenty-four hours. If more than one sample is analyzed to characterize waste-derived residues generated over a twenty-four-hour period, the concentration of each toxic constituent shall be the arithmetic mean of the concentrations in the samples. No results may be disregarded; and
3. Records sufficient to document compliance with the provisions must be retained until closure of the boiler or industrial furnace unit. At a minimum, the following shall be recorded:
  - a. Levels of constituents in appendix V of chapter 33-24-02, that are present in waste-derived residues; and
  - b. If the waste-derived residue is compared with normal residue under subdivision a of subsection 2:
    - (1) The levels of constituents in appendix V of chapter 33-24-02, that are present in normal residues; and
    - (2) Data and information, including analyses of samples as necessary, obtained to determine if changes in raw materials or fuels would reduce the concentration of toxic constituents of concern in the normal residue.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-550. ~~{Reserved}~~ Applicability of corrective action management unit (CAMU) regulations.**

1. Except as provided in subsection 2, corrective action management units are subject to the requirements of section 33-24-05-552.
2. Corrective action management units that were approved before April 22, 2002, or for which substantially complete applications (or equivalents) were submitted to the department on or before November 20, 2000, are subject to the requirements in section 33-24-05-551 for grandfathered corrective action management units; corrective action management unit waste, activities, and design will not be subject to the standards in section 33-24-05-552, so long as the waste, activities, and design remain within the general scope of the corrective action management unit as approved.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-551. ~~{Reserved}~~ Grandfathered corrective action management units (CAMUs).**

1. To implement remedies under section 33-24-05-58 or Resource Conservation and Recovery Act section 3008(h), or to implement remedies at a permitted facility that is not subject to section 33-24-05-58, the department may designate an area at the facility as a corrective action management unit under the requirements of this section. Corrective action management unit means an area within a facility that is used only for managing remediation wastes for implementing corrective action or cleanup at the facility. A corrective action management unit must be located within the contiguous property under the control of the owner or operator where the wastes to be managed in the corrective action management unit originated. One or more corrective action management units may be designated at a facility.
  - a. Placement of remediation wastes into or within a corrective action management unit does not constitute land disposal of hazardous wastes.
  - b. Consolidation or placement of remediation wastes into or within a corrective action management unit does not constitute creation of a unit subject to minimum technology requirements.
2. The department may designate a regulated unit as a corrective action management unit in accordance with the following:

- a. The department may designate a regulated unit (as defined in subdivision b of subsection 1 of section 33-24-05-47) as a corrective action management unit, or may incorporate a regulated unit into a corrective action management unit, if:
    - (1) The regulated unit is closed or closing, meaning it has begun the closure process under section 33-24-05-62; and
    - (2) Inclusion of the regulated unit will enhance implementation of effective, protective, and reliable remedial actions for the facility.
  - b. The sections 33-24-05-47 through 33-24-05-88 requirements and the unit-specific requirements of sections 33-24-05-01 through 33-24-05-190 and sections 33-24-05-300 through 33-24-05-559 that applied to that regulated unit will continue to apply to that portion of the corrective action management unit after incorporation into the corrective action management unit.
3. The department shall designate a corrective action management unit in accordance with the following:
- a. The corrective action management unit shall facilitate the implementation of reliable, effective, protective, and cost-effective remedies:
  - b. Waste management activities associated with the corrective action management unit shall not create unacceptable risks to humans or to the environment resulting from exposure to hazardous wastes or hazardous constituents:
  - c. The corrective action management unit may include uncontaminated areas of the facility, only if including such areas for the purpose of managing remediation waste is more protective than management of such wastes at contaminated areas of the facility:
  - d. Areas within the corrective action management unit, where wastes remain in place after closure of the corrective action management unit, shall be managed and contained so as to minimize future releases, to the extent practicable:
  - e. The corrective action management unit shall expedite the timing of remedial activity implementation, when appropriate and practicable:
  - f. The corrective action management unit shall enable the use, when appropriate, of treatment technologies (including innovative technologies) to enhance the long-term effectiveness of remedial



actions by reducing the toxicity, mobility, or volume of wastes that will remain in place after closure of the corrective action management unit; and

- g. The corrective action management unit shall, to the extent practicable, minimize the land area of the facility upon which wastes will remain in place after closure of the corrective action management unit.
4. The owner or operator shall provide sufficient information to enable the department to designate a corrective action management unit in accordance with the criteria in section 33-24-05-552.
5. The department shall specify, in the permit or order, requirements for corrective action management units to include the following:
  - a. The areal configuration of the corrective action management unit.
  - b. Requirements for remediation waste management to include the specification of applicable design, operation, and closure requirements.
  - c. Requirements for ground water monitoring that are sufficient to:
    - (1) Continue to detect and to characterize the nature, extent, concentration, direction, and movement of existing releases of hazardous constituents in ground water from sources located within the corrective action management unit; and
    - (2) Detect and subsequently characterize releases of hazardous constituents to ground water that may occur from areas of the corrective action management unit in which wastes will remain in place after closure of the corrective action management unit.
  - d. Closure and postclosure requirements.
    - (1) Closure of corrective action management units shall:
      - (a) Minimize the need for further maintenance; and
      - (b) Control, minimize, or eliminate, to the extent necessary to protect human health and the environment, for areas where wastes remain in place, postclosure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground, to surface waters, or to the atmosphere.



- (2) Requirements for closure of corrective action management units shall include the following, as appropriate and as deemed necessary by the department for a given corrective action management unit:
    - (a) Requirements for excavation, removal, treatment, or containment of wastes;
    - (b) For areas in which wastes will remain after closure of the corrective action management unit, requirements for capping of such areas; and
    - (c) Requirements for removal and decontamination of equipment, devices, and structures used in remediation waste management activities within the corrective action management unit.
  - (3) In establishing specific closure requirements for corrective action management units under this subsection, the department shall consider the following factors:
    - (a) Corrective action management unit characteristics;
    - (b) Volume of wastes which remain in place after closure;
    - (c) Potential for releases from the corrective action management unit;
    - (d) Physical and chemical characteristics of the waste;
    - (e) Hydrogeological and other relevant environmental conditions at the facility which may influence the migration of any potential or actual releases; and
    - (f) Potential for exposure of humans and environmental receptors if releases were to occur from the corrective action management unit.
  - (4) Postclosure requirements as necessary to protect human health and the environment, to include, for areas where wastes will remain in place, monitoring and maintenance activities, and the frequency with which such activities shall be performed to ensure the integrity of any cap, final cover, or other containment system.
6. The department shall document the rationale for designating corrective action management units and shall make such documentation available to the public.

7. Incorporation of a corrective action management unit into an existing permit must be approved by the department according to the procedures for department-initiated permit modifications under section 33-24-06-12, or according to the permit modification procedures of section 33-24-06-14.
8. The designation of a corrective action management unit does not change the department's existing authority to address cleanup levels, media-specific points of compliance to be applied to remediation at a facility, or other remedy selection decisions.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

### **33-24-05-552. Corrective action management unit (CAMU).**

1. For the purpose of implementing To implement remedies under section 33-24-05-58 or Resource Conservation and Recovery Act section 3008(h), or to implement remedies at a permitted facility that is not subject to section 33-24-05-58, the department may designate an area at the facility as a corrective action management unit, as defined in section 33-24-01-04, in accordance with under the requirements of in this section. Corrective action management unit means an area within a facility that is used only for managing corrective action management unit-eligible wastes for implementing corrective action or cleanup at the facility. A corrective action management unit must be located within the contiguous property under the control of the owner or operator where the wastes to be managed in the corrective action management unit originated. One or more corrective action management units may be designed designated at a facility.
  - a. Placement of remediation wastes into or within a corrective action management unit does not constitute land disposal of hazardous wastes. Corrective action management unit-eligible waste means:
    - (1) All solid and hazardous wastes, and all media (including ground water, surface water, soils, and sediments) and debris, that are managed for implementing cleanup. As-generated wastes (either hazardous or nonhazardous) from ongoing industrial operations at a site are not corrective action management unit-eligible wastes.
    - (2) Wastes that would otherwise meet the description in paragraph 1 of subdivision a are not "corrective action management unit-eligible wastes" where:
      - (a) The wastes are hazardous wastes found during cleanup in intact or substantially intact containers.

tanks, or other nonland-based units found aboveground, unless the wastes are first placed in the tanks, containers, or nonland-based units as part of cleanup, or the containers or tanks are excavated during the course of cleanup; or

(b) The department exercises the discretion in subdivision b to prohibit the wastes from management in a corrective action management unit.

(3) Notwithstanding paragraph 1 of subdivision a, where appropriate, as-generated nonhazardous waste may be placed in a corrective action management unit where such waste is being used to facilitate treatment or the performance of the corrective action management unit.

b. Consolidation or placement of remediation wastes into or within a corrective action management unit does not constitute creation of a unit subject to minimum technology requirements. The department may prohibit, where appropriate, the placement of waste in a corrective action management unit where the department has or receives information that such wastes have not been managed in compliance with applicable land disposal treatment standards of sections 33-24-05-250 through 33-24-05-299, or applicable unit design requirements of sections 33-24-05-550 through 33-24-05-599, or applicable unit design requirements under subsection 5 of section 33-24-06-16, or that noncompliance with other applicable requirements of chapter 33-24-05 likely contributed to the release of the waste.

c. Prohibition against placing liquids in corrective action management units.

(1) The placement of bulk or noncontainerized liquid hazardous waste or free liquids contained in hazardous waste (whether or not sorbents have been added) in any corrective action management unit is prohibited except where placement of such wastes facilitates the remedy selected for the waste.

(2) The requirements in subsection 4 of section 33-24-05-183 for placement of containers holding free liquids in landfills apply to placement in a corrective action management unit except where placement facilitates the remedy selected for the waste.

(3) The placement of any liquid which is not a hazardous waste in a corrective action management unit is prohibited unless such placement facilitates the remedy selected for the waste or a



demonstration is made pursuant to subsection 6 of section 33-24-05-183.

(4) The absence or presence of free liquids in either a containerized or a bulk waste must be determined in accordance with subsection 3 of section 33-24-05-183. Sorbents used to treat free liquids in corrective action management units must meet the requirements of subsection 5 of section 33-24-05-183.

d. Placement of corrective action management unit-eligible wastes into or within a corrective action management unit does not constitute land disposal of hazardous wastes.

e. Consolidation or placement of corrective action management unit-eligible wastes into or within a corrective action management unit does not constitute creation of a unit subject to minimum technology requirements.

2. ~~The department may designate a~~ Requirements for regulated unit as a corrective action management unit in accordance with the following:  
units.

a. The department may designate a regulated unit (as defined in subdivision b of subsection 1 of section 33-24-05-47) as a corrective action management unit, or may incorporate a regulated unit into a corrective action management unit, if:

(1) The regulated unit is closed or closing, meaning it has begun the closure process under section 33-24-05-62 or applicable requirements of subsection 5 of section 33-24-06-16; and

(2) Inclusion of the regulated unit will enhance implementation of effective, protective, and reliable remedial actions for the facility.

b. ~~The requirements of sections 33-24-05-47 through 33-24-05-88 requirements and the unit-specific requirements of sections 33-24-05-01 through 33-24-05-190 and sections 33-24-05-300 through 33-24-05-559 chapter 33-24-05 or applicable requirements of subsection 5 of section 33-24-06-16 that applied to that the~~ regulated unit will continue to apply to that portion of the corrective action management unit after incorporation into the corrective action management unit.

3. The department shall designate a corrective action management unit that will be used for storage or treatment, or both, only in accordance with subsection 6. The department shall designate ~~a all other~~ corrective action management unit units in accordance with the following:



- a. The corrective action management unit shall facilitate the implementation of reliable, effective, protective, and cost-effective remedies;
  - b. Waste management activities associated with the corrective action management unit shall not create unacceptable risks to humans or to the environment resulting from exposure to hazardous wastes or hazardous constituents;
  - c. The corrective action management unit ~~may~~ shall include uncontaminated areas of the facility, only if including such areas for the purpose of managing ~~remediation~~ corrective action management unit-eligible waste is more protective than management of such wastes at contaminated areas of the facility;
  - d. Areas within the corrective action management unit, where wastes remain in place after closure of the corrective action management unit, shall be managed and contained so as to minimize future releases, to the extent practicable;
  - e. The corrective action management unit shall expedite the timing of remedial activity implementation, when appropriate and practicable;
  - f. The corrective action management unit shall enable the use, when appropriate, of treatment technologies (including innovative technologies) to enhance the long-term effectiveness of remedial actions by reducing the toxicity, mobility, or volume of wastes that will remain in place after closure of the corrective action management unit; and
  - g. The corrective action management unit shall, to the extent practicable, minimize the land area of the facility upon which wastes will remain in place after closure of the corrective action management unit.
4. The owner or operator shall provide sufficient information to enable the department to designate a corrective action management unit in accordance with the criteria in this section 33-24-05-552. This must include, unless not reasonably available, information on:
    - a. The origin of the waste and how it was subsequently managed (including a description of the timing and circumstances surrounding the disposal or release, or both);
    - b. Whether the waste was listed or identified as hazardous at the time of disposal or release, or both; and

- c. Whether the disposal or release, or both, of the waste occurred before or after the land disposal requirements of section 33-24-05-250 through 33-24-05-299 were in effect for the waste listing or characteristic.
- 5. The department shall specify, in the permit or order, requirements for corrective action management units to include the following:
  - a. The areal configuration of the corrective action management unit.
  - b. Requirements Except as provided in subsection 7, requirements for remediation corrective action management unit-eligible waste management to include the specification of applicable design, operation, treatment, and closure requirements.
  - c. Minimum design requirements. Corrective action management units, except as provided in subsection 6, into which wastes are placed must be designed in accordance with the following:
    - (1) Unless the department approves alternate requirements under paragraph 2, corrective action management units that consist of new, replacement, or laterally expanded units must include a composite liner and a leachate collection system that is designed and constructed to maintain less than a thirty-centimeter depth of leachate over the liner. For purposes of this paragraph, composite liner means a system consisting of two components; the upper component must consist of a minimum thirty mil flexible membrane liner, and the lower component must consist of at least a two-foot layer of compacted soil with a hydraulic conductivity of no more than  $1 \times 10^{-7}$  centimeters per second. Flexible membrane liner components consisting of high density polyethylene must be at least sixty mil thick. The flexible membrane liner component must be installed in direct and uniform contact with the compacted soil component; and
    - (2) Alternate requirements. The department may approve alternate requirements if:
      - (a) The department finds that alternate design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents into the ground water or surface water at least as effectively as the liner and leachate collection systems in paragraph 1 of subdivision c; or
      - (b) The corrective action management unit is to be established in an area with existing significant levels

of contamination, and the department finds that an alternative design, including a design that does not include a liner, would prevent migration from the unit that would exceed long-term remedial goals.

d. Minimum treatment requirements. Unless the wastes will be placed in a corrective action management unit for storage or treatment, or both, only in accordance with subsection 6, corrective action management unit-eligible wastes that, absent this subdivision, would be subject to the treatment requirements of sections 33-24-05-250 through 33-24-05-299, and that the department determines contain principal hazardous constituents must be treated to the standards specified in paragraph 3.

(1) Principal hazardous constituents are those constituents that the department determines pose a risk to human health and the environment substantially higher than the cleanup levels or goals at the site.

(a) In general, the department will designate as principal hazardous constituents:

[1] Carcinogens that pose a potential direct risk from ingestion or inhalation at the site at or above  $10^{-3}$ ; and

[2] Noncarcinogens that pose a potential direct risk from ingestion or inhalation at the site an order of magnitude or greater over their reference dose.

(b) The department will also designate constituents as principal hazardous constituents, where appropriate, when risks to human health and the environment posed by the potential migration of constituents in wastes to ground water are substantially higher than cleanup levels or goals at the site; when making such a designation, the department may consider such factors as constituent concentrations, and fate and transport characteristics under site conditions.

(c) The department may also designate other constituents as principal hazardous constituents that the department determines pose a risk to human health and the environment substantially higher than the cleanup levels or goals at the site.

(2) In determining which constituents are "principal hazardous constituents", the department must consider all constituents which, absent this paragraph, would be subject to the



treatment requirements in sections 33-24-05-250 through 33-24-05-299.

- (3) Waste that the department determines contains principal hazardous constituents must meet treatment standards determined in accordance with paragraph 4 or 5.
- (4) Treatment standards for wastes placed in corrective action management units.

  - (a) For nonmetals, treatment must achieve ninety percent reduction in total principal hazardous constituent concentrations, except as provided by paragraph (e)(4)(iv)(C) of this section.
  - (b) For metals, treatment must achieve ninety percent reduction in principal hazardous constituent concentrations as measured in leachate from the treated waste or media (tested according to the toxicity characteristic leaching procedure) or ninety percent reduction in total constituent concentrations (when a metal removal treatment technology is used), except as provided by subparagraph c.
  - (c) When treatment of any principal hazardous constituent to a ninety percent reduction standard would result in a concentration less than ten times the universal treatment standard for that constituent, treatment to achieve constituent concentrations less than ten times the universal treatment standard is not required. Universal treatment standards are identified in section 33-24-05-288 table UTS.
  - (d) For waste exhibiting the hazardous characteristic of ignitability, corrosivity, or reactivity, the waste must also be treated to eliminate these characteristics.
  - (e) For debris, the debris must be treated in accordance with section 33-24-05-285, or by methods or to levels established under subparagraphs a through d, whichever the department determines is appropriate.
  - (f) Alternatives to toxicity characteristic leaching procedure. For metal-bearing wastes for which metals removal treatment is not used, the department may specify a leaching test other than the toxicity characteristic leaching procedure (SW-846 method 1311) to measure treatment effectiveness, provided the department determines that an alternative leach



testing protocol is appropriate for use, and that the alternative more accurately reflects conditions at the site that affect leaching.

(5) Adjusted standards. The department may adjust the treatment level or method in paragraph 4 to a higher or lower level, based on one or more of the following factors, as appropriate. The adjusted level or method must be protective of human health and the environment:

- (a) The technical impracticability of treatment to the levels or by the methods in paragraph 4;
- (b) The levels or methods in paragraph 4 would result in concentrations of principal hazardous constituents that are significantly above or below cleanup standards applicable to the site (established either site-specifically, or promulgated under state or federal law);
- (c) The views of the affected local community on the treatment levels or methods in paragraph 4 as applied at the site, and, for treatment levels, the treatment methods necessary to achieve these levels;
- (d) The short-term risks presented by the onsite treatment method necessary to achieve the levels or treatment methods in paragraph 4;
- (e) The long-term protection offered by the engineering design of the corrective action management unit and related engineering controls:

[1] Where the treatment standards in paragraph 4 are substantially met and the principal hazardous constituents in the waste or residuals are of very low mobility;

[2] Where cost-effective treatment has been used and the corrective action management unit meets the article 33-24 liner and leachate collection requirements for new land disposal units at subsection 3 or 4 of section 33-24-05-177;

[3] Where, after review of appropriate treatment technologies, the department determines that cost-effective treatment is not reasonably available, and the corrective action management unit meets the article 33-24 liner and leachate

collection requirements for new land disposal units at subsection 3 or 4 of section 33-24-05-177:

[4] Where cost-effective treatment has been used and the principal hazardous constituents in the treated wastes are of very low mobility; or

[5] Where, after review of appropriate treatment technologies, the department determines that cost-effective treatment is not reasonably available, the principal hazardous constituents in the wastes are of very low mobility, and either the corrective action management unit meets or exceeds the liner standards for new, replacement, or laterally expanded corrective action management units in paragraphs 1 and 2 of subdivision c, or the corrective action management unit provides substantially equivalent or greater protection:

(f) The treatment required by the treatment standards must be completed prior to, or within a reasonable time after, placement in the corrective action management unit; and

(g) For the purpose of determining whether wastes placed in corrective action management units have met site-specific treatment standards, the department may, as appropriate, specify a subset of the principal hazardous constituents in the waste as analytical surrogates for determining whether treatment standards have been met for other principal hazardous constituents. This specification will be based on the degree of difficulty of treatment and analysis of constituents with similar treatment properties.

e. Requirements Except as provided in subsection 6, requirements for ground water monitoring and corrective action that are sufficient to:

(1) Continue to detect and to characterize the nature, extent, concentration, direction, and movement of existing releases of hazardous constituents in ground water from sources located within the corrective action management unit; and

(2) Detect and subsequently characterize releases of hazardous constituents to ground water that may occur from areas of the corrective action management unit in which wastes will remain in place after closure of the corrective action management unit; and

- (3) Require notification to the department and corrective action as necessary to protect human health and the environment for releases to ground water from the corrective action management unit.

d. f. Closure Except as provided in subsection 6, closure and postclosure requirements:-

- (1) Closure of corrective action management units shall:
  - (a) Minimize the need for further maintenance; and
  - (b) Control, minimize, or eliminate, to the extent necessary to protect human health and the environment, for areas where wastes remain in place, postclosure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground, to surface waters, or to the atmosphere.
- (2) Requirements for closure of corrective action management units shall include the following, as appropriate and as deemed necessary by the department for a given corrective action management unit:
  - (a) Requirements for excavation, removal, treatment, or containment of wastes; and
  - (b) ~~For areas in which wastes will remain after closure of the corrective action management unit, requirements for capping of such areas; and~~
  - (c) Requirements for removal and decontamination of equipment, devices, and structures used in remediation waste management activities within the corrective action management unit.
- (3) In establishing specific closure requirements for corrective action management units under this subsection 5, the department shall consider the following factors:
  - (a) Corrective action management unit characteristics;
  - (b) Volume of wastes which remain in place after closure;
  - (c) Potential for releases from the corrective action management unit;
  - (d) Physical and chemical characteristics of the waste;

- (e) Hydrogeological and other relevant environmental conditions at the facility which may influence the migration of any potential or actual releases; and
  - (f) Potential for exposure of humans and environmental receptors if releases were to occur from the corrective action management unit.
- (4) ~~Postclosure requirements as necessary to protect human health and the environment, to include, for areas where wastes will remain in place, monitoring and maintenance activities, and the frequency with which such activities shall be performed to ensure the integrity of any cap, final cover, or other containment system.~~ Cap requirements:
- (a) At final closure of the corrective action management unit, for areas in which wastes will remain after closure of the corrective action management unit, with constituent concentrations at or above remedial levels or goals applicable to the site, the owner or operator must cover the corrective action management unit with a final cover designed and constructed to meet the following performance criteria, except as provided in subparagraph b:
    - [1] Provide long-term minimization of migration of liquids through the closed unit;
    - [2] Function with minimum maintenance;
    - [3] Promote drainage and minimize erosion or abrasion of the cover;
    - [4] Accommodate settling and subsidence so that the cover's integrity is maintained; and
    - [5] Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.
  - (b) The department may determine that modifications to subparagraph a are needed to facilitate treatment or the performance of the corrective action management unit (for example, to promote biodegradation).
- (5) Postclosure requirements as necessary to protect human health and the environment, to include, for areas where wastes will remain in place, monitoring and maintenance activities, and the frequency with which such activities shall



be performed to ensure the integrity of any cap, final cover, or other containment system.

6. The department shall document the rationale for designating corrective action management units and shall make such documentation available to the public. Corrective action management units used for storage or treatment, or both, only are corrective action management units in which wastes will not remain after closure. Such corrective action management units must be designated in accordance with all of the requirements of this section, except as follows:
  - a. Corrective action management units that are used for storage or treatment, or both, only and that operate in accordance with the time limits established in the staging pile regulations at paragraph 3 of subdivision a of subsection 4, subsection 8 and subsection 9 of section 33-24-05-554 are subject to the requirements for staging piles at paragraphs 1 and 2 of subdivision a of subsection 4, subdivision b of subsection 4, subsections 5, 6, 10, and 11 of section 33-24-05-554 in lieu of the performance standards and requirements for corrective action management units contained in subsection 3 and subdivisions c through f of subsection 5.
  - b. Corrective action management units that are used for storage or treatment, or both, only and that do not operate in accordance with the time limits established in the staging pile regulations at paragraph 3 of subdivision a of subsection 4, subsections 8 and 9 of section 33-24-05-554:
    - (1) Must operate in accordance with a time limit, established by the department, that is no longer than necessary to achieve a timely remedy selected for the waste; and
    - (2) Are subject to the requirements for staging piles at paragraphs 1 and 2 of subdivision a of subsection 4, subdivision b of subsection 4, and subsections 5, 6, 10, and 11 of section 33-24-05-554 in lieu of the performance standards and requirements for corrective action management units contained in subsection 3 and subdivisions d through f of subsection 5.
7. Corrective action management units into which wastes are placed where all wastes have constituent levels at or below remedial levels or goals applicable to the site do not have to comply with the requirements for liners at paragraph 1 of subdivision c of subsection 5, caps at paragraph 4 of subdivision f of subsection 5, ground water monitoring requirements at subdivision e of subsection 5 or, for treatment or storage, or both, only corrective action management units, the design standards at subsection 6.

8. The department shall provide public notice and a reasonable opportunity for public comment before designating a corrective action management unit. Such notice shall include the rationale for any proposed adjustments under paragraph 5 of subdivision d of subsection 5 to the treatment standards in paragraph 4 of subdivision d of subsection 5.
9. Notwithstanding any other provision of this section, the department may impose additional requirements as necessary to protect human health and the environment.
7. 10. Incorporation of a corrective action management unit into an existing permit must be approved by the department according to the procedures for department-initiated permit modifications under section 33-24-06-12, or according to the permit modification procedures of section 33-24-06-14.
8. 11. The designation of a corrective action management unit does not change the department's existing authority to address cleanup levels, media-specific points of compliance to be applied to remediation at a facility, or other remedy selection decisions.

**History:** Effective January 1, 1994; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

### **33-24-05-553. Temporary units (TU).**

1. For temporary tanks and container storage areas used ~~for treatment to treat or storage of store~~ hazardous remediation wastes ~~(during remedial activities required under section 33-24-05-58) or Resource Conservation and Recovery Act section 3008(h), or at a permitted facility that is not subject to section 33-24-05-58,~~ the department may designate a unit at the facility, as a temporary unit. A temporary unit must be located within the contiguous property under the control of the owner or operator where the wastes to be managed in the temporary unit originated. For temporary units, the department may determine ~~that a~~ replace the design, operating, or closure standard applicable to ~~such these~~ units ~~may be replaced by under sections 33-24-05-01 through 33-24-05-190, 33-24-05-300 through 33-24-05-524, and 33-24-05-800 through 33-24-05-819, or the applicable requirements of subsection 5 of section 33-24-06-16, with~~ alternative requirements which ~~are protective of protect~~ human health and the environment.
2. Any temporary unit to which alternative requirements are applied in accordance with subsection 1 must be:
  - a. Located within the facility boundary; and

- b. Used only for treatment or storage of remediation wastes.
- 3. In establishing standards to be applied to a temporary unit, the department shall consider the following factors:
  - a. Length of time such unit will be in operation;
  - b. Type of unit;
  - c. Volumes of wastes to be managed;
  - d. Physical and chemical characteristics of the wastes to be managed in the unit;
  - e. Potential for releases from the unit;
  - f. Hydrogeological and other relevant environmental conditions at the facility which may influence the migration of any potential releases; and
  - g. Potential for exposure of humans and environmental receptors if releases were to occur from the unit.
- 4. The department shall specify in the permit or order the length of time a temporary unit will be allowed to operate, to be no longer than a period of one year. The department shall also specify the design, operating, and closure requirements for the unit.
- 5. The department may extend the operational period of a temporary unit once for no longer than a period of one year beyond that originally specified in the permit or order, if the department determines that:
  - a. Continued operation of the unit will not pose a threat to human health and the environment; and
  - b. Continued operation of the unit is necessary to ensure timely and efficient implementation of remedial actions at the facility.
- 6. Incorporation of a temporary unit or a time extension for a temporary unit into an existing permit must be:
  - a. Approved in accordance with the procedures for department-initiated permit modifications under section 33-24-06-12; or
  - b. Requested by the owner or operator as a class II modification according to the procedures under section 33-24-06-14.



7. The department shall document the rationale for designating a temporary unit and for granting time extensions for temporary units and shall make such documentation available to the public.

**History:** Effective January 1, 1994; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-554. ~~[Reserved]~~ Staging piles.**

1. A staging pile is an accumulation of solid, nonflowing remediation waste (as defined in section 33-24-01-04) that is not a containment building and is used only during remedial operations for temporary storage at a facility. A staging pile must be located within the contiguous property under the control of the owner or operator where the wastes to be managed in the staging pile originated. Staging piles must be designated by the department according to the requirements in this section.
  - a. For the purposes of this section, storage includes mixing, sizing, blending, or other similar physical operations as long as they are intended to prepare the wastes for subsequent management or treatment.
  - b. [Reserved]
2. A staging pile may be used to store hazardous remediation waste (or remediation waste otherwise subject to land disposal restrictions) only if the owner or operator follows the standards and design criteria the department has designated for that staging pile. The department must designate the staging pile in a permit or, at an interim status facility, in a closure plan or order (consistent with the applicable requirements of subsection 5 of section 33-24-06-16). The department must establish conditions in the permit, closure plan, or order that comply with subsections 4 through 11.
3. An owner or operator that is seeking a staging pile designation must provide the following information:
  - a. Sufficient and accurate information to enable the department to impose standards and design criteria for the staging pile according to subsections 4 through 11;
  - b. Certification by an independent, qualified, registered professional engineer for technical data, such as design drawings and specifications, and engineering studies, unless the department determines, based on information that the owner or operator provided, that this certification is not necessary to ensure that a staging pile will protect human health and the environment; and



- c. Any additional information the department determines is necessary to protect human health and the environment.
- 4. Performance criteria for a staging pile. The department must establish the standards and design criteria for the staging pile in the permit, closure plan, or order.
  - a. The standards and design criteria as established by the department in the permit closure plan or order must comply with the following:
    - (1) The staging pile must facilitate a reliable, effective, and protective remedy;
    - (2) The staging pile must be designed so as to prevent or minimize releases of hazardous wastes and hazardous constituents into the environment, and minimize or adequately control cross-media transfer, as necessary to protect human health and the environment (for example, through the use of liners, covers, and runoff and run-on controls, as appropriate); and
    - (3) The staging pile may not operate for a period of more than two years, except when the department grants an operating term extension under subsection 9. The owner or operator must measure the two-year limit, or other operating term specified by the department in the permit, closure plan, or order, from the first time remediation waste is placed into a staging pile. The owner or operator must maintain a record of the date when remediation waste is first placed into the staging pile for the life of the permit, closure plan, or order, or for three years, whichever is longer.
  - b. In setting the standards and design criteria, the department must consider the following factors:
    - (1) Length of time the staging pile will be in operation;
    - (2) Volumes of wastes the owner or operator intends to store in the staging pile;
    - (3) Physical and chemical characteristics of the wastes to be stored in the unit;
    - (4) Potential for releases from the unit;
    - (5) Hydrogeological and other relevant environmental conditions at the facility that may influence the migration of any potential releases; and

- (6) Potential for human and environmental exposure to potential releases from the unit.
- 5. Ignitable or reactive remediation waste are prohibited from being placed in a staging pile. The owner or operator must not place ignitable or reactive remediation waste in a staging pile unless:
  - a. The owner or operator has treated, rendered, or mixed the remediation waste before being placed in the staging pile so that:
    - (1) The remediation waste no longer meets the definition of ignitable or reactive under section 33-24-02-11 or 33-24-02-13; and
    - (2) The owner or operator has complied with subsection 2 of section 33-24-05-08; or
  - b. The owner or operator manages the remediation waste to protect it from exposure to any material or condition that may cause it to ignite or react.
- 6. Management of incompatible remediation wastes in a staging pile. The owner or operator must comply with the following requirements for incompatible wastes (as defined in section 33-24-01-04) in staging piles:
  - a. The owner or operator may not place incompatible remediation wastes in the same staging pile unless the owner or operator has complied with subsection 2 of section 33-24-05-08;
  - b. If remediation waste in a staging pile is incompatible with any waste or material stored nearby in containers, other piles, open tanks, or land disposal units (for example, surface impoundments), the owner or operator must separate the incompatible materials, or protect them from one another by using a dike, berm, wall, or other device; and
  - c. The owner or operator must not pile remediation waste on the same base where incompatible wastes or materials were previously piled, unless the base has been decontaminated sufficiently to comply with subsection 2 of section 33-24-05-08.
- 7. Land disposal restrictions and minimum technological requirements are not triggered by placing hazardous remediation wastes into a staging pile.
- 8. Staging pile operation time limits. The department may allow a staging pile to operate for up to two years after hazardous remediation waste is first placed into the pile. The owner or operator may use a staging pile

no longer than the length of time designated by the department in the permit, closure plan, or order except as provided in subsection 9.

9. Extension of operation time limits.

a. The department may grant one operating term extension of up to one hundred eighty days beyond the operating term limit contained in the permit, closure plan, or order (see subsection 12 for modification procedures). To justify to the department the need for an extension, the owner or operator must provide sufficient and accurate information to enable the department to determine that continued operation of the staging pile:

(1) Will not pose a threat to human health and the environment; and

(2) Is necessary to ensure timely and efficient implementation of remedial actions at the facility.

b. The department may, as a condition of the extension, specify further standards and design criteria in the permit, closure plan, or order, as necessary, to ensure protection of human health and the environment.

10. Closure requirements for a staging pile located in a previously contaminated area.

a. Within one hundred eighty days after the operating term of the staging pile expires, the owner or operator must close a staging pile located in a previously contaminated area of the site by removing or decontaminating all:

(1) Remediation waste;

(2) Contaminated containment system components; and

(3) Structures and equipment contaminated with waste and leachate.

b. The owner or operator must also decontaminate contaminated subsoils in a manner and according to a schedule that the department determines will protect human health and the environment.

c. The department must include the above requirements in the permit, closure plan, or order in which the staging pile is designated.

11. Closure requirements for a staging pile located in an uncontaminated area.



- a. Within one hundred eighty days after the operating term of the staging pile expires, the owner or operator must close a staging pile located in an uncontaminated area of the site according to subsection 1 of section 33-24-05-135 and section 33-24-05-60.
  - b. The department must include the above requirements in the permit, closure plan, or order in which the staging pile is designated.
- 12. Modifications to an existing permit, closure plan, or order to allow use of a staging pile.
  - a. A permit, other than a RAP, may be modified to incorporate a staging pile or staging pile operating term extension, by either:
    - (1) The department may initiate the modification in accordance with section 33-24-06-12; or
    - (2) The owner or operator may request a class 2 modification under section 33-24-06-14.
  - b. A remedial action plan may be modified to incorporate a staging pile or staging pile operating term extension when the owner or operator submits a request pursuant to subsections 1 and 2 of section 33-24-06-33.
  - c. The owner or operator must follow the applicable requirements under subsection 3 of section 33-24-05-61 to modify a closure plan to incorporate a staging pile or staging pile operating term extension.
  - d. To modify an order to incorporate a staging pile or staging pile operating term extension, the owner or operator must follow the terms of the order and the requirements of subdivision f of subsection 4 of section 33-24-06-16.
- 13. Information submitted to the department regarding the rationale for designating a staging pile or staging pile operating term extension will be placed in the facility file and this documentation made available to the public.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-555. [Reserved] Disposal of corrective action management unit-eligible wastes in permitted hazardous waste landfills.**

- 1. The department with regulatory oversight at the location where the cleanup is taking place may approve placement of corrective action



management unit-eligible wastes in hazardous waste landfills not located at the site from which the waste originated, without the wastes meeting the requirements of sections 33-24-05-250 through 33-24-05-299, if the conditions in subdivisions a through c are met:

- a. The waste meets the definition of corrective action management unit-eligible waste in subdivisions a and b of subsection 1 of section 33-24-05-552.
  - b. The department with regulatory oversight at the location where the cleanup is taking place identifies principal hazardous constituents in such waste, in accordance with paragraphs 1 and 2 of subdivision d of subsection 5 of section 33-24-05-552, and requires that such principal hazardous constituents are treated to any of the following standards specified for corrective action management unit-eligible wastes:
    - (1) The treatment standards under paragraph 4 of subdivision d of subsection 5 of section 33-24-05-552; or
    - (2) Treatment standards adjusted in accordance with subitems a, c, and d of item 1 of subparagraph e of paragraph 5 of subdivision d of subsection 5 of section 33-24-05-552; or
    - (3) Treatment standards adjusted in accordance with item 2 of subparagraph e of paragraph 5 of subdivision d of subsection 5 of section 33-24-05-552, where treatment has been used and that treatment significantly reduces the toxicity or mobility of the principal hazardous constituents in the waste. For minimizing the short-term and long-term threat posed by the waste, including the threat at the remediation site.
  - c. The landfill receiving the corrective action management unit-eligible waste must have a hazardous waste permit, meet the requirements for new landfills in sections 33-24-05-176 through 33-24-05-190, and be authorized to accept corrective action management unit-eligible wastes. For the purposes of this requirement, "permit" does not include interim status.
2. The person seeking approval shall provide sufficient information to enable the department with regulatory oversight at the location where the cleanup is taking place to approve placement of corrective action management unit-eligible waste in accordance with subsection 1. Information required by subdivisions a through c of subsection 4 of section 33-24-05-552 for corrective action management unit applications must be provided, unless not reasonably available.

3. The department with regulatory oversight at the location where the cleanup is taking place shall provide public notice and a reasonable opportunity for public comment before approving corrective action management unit-eligible waste for placement in an offsite permitted hazardous waste landfill, consistent with the requirements for corrective action management unit approval at subsection 8 of section 33-24-05-552. The approval must be specific to a single remediation.
4. Applicable hazardous waste management requirements in sections 33-24-05-550 through 33-24-05-599, including recordkeeping requirements to demonstrate compliance with treatment standards approved under this section, for corrective action management unit-eligible waste must be incorporated into the receiving facility permit through permit issuance or a permit modification, providing notice and an opportunity for comment and a hearing. Notwithstanding subsection 1 of section 33-24-06-10, a landfill may not receive hazardous corrective action management unit-eligible waste under this section unless its permit specifically authorizes receipt of such waste.
5. For each remediation, corrective action management unit-eligible waste may not be placed in an offsite landfill authorized to receive corrective action management unit-eligible waste in accordance with subsection 4 until the following additional conditions have been met:
  - a. The landfill owner or operator notifies the department and other regulatory agency responsible for oversight of the landfill and persons on the facility mailing list, maintained in accordance with paragraph 4 of subdivision a of subsection 3 of section 33-24-07-06, of the owner's or operator's intent to receive corrective action management unit-eligible waste in accordance with this section; the notice must identify the source of the remediation waste, the principal hazardous constituents in the waste, and treatment requirements.
  - b. Persons on the facility mailing list may provide comments, including objections to the receipt of the corrective action management unit-eligible waste, to the department within fifteen calendar days of notification.
  - c. The department may object to the placement of the corrective action management unit-eligible waste in the landfill within thirty calendar days of notification; the department may extend the review period an additional thirty calendar days because of public concerns or insufficient information.
  - d. Corrective action management unit-eligible wastes may not be placed in the landfill until the department has notified the facility

owner or operator that the department does not object to its placement.

- e. If the department objects to the placement or does not notify the facility owner or operator that the department has chosen not to object, the facility may not receive the waste, notwithstanding subsection 1 of section 33-24-06-10, until the objection has been resolved, or the owner or operator obtains a permit modification in accordance with the procedures of section 33-24-06-14 specifically authorizing receipt of the waste.
  - f. As part of the permit issuance or permit modification process of subsection 4, the department may modify, reduce, or eliminate the notification requirements of this subdivision as they apply to specific categories of corrective action management unit-eligible waste, based on minimal risk.
6. Generators of corrective action management unit-eligible wastes sent offsite to a hazardous waste landfill under this section must comply with the requirements of subdivision d of subsection 1 of section 33-24-05-256; offsite facilities treating corrective action management unit-eligible wastes to comply with this section must comply with the requirements of subdivision d of subsection 2 of section 33-24-05-256, except that the certification must be with respect to the treatment requirements of subdivision b of subsection 1.
7. For the purposes of this section only, the "design of the corrective action management unit" in subparagraph e of paragraph 5 of subdivision d of subsection 5 of section 33-24-05-552 means design of the permitted hazardous waste landfill.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-600. Definitions for the management of used oil.** Terms that are defined in sections 33-24-01-04, 33-24-02-01, and chapter 33-24-08 have the same meanings when used in sections 33-24-05-600 through 33-24-05-689.

- 1. "Aboveground tank" means a tank used to store or process used oil that is not an underground storage tank as defined in chapter 33-24-08.
- 2. "Container" means any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.
- 3. "Do-it-yourselfer used oil collection center" means any site or facility that accepts or aggregates and stores used oil collected only from household do-it-yourselfers.



4. "Existing tank" means a tank that is used for the storage or processing of used oil and that is in operation, or for which installation has commenced on or prior to the effective date of the authorized used oil program for the state in which the tank is located. Installation will be considered to have commenced if the owner or operator has obtained all federal, state, and local approvals or permits necessary to begin installation of the tank and if either:
  - a. A continuous onsite installation program has begun; or
  - b. The owner or operator has entered into contractual obligations, which cannot be canceled or modified without substantial loss, for installation of the tank to be completed within a reasonable time.
5. "Household do-it-yourselfer used oil" means oil that is derived from households, such as used oil generated by individuals who generate used oil through the maintenance of their personal vehicles.
6. "Household do-it-yourselfer used oil generator" means an individual who generates household do-it-yourselfer used oil.
7. "New tank" means a tank that will be used to store or process used oil and for which installation has commenced after the effective date of the authorized used oil program for the state in which the tank is located.
8. "Petroleum refining facility" means an establishment primarily engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, and lubricants, through fractionation, straight distillation of crude oil, redistillation of unfinished petroleum derivatives, cracking or other processes, for example, facilities classified as standard industrial code 2911.
9. "Processing" means chemical or physical operations designed to produce from used oil, or to make used oil more amenable for production of, fuel oils, lubricants, or other used oil-derived product. Processing includes, but is not limited to: blending used oil with virgin petroleum products, blending used oils to meet the fuel specification, filtration, simple distillation, chemical or physical separation, and re-refining.
10. "Re-refining distillation bottoms" means the heavy fraction produced by vacuum distillation of filtered and dehydrated used oil. The composition of still bottoms varies with column operation and feedstock.
11. "Tank" means any stationary device, designed to contain an accumulation of used oil which is constructed primarily of nonearthen materials, (for example, wood, concrete, steel, plastic) which provides structural support.



12. "Used oil" means any oil that has been refined from crude oil, or any synthetic oil, that has been used and as a result of such use is contaminated by physical or chemical impurities.
13. "Used oil aggregation point" means any site or facility that accepts, aggregates, or stores, or any combination, used oil collected only from other used oil generation sites owned or operated by the owner or operator of the aggregation point, from which used oil is transported to the aggregation point in shipments of no more than fifty-five gallons. Used oil aggregation points may also accept used oil from household do-it-yourselfers.
14. "Used oil burner" means a facility where used oil not meeting the specification requirements in section 33-24-05-611 is burned for energy recovery in devices identified in subsection 1 of section 33-24-05-661.
15. "Used oil collection center" means any site or facility that is registered, licensed and permitted, and recognized by a state, county, or municipal government to manage used oil and accepts, aggregates, and stores used oil collected from used oil generators regulated under sections 33-24-05-620 through 33-24-05-629 who bring used oil to the collection center in shipments of no more than fifty-five gallons [208.20 liters] under the provisions of section 33-24-05-624. Used oil collection centers may also accept used oil from household do-it-yourselfers.
16. "Used oil fuel marketer" means any person who conducts either of the following activities:
  - a. Directs a shipment of off-specification used oil from their facility to a used oil burner; or
  - b. First claims that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in section 33-24-05-611.
17. "Used oil generator" means any person, by site, whose act or process produces used oil or whose act first causes used oil to become subject to regulation.
18. "Used oil processor" means a facility that processes used oil and includes used oil re-refiners.
19. "Used oil transfer facility" means any transportation-related facility including loading docks, parking areas, storage areas, and other areas where shipments of used oil are held for more than twenty-four hours and not longer than thirty-five days during the normal course of transportation or prior to an activity performed pursuant to subdivision b of subsection 2 of section 33-24-05-620. Transfer facilities that store

used oil for more than thirty-five days are subject to regulation under sections 33-24-05-650 through 33-24-05-659.

20. "Used oil transporter" means any person who transports used oil, any person who collects used oil from more than one generator and transports the collected oil, and owners and operators of used oil transfer facilities. Used oil transporters may consolidate or aggregate loads of used oil for purposes of transportation but, with the following exception, may not process used oil. Transporters may conduct incidental processing operations that occur in the normal course of used oil transportation (for example, settling and water separation), but that are not designed to produce (or make more amenable for production of) used oil derived products or used oil fuel.

**History:** Effective January 1, 1994; amended effective July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-610. Applicability of used oil standards.** This section identifies those materials that are subject to regulation as used oil under sections 33-24-05-600 through 33-24-05-689. This section also identifies some materials that are not subject to regulation as used oil under sections 33-24-05-600 through 33-24-05-689, and indicates whether these materials may be subject to regulation as hazardous waste under article 33-24.

1. **Used oil.** The department presumes that used oil is to be recycled unless a used oil handler disposes of used oil or sends used oil for disposal. Except as provided in section 33-24-05-611, the regulations of sections 33-24-05-600 through 33-24-05-689 apply to used oil, and to materials identified in this section as being subject to regulation as used oil, whether or not the used oil or material exhibits any characteristics of hazardous waste identified in sections 33-24-02-10 through 33-24-02-14.
2. **Mixtures of used oil and hazardous waste.**
  - a. **Listed hazardous waste.**
    - (1) Mixtures of used oil and hazardous waste that is listed in sections 33-24-02-15 through 33-24-02-19 are subject to regulation as hazardous waste under ~~article 33-24~~ chapters 33-24-01 through 33-24-04, chapters 33-24-06 and 33-24-07, and sections 33-24-05-01 through 33-24-05-190, 33-24-05-300 through 33-24-05-524, and 33-24-05-550 through 33-24-05-559, rather than as used oil under sections 33-24-05-600 through 33-24-05-689.



- (2) Rebuttable presumption for used oil. Used oil containing greater than or equal to one thousand parts per million total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in sections 33-24-02-15 through 33-24-02-19. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste (for example, by using an analytical method from Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, environmental protection agency publication SW-846, edition III, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in appendix V of chapter 33-24-02).
- (a) The rebuttable presumption does not apply to metalworking oils or fluids containing chlorinated paraffins, if they are processed, through a tolling arrangement as described in subsection 3 of section 33-24-05-624, to reclaim metalworking oils or fluids. The presumption does apply to metalworking oils or fluids if such oils or fluids are recycled in any other manner, or disposed.
- (b) The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the chlorofluorocarbons are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with chlorofluorocarbons that have been mixed with used oil from sources other than refrigeration units.
- b. Characteristic hazardous waste. Mixtures of used oil and hazardous waste that solely exhibits one or more of the hazardous waste characteristics identified in sections 33-24-02-10 through 33-24-02-14 and mixtures of used oil and hazardous waste that is listed in sections 33-24-02-15 through 33-24-02-19 solely because it exhibits one or more of the characteristics of hazardous waste identified in sections 33-24-02-10 through 33-24-02-14 are subject to:
- (1) Except as provided in paragraph 3 of subdivision b of subsection 2, regulation as hazardous waste under article 33-24 chapters 33-24-01 through 33-24-04, chapters 33-24-06 and 33-24-07, and sections 33-24-05-01 through 33-24-05-190, 33-24-05-300 through 33-24-05-524, and 33-24-05-550 through 33-24-05-559, rather than as used oil under sections 33-24-05-600 through 33-24-05-689, if the resultant mixture exhibits any characteristics of

hazardous waste identified in sections 33-24-02-10 through 33-24-02-14; or

(2) Except as specified in paragraph 3 of subdivision b of subsection 2 of section 33-24-05-610, regulation as used oil under sections 33-24-05-600 through 33-24-05-689, if the resultant mixture does not exhibit any characteristics of hazardous waste identified under sections 33-24-02-10 through 33-24-02-14.

(3) Regulation as used oil under sections 33-24-05-600 through 33-24-05-689, if the mixture is of used oil and a waste which is hazardous solely because it exhibits the characteristic of ignitability, for example, ignitable-only mineral spirits, provided that the resultant mixture does not exhibit the characteristic of ignitability under section 33-24-02-11.

c. Conditionally exempt small quantity generator hazardous waste. Mixtures of used oil and conditionally exempt small quantity generator hazardous waste regulated under section 33-24-02-05 are subject to regulation as used oil under sections 33-24-05-600 through 33-24-05-689.

**3. Materials containing or otherwise contaminated with used oil.**

a. Except as provided in subdivision b of subsection 3, materials containing or otherwise contaminated with used oil from which the used oil has been properly drained or removed to the extent possible such that no visible signs of free-flowing oil remain in or on the material:

(1) Are not used oil and thus not subject to sections 33-24-05-600 through 33-24-05-689, and

(2) If applicable are subject to the hazardous waste regulations of article 33-24 chapters 33-24-01 through 33-24-04, chapters 33-24-06 and 33-24-07, and sections 33-24-05-01 through 33-24-05-190, 33-24-05-300 through 33-24-05-524, and 33-24-05-550 through 33-24-05-559.

b. Materials containing or otherwise contaminated with used oil that are burned for energy recovery are subject to regulation as used oil under sections 33-24-05-600 through 33-24-05-689.

c. Used oil drained or removed from materials containing or otherwise contaminated with used oil is subject to regulation as used oil under sections 33-24-05-600 through 33-24-05-689.

**4. Mixtures of used oil with products.**



- a. Except as provided in subdivision b of ~~subsection 4~~, mixtures of used oil and fuels or other fuel products are subject to regulation as used oil under sections 33-24-05-600 through 33-24-05-689.
- b. Mixtures of used oil and diesel fuel mixed onsite by the generator of the used oil for use in the generator's own vehicles are not subject to sections 33-24-05-600 through 33-24-05-689 once the used oil and diesel fuel have been mixed. Prior to mixing, the used oil is subject to the requirements of sections 33-24-05-620 through 33-24-05-629.

**5. Materials derived from used oil.**

- a. Materials that are reclaimed from used oil that are used beneficially and are not burned for energy recovery or used in a manner constituting disposal (for example, re-refined lubricants) are:
  - (1) Not used oil and thus are not subject to sections 33-24-05-600 through 33-24-05-689; and
  - (2) Not solid wastes and are thus not subject to the hazardous waste regulations of ~~article 33-24~~ chapters 33-24-01 through 33-24-04, chapters 33-24-06 and 33-24-07, and sections 33-24-05-01 through 33-24-05-190, 33-24-05-300 through 33-24-05-524, and 33-24-05-550 through 33-24-05-559 as provided in paragraph a of subdivision b of subsection 3 of section 33-24-02-03.
- b. Materials produced from used oil that are burned for energy recovery (for example, used oil fuels) are subject to regulation as used oil under sections 33-24-05-600 through 33-24-05-689.
- c. Except as provided in subdivision d of ~~subsection 5~~, materials derived from used oil that are disposed of or used in a manner constituting disposal are:
  - (1) Not used oil and thus are not subject to sections 33-24-05-600 through 33-24-05-689; and
  - (2) Are solid wastes and thus are subject to the hazardous waste regulations of ~~article 33-24~~ chapters 33-24-01 through 33-24-04, chapters 33-24-06 and 33-24-07, and sections 33-24-05-01 through 33-24-05-190, 33-24-05-300 through 33-24-05-524, and 33-24-05-550 through 33-24-05-559 if the materials are listed or identified as hazardous wastes.
- d. Used oil re-refining distillation bottoms that are used as feedstock to manufacture asphalt products are not subject to sections 33-24-05-600 through 33-24-05-689.

6. **Wastewater.** Wastewater, the discharge of which is subject to regulation under either section 402 or section 307(b) of the Clean Water Act (including wastewaters at facilities which have eliminated the discharge of wastewater), contaminated with de minimis quantities of used oil are not subject to the requirements of sections 33-24-05-600 through 33-24-05-689. For purposes of this ~~paragraph~~ subsection, de minimis quantities of used oils are defined as small spills, leaks, or drippings from pumps, machinery, pipes, and other similar equipment during normal operations or small amounts of oil lost to the wastewater treatment system during washing or draining operations. This exception will not apply if the used oil is discarded as a result of abnormal manufacturing operations resulting in substantial leaks, spills, or other releases, or to used oil recovered ~~from~~ from wastewaters.
7. **Used oil introduced into crude oil pipelines or a petroleum refining facility.**
- a. Used oil mixed with crude oil or natural gas liquids (for example, in a production separator or crude oil stock tank) for insertion into a crude oil pipeline is exempt from the requirements of sections 33-24-05-600 through 33-24-05-689. The used oil is subject to the requirements of sections 33-24-05-600 through 33-24-05-689 prior to the mixing of used oil with crude oil or natural gas liquids.
  - b. Mixtures of used oil and crude oil or natural gas liquids containing less than one percent used oil that are being stored or transported to a crude oil pipeline or petroleum refining facility for insertion in the refining process at a point prior to crude distillation or catalytic cracking are exempt from the requirements of sections 33-24-05-600 through 33-24-05-689.
  - c. Used oil that is inserted into the petroleum refining facility process before crude distillation or catalytic cracking without prior mixing with crude oil is exempt from the requirements of sections 33-24-05-600 through 33-24-05-689 provided that the used oil constitutes less than one percent of the crude oil feed to any petroleum refining facility process unit at any given time. Prior to insertion in the petroleum refining facility process, the used oil is subject to the requirements of sections 33-24-05-600 through 33-24-05-689.
  - d. Except as provided in subdivision e, used oil that is introduced into a petroleum refining facility process after crude distillation or catalytic cracking is exempt from the requirements of sections 33-24-05-600 through 33-24-05-689 only if the used oil meets the specification of section 33-24-05-611. Prior to insertion in the petroleum refining facility process, the used oil is subject to the requirements of sections 33-24-05-600 through 33-24-05-689.

- e. Used oil that is incidentally captured by a hydrocarbon recovery system or wastewater treatment system as part of routine process operations at a petroleum refining facility and inserted into the petroleum refining facility process is exempt from the requirements of sections 33-24-05-600 through 33-24-05-689. This exemption does not extend to used oil which is intentionally introduced into a hydrocarbon recovery system (for example, by pouring collected used oil into the wastewater treatment system).
  - f. Tank bottoms from stock tanks containing exempt mixtures of used oil and crude oil or natural gas liquids are exempt from the requirements of sections 33-24-05-600 through 33-24-05-689.
8. **Used oil on vessels.** Used oil produced on vessels from normal shipboard operations is not subject to sections 33-24-05-600 through 33-24-05-689 until it is transported ashore.
9. **Used oil containing polychlorinated biphenyls.** ~~In addition to the requirements of sections 33-24-05-600 through 33-24-05-689, marketers and burners of used oil who market or burn used oil containing any quantifiable level of polychlorinated biphenyls are subject to the requirements found at 40 CFR 761.20(e).~~ Used oil containing polychlorinated biphenyls (as defined at 40 CFR 761.3) at any concentration less than fifty parts per million is subject to the requirements of sections 33-24-05-600 through 33-24-05-689 unless, because of dilution, it is regulated under 40 CFR part 761 as a used oil containing polychlorinated biphenyls at fifty parts per million or greater. Polychlorinated biphenyl-containing used oil subject to the requirements of sections 33-24-05-600 through 33-24-05-689 may also be subject to the prohibitions and requirements found at 40 CFR part 761, including section 761.20(d) and (e). Used oil containing polychlorinated biphenyls at concentrations of fifty parts per million or greater is not subject to the requirements of sections 33-24-05-600 through 33-24-05-689, but is subject to regulations under 40 CFR part 761. No person may avoid these provisions by diluting used oil containing polychlorinated biphenyls, unless otherwise specifically provided for in sections 33-24-05-600 through 33-24-05-689 or 40 CFR part 761.

**History:** Effective January 1, 1994; amended effective July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

### **33-24-05-612. Prohibitions.**

1. **Surface impoundment prohibition.** Used oil shall not be managed in surface impoundments or waste piles unless the units are subject to regulation under sections 33-24-05-01 through 33-24-05-190,



sections 33-24-05-300 through ~~33-24-05-559~~ 33-24-05-524, sections 33-24-05-550 through 33-24-05-559, or the applicable requirements of subsection 5 of section 33-24-06-16.

2. **Use as a dust suppressant.** The use of used oil as a dust suppressant is prohibited.
3. **Burning in particular units.** Off-specification used oil fuel may be burned for energy recovery in only the following devices:
  - a. Industrial furnaces identified in section 33-24-01-04;
  - b. Boilers, as defined in section 33-24-01-04, that are identified as follows:
    - (1) Industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes;
    - (2) Utility boilers used to produce electric power, steam, heated or cooled air, or other gases or fluids for sale; or
    - (3) Used oil-fired space heaters provided that the burner meets the provisions of section 33-24-05-623.
  - c. Hazardous waste incinerators subject to regulation under sections 33-24-05-144 through 33-24-05-159 and the applicable requirements of subsection 5 of section 33-24-06-16.

**History:** Effective January 1, 1994; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

#### **33-24-05-620. Applicability of standards for used oil generators.**

1. **General.** Except as provided in subdivisions a through d, sections 33-24-05-620 through 33-24-05-629 applies to all used oil generators. A used oil generator is any person, by site, whose act or process produces used oil or whose act first causes used oil to become subject to regulation.
  - a. Household do-it-yourselfer used oil generators. Household do-it-yourselfer used oil generators are not subject to regulation under sections 33-24-05-620 through 33-24-05-629.
  - b. Vessels. Vessels at sea or at port are not subject to sections 33-24-05-620 through 33-24-05-629. For purposes of sections 33-24-05-620 through 33-24-05-629, used oil produced on vessels



from normal shipboard operations is considered to be generated at the time it is transported ashore. The owner or operator of the vessel and the persons removing or accepting used oil from the vessel are co-generators of the used oil and are both responsible for managing the waste in compliance with sections 33-24-05-620 through 33-24-05-629 once the used oil is transported ashore. The co-generators may decide among them which party will fulfill the requirements of sections 33-24-05-620 through 33-24-05-629.

- c. Diesel fuel. Mixtures of used oil and diesel fuel mixed by the generator of the used oil for use in the generator's own vehicles are not subject to sections 33-24-05-620 through 33-24-05-629 once the used oil and diesel fuel have been mixed. Prior to mixing, the used oil fuel is subject to the requirements of sections 33-24-05-620 through 33-24-05-629.
  - d. Farmers. Farmers who generate an average of twenty-five gallons [94.64 liters] per month or less of used oil from vehicles or machinery used on the farm in a calendar year are not subject to the requirements of sections 33-24-05-600 through 33-24-05-689.
2. **Other applicable provisions.** Used oil generators who conduct the following activities are subject to the requirements of other applicable provisions of sections 33-24-05-600 through 33-24-05-689 as indicated in subdivisions a through e of ~~subsection 2~~:
- a. Generators who transport used oil, except under the self-transport provisions of subsections 1 and 2 of section 33-24-05-624, must also comply with sections 33-24-05-640 through 33-24-05-649.
  - b. Generators who process used oil must also comply with sections 33-24-05-650 through 33-24-05-659.
    - (1) Except as provided in paragraph 2, generators who process or re-refine used oil must also comply with sections 33-24-05-650 through 33-24-05-659.
    - (2) Generators who perform the following activities are not processors provided that the used oil is generated onsite and is not being sent offsite to a burner of ~~onsite~~ on-specification or off-specification used oil fuel.
      - (a) Filtering, cleaning, or otherwise reconditioning used oil before returning it for reuse by the generator;
      - (b) Separating used oil from wastewater generated onsite to make the wastewater acceptable for discharge or reuse pursuant to section 402 or section 307(b) of the Clean Water Act or other applicable federal or state

regulations governing the management of discharge of wastewaters;

- (c) Using oil mist collectors to remove small droplets of used oil from in-plant air to make plant air suitable for continued recirculation;
  - (d) Draining or otherwise removing used oil from materials containing or otherwise contaminated with used oil in order to remove excessive oil to the extent possible pursuant to subsection 3 of section 33-24-05-610; or
  - (e) Filtering, cleaning, or otherwise reconditioning used oil before burning it in a space heater pursuant to section 33-24-05-623.
- c. Generators who burn off-specification used oil for energy recovery, except under the onsite space heater provisions of section 33-24-05-623, must also comply with sections 33-24-05-660 through 33-24-05-669.
  - d. Generators who direct shipments of off-specification used oil from their facility to a used oil burner or first claim that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in section 33-24-05-611 must also comply with sections 33-24-05-670 through 33-24-05-679.
  - e. Generators who dispose of used oil must also comply with sections 33-24-05-680 through 33-24-05-689.

**History:** Effective January 1, 1994; amended effective July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-622. Used oil storage.** Used oil generators are subject to all applicable spill prevention, control, and countermeasures [40 CFR part 112] in addition to the requirements of sections 33-24-05-620 through 33-24-05-629. Used oil generators are also subject to the underground storage tank (chapter 33-24-08) standards for used oil stored in underground tanks whether or not the used oil exhibits any characteristics of hazardous waste, in addition to the requirements of sections 33-24-05-620 through 33-24-05-629.

1. **Storage units.** Used oil generators shall not store used oil in units other than tanks or containers, or units subject to regulation under sections 33-24-05-01 through 33-24-05-190 and sections 33-24-05-300 through 33-24-05-524, sections 33-24-05-550 through 33-24-05-559 or the applicable requirements of subsection 5 of section 33-24-06-16.

2. **Condition of units.** Containers and aboveground tanks used to store used oil at generator facilities must be:
  - a. In good condition (no severe rusting, apparent structural defects, or deterioration); and
  - b. Not leaking (no visible leaks).
3. **Labels.**
  - a. Containers and aboveground tanks used to store used oil at generator facilities must be labeled or marked clearly with the words "Used Oil".
  - b. Fill pipes used to transfer used oil into underground storage tanks at generator facilities must be labeled or marked clearly with the words "Used Oil".
4. **Response to releases.** Upon detection of a release of used oil to the environment not subject to the requirements of chapter 33-24-08, sections 33-24-08-50 through 33-24-08-59, a generator must perform the following cleanup steps:
  - a. Stop the release;
  - b. Contain the released used oil;
  - c. Clean up and manage properly the released used oil and other materials; and
  - d. If necessary to prevent future releases, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

**History:** Effective January 1, 1994; amended effective July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-624. Offsite shipments.** Except as provided in subsections 1; through 3, generators must ensure that their used oil is transported only by transporters who have obtained ~~environmental protection agency~~ identification numbers.

1. **Self-transportation of small amounts to approved collection centers.** Generators may transport, without an ~~environmental protection agency~~ identification number, used oil that is generated at the generator's site and used oil collected from household do-it-yourselfers to a used oil collection center provided that:

- a. The generator transports the used oil in a vehicle owned by the generator or owned by an employee of the generator;
  - b. The generator transports no more than fifty-five gallons [208.20 liters] of used oil at any time; and
  - c. The generator transports the used oil to a used oil collection center that is registered, licensed, permitted, or recognized by a state, county, and municipal government to manage used oil.
2. **Self-transportation of small amounts to aggregation points owned by the generator.** Generators may transport, without an ~~environmental protection agency~~ identification number, used oil that is generated at the generator's site to an aggregation point provided that:
- a. The generator transports the used oil in a vehicle owned by the generator or owned by an employee of the generator;
  - b. The generator transports no more than fifty-five gallons [208.20 liters] of used oil at any time; and
  - c. The generator transports the used oil to an aggregation point that is owned or operated by the same generator.
3. **Tolling arrangements.** Used oil generators may arrange for used oil to be transported by a transporter without an ~~environmental protection agency~~ identification number if the used oil is reclaimed under a contractual agreement pursuant to which reclaimed oil is returned by the processor to the generator for use as a lubricant, cutting oil, or coolant. The contract (known as a "tolling arrangement") must indicate:
- a. The type of used oil and the frequency of shipments;
  - b. That the vehicle used to transport the used oil to the processing facility and to deliver recycled used oil back to the generator is owned and operated by the used oil processor; and
  - c. That reclaimed oil will be returned to the generator.

**History:** Effective January 1, 1994; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-640. Applicability of standards for used oil transporters and transfer facilities.**

1. **General.** Except as provided in subdivisions a through d of ~~subsection 4~~, sections 33-24-05-640 through 33-24-05-649 apply



to all used oil transporters. Used oil transporters are persons who transport used oil, persons who collect used oil from more than one generator and transport the collected oil, and owners and operators of used oil transfer facilities.

- a. Sections 33-24-05-640 through 33-24-05-649 do not apply to onsite transportation.
  - b. Sections 33-24-05-640 through 33-24-05-649 do not apply to generators who transport shipments of used oil totaling fifty-five gallons [208.20 liters] or less from the generator to a used oil collection center as specified in subsection 1 of section 33-24-05-624.
  - c. Sections 33-24-05-640 through 33-24-05-649 do not apply to generators who transport shipments of used oil totaling fifty-five gallons [208.20 liters] or less from the generator to a used oil aggregation point owned or operated by the same generator as specified in subsection 2 of section 33-24-05-624.
  - d. Sections 33-24-05-640 through 33-24-05-649 do not apply to transportation of used oil from household do-it-yourselfers to a regulated used oil generator, collection center, aggregation point, processor, or burner subject to the requirements of ~~this part~~ sections 33-24-05-600 through 33-24-05-689. Except as provided in subdivisions a through c ~~of subsection 4~~, sections 33-24-05-640 through 33-24-05-649 do, however, apply to transportation of collected household do-it-yourselfer used oil from regulated used oil generators, collection centers, aggregation points, or other facilities where household do-it-yourselfer used oil is collected.
2. **Imports and exports.** Transporters who import used oil from abroad or export used oil outside of the United States are subject to the requirements of sections 33-24-05-640 through 33-24-05-649 from the time the used oil enters and until the time it exits the United States.
  3. **Trucks used to transport hazardous waste.** Unless trucks previously used to transport hazardous waste are emptied as described in section 33-24-02-07 prior to transporting used oil, the used oil is considered to have been mixed with the hazardous waste and must be managed as hazardous waste unless, under the provisions of subsection 2 of section 33-24-05-610, the hazardous waste and used oil mixture is determined not to be hazardous waste.
  4. **Other applicable provisions.** Used oil transporters who conduct the following activities are also subject to other applicable provisions of sections 33-24-05-600 through 33-24-05-689 as indicated in subdivisions a through e ~~of subsection 4~~:

- a. Transporters who generate used oil must also comply with sections 33-24-05-620 through 33-24-05-629;
- b. Transporters who process used oil, except as provided in section 33-24-05-641, must also comply with sections 33-24-05-650 through 33-24-05-659;
- c. Transporters who burn off-specification used oil for energy recovery must also comply with sections 33-24-05-660 through 33-24-05-669;
- d. Transporters who direct shipments of off-specification used oil from their facility to a used oil burner or first claim that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in section 33-24-05-611 must also comply with sections 33-24-05-670 through 33-24-05-679; and
- e. Transporters who dispose of used oil must also comply with sections 33-24-05-680 through 33-24-05-689.

**History:** Effective January 1, 1994; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

#### **33-24-05-642. Notification.**

- 1. **Identification numbers.** Used oil transporters who have not previously complied with the notification requirements of Resource Conservation and Recovery Act section 3010 must comply with these requirements and obtain an ~~environmental protection agency~~ identification number.
- 2. **Mechanics of notification.** A used oil transporter who has not received an ~~environmental protection agency/state~~ identification number may obtain one by notifying the department of their used oil activity by submitting either:
  - a. A completed notification of regulated waste activity form (environmental protection agency form 8700-12, or equivalent state form); or
  - b. A letter requesting an ~~environmental protection agency/state~~ identification number.

The letter should include the following information:

- (1) Transporter company name;
- (2) Owner of the transporter company;

- (3) Mailing address for the transporter;
- (4) Name and telephone number for the transporter point of contact;
- (5) Type of transport activity (for example, transport only, transport and transfer facility, transfer facility only);
- (6) Location of all transfer facilities at which used oil is stored; and
- (7) Name and telephone number for a contact at each transfer facility.

**History:** Effective January 1, 1994; amended effective July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-643. Used oil transportation.**

1. **Deliveries.** A used oil transporter shall deliver all used oil received to:
  - a. Another used oil transporter, provided that the transporter has obtained an ~~environmental protection agency~~ identification number;
  - b. A used oil processing facility who has obtained an ~~environmental protection agency~~ identification number;
  - c. An off-specification used oil burner facility who has obtained an ~~environmental protection agency~~ identification number; or
  - d. An on-specification used oil burner facility.
2. **Department of transportation requirements.** Used oil transporters shall comply with all applicable requirements under the United States department of transportation regulations in 49 CFR parts 171 through 180. Persons transporting used oil that meets the definition of a hazardous material in 49 CFR 171.8 shall comply with all applicable regulations in 49 CFR parts 171 through 180.
3. **Used oil discharges.**
  - a. In the event of a discharge of used oil during transportation, the transporter must take appropriate immediate action to protect human health and the environment (for example, notify local authorities, dike the discharge area).

- b. If a discharge of used oil occurs during transportation and an official (state or local government or a federal agency) acting within the scope of official responsibilities determines that immediate removal of the used oil is necessary to protect human health or the environment, that official may authorize the removal of the used oil by transporters who do not have ~~environmental protection agency~~ identification numbers.
- c. An air, rail, highway, or water transporter who has discharged used oil must:
  - (1) Give notice, if required by 49 CFR 171.15 to the national response center (800-424-8802 or 202-426-2675); and
  - (2) Report in writing as required by 49 CFR 171.16 to the Director, Office of Hazardous Materials Regulations, Materials Transportation Bureau, Department of Transportation, Washington, D.C. 20590.
- d. A water transporter who has discharged used oil shall give notice as required by 33 CFR 153.203.
- e. A transporter shall clean up any used oil ~~discharged~~ discharge that occurs during transportation or take such action as may be required or approved by federal, state, or local officials so that the used oil discharge no longer presents a hazard to human health or the environment.

**History:** Effective January 1, 1994; amended effective July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-644. Rebuttable presumption for used oil.**

- 1. To ensure that used oil is not a hazardous waste under the rebuttable presumption of paragraph 2 of subdivision a of subsection 2 of section 33-24-05-610, the used oil transporter shall determine whether the total halogen content of used oil being transported or stored at a transfer facility is above or below one thousand parts per million.
- 2. The transporter shall make this determination by:
  - a. Testing the used oil; or
  - b. Applying knowledge of the halogen content of the used oil in light of the materials or processes used.



3. If the used oil contains greater than or equal to one thousand parts per million total halogens, it is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in sections 33-24-02-15 through 33-24-02-19. The owner or operator may rebut the presumption by demonstrating that the used oil does not contain hazardous waste (for example, by using an analytical method from Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, edition III, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in appendix V of chapter 33-24-02). ~~Environmental protection agency publication SW-846, third edition, is available from the Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, Pennsylvania 15250-7954. 202-783-3238 (document number 955-001-00000-1).~~
  - a. The rebuttable presumption does not apply to metalworking oils or fluids containing chlorinated paraffins, if they are processed, through a tolling arrangement as described in subsection 3 of section 33-24-05-624, to reclaim metalworking oils or fluids. The presumption does apply to metalworking oils or fluids if such oils or fluids are recycled in any other manner, or disposed.
  - b. The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units if the chlorofluorocarbons are destined for reclamation. The rebuttable presumption does apply to used oil contaminated with chlorofluorocarbons that have been mixed with used oil from sources other than refrigeration units.
4. Record retention. Records of analyses conducted or information used to comply with subsections 1, 2, and 3 must be maintained by the transporter for at least three years.

**History:** Effective January 1, 1994; amended effective July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-645. Used oil storage at transfer facilities.** Used oil transporters are subject to all applicable spill prevention, control, and countermeasures [40 CFR part 112] in addition to the requirements of sections 33-24-05-640 through 33-24-05-649. Used oil transporters are also subject to the underground storage tank (chapter 33-24-08) standards for used oil stored in underground tanks whether or not the used oil exhibits any characteristics of hazardous waste, in addition to the requirements of sections 33-24-05-640 through 33-24-05-649.

1. **Applicability.** This section applies to used oil transfer facilities. Used oil transfer facilities are transportation-related facilities including loading docks, parking areas, storage areas, and other areas where shipments

of used oil are held for more than twenty-four hours during the normal course of transportation and not longer than thirty-five days. Transfer facilities that store used oil for more than thirty-five days are subject to regulation under sections 33-24-05-650 through 33-24-05-659.

2. **Storage units.** Owners or operators of used oil transfer facilities may not store used oil in units other than tanks ~~or~~ containers, or units subject to regulation under sections 33-24-05-89 through 33-24-05-102, sections 33-24-05-103 through 33-24-05-114, except subsection 3 of section 33-24-05-110 and section 33-24-05-113.
3. **Condition of units.** Containers and aboveground tanks used to store used oil at transfer facilities must be:
  - a. In good condition (no severe rusting, apparent structural defects, or deterioration); and
  - b. Not leaking (no visible leaks).
4. **Secondary containment for containers.** Containers used to store used oil at transfer facilities must be equipped with a secondary containment system.
  - a. The secondary containment system must consist of, at a minimum:
    - (1) Dikes, berms, or retaining walls; and
    - (2) A floor. The floor must cover the entire area within the dikes, berms, or retaining walls; or
    - (3) An equivalent secondary containment system.
  - b. The entire containment system, including walls and floors, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, ground water, or surface water.
5. **Secondary containment for existing aboveground tanks.** Existing aboveground tanks used to store used oil at transfer facilities must be equipped with a secondary containment system.
  - a. The secondary containment system must consist of, at a minimum:
    - (1) Dikes, berms, or retaining walls; and
    - (2) A floor. The floor must cover the entire area within the dike, berm, or retaining wall except areas where existing portions of the tank meet the ground; or

- (3) An equivalent secondary containment system.
  - b. The entire containment system, including walls and floors, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, ground water, or surface water.
6. **Secondary containment for new aboveground tanks.** New aboveground tanks used to store used oil at transfer facilities must be equipped with a secondary containment system.
- a. The secondary containment system must consist of, at a minimum:
    - (1) Dikes, berms, or retaining walls; and
    - (2) A floor. The floor must cover the entire area within the dike, berm, or retaining wall; or
    - (3) An equivalent secondary containment system.
  - b. The entire containment system, including walls and floors, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, ground water, or surface water.
7. **Labels.**
- a. Containers and aboveground tanks used to store used oil at transfer facilities must be labeled or marked clearly with the words "Used Oil".
  - b. Fill pipes used to transfer used oil into underground storage tanks at transfer facilities must be labeled or marked clearly with the words "Used Oil".
8. **Response to releases.** Upon detection of a release of used oil to the environment not subject to the requirements of chapter 33-24-08 ~~which has occurred after the effective date of the authorized used oil program for North Dakota in which the release is located~~ and sections 33-24-05-650 through 33-24-05-659, the owner or operator of a transfer facility must perform the following cleanup steps:
- a. Stop the release;
  - b. Contain the released used oil;
  - c. Clean up and manage properly the released used oil and other materials; and

- d. If necessary, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

**History:** Effective January 1, 1994; amended effective July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

### **33-24-05-646. Tracking.**

1. **Acceptance.** Used oil transporters must keep a record of each used oil shipment accepted for transport. Records for each shipment must include:
  - a. The name and address of the generator, transporter, or processor who provided the used oil for transport;
  - b. The ~~environmental protection agency~~ identification number (if applicable) of the generator, transporter, or processor who provided the used oil for transport;
  - c. The quantity of used oil accepted;
  - d. The date of acceptance; and
  - e. The signature, dated upon receipt of the used oil, of a representative of the generator, transporter, or processor who provided the used oil for transport, ~~except for intermediate rail transporters.~~
  - f. Intermediate rail transporters are not required to sign the record of acceptance to comply with subdivision e.
2. **Deliveries.** Used oil transporters must keep a record of each shipment of used oil that is delivered to another used oil transporter, or to a used oil burner, processor, or disposal facility. Records of each delivery must include:
  - a. The name and address of the receiving facility or transporter;
  - b. The ~~environmental protection agency~~ identification number of the receiving facility or transporter;
  - c. The quantity of used oil delivered;
  - d. The date of delivery; and



- e. The signature, dated upon receipt of the used oil, of a representative of the receiving facility or transporter, ~~except for intermediate rail transporters.~~
  - f. Intermediate rail transporters are not required to sign the record of acceptance to comply with subdivision e.
3. **Exports of used oil.** Used oil transporters must maintain the records described in subdivisions a through d of subsection 2 for each shipment of used oil exported to any foreign country.
  4. **Record retention.** The records described in subsections 1, 2, and 3 must be maintained for at least three years.

**History:** Effective January 1, 1994; amended effective July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

#### **33-24-05-651. Notification.**

1. **Identification numbers.** Used oil processors who have not previously complied with the notification requirements of Resource Conservation and Recovery Act section 3010 must comply with these requirements and obtain an ~~environmental protection agency~~ identification number.
2. **Mechanics of notification.** A used oil processor who has not received an ~~environmental protection agency~~ identification number may obtain one by notifying the department of their used oil activity by submitting either:
  - a. ~~A completed environmental protection agency form 8700-12 (to obtain environmental protection agency form 8700-12 call the Resource Conservation and Recovery Act superfund hotline at 1-800-424-9346 or 703-920-9810)~~ A completed notification of regulated waste activity form (environmental protection agency form 8700-12, or equivalent state form); or
  - b. A letter requesting an ~~environmental protection agency~~ identification number.

The letter should include the following information:

- (1) Processor company name;
- (2) Owner of the processor company;
- (3) Mailing address for the processor;

- (4) Name and telephone number for the processor point of contact;
- (5) Type of used oil activity; and
- (6) Location of the processor facility.

**History:** Effective January 1, 1994; amended effective July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

### **33-24-05-652. General facility standards.**

1. **Preparedness and prevention.** Owners and operators of used oil processors processing facilities shall comply with the following requirements:
  - a. Maintenance and operation of facility. Facilities must be maintained and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or nonsudden release of used oil to air, soil, or surface water which could threaten human health or the environment.
  - b. Required equipment. All facilities must be equipped with the following, unless none of the hazards posed by used oil handled at the facility could require a particular kind of equipment specified in paragraphs 1 through 4 ~~of subdivision b of subsection 1:~~
    - (1) An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel;
    - (2) A device, such as a telephone (immediately available at the scene of operations) or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams;
    - (3) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and
    - (4) Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems.

- c. Testing and maintenance of equipment. All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.
- d. Access to communications or alarm system.
  - (1) When used oil is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not required in subdivision b of ~~subsection 4~~.
  - (2) If there is only one employee on the premises while the facility is operating, the employee must have immediate access to a device, such as a telephone (immediately available at the scene of operation) or a hand-held two-way radio, capable of summoning external emergency assistance, unless such a device is not required in subdivision b of ~~subsection 4~~.
- e. Required aisle space. The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless aisle space is not needed for any of these purposes.
- f. Arrangements with local authorities.
  - (1) The owner or operator shall attempt to make the following arrangements, as appropriate for the type of used oil handled at the facility and the potential need for the services of these organizations:
    - (a) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of used oil handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to roads inside the facility, and possible evacuation routes;
    - (b) Where more than one police and fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority;

- (c) Agreements with state emergency response teams, emergency response contractors, and equipment suppliers; and
    - (d) Arrangements to familiarize local hospitals with the properties of used oil handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.
  - (2) Where state or local authorities decline to enter into such arrangements, the owner or operator must document the refusal in the operating record.
- 2. **Contingency plan and emergency procedures.** Owners and operators of used oil processor facilities must comply with the following requirements:
  - a. Purpose and implementation of contingency plan.
    - (1) Each owner or operator must have a contingency plan for the facility. The contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or nonsudden release of used oil to air, soil, or surface water.
    - (2) The provisions of the plan must be carried out immediately when there is a fire, explosion, or release of used oil which could threaten human health or the environment.
  - b. Content of contingency plan.
    - (1) The contingency plan must describe the actions facility personnel must take to comply with subdivisions a and f of ~~subsection 2~~ in response to fires, explosions, or any unplanned sudden or nonsudden release of used oil to air, soil, or surface water at the facility.
    - (2) If the owner or operator has already prepared a spill prevention, control, and countermeasures; (SPCC) plan in accordance with 40 CFR part 112 of chapter I, of 40 CFR part 1510 of chapter V, or some other emergency or contingency plan, the owner or operator need only amend that plan to incorporate used oil management provisions that are sufficient to comply with the requirements of sections 33-24-05-600 through 33-24-05-689.
    - (3) The plan must describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and state and local emergency response teams



to coordinate emergency services, pursuant to subdivision f of subsection 1.

- (4) The plan must list names, addresses, and ~~phone~~ telephone numbers (office and home) of all persons qualified to act as emergency coordinator (see subdivision e ~~of subsection 2~~), and this list must be kept up to date. Where more than one person is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates.
  - (5) The plan must include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required. This list must be kept up to date. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities.
  - (6) The plan must include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe signals to be used to begin evacuation, evacuation routes, and alternate evacuation routes (in cases where the primary routes could be blocked by releases of used oil or fires).
- c. Copies of contingency plan. A copy of the contingency plan and all revisions to the plan must be:
- (1) Maintained at the facility; and
  - (2) Submitted to all local police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services.
- d. Amendment of contingency plan. The contingency plan must be reviewed, and immediately amended, if necessary, when:
- (1) Applicable regulations are revised;
  - (2) The plan fails in an emergency;
  - (3) The facility changes (in its design, construction, operation, maintenance, or other circumstances) in a way that materially increases the potential for fires, explosions, or releases of used oil, or changes the response necessary in an emergency;

- (4) The list of emergency coordinators changes; or
  - (5) The list of emergency equipment changes.
- e. Emergency coordinator. At all times, there must be at least one employee either on the facility premises or on call (for example, available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures. This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristic of used oil handled, the location of all records within the facility, and facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan.

Guidance: The emergency coordinator's responsibilities are more fully spelled out in subdivision f of ~~subsection 2~~. Applicable responsibilities for the emergency coordinator vary, depending on factors such as type and variety of used oil handled by the facility, and type and complexity of the facility.

- f. Emergency procedures.
  - (1) When there is an imminent or actual emergency situation, the emergency coordinator (or the designee when the emergency coordinator is on call) must immediately:
    - (a) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and
    - (b) Notify appropriate state or local agencies with designated response roles if their help is needed.
  - (2) When there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and a real extent of any released materials. The emergency coordinator may do this by observation or review of facility records of manifests and, if necessary, by chemical analysts.
  - (3) Concurrently, the emergency coordinator must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion (for example, the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water runoffs from water

of chemical agents used to control fire and heat-induced explosions).

- (4) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, the emergency coordinator must report these findings as follows:
  - (a) If the emergency coordinator's assessment indicated that evacuation of local areas may be advisable, the emergency coordinator must immediately notify appropriate local authorities. The emergency coordinator must be available to help appropriate officials decide whether local areas should be evacuated; and
  - (b) The emergency coordinator must immediately notify either the government official designated as the onscene coordinator for the geographical area (in the applicable regional contingency plan under part 1510 of the 40 CFR), or the national response center (using their twenty-four-hour toll-free number 800-424-8802). The report must include:
    - [1] Name and telephone number of reporter;
    - [2] Name and address of facility;
    - [3] Time and type of incident (for example, release, fire);
    - [4] Name and quantity of materials involved, to the extent known;
    - [5] The extent of injuries, if any; and
    - [6] The possible hazards to human health, or the environment, outside the facility.
- (5) During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other used oil or hazardous waste at the facility. These measures must include, where applicable, stopping processes and operation, collecting and containing released used oil, and removing or isolating containers.
- (6) If the facility stops operation in response to a fire, explosion, or release, the emergency coordinator must monitor for leaks,

pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

- (7) Immediately after an emergency, the emergency coordinator must provide for recycling, storing, or disposing of recovered used oil, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.
- (8) The emergency coordinator must ensure that, in the affected areas of the facility:
  - (a) No waste or used oil that may be incompatible with the released material is recycled, treated, stored, or disposed of until cleanup procedures are completed; and
  - (b) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.
  - (c) The owner or operator must notify the department, and appropriate state and local authorities that the facility is in compliance with subparagraphs a and b ~~of paragraph 8 of subdivision f of subsection 2~~ before operations are resumed in the affected areas of the facility.
- (9) The owner or operator must note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within fifteen days after the incident, the owner or operator must submit a written report on the incident to the department. The report must include:
  - (a) Name, address, and telephone number of the owner or operator;
  - (b) Name, address, and telephone number of the facility;
  - (c) Date, time, and type of incident (for example, fire, explosion);
  - (d) Name and quantity of materials involved;
  - (e) The extent of injuries, if any;
  - (f) An assessment of actual or potential hazards to human health or the environment, where this is applicable; and



- (g) Estimated quantity and disposition of recovered material that resulted from the incident.

**History:** Effective January 1, 1994; amended effective July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-653. Rebuttable presumption for used oil.**

1. To ensure that used oil managed at a processing facility is not hazardous waste under the rebuttable presumption of paragraph 2 of subdivision a of subsection 2 of section 33-24-05-610, the owner or operator of a used oil processing facility must determine whether the total halogen content of used oil managed at the facility is above or below one thousand parts per million.
2. The owner or operator must make this determination by:
  - a. Testing the used oil; or
  - b. Applying knowledge of the halogen content of the used oil in light of the materials or processes used.
3. If the used oil contains greater than or equal to one thousand parts per million total halogens, it is presumed to be hazardous waste because it has been mixed with halogenated hazardous waste listed in sections 33-24-02-15 through 33-24-02-19. The owner or operator may rebut the presumption by demonstrating that the used oil does not contain hazardous waste (for example, by using an analytical method from Test Methods for Evaluating Solid Waste, Physical/Chemical methods, environmental protection agency publication SW-846, edition III, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in appendix V of chapter 33-24-02).
  - a. The rebuttable presumption does not apply to metalworking oils or fluids containing chlorinated paraffins, if they are processed, through a tolling agreement, to reclaim metalworking oils or fluids. The presumption does apply to metalworking oils or fluids if such oils or fluids are recycled in any other manner, or disposed.
  - b. The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the chlorofluorocarbons are destined for reclamation. The rebuttable presumption does apply to used oils

contaminated with chlorofluorocarbons that have been mixed with used oil from sources other than refrigeration units.

**History:** Effective January 1, 1994; amended effective July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-654. Used oil management.** Used oil processors are subject to all applicable spill prevention, control, and countermeasures [40 CFR part 112] in addition to the requirements of ~~this subpart~~ sections 33-24-05-650 through 33-24-05-659. Used oil processors are also subject to the underground storage tank (chapter 33-24-08) standards for used oil stored in underground tanks whether or not the used oil exhibits any characteristics of hazardous waste, in addition to the requirements of sections 33-24-05-650 through 33-24-05-659.

1. **Management units.** Used oil processors may not store used oil in units other than tanks ~~or~~ containers, or units subject to regulation under sections 33-24-05-01 through 33-24-05-190, sections 33-24-05-300 through 33-24-05-550, or the applicable requirements of subsection 5 of section 33-24-06-16.
2. **Condition of units.** Containers and aboveground tanks used to store or process used oil at processing facilities must be:
  - a. In good condition (no severe rusting, apparent structural defects, or deterioration); and
  - b. Not leaking (no visible leaks).
3. **Secondary containment for containers.** Containers used to store or process used oil at processing facilities must be equipped with a secondary containment system.
  - a. The secondary containment system must consist of, at a minimum:
    - (1) Dikes, berms, or retaining walls; and
    - (2) A floor. The floor must cover the entire area within the dike, berm, or retaining walls; or
    - (3) An equivalent secondary containment system.
  - b. The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, ground water, or surface water.

4. **Secondary containment for existing aboveground tanks.** Existing aboveground tanks used to store or process used oil at processing facilities must be equipped with a secondary containment system.
  - a. The secondary containment system must consist of, at a minimum:
    - (1) Dikes, berms, or retaining walls; and
    - (2) A floor. The floor must cover the entire area within the dike, berm, or retaining wall except areas where existing portions of the tank meet the ground; or
    - (3) An equivalent secondary containment system.
  - b. The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, ground water, or surface water.
5. **Secondary containment for new aboveground tanks.** New aboveground tanks used to store or process used oil at processing facilities must be equipped with a secondary containment system.
  - a. The secondary containment system must consist of, at a minimum:
    - (1) Dikes, berms, or retaining walls; and
    - (2) A floor. The floor must cover the entire area within the dike, berm, or retaining wall; or
    - (3) An equivalent secondary containment system.
  - b. The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, ground water, or surface water.
6. **Labels.**
  - a. Containers and aboveground tanks used to store or process used oil at processing facilities must be labeled or marked clearly with the words "Used Oil".
  - b. Fill pipes used to transfer used oil into underground storage tanks at processing facilities must be labeled or marked clearly with the words "Used Oil".
7. **Response to releases.** Upon detection of a release of used oil to the environment not subject to the requirements of chapter 33-24-08, which

~~has occurred after the effective date of the authorized used oil program for the state in which the release is located and sections 33-24-05-650 through 33-24-05-659,~~ an owner or operator must perform the following cleanup steps:

- a. Stop the release;
- b. Contain the released used oil;
- c. Clean up and manage properly the released used oil and other materials; and
- d. If necessary, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

**8. Closure.**

- a. Aboveground tanks. Owners and operators who store or process used oil in aboveground tanks must comply with the following requirements:
  - (1) At closure of a tank system, the owner or operator must remove or decontaminate used oil residues in tanks, contaminated containment system components, contaminated soils, and structures and equipment contaminated with used oil, and manage them as hazardous waste, unless the materials are not hazardous waste under this chapter.
  - (2) If the owner or operator demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in paragraph 1, then the owner or operator must close the tank system and perform postclosure care in accordance with the closure and postclosure care requirements that apply to hazardous waste landfills (section 33-24-05-180).
- b. Containers. Owners and operators who store used oil in containers must comply with the following requirements:
  - (1) At closure, containers holding used oils or residues of used oil must be removed from the site; and
  - (2) The owner or operator must remove or decontaminate used oil residues, contaminated containment system components, contaminated soils, and structures and equipment contaminated with used oil, and manage them as



hazardous waste, unless the materials are not hazardous waste under chapter 33-24-02.

**History:** Effective January 1, 1994; amended effective July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-656. Tracking.**

1. **Acceptance.** Used oil processors must keep a record of each used oil shipment accepted for processing. These records may take the form of a log, invoice, manifest, bill of lading, or other shipping documents. Records for each shipment must include the following information:
  - a. The name and address of the transporter who delivered the used oil to the processor;
  - b. The name and address of the generator or processor from whom the used oil was sent for processing;
  - c. The ~~environmental protection agency~~ identification number of the transporter who delivered the used oil to the processor;
  - d. The ~~environmental protection agency~~ identification number (if applicable) of the generator or processor from whom the used oil was sent for processing;
  - e. The quantity of used oil accepted; and
  - f. The date of acceptance.
2. **Delivery.** Used oil processor must keep a record of each shipment of used oil that is shipped to a used oil burner, processor, or disposal facility. These records may take the form of a log, invoice, manifest, bill of lading, or other shipping documents. Records for each shipment must include the following information:
  - a. The name and address of the transporter who delivers the used oil to the burner, processor, or disposal facility;
  - b. The name and address of the burner, processor, or disposal facility that will receive the used oil;
  - c. The ~~environmental protection agency~~ identification number of the transporter who delivers the used oil to the burner, processor, or disposal facility;

- d. The ~~environmental protection agency~~ identification number of the burner, processor, or disposal facility that will receive the used oil;
  - e. The quantity of used oil shipped; and
  - f. The date of shipment.
3. **Record retention.** The records described in subsections 1 and 2 must be maintained for at least three years.

**History:** Effective January 1, 1994; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-657. Operating record and reporting.**

1. **Operating record.**

- a. The owner or operator must keep a written operating record at the facility.
- b. The following information must be recorded, as it becomes available, and maintained in the operating record until closure of the facility;
  - (1) Records and results of used oil analyses performed as described in the analysis plan required under section 33-24-05-655; and
  - (2) Summary reports and details of all incidents that require implementation of the contingency plan as specified in subsection 2 of section 33-24-05-652.

2. **Reporting.** A used oil processor must report to the department, in the form of a letter, on a biennial basis (by March first of each even-numbered year), the following information concerning used oil activities during the previous calendar year:

- a. The ~~environmental protection agency~~ identification number, name, and address of the processor;
- b. The calendar year covered by the report; and

- c. The quantities of used oil accepted for processing and the manner in which the used oil is processed, including the specific processes employed.

**History:** Effective January 1, 1994; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-658. Offsite shipments of used oil.** Used oil processors who initiate shipments of used oil offsite must ship the used oil using a used oil transporter who has obtained an ~~environmental protection agency~~ identification number.

**History:** Effective January 1, 1994; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-662. Notification.**

1. **Identification numbers.** Used oil burners who have not previously complied with the notification requirements of Resource Conservation and Recovery Act section 3010 must comply with these requirements and obtain an ~~environmental protection agency~~ identification number.
2. **Mechanics of notification.** A used oil burner who has not received an ~~environmental protection agency~~ identification number may obtain one by notifying the department of the used oil burner's used oil activity by submitting either:
  - a. A completed ~~environmental protection agency form 8700-12 notification of regulated waste activity form (environmental protection agency form 8700-12, or equivalent state form);~~ or
  - b. A letter requesting an ~~environmental protection agency~~ identification number. The letter should include the following information:
    - (1) Burner company name;
    - (2) Owner of the burner company;
    - (3) Mailing address for the burner;
    - (4) Name and telephone number for the burner point of contact;
    - (5) Type of used oil activity; and

- (6) Location of the burner facility.

**History:** Effective January 1, 1994; amended effective July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-663. Rebuttable presumption for used oil.**

1. To ensure that used oil managed at a used oil burner facility is not hazardous waste under the rebuttable presumption of paragraph 2 of subdivision a of subsection 2 of section 33-24-05-610, a used oil burner must determine whether the total halogen content of used oil managed at the facility is above or below one thousand parts per million.
2. The used oil burner must determine if the used oil contains above or below one thousand parts per million total halogens by:
  - a. Testing the used oil;
  - b. Applying knowledge of the halogen content of the used oil in light of the materials or processes used; or
  - c. If the used oil has been received from a processor subject to regulation under sections 33-24-05-650 through 33-24-05-659, using information provided by the processor.
3. If the used oil contains greater than or equal to one thousand parts per million total halogens, it is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in sections 33-24-02-15 through 33-24-02-19. The owner or operator may rebut the presumption by demonstrating that the used oil does not contain hazardous waste (for example, by using an analytical method ~~from~~ from Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, environmental protection agency publication SW-846, edition III, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in appendix V of chapter 33-24-02).
  - a. The rebuttable presumption does not apply to metalworking oils or fluids containing chlorinated paraffins, if they are processed, through a tolling arrangement as described in subsection 3 of section 33-24-05-624, to reclaim metalworking oils or fluids. The presumption does apply to metalworking oils or fluids if such oils or fluids are recycled in any other manner, or disposed.
  - b. The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the chlorofluorocarbons are destined for



reclamation. The rebuttable presumption does apply to used oils contaminated with chlorofluorocarbons that have been mixed with used oil from sources other than refrigeration units.

4. **Record retention.** Records of analyses conducted or information used to comply with subsections 1, 2, and 3 must be maintained by the burner for at least three years.

**History:** Effective January 1, 1994; amended effective July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-664. Used oil storage.** Used oil burners are subject to all applicable spill prevention, control, and countermeasures [40 CFR part 112] in addition to the requirements of sections 33-24-05-660 through 33-24-05-669. Used oil burners are also subject to the underground storage tank (chapter 33-24-08) standards for used oil stored in underground tanks whether or not the used oil exhibits any characteristics of hazardous waste, in addition to the requirements of sections 33-24-05-660 through 33-24-05-669.

1. **Storage units.** Used oil burners may not store used oil in units other than tanks ~~or~~ containers, or units subject to regulation under sections 33-24-05-01 through 33-24-05-190, sections 33-24-05-300 through 33-24-05-550, or the applicable requirements of subsection 5 of section 33-24-06-16.
2. **Condition of units.** Containers and aboveground tanks used to store oil at burner facilities must be:
  - a. In good condition (no severe rusting, apparent structural defects, or deterioration); and
  - b. Not leaking (no visible leaks).
3. **Secondary containment for containers.** Containers used to store used oil at burner facilities must be equipped with a secondary containment system.
  - a. The secondary containment system must consist of, at a minimum:
    - (1) Dikes, berms, or retaining walls; and
    - (2) A floor. The floor must cover the entire area within the dike, berm, or retaining wall.
  - b. The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released

into the containment system from migrating out of the system to the soil, ground water, or surface water.

4. **Secondary containment for existing aboveground tanks.** Existing aboveground tanks used to store used oil at burner facilities must be equipped with a secondary containment system.
  - a. The secondary containment system must consist of, at a minimum:
    - (1) Dikes, berms, or retaining walls; and
    - (2) A floor. The floor must cover the entire area within the dike, berm, or retaining wall except areas where existing portions of the tank meet the ground; or
    - (3) An equivalent secondary containment system.
  - b. The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, ground water, or surface water.
5. **Secondary containment for existing new aboveground tanks.** New aboveground tanks used to store used oil at burner facilities must be equipped with a secondary containment system.
  - a. The secondary containment system must consist of, at a minimum:
    - (1) Dikes, berms, or retaining walls; and
    - (2) A floor. The floor must cover the entire area within the dike, berm, or retaining wall; or
    - (3) An equivalent secondary containment system.
  - b. The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, ground water, or surface water.
6. **Labels.**
  - a. Containers and aboveground tanks used to store used oil at burner facilities must be labeled or marked clearly with the words "Used Oil".
  - b. Fill pipes used to transfer used oil into underground storage tanks at burner facilities must be labeled or marked clearly with the words "Used Oil".

7. **Response to releases.** Upon detection of a release of used oil to the environment not subject to the requirements of chapter 33-24-08 ~~which has occurred after the effective date of the authorized used oil program for the state in which the release is located~~ and sections 33-24-05-650 through 33-24-05-659, a burner must perform the following cleanup steps:
- a. Stop the release;
  - b. Contain the released used oil;
  - c. Clean up and manage properly the released used oil and other materials; and
  - d. If necessary, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

**History:** Effective January 1, 1994; amended effective July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

#### **33-24-05-665. Tracking.**

1. **Acceptance.** Used oil burners must keep a record of each used oil shipment accepted for burning. These records may take the form of a log, invoice, manifest, bill of lading, or other shipping documents. Records for each shipment must include the following information:
  - a. The name and address of the transporter who delivered the used oil to the burner;
  - b. The name and address of the generator or processor from whom the used oil was sent to the burner;
  - c. The ~~environmental protection agency~~ identification number of the transporter who delivered the used oil to the burner;
  - d. The ~~environmental protection agency~~ identification number (if applicable) of the generator or processor from whom the used oil was sent to the burner;
  - e. The quantity of used oil accepted; and
  - f. The date of acceptance.

2. **Record retention.** The records described in subsection 1 must be maintained for at least three years.

**History:** Effective January 1, 1994; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-671. Prohibitions.** A used oil fuel marketer may initiate a shipment of off-specification used oil only to a used oil burner who:

1. Has an ~~environmental protection agency~~ identification number; and
2. Burns the used oil in an industrial furnace or boiler identified in subsection 1 of section 33-24-05-661.

**History:** Effective January 1, 1994; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-673. Notification.**

1. Identification numbers. A used oil fuel marketer subject to the requirements of sections ~~33-24-05-673~~ 33-24-05-670 through 33-24-05-679 who has not previously complied with the notification requirements of Resource Conservation and Recovery Act section 3010 must comply with these requirements and obtain an ~~environmental protection agency~~ identification number.
2. A marketer who has not received an ~~environmental protection agency~~ identification number may obtain one by notifying the department of their used oil activity by submitting either:
  - a. A completed ~~environmental protection agency form 8700-12~~ notification of regulated waste activity form (environmental protection agency form 8700-12, or equivalent state form); or
  - b. A letter requesting an ~~environmental protection agency~~ identification number. The letter should include the following information:
    - (1) Marketer company name;
    - (2) Owner of the marketer;
    - (3) Mailing address for the marketer;
    - (4) Name and telephone number for the marketer point of contact; and



- (5) Type of used oil activity (for example, generator directing shipments of off-specification used oil to a burner).

**History:** Effective January 1, 1994; amended effective July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-674. Tracking.**

1. **Off-specification used oil delivery.** Any used oil marketer who directs a shipment of off-specification used oil to a burner must keep a record of each shipment of used oil to a used oil burner. These records may take the form of a log, invoice, manifest, bill of lading, or other shipping documents. Records for each shipment must include the following information:
  - a. The name and address of the transporter who delivers the used oil to the burner;
  - b. The name and address of the burner who will receive the used oil;
  - c. The ~~environmental protection agency~~ identification number of the transporter who delivers the used oil to the burner;
  - d. The ~~environmental protection agency~~ identification number of the burner;
  - e. The quantity of used oil shipped; and
  - f. The date of shipment.
2. **On-specification used oil delivery.** A generator, transporter, processor, or burner who first claims that used oil that is to be burned for energy recovery meets the fuel specifications under section 33-24-05-611 must keep a record of each shipment of used oil to ~~an on-specification used oil burner~~ the facility to which it delivers the used oil. Records for each shipment must include the following information:
  - a. The name and address of the facility receiving the shipment;
  - b. The quantity of used oil fuel delivered;
  - c. The date of shipment or delivery; and
  - d. A cross-reference to the record of used oil analysis or other information used to make the determination that the oil meets

the specifications as required under subsection 1 of section 33-24-05-672.

3. **Record retention.** The records described in subsections 1 and 2 must be maintained for at least three years.

**History:** Effective January 1, 1994; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-701. Scope of universal waste rule.**

1. Sections 33-24-05-701 through ~~33-24-05-765~~ 33-24-05-799 establish requirements for managing the following:
  - a. Batteries as described in section 33-24-05-702;
  - b. Pesticides as described in section 33-24-05-703; ~~and~~
  - c. Mercury containing devices as described in section 33-24-05-704; and
  - d. Lamps as described in section 33-24-05-705.
2. Sections 33-24-05-701 through ~~33-24-05-765~~ 33-24-05-799 provide an alternative set of management standards in lieu of regulation under chapters 33-24-01 through 33-24-04 and 33-24-06 and sections 33-24-05-01 through 33-24-05-689.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-702. Applicability - Batteries.**

1. **Batteries covered under sections 33-24-05-701 through ~~33-24-05-765~~ 33-24-05-799.**
  - a. The requirements of sections 33-24-05-701 through ~~33-24-05-765~~ 33-24-05-799 apply to persons managing batteries as described in section 33-24-01-04, except as those listed in subsection 2.
  - b. Spent lead-acid batteries which are not managed under sections 33-24-05-235 through 33-24-05-249 are subject to management under sections 33-24-05-701 through ~~33-24-05-765~~ 33-24-05-799.
2. **Batteries not covered under sections 33-24-05-701 through ~~33-24-05-765~~ 33-24-05-799.** The requirements of sections

33-24-05-701 through ~~33-24-05-765~~ 33-24-05-799 do not apply to persons managing the following batteries:

- a. Spent lead-acid batteries that are managed under sections 33-24-05-235 through 33-24-05-249.
- b. Batteries, as described in section 33-24-01-04, that are not yet wastes under chapter ~~33-24-01~~ 33-24-02, including those that do not meet the criteria for waste generation in subsection 3.
- c. Batteries, as described in section 33-24-01-04, that are not hazardous waste. A battery is a hazardous waste if it exhibits one or more of the characteristics identified in sections 33-24-02-10 through 33-24-02-14.

**3. Generation of waste batteries.**

- a. A used battery becomes a waste on the date it is discarded (for example, when sent for reclamation).
- b. An unused battery becomes a waste on the date the handler decides to discard it.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-703. Applicability - Pesticides.**

1. **Pesticides covered under sections 33-24-05-701 through ~~33-24-05-765~~ 33-24-05-799.** The requirements of sections 33-24-05-701 through ~~33-24-05-765~~ 33-24-05-799 apply to persons managing pesticides, as described in section 33-24-01-04, meeting the following conditions, except those listed in subsection 2:

- a. Recalled pesticides that are:
  - (1) Stocks of a suspended and canceled pesticide that are part of a voluntary or mandatory recall under federal Insecticide, Fungicide, and Rodenticide Act section 19(b), including, but not limited to, those owned by the registrant responsible for conducting the recall; or
  - (2) Stocks of a suspended or canceled pesticide, or a pesticide that is not in compliance with federal Insecticide, Fungicide, and Rodenticide Act, that are part of a voluntary recall by the registrant.

- b. Stocks of other unused pesticide products that are collected and managed as part of a waste pesticide collection program.
- 2. **Pesticides not covered under sections 33-24-05-701 through ~~33-24-05-765~~ 33-24-05-799.** The requirements of sections 33-24-05-701 through ~~33-24-05-765~~ 33-24-05-799 do not apply to persons managing the following pesticides:
  - a. Recalled pesticides described in subdivision a of subsection 1, and unused pesticide products described in subdivision b of subsection 1, that are managed by farmers in compliance with section 33-24-03-40.
  - b. Pesticides not meeting the conditions set forth in subsection 1. These pesticides must be managed in compliance with the hazardous waste regulations in chapters 33-24-01 through 33-24-04, and chapter 33-24-06, and sections 33-24-05-01 through ~~33-24-05-700~~ 33-24-05-699;
  - c. Pesticides that are not wastes under chapter 33-24-02, including those that do not meet the criteria for waste generation in subsection 3 or those that are not wastes as described in subsection 4; and
  - d. Pesticides that are not hazardous waste. A pesticide is a hazardous waste if it is listed in sections 33-24-02-15 through 33-24-02-19 or if it exhibits one or more of the characteristics identified in sections 33-24-02-10 through 33-24-02-14.
- 3. **When a pesticide becomes a waste.**
  - a. A recalled pesticide described in subdivision a of subsection 1 becomes a waste on the first date on which both of the following conditions apply:
    - (1) The generator of the recalled pesticide agrees to participate in the recall; and
    - (2) The person conducting the recall decides to discard the pesticide (for example, burn the pesticide for energy recovery).
  - b. An unused pesticide product described in subdivision b of subsection 1 becomes a waste on the date the generator decides to discard it.
- 4. **Pesticides that are not wastes.** The following pesticides are not wastes:



- a. Recalled pesticides described in subdivision a of subsection 1 provided that the person conducting the recall:
  - (1) Has not made a decision to discard the pesticide (for example, burn for energy recovery). Until such a decision is made, the pesticide does not meet the definition of "solid waste" under section 33-24-02-02; thus the pesticide is not a hazardous waste and is not subject to hazardous waste requirements, including sections 33-24-05-701 through ~~33-24-05-765~~ 33-24-05-799. This pesticide remains subject to the requirements of federal Insecticide, Fungicide, and Rodenticide Act; or
  - (2) Has made a decision to use a management option that, under section 33-24-02-02, does not cause the pesticide to be a solid waste (for example, the selected option is use (other than use constituting disposal) or reuse (other than burning for energy recovery) or reclamation). Such a pesticide is not a solid waste and therefore is not a hazardous waste, and is not subject to hazardous waste requirements including sections 33-24-05-701 through ~~33-24-05-765~~ 33-24-05-799. This pesticide, including a recalled pesticide that is exported to a foreign destination for use or reuse, remains subject to the requirements of federal Insecticide, Fungicide, and Rodenticide Act.
- b. Unused pesticide products described in subdivision b of subsection 1, if the generator of the unused pesticide product has not decided to discard them (for example, burn for energy recovery). These pesticides remain subject to the requirements of federal Insecticide, Fungicide, and Rodenticide Act.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-704. Applicability - Mercury containing devices.**

- 1. **Mercury containing devices covered under sections 33-24-05-701 through ~~33-24-05-765~~ 33-24-05-799.** The requirements of sections 33-24-05-701 through ~~33-24-05-765~~ 33-24-05-799 apply to persons managing mercury containing devices, as described in section 33-24-01-04, except as those listed in subsection 2.
- 2. **Mercury containing devices not covered under sections 33-24-05-701 through ~~33-24-05-765~~ 33-24-05-799.** The requirements of sections 33-24-05-701 through ~~33-24-05-765~~ 33-24-05-799 do not apply to persons managing the following mercury containing devices:

- a. Mercury containing devices that are not yet wastes under chapter 33-24-02. Subsection 3 describes when mercury containing devices become wastes.
  - b. Mercury containing devices that are not hazardous waste. A mercury containing device is a hazardous waste if it exhibits one or more of the characteristics identified in sections 33-24-02-10 through 33-24-02-14.
3. **Generation of waste mercury containing devices.**
- a. A used mercury containing device becomes a waste on the date that it is discarded (for example, sent for reclamation).
  - b. An unused mercury containing device becomes a waste on the date the handler decides to discard it.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-705. Applicability - ~~Household and conditionally exempt small quantity generator waste~~ Lamps.**

- 1. ~~Persons managing the wastes listed below may, at their option, manage them under the requirements of sections 33-24-05-701 through 33-24-05-765:~~
    - a. ~~Household wastes that are exempt under subdivision a of subsection 2 of section 33-24-02-04 and are also of the same type as the universal wastes defined in section 33-24-01-04; or~~
    - b. ~~Conditionally exempt small quantity generator wastes that are exempt under section 33-24-02-05 and are also of the same type as the universal wastes defined in section 33-24-01-04.~~
  - 2. ~~Persons who commingle the wastes described in subdivision a and b of subsection 1 together with universal waste regulated under sections 33-24-05-701 through 33-24-05-765 must manage the commingled waste under the requirements of sections 33-24-05-701 through 33-24-05-765.~~
1. Lamps covered under sections 33-24-05-701 through 33-24-05-799. The requirements of sections 33-24-05-701 through 33-24-05-799 apply to persons managing lamps as described in section 33-24-01-04, except those listed in subsection 2.

2. Lamps not covered under sections 33-24-05-701 through 33-24-05-799. The requirements of sections 33-24-05-701 through 33-24-05-799 do not apply to persons managing the following lamps:
  - a. Lamps that are not yet wastes under chapter 33-24-02 as provided in subsection 3.
  - b. Lamps that are not hazardous waste. A lamp is a hazardous waste if it exhibits one or more of the characteristics identified in sections 33-24-02-10 through 33-24-02-14.
3. Generation of waste lamps.
  - a. A used lamp becomes a waste on the date it is discarded.
  - b. An unused lamp becomes a waste on the date the handler decides to discard it.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-706. Definitions:** ~~[Reserved] Terms that are defined in sections 33-24-01-04 and 33-24-02-01 and chapter 33-24-05 have the same meanings when used in sections 33-24-05-701 through 33-24-05-765.~~

**History:** Effective July 1, 1997; reserved December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-708. [Reserved] Applicability - Household and conditionally exempt small quantity generator waste.**

1. Persons managing the wastes listed below may, at their option, manage them under the requirements of sections 33-24-05-701 through 33-24-05-799:
  - a. Household wastes that are exempt under subdivision a of subsection 2 of section 33-24-02-04 and are also of the same type as the universal wastes defined in section 33-24-01-04; or
  - b. Conditionally exempt small quantity generator wastes that are exempt under section 33-24-02-05 and are also of the same type as the universal wastes defined in section 33-24-01-04.
2. Persons who commingle the wastes described in subdivisions a and b of subsection 1 together with universal waste regulated under sections 33-24-05-701 through 33-24-05-799 must manage the commingled

waste under the requirements of sections 33-24-05-701 through 33-24-05-799.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-709. [Reserved] Definitions.** Terms that are defined in sections 33-24-01-04 and 33-24-02-01 and chapter 33-24-05 have the same meanings when used in sections 33-24-05-701 through 33-24-05-799.

1. "FIFRA" means the Federal Insecticide, Fungicide and Rodenticide Act [7 United States Code 136-136y].
2. "Large quantity handler of universal waste" means a universal waste handler (as defined in section 33-24-01-04) who accumulates five thousand kilograms or more total of universal waste (batteries, pesticides, lamps, or mercury containing devices, calculated collectively) at any time. This designation as a large quantity handler of universal waste is retained through the end of the calendar year in which five thousand kilograms or more total of universal waste is accumulated.
3. "Small quantity handler of universal waste" means a universal waste handler (as defined in section 33-24-01-04) who does not accumulate five thousand kilograms or more total of universal waste (batteries, pesticides, lamps, or mercury containing devices, calculated collectively) at any time.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-710. Applicability - Handlers Small quantity handlers of universal waste.** Sections 33-24-05-710 through 33-24-05-739 33-24-05-720 apply to all small quantity handlers of universal waste.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-711. Prohibitions.** A small quantity handler of universal waste is:

1. Prohibited from disposing of universal waste; and



2. Prohibited from diluting or treating universal waste, except by responding to releases as provided by section 33-24-05-717; or by managing specific wastes as provided in section 33-24-05-713.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

#### **33-24-05-712. Notification.**

~~1. A handler of universal waste must:~~

- ~~a. Except as provided in subdivisions b and c, send written notification of universal waste management activities to the department, and receive an environmental protection agency/state identification number.~~
- ~~b. A handler of universal waste who has already notified the department of the person's hazardous waste management activities and received an environmental protection agency/state identification number is not required to renotify.~~
- ~~c. A handler of universal waste who manages recalled universal waste pesticides as described in subdivision a of subsection 1 of section 33-24-05-703 and who has sent notification to the environmental protection agency as required by 40 CFR part 165 is not required to notify for those recalled universal waste pesticides.~~

~~2. This notification must include:~~

- ~~a. The universal waste handler's name and mailing address;~~
- ~~b. The name and business telephone number of the person at the universal waste handler's site who should be contacted regarding universal waste management activities;~~
- ~~c. The address or physical location of the universal waste management activities;~~
- ~~d. A list of all types of universal waste managed by the handler (for example, batteries, pesticides, mercury containing devices); and~~
- ~~e. A statement indicating that the handler is accumulating universal waste and the types of universal waste (for example, batteries, pesticides, mercury containing devices) the handler is accumulating. A small quantity handler of universal waste is~~

not required to notify the department of universal waste handling activities.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-713. Waste management.**

1. **Universal waste batteries.** A small quantity handler of universal waste must manage universal waste batteries in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:
  - a. A small quantity handler of universal waste must contain any universal waste battery that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the battery and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.
  - b. A small quantity handler of universal waste may conduct the following activities as long as the casing of each individual battery cell is not breached and remains intact and closed (except that cells may be opened to remove electrolyte but must be immediately closed after removal):
    - (1) Sorting batteries by type;
    - (2) Mixing battery types in one container;
    - (3) Discharging batteries so as to remove the electric charge;
    - (4) Regenerating used batteries;
    - (5) Disassembling batteries or battery packs into individual batteries or cells;
    - (6) Removing batteries from consumer products; or
    - (7) Removing electrolyte from batteries.
  - c. A small quantity handler of universal waste who removes electrolyte from batteries, or who generates other solid waste (for example, battery pack materials, discarded consumer products) as a result of the activities listed in subdivision b, must determine whether the electrolyte or other solid waste, or both, exhibit one

or more of the characteristics of hazardous waste identified in sections 33-24-02-10 through 33-24-02-14.

- (1) If the electrolyte or other solid waste exhibits, or both, exhibit a characteristic of hazardous waste, it is subject to all applicable requirements of chapters 33-24-01 through 33-24-04, chapter 33-24-06, and sections 33-24-05-01 through ~~33-24-05-700~~ 33-24-05-699. The handler is considered the generator of the hazardous electrolyte or other hazardous waste, or both, and is subject to the requirements of chapter 33-24-03.
- (2) If the electrolyte or other solid waste is not hazardous, the handler may manage the waste in compliance with applicable federal, state, or local solid waste regulations.

**2. Universal waste pesticides.** A small quantity handler of universal waste must manage universal waste pesticides in a way that prevents releases of any universal waste or component of a universal waste to the environment. The universal waste pesticides must be contained in one or more of the following:

- a. A container that remains closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions;
- b. A container that does not meet the requirements of subdivision a, provided that the unacceptable container is overpacked in a container that does meet the requirements of subdivision a;
- c. A tank that meets the requirements of sections 33-24-05-103 through 33-24-05-114, except subsection 3 of section 33-24-06-110 and sections 33-24-05-113 and 33-24-05-114; or
- d. A transport vehicle or vessel that is closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

**3. Universal waste mercury containing devices.** A small quantity handler of universal waste must manage universal waste mercury containing devices in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

- a. A small quantity handler of universal waste must contain any universal waste mercury containing device that shows evidence of leakage, spillage, or damage that could cause leakage under

reasonable foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the mercury containing device, and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

- b. A handler of universal waste may remove mercury-containing ampules or other reservoirs from universal waste mercury containing devices provided the handler:
  - (1) Removes the ampules or other reservoirs in a manner designed to prevent breakage of the ampules or other reservoirs;
  - (2) Removes the ampules or other reservoirs only over or in a containment device (for example, a tray or pan sufficient to collect and contain any mercury released from an ampule or other reservoir in case of breakage);
  - (3) Ensures that a mercury cleanup system is readily available to immediately transfer any mercury resulting from spills or leaks from broken ampules or other reservoirs, from the containment device to a container that meets the requirements of section 33-24-03-12;
  - (4) Immediately transfers any mercury resulting from spills or leaks from broken ampules or other reservoirs from the containment device to a container that meets the requirements of section 33-24-03-12;
  - (5) Ensures that the area in which ampules or other reservoirs are removed is well-ventilated and monitored to ensure compliance with applicable occupational safety and health administration exposure levels for mercury;
  - (6) Ensures that employees removing ampules or other reservoirs are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers;
  - (7) Stores removed ampules or other reservoirs in closed, nonleaking containers that are in good condition; and
  - (8) Packs removed ampules or other reservoirs in the container with packing materials adequate to prevent breakage during storage, handling, and transportation; ~~and~~.



- c. A small quantity handler of universal waste who removes mercury containing ampules or other reservoirs from mercury containing devices must:
- (1) Determine whether the following exhibit a characteristic of hazardous waste identified in sections 33-24-02-10 through 33-24-02-14:
    - (a) Mercury or cleanup residues resulting from spills or leaks; and or
    - (b) Other solid waste generated as a result of the removal of mercury containing ampules or other reservoirs (for example, remaining mercury containing device units); or
    - (c) Both.
  - (2) If the mercury, residues, or other solid waste exhibits a characteristic of hazardous waste, it must be managed in compliance with all applicable requirements of chapters 33-24-01 through 33-24-04, chapter 33-24-06, and sections 33-24-05-01 through ~~33-24-05-700~~ 33-24-05-699. The handler is considered the generator of the mercury, residues, or other solid waste and is subject to the requirements of chapter 33-24-03.
  - (3) If the mercury, residues, or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state, or local solid waste regulations.

4. Lamps. A small quantity handler of universal waste must manage lamps in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

- a. A small quantity handler of universal waste must contain any lamp in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. Such containers and packages must remain closed and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.
- b. A small quantity handler of universal waste must immediately clean up and place in a container any lamp that is broken and must place in a container any lamp that shows evidence of breakage, leakage, or damage that could cause the release of mercury or other hazardous constituents to the environment. Containers must be closed, structurally sound, compatible with the contents of the

lamps and must lack evidence of leakage, spillage, or damage that could cause leakage or releases of mercury or other hazardous constituents to the environment under reasonably foreseeable conditions.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-714. Labeling and marking.** A small quantity handler of universal waste must label or mark the universal waste to identify the type of universal waste as specified below:

1. Universal waste batteries (for example, each battery), or a container in which the batteries are contained, must be labeled or marked clearly with any one of the following phrases: "Universal Waste - Battery(ies)", or "Waste Battery(ies)", "Used Battery(ies)"<sub>1,2</sub>
2. A container, (or multiple container package unit), tank, or transport vehicle or vessel in which recalled universal waste pesticides as described in subdivision a of subsection 1 of section 33-24-05-703 are contained must be labeled or marked clearly with:
  - a. The label that was on or accompanied the product as sold or distributed; and
  - b. The words "Universal Waste - Pesticide(s)" or "Waste - Pesticide(s)"<sub>1,2</sub>
3. A container, tank, or transport vehicle or vessel in which unused pesticide products as described in subdivision b of subsection 1 of section 33-24-05-703 are contained must be labeled or marked clearly with:
  - a. The following:
    - (1) The label that was on the product when purchased, if still legible;
    - (2) If using the labels described in paragraph 1 is not feasible, the appropriate label as required under department of transportation regulation 49 CFR part 172; or
    - (3) If using the labels described in paragraphs 1 and 2 is not feasible, another label prescribed or designated by the waste pesticide collection program administered or recognized by the state; and

- b. The words "Universal Waste - Pesticide(s)" or "Waste - Pesticide(s)".
- 4. Universal waste mercury containing devices (for example, each mercury containing device) or a container in which mercury containing devices are contained must be labeled or marked clearly with any one of the following phrases: "Universal Waste - Mercury Containing Device(s)", or "Waste Mercury Containing Device(s)", or "Used Mercury Containing Device(s)".
- 5. Each lamp or a container or package in which such lamps are contained must be labeled or marked clearly with one of the following phrases: "Universal Waste - Lamp(s)", or "Waste Lamp(s)", or "Used Lamp(s)".

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

### **33-24-05-715. Accumulation time limits.**

- 1. A small quantity handler of universal waste may accumulate universal waste for no longer than one year from the date the universal waste is generated, or received from another handler, unless the requirements of subsection 2 are met.
- 2. A small quantity handler of universal waste may accumulate universal waste for longer than one year from the date the universal waste is generated, or received from another handler, if such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal. However, the handler bears the burden of proving that such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal.
- 3. A small quantity handler of universal waste who accumulates universal waste must be able to demonstrate the length of time that the universal waste has been accumulated from the date it becomes a waste or is received. The handler may make this demonstration by:
  - a. Placing the universal waste in a container and marking or labeling the container with the earliest date that any universal waste in the container became a waste or was received;
  - b. Marking or labeling each individual item of universal waste (for example, each battery or mercury containing device) with the date it became a waste or was received;
  - c. Maintaining an inventory system onsite that identifies the date each universal waste became a waste or was received;



- d. Maintaining an inventory system onsite that identifies the earliest date that any universal waste in a group of universal waste items or a group of containers of universal waste became a waste or was received;
- e. Placing the universal waste in a specific accumulation area and identifying the earliest date that any universal waste in the area became a waste or was received; or
- f. Any other method which clearly demonstrates the length of time that the universal waste has been accumulated from the date it becomes a waste or is received.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-716. Employee training.** ~~All handlers of universal waste shall ensure all employees who handle or have responsibility for managing universal waste are thoroughly familiar with proper waste handling and emergency procedures appropriate for the type or types of universal waste handled at the facility, and relative to their responsibilities during normal facility operations and emergencies. A small quantity handler of universal waste shall inform all employees who handle or have responsibility for managing universal waste. The information must describe proper waste handling and emergency procedures appropriate for the type or types of universal waste handled at the facility.~~

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-717. Response to releases.**

1. A small quantity handler of universal waste shall immediately contain all releases of universal wastes and other residues from universal wastes.
2. A small quantity handler of universal waste shall determine whether any material resulting from the release is hazardous waste, and if so, must manage the hazardous waste in compliance with all applicable requirements of chapters 33-24-01 through 33-24-04, chapter 33-24-06, and sections 33-24-05-01 through ~~33-24-05-700~~ 33-24-05-699. The handler is considered the generator of the material resulting from the release, and must manage it in compliance with chapter 33-24-03.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-718. Offsite shipments.**



1. A small quantity handler of universal waste is prohibited from sending or taking universal waste to a place other than another universal waste handler, a destination facility, or a foreign destination.
2. If a small quantity handler of universal waste self-transportes universal waste offsite, the handler becomes a universal waste transporter for those self-transportation activities and must comply with the transporter requirements of sections ~~33-24-05-740 through 33-24-05-749~~ 33-24-05-750 through 33-24-05-759 while transporting the universal waste.
3. If a universal waste being offered for offsite transportation meets the definition of hazardous materials under 49 CFR parts 171 through 180, a small quantity handler of universal waste must package, label, mark, and placard the shipment and prepare the proper shipping papers in accordance with applicable department of transportation regulations under 49 CFR parts 172 through 180.
4. Prior to sending a shipment of universal waste to another universal waste handler, the originating small quantity handler shall ensure that the receiving handler agrees to receive the shipment.
5. If a small quantity handler of universal waste sends a shipment of universal waste to another handler or to a destination facility and the shipment is rejected by the receiving handler or destination facility, the originating handler shall either:
  - a. Receive the universal waste back when notified that the shipment has been rejected; or
  - b. Agree with the receiving handler on a destination facility to which the shipment will be sent.
6. A small quantity handler of universal waste may reject a shipment containing universal waste, or a portion of a shipment containing universal waste that the handler has received from another handler. If a handler rejects a shipment or a portion of a shipment, the receiving handler shall contact the originating handler to notify the originating handler of the rejection and to discuss reshipment of the load. The receiving handler must:
  - a. Send the shipment back to the originating handler; or
  - b. If agreed to by both the originating and receiving handler, send the shipment to a destination facility.
7. If a small quantity handler of universal waste receives a shipment containing hazardous waste that is not a universal waste, the handler shall immediately notify the department of the illegal shipment, and

provide the name, address, and telephone number of the originating shipper. The department will provide instructions for managing the hazardous waste.

8. If a small quantity handler of universal waste receives a shipment of nonhazardous, nonuniversal waste, the handler may manage the waste in any way that is in compliance with applicable federal, state, or local waste regulations.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-719. Tracking universal waste shipments.** ~~A handler of universal waste must keep the following records:~~

- ~~1. **Receipt of shipment.** A handler of universal waste shall keep a record of each shipment of universal waste received at the facility. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste received must include the following information:~~
  - ~~a. The name and address of the originating universal waste handler or foreign shipper from whom the universal waste was sent;~~
  - ~~b. The quantity of each type of universal waste received (for example, batteries, pesticides, mercury containing devices); and~~
  - ~~c. The date of receipt of the shipment of universal waste.~~
- ~~2. **Shipments offsite.** A handler of universal waste must keep a record of each shipment of universal waste sent from the handler to other facilities. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste sent must include the following information:~~
  - ~~a. The name and address of the universal waste handler, destination facility, or foreign destination to whom the universal waste was sent;~~
  - ~~b. The quantity of each type of universal waste sent (for example, batteries, pesticides, mercury containing devices); and~~
  - ~~c. The date the shipment of universal waste left the facility.~~
- ~~3. **Record retention.**~~

- a. ~~A handler of universal waste shall retain the records described in subsection 1 for at least three years from the date of receipt of the shipment of universal waste.~~
- b. ~~A handler of universal waste shall retain the records described in subsection 2 for at least three years from the date a shipment of universal waste left the facility. A small quantity handler of universal waste is not required to keep records of shipments of universal waste.~~

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-720. Exports.** A small quantity handler of universal waste who sends universal waste to a foreign destination other than to those foreign OECD countries specified in 40 CFR 262.58(a)(1) (in which case the handler is subject to the requirements of 40 CFR subpart H) shall:

1. Comply with the requirements applicable to a primary exporter in section 33-24-03-20, subdivisions a through d and f of subsection 1; and subsection 2 of section 33-24-03-23, and section 33-24-03-24;
2. Export such universal waste only upon consent of the receiving country and in conformance with environmental protection agency acknowledgment of consent as defined in sections 33-24-03-17 through 33-24-03-29; and
3. Provide a copy of the environmental protection agency acknowledgment of consent for the shipment to the transporter transporting the shipment for export.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-730. [Reserved] Applicability - Large quantity handlers of universal waste.** Sections 33-24-05-730 through 33-24-05-740 apply to large quantity handlers of universal waste.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-731. [Reserved] Prohibitions.** A large quantity handler of universal waste is:

1. Prohibited from disposing of universal waste; and

2. Prohibited from diluting or treating universal waste, except by responding to releases as provided by section 33-24-05-737, or by managing specific wastes as provided in section 33-24-05-733.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-732. ~~[Reserved]~~ Notification.**

1. A large quantity handler of universal waste must:
  - a. Except as provided in subdivisions b and c, send written notification of universal waste management activities to the department, and receive an identification number before meeting or exceeding the five thousand kilogram storage limit.
  - b. A large quantity handler of universal waste who has already notified the department of the person's hazardous waste management activities and received an identification number is not required to renotify.
  - c. A large quantity handler of universal waste who manages recalled universal waste pesticides as described in subdivision a of subsection 1 of section 33-24-05-703 and who has sent notification to the environmental protection agency as required by 40 CFR part 165 is not required to notify for those recalled universal waste pesticides.
2. This notification must include:
  - a. The universal waste handler's name and mailing address;
  - b. The name and business telephone number of the person at the universal waste handler's site who should be contacted regarding universal waste management activities;
  - c. The address or physical location of the universal waste management activities;
  - d. A list of all types of universal waste managed by the handler (for example, batteries, pesticides, mercury containing devices, lamps); and
  - e. A statement indicating that the handler is accumulating more than five thousand kilograms of universal waste at one time and the types of universal waste (for example, batteries, pesticides,



mercury containing devices, lamps) the handler is accumulating above this quantity.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-733. ~~[Reserved]~~ Waste management.**

**1. Universal waste batteries.** A large quantity handler of universal waste must manage universal waste batteries in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

**a.** A large quantity handler of universal waste must contain any universal waste battery that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the battery and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

**b.** A large quantity handler of universal waste may conduct the following activities as long as the casing of each individual battery cell is not breached and remains intact and closed (except that cells may be opened to remove electrolyte but must be immediately closed after removal):

(1) Sorting batteries by type:

(2) Mixing battery types in one container:

(3) Discharging batteries so as to remove the electric charge:

(4) Regenerating used batteries:

(5) Disassembling batteries or battery packs into individual batteries or cells:

(6) Removing batteries from consumer products; or

(7) Removing electrolyte from batteries.

**c.** A large quantity handler of universal waste who removes electrolyte from batteries, or who generates other solid waste (for example, battery pack materials, discarded consumer products) as a result of the activities listed in subdivision b, must determine whether the electrolyte or other solid waste, or both, exhibit one or more

of the characteristics of hazardous waste identified in sections 33-24-02-10 through 33-24-02-14.

- (1) If the electrolyte or other solid waste, or both, exhibit a characteristic of hazardous waste, it is subject to all applicable requirements of chapters 33-24-01 through 33-24-04, chapter 33-24-06, and sections 33-24-05-01 through 33-24-05-700. The handler is considered the generator of the hazardous electrolyte or other hazardous waste and is subject to the requirements of chapter 33-24-03.
- (2) If the electrolyte or other solid waste is not hazardous, the handler may manage the waste in compliance with applicable federal, state, or local solid waste regulations.

2. **Universal waste pesticides.** A large quantity handler of universal waste must manage universal waste pesticides in a way that prevents releases of any universal waste or component of a universal waste to the environment. The universal waste pesticides must be contained in one or more of the following:

- a. A container that remains closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions;
- b. A container that does not meet the requirements of subdivision a, provided that the unacceptable container is overpacked in a container that does meet the requirements of subdivision a;
- c. A tank that meets the applicable requirements of subsection 5 of section 33-24-06-16 and sections 33-24-05-103 through 33-24-05-114, except subsection 3 of section 33-24-06-110 and sections 33-24-05-113 and 33-24-05-114; or
- d. A transport vehicle or vessel that is closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

3. **Universal waste mercury containing devices.** A large quantity handler of universal waste must manage universal waste mercury containing devices in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

- a. A large quantity handler of universal waste must contain any universal waste mercury containing device that shows evidence of leakage, spillage, or damage that could cause leakage under

reasonably foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the mercury containing device, and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

b. A large quantity handler of universal waste may remove mercury containing ampules or other reservoirs from universal waste mercury containing devices provided the handler:

- (1) Removes the ampules or other reservoirs in a manner designed to prevent breakage of the ampules or other reservoirs;
- (2) Removes the ampules or other reservoirs only over or in a containment device (for example, a tray or pan sufficient to collect and contain any mercury released from an ampule or other reservoir in case of breakage);
- (3) Ensures that a mercury cleanup system is readily available to immediately transfer any mercury resulting from spills or leaks from broken ampules or other reservoirs from the containment device to a container that meets the requirements of section 33-24-03-12;
- (4) Immediately transfers any mercury resulting from spills or leaks from broken ampules or other reservoirs from the containment device to a container that meets the requirements of section 33-24-03-12;
- (5) Ensures that the area in which ampules or other reservoirs are removed is well-ventilated and monitored to ensure compliance with applicable occupational safety and health administration exposure levels for mercury;
- (6) Ensures that employees removing ampules or other reservoirs are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers;
- (7) Stores removed ampules or other reservoirs in closed, nonleaking containers that are in good condition; and
- (8) Packs removed ampules or other reservoirs in the container with packing materials adequate to prevent breakage during storage, handling, and transportation.



c. A large quantity handler of universal waste who removes mercury containing ampules or other reservoirs from mercury containing devices must:

(1) Determine whether the following exhibit a characteristic of hazardous waste identified in sections 33-24-02-10 through 33-24-02-14:

(a) Mercury or cleanup residues resulting from spills or leaks;

(b) Other solid waste generated as a result of the removal of mercury containing ampules or other reservoirs (for example, remaining mercury containing device units); or

(c) Both.

(2) If the mercury, residues, or other solid waste, or any combination thereof, exhibits a characteristic of hazardous waste, it must be managed in compliance with all applicable requirements of chapters 33-24-01 through 33-24-04, chapter 33-24-06, and sections 33-24-05-01 through 33-24-05-699. The handler is considered the generator of the mercury, residues, or other solid waste, or any combination thereof, and is subject to the requirements of chapter 33-24-03.

(3) If the mercury, residues, or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state, or local solid waste regulations.

4. **Lamps.** A large quantity handler of universal waste must manage lamps in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

a. A large quantity handler of universal waste must contain any lamp in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. Such containers and packages must remain closed and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

b. A large quantity handler of universal waste must immediately clean up and place in a container any lamp that is broken and must place in a container any lamp that shows evidence of breakage, leakage, or damage that could cause the release of mercury or other hazardous constituents to the environment. Containers must be closed, structurally sound, compatible with the contents of the



lamps and must lack evidence of leakage, spillage, or damage that could cause leakage or releases of mercury or other hazardous constituents to the environment under reasonably foreseeable conditions.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-734. ~~{Reserved}~~ Labeling and marking.** A large quantity handler of universal waste must label or mark the universal waste to identify the type of universal waste as specified below:

1. Universal waste batteries (for example, each battery), or a container in which the batteries are contained, must be labeled or marked clearly with any one of the following phrases: "Universal Waste - Battery(ies)", or "Waste Battery(ies)", or "Used Battery(ies)".
2. A container (or multiple container package unit), tank, or transport vehicle or vessel in which recalled universal waste pesticides as described in subdivision a of subsection 1 of section 33-24-05-703 are contained must be labeled or marked clearly with:
  - a. The label that was on or accompanied the product as sold or distributed; and
  - b. The words "Universal Waste - Pesticide(s)" or "Waste - Pesticide(s)".
3. A container, tank, or transport vehicle or vessel in which unused pesticide products as described in subdivision b of subsection 1 of section 33-24-05-703 are contained must be labeled or marked clearly with:
  - a. The following:
    - (1) The label that was on the product when purchased, if still legible;
    - (2) If using the labels described in paragraph 1 is not feasible, the appropriate label as required under department of transportation regulation 49 CFR part 172; or
    - (3) If using the labels described in paragraphs 1 and 2 is not feasible, another label prescribed or designated by the waste pesticide collection program administered or recognized by the state; and

- b. The words "Universal Waste - Pesticide(s)" or "Waste - Pesticide(s)".
- 4. Universal waste mercury containing devices (for example, each mercury containing device) or a container in which mercury containing devices are contained must be labeled or marked clearly with any one of the following phrases: "Universal Waste - Mercury Containing Device(s)", or "Waste Mercury Containing Device(s)", or "Used Mercury Containing Device(s)".
- 5. Each lamp or a container or package in which such lamps are contained must be labeled or marked clearly with one of the following phrases: "Universal Waste - Lamp(s)", or "Waste Lamp(s)", or "Used Lamp(s)".

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-735. ~~[Reserved]~~ Accumulation time limits.**

- 1. A large quantity handler of universal waste may accumulate universal waste for no longer than one year from the date the universal waste is generated, or received from another handler, unless the requirements of subsection 2 are met.
- 2. A large quantity handler of universal waste may accumulate universal waste for longer than one year from the date the universal waste is generated, or received from another handler, if such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal. However, the handler bears the burden of proving that such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal.
- 3. A large quantity handler of universal waste must be able to demonstrate the length of time that the universal waste has been accumulated from the date it becomes a waste or is received. The handler may make this demonstration by:
  - a. Placing the universal waste in a container and marking or labeling the container with the earliest date that any universal waste in the container became a waste or was received;
  - b. Marking or labeling each individual item of universal waste (for example, each battery or mercury containing device) with the date it became a waste or was received;
  - c. Maintaining an inventory system onsite that identifies the date each universal waste became a waste or was received;

- d. Maintaining an inventory system onsite that identifies the earliest date that any universal waste in a group of universal waste items or a group of containers of universal waste became a waste or was received;
- e. Placing the universal waste in a specific accumulation area and identifying the earliest date that any universal waste in the area became a waste or was received; or
- f. Any other method which clearly demonstrates the length of time that the universal waste has been accumulated from the date it becomes a waste or is received.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-736. ~~[Reserved]~~ Employee training.** A large quantity handler of universal waste shall ensure all employees who handle or have responsibility for managing universal waste are thoroughly familiar with proper waste handling and emergency procedures appropriate for the type or types of universal waste handled at the facility, and relative to their responsibilities during normal facility operations and emergencies.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-737. ~~[Reserved]~~ Response to releases.**

- 1. A large quantity handler of universal waste shall immediately contain all releases of universal wastes and other residues from universal wastes.
- 2. A large quantity handler of universal waste shall determine whether any material resulting from the release is hazardous waste, and if so, must manage the hazardous waste in compliance with all applicable requirements of chapters 33-24-01 through 33-24-06. The handler is considered the generator of the material resulting from the release, and must manage it in compliance with chapter 33-24-03.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-738. ~~[Reserved]~~ Offsite shipments.**

- 1. A large quantity handler of universal waste is prohibited from sending or taking universal waste to a place other than another universal waste handler, a destination facility, or a foreign destination.



2. If a large quantity handler of universal waste self-transport universal waste offsite, the handler becomes a universal waste transporter for those self-transportation activities and must comply with the transporter requirements of sections 33-24-05-750 through 33-24-05-759 while transporting the universal waste.
3. If a universal waste being offered for offsite transportation meets the definition of hazardous materials under 49 CFR parts 171 through 180, a large quantity handler of universal waste must package, label, mark, and placard the shipment and prepare the proper shipping papers in accordance with applicable department of transportation regulations under 49 CFR parts 172 through 180.
4. Prior to sending a shipment of universal waste to another universal waste handler, the originating handler shall ensure that the receiving handler agrees to receive the shipment.
5. If a large quantity handler of universal waste sends a shipment of universal waste to another handler or to a destination facility and the shipment is rejected by the receiving handler or destination facility, the originating handler shall either:
  - a. Receive the universal waste back when notified that the shipment has been rejected; or
  - b. Agree with the receiving handler on a destination facility to which the shipment will be sent.
6. A large quantity handler of universal waste may reject a shipment containing universal waste, or a portion of a shipment containing universal waste that the handler has received from another handler. If a handler rejects a shipment or a portion of a shipment, the receiving handler shall contact the originating handler to notify the originating handler of the rejection and to discuss reshipment of the load. The receiving handler must:
  - a. Send the shipment back to the originating handler; or
  - b. If agreed to by both the originating and receiving handler, send the shipment to a destination facility.
7. If a large quantity handler of universal waste receives a shipment containing hazardous waste that is not a universal waste, the handler shall immediately notify the department of the illegal shipment, and provide the name, address, and telephone number of the originating shipper. The department will provide instructions for managing the hazardous waste.



8. If a large quantity handler of universal waste receives a shipment of nonhazardous, nonuniversal waste, the handler may manage the waste in any way that is in compliance with applicable federal, state, or local solid waste regulations.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-739. ~~[Reserved]~~ Tracking universal waste shipments.**

1. **Receipt of shipments.** A large quantity handler of universal waste shall keep a record of each shipment of universal waste received at the facility. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste received must include the following information:
  - a. The name and address of the originating universal waste handler or foreign shipper from whom the universal waste was sent;
  - b. The quantity of each type of universal waste received (for example, batteries, pesticides, mercury containing devices, lamps); and
  - c. The date of receipt of the shipment of universal waste.
2. **Shipments offsite.** A large quantity handler of universal waste must keep a record of each shipment of universal waste sent from the handler to other facilities. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste sent must include the following information:
  - a. The name and address of the universal waste handler, destination facility, or foreign destination to whom the universal waste was sent;
  - b. The quantity of each type of universal waste sent (for example, batteries, pesticides, mercury containing devices, lamps); and
  - c. The date the shipment of universal waste left the facility.
3. **Record retention.**
  - a. A large quantity handler of universal waste shall retain the records described in subsection 1 for at least three years from the date of receipt of the shipment of universal waste.

- b. A large quantity handler of universal waste shall retain the records described in subsection 2 for at least three years from the date a shipment of universal waste left the facility.
- c. The retention period for all records is extended automatically during the course of any unresolved enforcement action regarding the facility or as requested by the department.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-740. ~~Applicability -- Universal waste transporters Exports.~~**

~~Sections 33-24-05-740 through 33-24-05-749 apply to all transporters of universal waste. A large quantity handler of universal waste who sends universal waste to a foreign destination other than those OECD countries specified in 40 CFR 262.58(a)(1)(in which case the handler is subject to the requirements of 40 CFR, subpart H) shall:~~

- 1. Comply with the requirements applicable to a primary exporter in section 33-24-03-20, subdivisions a through d and f of subsection 1 and subsection 2 of section 33-24-03-23, and section 33-24-03-24;
- 2. Export such universal waste only upon consent of the receiving country and in conformance with environmental protection agency acknowledgment of consent as defined in sections 33-24-03-17 through 33-24-03-29; and
- 3. Provide a copy of the environmental protection agency acknowledgment of consent for the shipment to the transporter transporting the shipment for export.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-741. ~~Prohibitions. [Reserved]~~** ~~A universal waste transporter is:~~

- 1. ~~Prohibited from disposing of universal waste; and~~
- 2. ~~Prohibited from diluting or treating universal waste, except by responding to releases as provided by section 33-24-05-744.~~

**History:** Effective July 1, 1997; reserved December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-742. ~~Waste management. [Reserved]~~**



1. ~~A universal waste transporter shall comply with all applicable United States department of transportation regulations in 49 CFR parts 171 through 180 for transport of any universal waste that meets the definition of hazardous material in 49 CFR 171.8. For purposes of the department of transportation regulations, a material is considered a hazardous waste if it is subject to the hazardous waste manifest requirements specified in chapter 33-24-03. Because universal waste does not require a hazardous waste manifest, it is not considered a hazardous waste under the department of transportation regulations.~~
2. ~~Some universal waste materials are regulated by the department of transportation as hazardous materials because they meet the criteria for one or more hazard classes specified in 49 CFR 173.2. As universal waste shipments do not require a manifest under chapter 33-24-03, they may not be described by the department of transportation proper shipping name "hazardous waste, (1) or (s), n.o.s.", nor may the hazardous material's proper shipping name be modified by adding the word "waste".~~
3. ~~All universal waste transporters shall comply with the solid waste transportation permitting requirements contained in section 33-20-02.1-01.~~

**History:** Effective July 1, 1997; reserved December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05

### **33-24-05-743. Storage time limits. [Reserved]**

1. ~~A universal waste transporter may only store the universal waste at a universal waste transfer facility for ten days or less.~~
2. ~~If a universal waste transporter stores universal waste for more than ten days, the universal waste transporter becomes a universal waste handler and must comply with the requirements of sections 33-24-05-710 through 33-24-05-739 while storing the universal waste.~~
3. ~~A universal waste transporter must keep records for each shipment of universal waste transported. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste sent must include the following information:~~
  - a. ~~The name and address of the universal waste generator or handler originating the shipment and the subsequent handler, destination facility, or foreign destination to whom the universal waste was sent;~~
  - b. ~~The quantity of each type of universal waste sent (for example, batteries, pesticides, mercury containing devices); and~~

- ~~c. The date the universal waste transporter accepted the shipment of universal waste for transportation.~~
- ~~4. Record retention. A universal waste transporter shall retain the records described in subsection 3 for at least three years from the date of delivery of the shipment of universal waste to another handler, destination facility or foreign destination.~~

**History:** Effective July 1, 1997; reserved December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-744. Response to releases. [Reserved]**

- ~~1. A universal waste transporter must immediately contain all releases of universal wastes and other residues from universal wastes.~~
- ~~2. A universal waste transporter must determine whether any material resulting from the release is hazardous waste, and if so, is subject to all applicable requirements of chapters 33-24-01 through 33-24-06, and sections 33-24-05-01 through 33-24-05-700. If the waste is determined to be hazardous waste, the transporter is subject to chapter 33-24-03.~~

**History:** Effective July 1, 1997; reserved December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-745. Offsite shipments. [Reserved]**

- ~~1. A universal waste transporter is prohibited from transporting the universal waste to a place other than a universal waste handler, a destination facility, or a foreign destination.~~
- ~~2. If the universal waste being shipped offsite meets the department of transportation's definition of hazardous materials in 49 CFR 171.8, the shipment must be properly described on a shipping paper in accordance with the applicable department of transportation regulations under 49 CFR part 172.~~

**History:** Effective July 1, 1997; reserved December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-746. Exports. [Reserved]** A universal waste transporter transporting a shipment of universal waste to a foreign destination may not accept a shipment if the transporter knows the shipment does not conform to the environmental protection agency acknowledgment of consent. In addition, the transporter must ensure that:



1. ~~A copy of the environmental protection agency acknowledgment of consent accompanies the shipment; and~~
2. ~~The shipment is delivered to the facility designated by the person initiating the shipment.~~

**History:** Effective July 1, 1997; reserved December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-750. Applicability - ~~Destination facilities~~ Universal waste transporters.** Sections 33-24-05-750 through 33-24-05-759 apply to all transporters of universal waste.

1. ~~The owner or operator of a destination facility (as defined in section 33-24-01-04) is subject to all applicable requirements of sections 33-24-05-01 through 33-24-05-700 and chapters 33-24-06 and 33-24-07, and the notification requirement under section 3010 of the Resource Conservation and Recovery Act.~~
2. ~~The owner or operator of a destination facility that recycles a particular universal waste without storing that universal waste before it is recycled must comply with subdivision b of subsection 3 of section 33-24-02-06.~~

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-751. ~~Offsite shipments~~ Prohibitions.** A universal waste transporter is:

1. ~~The owner or operator of a destination facility is prohibited from sending or taking universal waste to a place other than a universal waste handler, another destination facility, or foreign destination. Prohibited from disposing of universal waste; and~~
2. ~~The owner or operator of a destination facility may reject a shipment containing universal waste or a portion of a shipment containing universal waste. If the owner or operator of the destination facility rejects a shipment or a portion of a shipment, the destination facility must contact the shipper to notify the shipper of the rejection and to discuss reshipment of the load. The owner or operator of the destination facility shall: Prohibited from diluting or treating universal waste, except by responding to releases as provided by section 33-24-05-754.~~
  - a. ~~Send the shipment back to the original shipper; or~~

- b. ~~If agreed to by both the shipper and the owner or operator of the destination facility, send the shipment to another destination facility.~~
- 3. ~~If the owner or operator of a destination facility receives a shipment containing hazardous waste that is not a universal waste, the owner or operator of the destination facility shall immediately notify the department of the illegal shipment, and provide the name, address, and telephone number of the originating shipper. The department will provide instructions for managing the hazardous waste.~~
- 4. ~~If the owner or operator of a destination facility receives a shipment of nonhazardous, nonuniversal waste, the owner or operator of the destination facility may manage the waste in any way that is in compliance with applicable federal or state solid waste regulations.~~

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-752.      ~~Tracking universal waste shipments~~      Waste management.**

- 1. ~~The owner or operator of a destination facility shall keep a record of each shipment of universal waste received at the facility. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste sent must include the following information: A universal waste transporter shall comply with all applicable United States department of transportation regulations in 49 CFR parts 171 through 180 for transport of any universal waste that meets the definition of hazardous material in 49 CFR 171.8. For purposes of the department of transportation regulations, a material is considered a hazardous waste if it is subject to the hazardous waste manifest requirements specified in chapter 33-24-03. Because universal waste does not require a hazardous waste manifest, it is not considered a hazardous waste under the department of transportation regulations.~~
  - a. ~~The name and address of the universal waste handler, destination facility, or foreign shipper from whom the universal waste was sent;~~
  - b. ~~The quantity of each type of universal waste received (for example, batteries, pesticides, mercury-containing devices); and~~
  - c. ~~The date of receipt of the shipment of universal waste.~~
- 2. ~~The owner or operator of a destination facility must retain the records described in subsection 1 for at least three years from the date of receipt of a shipment of universal waste. Some universal waste materials are regulated by the department of transportation as hazardous~~

materials because they meet the criteria for one or more hazard classes specified in 49 CFR 173.2. As universal waste shipments do not require a manifest under chapter 33-24-03, they may not be described by the department of transportation proper shipping name "hazardous waste (I) or (S), n.o.s.", nor may the hazardous material's proper shipping name be modified by adding the word "waste".

3. All universal waste transporters shall comply with the solid waste transportation permitting requirements contained in section 33-20-02.1-01.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-753. ~~{Reserved}~~ Storage time limits.**

1. A universal waste transporter may only store the universal waste at a universal waste transfer facility for ten days or less.
2. If a universal waste transporter stores universal waste for more than ten days, the universal waste transporter becomes a universal waste handler and must comply with the requirements of sections 33-24-05-710 through 33-24-05-749, as applicable, while storing the universal waste.
3. A universal waste transporter must keep records for each shipment of universal waste transported. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste sent must include the following information:
  - a. The name and address of the universal waste generator or handler originating the shipment and the subsequent handler, destination facility, or foreign destination to whom the universal waste was sent;
  - b. The quantity of each type of universal waste sent (for example, batteries, pesticides, mercury containing devices); and
  - c. The date the universal waste transporter accepted the shipment of universal waste for transportation.
4. Record retention. A universal waste transporter shall retain the records described in subsection 3 for at least three years from the date



of delivery of the shipment of universal waste to another handler, destination facility, or foreign destination.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-754. ~~[Reserved]~~ Response to releases.**

1. A universal waste transporter must immediately contain all releases of universal wastes and other residues from universal wastes.
2. A universal waste transporter must determine whether any material resulting from the release is hazardous waste, and if so, is subject to all applicable requirements of chapters 33-24-01 through 33-24-04, chapter 33-24-06, and sections 33-24-05-01 through 33-24-05-699. If the waste is determined to be hazardous waste, the transporter is subject to chapter 33-24-03.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-755. Imports Offsite shipments.** ~~Persons managing universal waste that is imported from a foreign country into the United States are subject to the applicable requirements of sections 33-24-05-701 through 33-24-05-765, immediately after the waste enters the United States, as indicated below:~~

1. ~~A universal waste transporter is subject to the universal waste transporter requirements of sections 33-24-05-740 through 33-24-05-749.~~ A universal waste transporter is prohibited from transporting the universal waste to a place other than a universal waste handler, a destination facility, or a foreign destination.
2. ~~A universal waste handler is subject to the universal waste handler requirements of sections 33-24-05-710 through 33-24-05-739, as applicable.~~ If the universal waste being shipped offsite meets the department of transportation's definition of hazardous materials in 49 CFR 171.8, the shipment must be properly described on a shipping paper in accordance with the applicable department of transportation regulations under 49 CFR part 172.
3. ~~An owner or operator of a destination facility is subject to the destination facility requirements of sections 33-24-05-750 through 33-24-05-754.~~

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04



**33-24-05-756. [Reserved] Exports.** A universal waste transporter transporting a shipment of universal waste to a foreign destination other than those OECD countries specified in 40 CFR 262.58(a)(1)(in which case the handler is subject to the requirements of 40 CFR, subpart H) may not accept a shipment if the transporter knows the shipment does not conform to the environmental protection agency acknowledgment of consent. In addition, the transporter must ensure that:

1. A copy of the environmental protection agency acknowledgment of consent accompanies the shipment; and
2. The shipment is delivered to the facility designated by the person initiating the shipment.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-760. ~~Petitions to include other wastes under sections 33-24-05-701 through 33-24-05-765.~~ Applicability - Destination facilities.**

- ~~1. Any person seeking to add a hazardous waste or a category of hazardous waste to sections 33-24-05-701 through 33-24-05-765 may petition for a regulatory amendment under sections 33-24-05-760 through 33-24-05-765, 33-24-01-06, and 33-24-01-08. The owner or operator of a destination facility (as defined in section 33-24-01-04) is subject to all applicable requirements of sections 33-24-05-01 through 33-24-05-699 and chapters 33-24-06 and 33-24-07, and the notification requirement under section 3010 of the Resource Conservation and Recovery Act.~~
- ~~2. To be successful, the petitioner must demonstrate to the satisfaction of the department that regulation under the universal waste regulations of sections 33-24-05-701 through 33-24-05-765 is appropriate for the waste or category of waste; will improve management practices for the waste or category of waste; and will improve implementation of the hazardous waste program. The petition must include the information required by subsection 2 of section 33-24-01-06. The petition should also address as many of the factors listed in section 33-24-05-761 as are appropriate for the waste or waste category addressed in the petition. The owner or operator of a destination facility that recycles a particular universal waste without storing that universal waste before it is recycled must comply with subdivision b of subsection 3 of section 33-24-02-06.~~
- ~~3. The department will evaluate petitions using the factors listed in section 33-24-05-761. The department will grant or deny a petition using the factors listed in section 33-24-05-761. The decision will be based on the weight of evidence showing that regulation under sections 33-24-05-701 through 33-24-05-765 is appropriate for the waste or category of waste, will improve management practices for the waste or~~

~~category of waste, and will improve implementation of the hazardous waste program.~~

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-761. Factors for petitions to include other wastes under sections 33-24-05-701 through 33-24-05-765. Offsite shipments.**

1. ~~The waste or category of waste, as generated by a wide variety of generators, is listed in sections 33-24-02-15 through 33-24-02-19, or (if not listed) a proportion of the waste stream exhibits one or more characteristics of hazardous waste identified in sections 33-24-02-10 through 33-24-02-14. (When a characteristic waste is added to the universal waste regulations of sections 33-24-05-701 through 33-24-05-765 by using a generic name to identify the waste category (for example, batteries), the definition of universal waste in section 33-24-01-04 will be amended to include only the hazardous waste portion of the waste category (for example, hazardous waste batteries).) Thus, only the portion of the waste stream that does exhibit one or more characteristics (therefore, is hazardous waste) is subject to the universal waste regulations of sections 33-24-05-701 through 33-24-05-765; The owner or operator of a destination facility is prohibited from sending or taking universal waste to a place other than a universal waste handler, another destination facility, or foreign destination.~~
2. ~~The waste or category of waste is not exclusive to a specific industry or group of industries, is commonly generated by a wide variety of types of establishments (including, for example, households, retail and commercial businesses, office complexes, conditionally exempt small quantity generators, small businesses, government organizations, as well as large industrial facilities); The owner or operator of a destination facility may reject a shipment containing universal waste or a portion of a shipment containing universal waste. If the owner or operator of the destination facility rejects a shipment or a portion of a shipment, the destination facility must contact the shipper to notify the shipper of the rejection and to discuss reshipment of the load. The owner or operator of the destination facility shall:~~
  - a. Send the shipment back to the original shipper; or
  - b. If agreed to by both the shipper and the owner or operator of the destination facility, send the shipment to another destination facility.
3. ~~The waste or category of waste is generated by a large number of generators (for example, more than one thousand nationally) and is frequently generated in relatively small quantity by each generator; If the~~



owner or operator of a destination facility receives a shipment containing hazardous waste that is not a universal waste, the owner or operator of the destination facility shall immediately notify the department of the illegal shipment, and provide the name, address, and telephone number of the originating shipper. The department will provide instructions for managing the hazardous waste.

- ~~4. Systems to be used for collecting the waste or category of waste (including packaging, marking, and labeling practices) would ensure close stewardship of the waste; If the owner or operator of a destination facility receives a shipment of nonhazardous, nonuniversal waste, the owner or operator of the destination facility may manage the waste in any way that is in compliance with applicable federal or state solid waste regulations.~~
- ~~5. The risk posed by the waste or category of waste during accumulation and transport is relatively low compared to other hazardous wastes; and specific management standards proposed or referenced by the petitioner (for example, waste management requirement appropriate to be added to sections 33-24-05-713, 33-24-05-728, and 33-24-05-742; or applicable department of transportation requirements) would be protective of human health and environment during accumulation and transport;~~
- ~~6. Regulation of the waste or category of waste under sections 33-24-05-701 through 33-24-05-765 will increase the likelihood that the waste will be diverted from the nonhazardous waste management systems (for example, the municipal waste stream, nonhazardous industrial or commercial waste stream, municipal sewer, or stormwater systems) to recycling, treatment, or disposal in compliance with the hazardous waste management rules;~~
- ~~7. Regulation of the waste or category of waste under sections 33-24-05-701 through 33-24-05-765 will improve implementation of the hazardous waste regulatory program; and~~
- ~~8. Such other factors as may be appropriate.~~

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

#### **33-24-05-762. [Reserved] Tracking universal waste shipments.**

1. The owner or operator of a destination facility shall keep a record of each shipment of universal waste received at the facility. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste sent must include the following information:

- a. The name and address of the universal waste handler, destination facility, or foreign shipper from whom the universal waste was sent;
  - b. The quantity of each type of universal waste received (for example, batteries, pesticides, mercury containing devices); and
  - c. The date of receipt of the shipment of universal waste.
2. The owner or operator of a destination facility must retain the records described in subsection 1 for at least three years from the date of receipt of a shipment of universal waste.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

33-24-05-765. [Reserved]

33-24-05-766. [Reserved]

33-24-05-767. [Reserved]

33-24-05-768. [Reserved]

33-24-05-769. [Reserved]

**33-24-05-770. Imports.** Persons managing universal waste that is imported from a foreign country into the United States are subject to the applicable requirements of sections 33-24-05-701 through 33-24-05-799, immediately after the waste enters the United States, as indicated below:

1. A universal waste transporter is subject to the universal waste transporter requirements of sections 33-24-05-740 through 33-24-05-749.
2. A universal waste handler is subject to the universal waste handler requirements of sections 33-24-05-710 through 33-24-05-739, as applicable.
3. An owner or operator of a destination facility is subject to the destination facility requirements of sections 33-24-05-750 through 33-24-05-754.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

33-24-05-771. [Reserved]

33-24-05-772. [Reserved]



33-24-05-773. [Reserved]

33-24-05-774. [Reserved]

33-24-05-775. [Reserved]

33-24-05-776. [Reserved]

33-24-05-777. [Reserved]

33-24-05-778. [Reserved]

33-24-05-779. [Reserved]

33-24-05-780. Petitions to include other wastes under sections 33-24-05-701 through 33-24-05-799.

1. Any person seeking to add a hazardous waste or a category of hazardous waste to sections 33-24-05-701 through 33-24-05-799 may petition for a regulatory amendment under sections 33-24-05-760 through 33-24-05-799, 33-24-01-06, and 33-24-01-08.
2. To be successful, the petitioner must demonstrate to the satisfaction of the department that regulation under the universal waste regulations of sections 33-24-05-701 through 33-24-05-799 is appropriate for the waste or category of waste; will improve management practices for the waste or category of waste; and will improve implementation of the hazardous waste program. The petition must include the information required by subsection 2 of section 33-24-01-06. The petition should also address as many of the factors listed in section 33-24-05-761 as are appropriate for the waste or waste category addressed in the petition.
3. The department will evaluate petitions using the factors listed in section 33-24-05-761. The department will grant or deny a petition using the factors listed in section 33-24-05-761. The decision will be based on the weight of evidence showing that regulation under sections 33-24-05-701 through 33-24-05-799 is appropriate for the waste or category of waste, will improve management practices for the waste of category of waste, and will improve implementation of the hazardous waste program.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

33-24-05-781. Factors for petitions to include other wastes under sections 33-24-05-701 through 33-24-05-799.

1. The waste or category of waste, as generated by a wide variety of generators, is listed in sections 33-24-02-15 through 33-24-02-19, or (if not listed) a proportion of the waste stream exhibits one or more characteristics of hazardous waste identified in sections 33-24-02-10 through 33-24-02-14. (When a characteristic waste is added to the universal waste regulations of sections 33-24-05-701 through 33-24-05-799 by using a generic name to identify the waste category (for example, batteries), the definition of universal waste in section 33-24-01-04 will be amended to include only the hazardous waste portion of the waste category (for example, hazardous waste batteries).) Thus, only the portion of the waste stream that does exhibit one or more characteristics (therefore, is hazardous waste) is subject to the universal waste regulations of sections 33-24-05-701 through 33-24-05-799;
2. The waste or category of waste is not exclusive to a specific industry or group of industries, is commonly generated by a wide variety of types of establishments (including, for example, households, retail and commercial businesses, office complexes, conditionally exempt small quantity generators, small businesses, government organizations, as well as large industrial facilities);
3. The waste or category of waste is generated by a large number of generators (for example, more than one thousand nationally) and is frequently generated in relatively small quantity by each generator;
4. Systems to be used for collecting the waste or category of waste (including packaging, marking, and labeling practices) would ensure close stewardship of the waste;
5. The risk posed by the waste or category of waste during accumulation and transport is relatively low compared to other hazardous wastes, and specific management standards proposed or referenced by the petitioner (for example, waste management requirements appropriate to be added to sections 33-24-05-713, 33-24-05-733, and 33-24-05-752; or applicable department of transportation requirements) would be protective of human health and the environment during accumulation and transport;
6. Regulation of the waste or category of waste under sections 33-24-05-701 through 33-24-05-799 will increase the likelihood that the waste will be diverted from the nonhazardous waste management systems (for example, the municipal waste stream, nonhazardous industrial or commercial waste stream, municipal sewer, or stormwater systems) to recycling, treatment, or disposal in compliance with the hazardous waste management rules;

7. Regulation of the waste or category of waste under sections 33-24-05-701 through 33-24-05-799 will improve implementation of the hazardous waste regulatory program; and
8. Such other factors as may be appropriate.

History: Effective December 1, 2003.

General Authority: NDCC 23-20.3-03

Law Implemented: NDCC 23-20.3-03, 23-20.3-04

33-24-05-782. [Reserved]

33-24-05-783. [Reserved]

33-24-05-784. [Reserved]

33-24-05-785. [Reserved]

33-24-05-786. [Reserved]

33-24-05-787. [Reserved]

33-24-05-788. [Reserved]

33-24-05-789. [Reserved]

33-24-05-790. [Reserved]

33-24-05-791. [Reserved]

33-24-05-792. [Reserved]

33-24-05-793. [Reserved]

33-24-05-794. [Reserved]

33-24-05-795. [Reserved]

33-24-05-796. [Reserved]

33-24-05-797. [Reserved]

33-24-05-798. [Reserved]

33-24-05-799. [Reserved]

33-24-05-800. Applicability - Military munitions. The requirements of sections 33-24-05-800 through 33-24-05-819 apply to owners or operators who store munitions and explosive hazardous wastes, except as section 33-24-05-01



provides otherwise. (Note: Depending on explosive hazards, hazardous waste munitions and explosives may also be managed in other types of storage units, including containment buildings (sections 33-24-05-475 through 33-24-05-500), tanks (sections 33-24-05-103 through 33-24-05-117), or containers (sections 33-24-05-89 through 33-24-05-102); see section 33-24-05-825 for storage of waste military munitions.)

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

### **33-24-05-801. Design and operating standards.**

1. Hazardous waste munitions and explosives storage units must be designed and operated with containment systems, controls, and monitoring, that:
  - a. Minimize the potential for detonation or other means of release of hazardous waste, hazardous constituents, hazardous decomposition products, or contaminated runoff to the soil, ground water, surface water, and atmosphere;
  - b. Provide a primary barrier, which may be a container (including a shell) or tank, designed to contain the hazardous waste;
  - c. For wastes stored outdoors, provide that the waste and containers will not be in standing precipitation;
  - d. For liquid wastes, provide a secondary containment system that assures that any released liquids are contained and promptly detected and removed from the waste area, or vapor detection system that assures that any released liquids or vapors are promptly detected and an appropriate response taken (for example, additional containment, such as overpacking, or removal from the waste area); and
  - e. Provide monitoring and inspection procedures that assure the controls and containment systems are working as designed and that releases that may adversely impact human health or the environment are not escaping from the unit.
2. Hazardous waste munitions and explosives stored under sections 33-24-05-800 through 33-24-05-819 may be stored in one of the following:
  - a. Earth-covered magazines. Earth-covered magazines must be:



- (1) Constructed of waterproofed, reinforced concrete or structural steel arches, with steel doors that are kept closed when not being accessed;
  - (2) Designed and constructed:
    - (a) To be of sufficient strength and thickness to support the weight of any explosives or munitions stored and any equipment used in the unit;
    - (b) To provide working space for personnel and equipment in the unit; and
    - (c) To withstand movement activities that occur in the unit; and
  - (3) Located and designed, with walls and earthen covers that direct an explosion in the unit in a safe direction, so as to minimize the propagation of an explosion to adjacent units and to minimize other effects of any explosion.
- b. Aboveground magazines. Aboveground magazines must be located and designed so as to minimize the propagation of an explosion to adjacent units and to minimize other effects of any explosion.
- c. Outdoor or open storage areas. Outdoor or open storage areas must be located and designed so as to minimize the propagation of an explosion to adjacent units and to minimize other effects of any explosion.
3. Hazardous waste munitions and explosives must be stored in accordance with a standard operating procedure specifying procedures to ensure safety, security, and environmental protection. If these procedures serve the same purpose as the security and inspection requirements of section 33-24-05-05, the preparedness and prevention procedures of sections 33-24-05-12 through 33-24-05-21, and the contingency plan and emergency procedures requirements of sections 33-24-05-22 through 33-24-05-36, then these procedures will be used to fulfill those requirements.
4. Hazardous waste munitions and explosives must be packaged to ensure safety in handling and storage.
5. Hazardous waste munitions and explosives must be inventoried at least annually.

6. Hazardous waste munitions and explosives and their storage units must be inspected and monitored as necessary to ensure explosives safety and to ensure that there is no migration of contaminants out of the unit.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-802. Closure and postclosure care.**

1. At closure of a magazine or unit which stored hazardous waste under sections 33-24-05-800 through 33-24-05-819, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components, contaminated subsoils, and structures and equipment contaminated with waste, and manage them as hazardous waste unless subsection 4 of section 33-24-02-03 applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for magazines or units must meet all of the requirements specified in sections 33-24-05-59 through 33-24-05-88, except that the owner or operator may defer closure of the unit as long as it remains in service as a munitions or explosives magazine or storage unit.
2. If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in subsection 1, the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, they must close the facility and perform postclosure care in accordance with the closure and postclosure requirements that apply to landfills in section 33-24-05-180.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-803. [Reserved]**

**33-24-05-804. [Reserved]**

**33-24-05-805. [Reserved]**

**33-24-05-806. [Reserved]**

**33-24-05-807. [Reserved]**

**33-24-05-808. [Reserved]**

**33-24-05-809. [Reserved]**

33-24-05-810. [Reserved]

33-24-05-811. [Reserved]

33-24-05-812. [Reserved]

33-24-05-813. [Reserved]

33-24-05-814. [Reserved]

33-24-05-815. [Reserved]

33-24-05-816. [Reserved]

33-24-05-817. [Reserved]

33-24-05-818. [Reserved]

33-24-05-819. [Reserved]

33-24-05-820. Applicability.

1. The regulations in sections 33-24-05-820 through 33-24-05-849 identify when military munitions become a solid waste, and, if these wastes are also hazardous under sections 33-24-05-820 through 33-24-05-849 or chapter 33-24-02, the management standards that apply to these wastes.
2. Unless otherwise specified in sections 33-24-05-820 through 33-24-05-849, all applicable requirements in article 33-24 apply to waste military munitions.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-821. Definitions.** In addition to the definitions in section 33-24-01-04, the following definitions apply to sections 33-24-05-820 through 33-24-05-849:

1. "Active range" means a military range that is currently in service and is being regularly used for range activities.
2. "Chemical agents and munitions" are defined as in 50 U.S.C. section 1521(j)(1).
3. "Director" means the director of the division of waste management, state department of health.



4. "Inactive range" means a military range that is not currently being used, but that is still under military control and considered by the military to be a potential range area, and that has not been put to a new use that is incompatible with range activities.
5. "Military" means the department of defense, the armed services, coast guard, national guard, department of energy, or other parties under contract or acting as an agent for the foregoing, who handle military munitions.
6. "Military range" means designated land and water areas set aside, managed, and used to conduct research on, develop, test, and evaluate military munitions and explosives, other ordnance, or weapon systems, or to train military personnel in their use and handling. Ranges include firing lines and positions, maneuver areas, firing lanes, test pads, detonation pads, impact areas, and buffer zones with restricted access and exclusionary areas.
7. "Unexploded ordnance" means military munitions that have been primed, fused, armed, or otherwise prepared for action, and have been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installation, personnel, or material and remain unexploded either by malfunction, design, or any other cause.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-822. Definition of solid waste.**

1. A military munition is not a solid waste when:
  - a. Used for its intended purpose, including:
    - (1) Use in training military personnel or explosives and munitions emergency response specialists (including training in proper destruction of unused propellant or other munitions);
    - (2) Use in research, development, testing, and evaluation of military munitions, weapons, or weapon systems; or
    - (3) Recovery, collection, and on-range destruction of unexploded ordnance and munitions fragments during range clearance activities at active or inactive ranges. However, "use for intended purpose" does not include the on-range disposal or burial of unexploded ordnance and contaminants when the burial is not a result of product use.



- b. An unused munition, or component thereof, is being repaired, reused, recycled, reclaimed, disassembled, reconfigured, or otherwise subjected to materials recovery activities, unless such activities involve use constituting disposal (as defined in subdivision a of subsection 3 of section 33-24-02-02) or burning for energy recovery (as defined in subdivision b of subsection 3 of section 33-24-02-02).
- 2. An unused military munition is a solid waste when any of the following occurs:
  - a. The munition is abandoned by being disposed of, burned, detonated (except during intended use as specified in subsection 1), incinerated, or treated prior to disposal;
  - b. The munition is removed from storage in a military magazine or other storage area for the purpose of being disposed of, burned, or incinerated, or treated prior to disposal;
  - c. The munition is deteriorated or damaged (for example, the integrity of the munition is compromised by cracks, leaks, or other damage) to the point that it cannot be put into serviceable condition, and cannot reasonably be recycled or used for other purposes; or
  - d. The munition has been declared a solid waste by an authorized military official.
- 3. A used or fired military munition is a solid waste:
  - a. When transported off-range or from the site of use, where the site of use is not a range, for the purposes of storage, reclamation, treatment, disposal, or treatment prior to disposal; or
  - b. If recovered, collected, and then disposed of by burial, or landfilling either on or off a range.
- 4. For purposes of Resource Conservation and Recovery Act section 1004(27), a used or fired military munition is a solid waste, and, therefore, is potentially subject to corrective action authorities under Resource Conservation and Recovery Act sections 3004(u) and (v), and 3008(h), or imminent and substantial endangerment authorities under section 7003, if the munition lands offrange and is not promptly rendered safe or retrieved, or both. Any imminent and substantial threats associated with any remaining material must be addressed. If remedial action is infeasible, the operator of the range must maintain a record of the event for as long as any threat remains. The record must

include the type of munition and its location (to the extent the location is known).

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-823. Standards applicable to the transportation of solid waste military munitions.**

1. Criteria for hazardous waste regulation of waste nonchemical military munitions in transportation.
  - a. Waste military munitions that are being transported and that exhibit a hazardous waste characteristic or are listed as hazardous waste under chapter 33-24-02 are listed or identified as a hazardous waste (and thus are subject to regulation under article 33-24), unless all the following conditions are met:
    - (1) The waste military munitions are not chemical agents or chemical munitions;
    - (2) The waste military munitions must be transported in accordance with the department of defense shipping controls applicable to the transport of military munitions;
    - (3) The waste military munitions must be transported from a military owned or operated installation to a military owned or operated treatment, storage, or disposal facility; and
    - (4) The transporter of the waste must provide oral notice to the department within twenty-four hours from the time the transporter becomes aware of any loss or theft of the waste military munitions, or any failure to meet a condition of this subdivision that may endanger health or the environment. In addition, a written submission describing the circumstances shall be provided within five days from the time the transporter becomes aware of any loss or theft of the waste military munitions or any failure to meet a condition of this subdivision.
  - b. If any waste military munitions shipped under subdivision a are not received by the receiving facility within forty-five days of the day the waste was shipped, the owner or operator of the receiving facility must report this nonreceipt to the department within five days.
  - c. The exemption in subdivision a from regulation as hazardous waste shall apply only to the transportation of nonchemical waste military munitions. It does not affect the regulatory status of waste military

munitions as hazardous wastes with regard to storage, treatment, or disposal.

- d. The conditional exemption in subdivision a applies only so long as all of the conditions in subdivision a are met.

2. Reinstatement of exemption. If any waste military munition loses its exemption under subdivision a of subsection 1, an application may be filed with the director for reinstatement of the exemption from hazardous waste transportation regulation with respect to such munition as soon as the munition is returned to compliance with the conditions of subdivision a of subsection 1. If the department finds that reinstatement of the exemption is appropriate based on factors such as the transporter's provision of a satisfactory explanation of the circumstances of the violation, or a demonstration that the violations are not likely to recur, the department may reinstate the exemption under subdivision a of subsection 1. If the department does not take action on the reinstatement application within sixty days after receipt of the application, then reinstatement shall be deemed granted, retroactive to the date of the application. However, the department may terminate a conditional exemption reinstated by default in the preceding sentence if the department finds that reinstatement is inappropriate based on factors such as the transporter's failure to provide a satisfactory explanation of the circumstances of the violation, or failure to demonstrate that the violations are not likely to recur. In reinstating the exemption under subdivision a of subsection 1, the department may specify additional conditions as are necessary to ensure and document proper transportation to protect human health and the environment.
3. Amendments to department of defense shipping controls. The department of defense shipping controls applicable to the transport of military munitions referenced in paragraph 2 of subdivision a of subsection 1 are government bill of lading (GSA standard form 1109), requisition tracking form (DD form 1348), the signature and tally record (DD form 1907), special instructions for motor vehicle drivers (DD form 836), and the motor vehicle inspection report (DD form 626) in effect on November 8, 1995, except as provided in the following sentence. Any amendments to the department of defense shipping controls shall become effective for purposes of subdivision a of subsection 1 on the date the department of defense publishes notice in the federal register that the shipping controls referenced in paragraph 2 of subdivision a of subsection 1 have been amended.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04



**33-24-05-824. Standards applicable to emergency responses.**

Explosives and munitions emergencies involving military munitions or explosives are subject to subsection 7 of section 33-24-03-01, subsection 5 of section 33-24-04-01, paragraph 1 of subdivision g of subsection 6 of section 33-24-05-01, 40 CFR 265.1(c)(11) as incorporated by reference at subsection 5 of section 33-24-06-16, and paragraph 9 of subdivision b of subsection 2 of section 33-24-06-01, and subsection 1 of section 33-24-06-19.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-825. Standards applicable to the storage of solid waste military munitions.**

1. Criteria for hazardous waste regulation of waste nonchemical military munitions in storage.
  - a. Waste military munitions in storage that exhibit a hazardous waste characteristic or are listed as hazardous waste under chapter 33-24-02 are listed or identified as a hazardous waste (and thus are subject to regulation under article 33-24), unless all the following conditions are met:
    - (1) The waste military munitions are not chemical agents or chemical munitions.
    - (2) The waste military munitions must be subject to the jurisdiction of the department of defense explosives safety board.
    - (3) The waste military munitions must be stored in accordance with the department of defense explosives safety board storage standards applicable to waste military munitions.
    - (4) Within ninety days of August 12, 1997, or within ninety days of when a storage unit is first used to store waste military munitions, whichever is later, the owner or operator must notify the department of the location of any waste storage unit used to store waste military munitions for which the conditional exemption in this subdivision is claimed.
    - (5) The owner or operator must provide oral notice to the department within twenty-four hours from the time the owner or operator becomes aware of any loss or theft of the waste military munitions, or any failure to meet a condition of this subdivision that may endanger health or the environment. In addition, a written submission describing the circumstances shall be provided within five days from the time the owner



or operator becomes aware of any loss or theft of the waste military munitions or any failure to meet a condition of this subdivision.

(6) The owner or operator must inventory the waste military munitions at least annually, must inspect the waste military munitions at least quarterly for compliance with the conditions of this subdivision, and must maintain records of the findings of these inventories and inspections for at least three years.

(7) Access to the stored waste military munitions must be limited to appropriately trained and authorized personnel.

b. The conditional exemption in subdivision a from regulation as hazardous waste shall apply only to the storage of nonchemical waste military munitions. It does not affect the regulatory status of waste military munitions as hazardous wastes with regard to transportation, treatment, or disposal.

c. The conditional exemption in subdivision a applies only so long as all of the conditions in subdivision a are met.

2. Notice of termination of waste storage. The owner or operator must notify the department when a storage unit identified in paragraph 4 of subdivision a of subsection 1 will no longer be used to store waste military munitions.

3. Reinstatement of conditional exemption. If any waste military munition loses its conditional exemption under subdivision a of subsection 1, an application may be filed with the department for reinstatement of the conditional exemption from hazardous waste storage regulation with respect to such munition as soon as the munition is returned to compliance with the conditions of subdivision a of subsection 1. If the department finds that reinstatement of the conditional exemption is appropriate based on factors such as the owner's or operator's provision of a satisfactory explanation of the circumstances of the violation, or a demonstration that the violations are not likely to recur, the department may reinstate the conditional exemption under subdivision a of subsection 1. If the department does not take action on the reinstatement application within sixty days after receipt of the application, then reinstatement shall be deemed granted, retroactive to the date of the application. However, the department may terminate a conditional exemption reinstated by default in the preceding sentence if the department finds that reinstatement is inappropriate based on factors such as the owner's or operator's failure to provide a satisfactory explanation of the circumstances of the violation, or failure to demonstrate that the violations are not likely to recur. In reinstating the conditional exemption under subdivision a of subsection 1, the department may specify additional conditions as are necessary to

ensure and document proper storage to protect human health and the environment.

4. Waste chemical munitions.

a. Waste military munitions that are chemical agents or chemical munitions and that exhibit a hazardous waste characteristic or are listed as hazardous waste under chapter 33-24-02 are listed or identified as a hazardous waste and shall be subject to the applicable regulatory requirements of article 33-24.

b. Waste military munitions that are chemical agents or chemical munitions and that exhibit a hazardous waste characteristic or are listed as hazardous waste under chapter 33-24-02 are not subject to the storage prohibition in Resource Conservation and Recovery Act section 3004(j), codified in section 33-24-05-290.

5. Amendments to department of defense explosives safety board storage standards. The department of defense explosives safety board storage standards applicable to waste military munitions, referenced in paragraph 3 of subdivision a of subsection 1, are department of defense 6055.9-STD ("DOD ammunition and explosive safety standards"), in effect on November 8, 1995, except as provided in the following sentence. Any amendments to the department of defense explosives safety board storage standards shall become effective for purposes of subdivision a of subsection 1 on the date the department of defense publishes notice in the federal register that the department of defense explosives safety board standards referenced in subdivision a of subsection 1 have been amended.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-826. Standards applicable to the treatment and disposal of waste military munitions.** The treatment and disposal of hazardous waste military munitions are subject to the applicable permitting, procedural, and technical standards in article 33-24.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-827. [Reserved]**

**33-24-05-828. [Reserved]**

**33-24-05-829. [Reserved]**

33-24-05-830. [Reserved]

33-24-05-831. [Reserved]

33-24-05-832. [Reserved]

33-24-05-833. [Reserved]

33-24-05-834. [Reserved]

33-24-05-835. [Reserved]

33-24-05-836. [Reserved]

33-24-05-837. [Reserved]

33-24-05-838. [Reserved]

33-24-05-839. [Reserved]

33-24-05-840. [Reserved]

33-24-05-841. [Reserved]

33-24-05-842. [Reserved]

33-24-05-843. [Reserved]

33-24-05-844. [Reserved]

33-24-05-845. [Reserved]

33-24-05-846. [Reserved]

33-24-05-847. [Reserved]

33-24-05-848. [Reserved]

33-24-05-849. [Reserved]

33-24-05-850. Definitions applicable to the conditional exemption for low-level mixed waste storage, treatment, transportation, and disposal. For sections 33-24-05-850 through 33-24-05-949, use the following special definitions:

1. "Agreement state" means a state that has entered into an agreement with the nuclear regulatory commission under subsection 274b of the Atomic Energy Act of 1954, as amended [68 Stat. 919], to assume responsibility for regulating within its borders byproduct, source, or



special nuclear material in quantities not sufficient to form a critical mass. North Dakota is an agreement state.

2. "Certified delivery" means certified mail with return receipt requested, or equivalent courier service, or other means, that provides the sender with a receipt confirming delivery.
3. "Eligible naturally occurring or accelerator-produced radioactive material, or both (NARM)" is NARM that is eligible for the transportation and disposal conditional exemption. It is a NARM waste that contains hazardous waste, meets the waste acceptance criteria of, and is allowed by applicable state NARM regulations to be disposed of at a low-level radioactive waste disposal facility licensed in accordance with 10 CFR part 61 or nuclear regulatory commission agreement state equivalent regulations.
4. "Exempted waste" means a waste that meets the eligibility criteria in section 33-24-05-856 and meets all of the conditions in section 33-24-05-857, or meets the eligibility criteria in section 33-24-05-890 and complies with all the conditions in section 33-24-05-895. Such waste is conditionally exempted from the regulatory definition of hazardous waste described in section 33-24-02-03.
5. "Hazardous waste" means any material which is defined to be hazardous waste in accordance with section 33-24-02-03.
6. "Land disposal restriction treatment standards" means treatment standards, under sections 33-24-05-250 through 33-24-05-299, that a hazardous waste must meet before it can be disposed of in a permitted hazardous waste land disposal unit.
7. "License" means a license issued by the nuclear regulatory commission, or nuclear regulatory commission agreement state, to users that manage radionuclides regulated by nuclear regulatory commission, or nuclear regulatory commission agreement states, under authority of the Atomic Energy Act of 1954, as amended.
8. "Low-level mixed waste" is a waste that contains both low-level radioactive waste and hazardous waste.
9. "Low-level radioactive waste" is a radioactive waste which contains source, special nuclear, or byproduct material, and which is not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material as defined in section 11e.(2) of the Atomic Energy Act. See also nuclear regulatory commission definition of "waste" at 10 CFR 61.2.



10. "Mixed waste" means a waste that contains both hazardous waste and source, special nuclear, or byproduct material subject to the Atomic Energy Act of 1954, as amended.
11. "Naturally occurring radioactive material, accelerator-produced radioactive material, or both (NARM)" means radioactive materials that:
- a. Are naturally occurring and are not source, special nuclear, or byproduct materials (as defined by the Atomic Energy Act); or
  - b. Are produced by an accelerator.
- NARM is regulated by the states under state law, or by department of energy (as authorized by the Atomic Energy Act) under department of energy orders.
12. "Nuclear regulatory commission" means the United States nuclear regulatory commission.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-851. [Reserved]**

**33-24-05-852. [Reserved]**

**33-24-05-853. [Reserved]**

**33-24-05-854. [Reserved]**

**33-24-05-855. Storage and treatment conditional exemption and eligibility.** The storage and treatment conditional exemption exempts certain low-level mixed waste from the regulatory definition of hazardous waste in section 33-24-02-03 if the waste meets the eligibility criteria in section 33-24-05-856 and the generator, treater, or other handler meets the conditions in section 33-24-05-857.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-856. Eligible wastes for the storage and treatment conditional exemption.** Low-level mixed waste, defined in section 33-24-05-850, is eligible for this conditional exemption if it is generated and managed by a generator, treater, or other handler under a single nuclear regulatory commission or nuclear regulatory commission agreement state license. (Mixed waste generated at a facility with a different license number and shipped to a facility for storage or treatment requires

a permit and is ineligible for this exemption. In addition, NARM waste is ineligible for this exemption.)

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-857. Conditions to qualify for and maintain a storage and treatment exemption.**

1. For a generator's, treater's, or other handler's low-level mixed waste to qualify for the exemption, the generator, treater, or other handler must notify the department in writing by certified delivery that the generator, treater, or other handler is claiming a conditional exemption for the low-level mixed waste stored at the facility. The dated notification must include the generator's, treater's, or other handler's name, address, identification number, nuclear regulatory commission or nuclear regulatory commission agreement state license number, the waste code or codes and storage unit or units for which an exemption is being sought, and a statement that the generator, treater, or other handler meets the conditions of sections 33-24-05-850 through 33-24-05-949. The notification must be signed by an authorized representative who certifies that the information in the notification is true, accurate, and complete. The generator, treater, or other handler must notify the department of the claim either within ninety days of the effective date of this rule, or within ninety days of when a storage unit is first used to store conditionally exempt low-level mixed waste.
2. To qualify for and maintain an exemption for low-level mixed waste, the generator, treater, or other handler must:
  - a. Store low-level mixed waste in tanks or containers in compliance with the requirements of the generator's, treater's, or other handler's license that apply to the proper storage of low-level radioactive waste (not including those license requirements that relate solely to recordkeeping):
  - b. Store low-level mixed waste in tanks or containers in compliance with chemical compatibility requirements of a tank or container in section 33-24-05-96, or section 33-24-05-112:
  - c. Certify that facility personnel who manage stored conditionally exempt low-level mixed waste are trained in a manner that ensures that the conditionally exempt waste is safely managed and includes training in chemical waste management and hazardous materials incidents response that meets the personnel training standards found in subdivision c of subsection 1 of section 33-24-05-07:

- d. Conduct an inventory of the generator's, treater's, or other handler's stored conditionally exempt low-level mixed waste at least annually and inspect it at least quarterly for compliance with sections 33-24-05-850 through 33-24-05-949; and
- e. Maintain an accurate emergency plan and provide copies of the plan to all local authorities who may have to respond to a fire, explosion, or release of hazardous waste or hazardous constituents. The plan must describe emergency response arrangements with local authorities; describe evacuation plans; list the names, addresses, and telephone numbers of all facility personnel qualified to work with local authorities as emergency coordinators; and list emergency equipment.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-858. [Reserved]**

**33-24-05-859. [Reserved]**

**33-24-05-860. Treatment allowed under storage and treatment conditional exemption.** A generator, treater, or other handler may treat low-level mixed waste at the facility within a tank or container in accordance with the terms of the generator's, treater's, or other handler's nuclear regulatory commission or nuclear regulatory commission agreement state license. Treatment that cannot be done in a tank or container without a hazardous waste permit (such as incineration) is not allowed under this exemption.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-861. [Reserved]**

**33-24-05-862. [Reserved]**

**33-24-05-863. [Reserved]**

**33-24-05-864. [Reserved]**

**33-24-05-865. Loss of conditional exemption.**

- 1. A generator's, treater's, or other handler's low-level mixed waste will automatically lose the storage and treatment conditional exemption if the generator, treater, or other handler fails to meet any of the conditions specified in section 33-24-05-857. When low-level mixed waste loses the exemption, the generator, treater, or other handler must immediately



manage that waste which failed the condition as hazardous waste, and the storage unit storing the low-level mixed waste immediately becomes subject to hazardous waste container or tank storage requirements, as applicable.

a. If a generator, treater, or other handler fails to meet any of the conditions specified in section 33-24-05-857 the generator, treater, or other handler must report to the department and the nuclear regulatory commission, or the oversight agency in the nuclear regulatory commission agreement state, in writing by certified delivery within thirty days of learning of the failure. The report must be signed by an authorized representative certifying that the information provided is true, accurate, and complete. This report must include:

- (1) The specific condition or conditions the generator, treater, or other handler failed to meet;
- (2) A description of the low-level mixed waste (including the waste name, hazardous waste code or codes and quantity) and storage location at the facility; and
- (3) The date or dates on which the generator, treater, or other handler failed to meet the condition or conditions.

b. If the failure to meet any of the conditions may endanger human health or the environment, the generator, treater, or other handler must also immediately notify the department orally within twenty-four hours and follow up with a written notification within five days. Failures that may endanger human health or the environment include discharge of a comprehensive environmental response, compensation and liability act reportable quantity or other leaking or exploding tanks or containers, or detection of radionuclides above background or hazardous constituents in the leachate collection system of a storage area. If the failure may endanger human health or the environment, the generator, treater, or other handler must follow the provisions of the emergency plan.

2. The department may terminate the conditional exemption for the generator's, treater's, or other handler's low-level mixed waste, or require the generator, treater, or other handler to meet additional conditions to claim a conditional exemption, for serious or repeated noncompliance with any requirement or requirements of sections 33-24-05-850 through 33-24-05-949.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04



**33-24-05-866. Procedures to reclaim a lost storage and treatment conditional exemption for low-level mixed waste.**

1. A generator, treater, or other handler may reclaim the storage and treatment exemption for low-level mixed waste if:
  - a. The generator, treater, or other handler again meets the conditions specified in section 33-24-05-857; and
  - b. The generator, treater, or other handler sends the department a notice by certified delivery that the generator, treater, or other handler is reclaiming the exemption for low-level mixed waste. The notice must be signed by an authorized representative certifying that the information contained in the notice is true, complete, and accurate. In the notice the generator, treater, or other handler must do the following:
    - (1) Explain the circumstances of each failure.
    - (2) Certify that the generator, treater, or other handler has corrected each failure that caused the loss of the exemption for the low-level mixed waste and that the generator, treater, or other handler again meets all the conditions as of the date specified in the notice.
    - (3) Describe plans that have been implemented, listing specific steps taken to ensure the conditions will be met in the future.
    - (4) Include any other information the department should consider when reviewing the notice reclaiming the exemption.
2. The department may terminate a reclaimed conditional exemption if the department finds the claim is inappropriate based on factors including the following: failure to correct the problem; unsatisfactory explanation of the circumstances of the failure; or failure to implement a plan with steps to prevent another failure to meet the conditions of section 33-24-05-857. In reviewing a reclaimed conditional exemption under this section, the department may add conditions to the exemption to ensure that waste management during storage and treatment of the low-level mixed waste will protect human health and the environment.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-867. [Reserved]**

**33-24-05-868. [Reserved]**

**33-24-05-869. [Reserved].**

**33-24-05-870. Recordkeeping for the storage and treatment conditional exemption.**

1. In addition to those records required by the generator's, treater's, or other handler's nuclear regulatory commission or nuclear regulatory commission agreement state license, the generator, treater, or other handler must keep records as follows:
  - a. The generator's, treater's, or other handler's initial notification records, return receipts, reports to the department of failure or failures to meet the exemption conditions, and all records supporting any reclaim of an exemption;
  - b. Records of low-level mixed waste annual inventories, and quarterly inspections;
  - c. Certification that facility personnel who manage stored mixed waste are trained in safe management of low-level mixed waste, including training in chemical waste management and hazardous materials incidents response; and
  - d. The emergency plan as specified in subsection 2 of section 33-24-05-857.
2. The generator, treater, or other handler must maintain records concerning notification, personnel trained, and emergency plan for as long as the exemption is claimed and for three years thereafter, or in accordance with nuclear regulatory commission regulations under chapter 33-10-04.1 [10 CFR part 20], whichever is longer. The generator, treater, or other handler must maintain records concerning the annual inventory and quarterly inspections for three years after the waste is sent for disposal, or in accordance with nuclear regulatory commission regulations under chapter 33-10-04.1 [10 CFR part 20], whichever is longer.
3. The retention period referred to in this section is extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the department.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-871. [Reserved]**

**33-24-05-872. [Reserved]**

**33-24-05-873. [Reserved]**

**33-24-05-874. [Reserved]**

**33-24-05-875. Reentry into regulation under the hazardous waste management rules.** Low-level mixed waste is no longer eligible for the storage and treatment conditional exemption:

1. When the low-level mixed waste has met the requirements of the generator's, treater's, or other handler's nuclear regulatory commission or nuclear regulatory commission agreement state license for decay-in-storage and can be disposed of as nonradioactive waste, then the conditional exemption for storage no longer applies. On that date the waste is subject to hazardous waste regulation under the applicable sections of article 33-24, and the time period for accumulation of a hazardous waste as specified in section 33-24-03-12 begins.
2. When a generator's, treater's, or other handler's conditionally exempt low-level mixed waste, which has been generated and stored under a single nuclear regulatory commission or nuclear regulatory commission agreement state license number, is removed from storage, it is no longer eligible for the storage and treatment exemption, however, the waste may be eligible for the transportation and disposal conditional exemption at section 33-24-05-885.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-876. [Reserved]**

**33-24-05-877. [Reserved]**

**33-24-05-878. [Reserved]**

**33-24-05-879. [Reserved]**

**33-24-05-880. Storage unit closure.** Interim status and permitted storage units that have been used to store only low-level mixed waste prior to the effective date of sections 33-24-05-850 through 33-24-05-949 and, after that date, store only low-level mixed waste which becomes exempt under sections 33-24-05-850 through 33-24-05-949, are not subject to the closure requirements of sections 33-24-05-01 through 33-24-05-190, 33-24-05-300 through 33-24-05-524, 33-24-05-550 through 33-24-05-559, and 33-24-05-800 through 33-24-05-819 or applicable requirements of subsection 5 of section 33-24-06-16. Storage units (or portions of units) that have been used to store both low-level mixed waste and nonmixed hazardous waste prior to the effective date of sections 33-24-05-850

through 33-24-05-949 or are used to store both after that date remain subject to closure requirements with respect to the nonmixed hazardous waste.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05

**33-24-05-881. [Reserved]**

**33-24-05-882. [Reserved]**

**33-24-05-883. [Reserved]**

**33-24-05-884. [Reserved]**

**33-24-05-885. Transportation and disposal conditional exemption.** This conditional exemption exempts a generator's, treater's, or other handler's waste from the regulatory definition of hazardous waste in section 33-24-02-03 if the waste meets the eligibility criteria under section 33-24-05-890, and the generator, treater, or other handler meets the conditions in section 33-24-05-895.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-886. [Reserved]**

**33-24-05-887. [Reserved]**

**33-24-05-888. [Reserved]**

**33-24-05-889. [Reserved]**

**33-24-05-890. Eligibility for the transportation and disposal conditional exemption.** Eligible waste must be:

1. A low-level mixed waste, as defined in section 33-24-05-850, that meets the waste acceptance criteria of a low-level radioactive waste disposal facility;
2. An eligible NARM waste, defined in section 33-24-05-850; or
3. Both a low-level mixed waste and an eligible NARM waste.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-891. [Reserved]**



**33-24-05-892. [Reserved]**

**33-24-05-893. [Reserved]**

**33-24-05-894. [Reserved]**

**33-24-05-895. Conditions to qualify for and maintain the transportation and disposal conditional exemption.** A generator, treater, or other handler must meet the following conditions for the generator's, treater's, or other handler's eligible waste to qualify for and maintain the exemption:

- 1. The eligible waste must meet or be treated to meet land disposal restriction treatment standards as described in section 33-24-05-896.**
- 2. If the generator, treater, or other handler is not already subject to nuclear regulatory commission or nuclear regulatory commission agreement state equivalent manifest and transportation regulations for the shipment of the waste, the generator, treater, or other handler must manifest and transport the waste according to nuclear regulatory commission regulations as described in section 33-24-05-897.**
- 3. The exempted waste must be in containers when it is disposed of in the low-level radioactive waste disposal facility as described in section 33-24-05-900.**
- 4. The exempted waste must be disposed of at a designated low-level radioactive waste disposal facility as described in section 33-24-05-899.**

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-896. Treatment standards for eligible waste.** A generator's, treater's, or other handler's low-level mixed waste or eligible NARM waste must meet land disposal restriction treatment standards specified in sections 33-24-05-280 through 33-24-05-289.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-897. Manifest and transportation of eligible wastes not already subject to nuclear regulatory commission or nuclear regulatory commission agreement state equivalent manifest and transportation regulations.** If the generator, treater, or other handler is not already subject to nuclear regulatory commission or nuclear regulatory commission agreement state equivalent manifest and transportation regulations for the shipment of the generator's, treater's, or other handler's waste, then the generator, treater, or other handler must meet the manifest requirements under chapter 33-10-04.1 [10 CFR

20.2006], and the transportation requirements under chapter 33-10-13 [10 CFR 1.5] to ship the exempted waste.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-898. Transportation and disposal exemption.** The exemption becomes effective once all the following have occurred:

1. The generator's, treater's, or other handler's eligible waste meets the applicable land disposal restriction treatment standards.
2. The generator, treater, or other handler has received return receipts that the department and the low-level radioactive waste disposal facility have received notification as described in section 33-24-05-905.
3. The generator, treater, or other handler has completed the packaging and preparation for shipment requirements for the generator's, treater's, or other handler's waste according to nuclear regulatory commission packaging and transportation regulations found under chapter 33-10-13 [10 CFR part 71]; and the generator, treater, or other handler has prepared a manifest for the waste according to nuclear regulatory commission manifest regulations found under chapter 33-10-04.1 [10 CFR part 20].
4. The generator, treater, or other handler has placed the waste on a transportation vehicle destined for a low-level radioactive waste disposal facility licensed by the nuclear regulatory commission or a nuclear regulatory commission agreement state.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-899. Disposal facilities for exempted wastes.** The generator's, treater's, or other handler's exempted waste must be disposed of in a low-level radioactive waste disposal facility that is regulated and licensed by the nuclear regulatory commission under 10 CFR part 61 or by a nuclear regulatory commission agreement state under equivalent state regulations where the low-level radioactive waste disposal facility is located, including state NARM licensing regulations for eligible NARM.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04



**33-24-05-900. Disposal containers for exempted waste.** The generator's, treater's, or other handler's exempted waste must be placed in containers before it is disposed. The container must be:

1. A carbon steel drum;
2. An alternative container with equivalent containment performance in the disposal environment as a carbon steel drum; or
3. A high integrity container as defined by the nuclear regulatory commission.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-901. [Reserved]**

**33-24-05-902. [Reserved]**

**33-24-05-903. [Reserved]**

**33-24-05-904. [Reserved]**

**33-24-05-905. Notification.**

1. The generator, treater, or other handler must provide a one-time notice to the department stating that the generator, treater, or other handler is claiming the transportation and disposal conditional exemption prior to the initial shipment of an exempted waste from the generator's, treater's, or other handler's facility to a low-level radioactive waste disposal facility. The dated written notice must include the generator, treater, or other handler facility name, address, telephone number, and identification number, and be sent by certified delivery.
2. The generator, treater, or other handler must notify the low-level radioactive waste disposal facility receiving the exempted waste by certified delivery before shipment of each exempted waste. The generator, treater, or other handler can only ship the exempted waste after receipt of the return receipt of the notice to the low-level radioactive waste disposal facility. This notification must include the following:
  - a. A statement that the generator, treater, or other handler has claimed the exemption for the waste.
  - b. A statement that the eligible waste meets applicable land disposal restriction treatment standards.

- c. The generator, treater, or other handler facility's name, address, and identification number.
- d. The hazardous waste code or codes prior to the exemption of the waste streams.
- e. A statement that the exempted waste must be placed in a container according to section 33-24-05-900 prior to disposal in order for the waste to remain exempt under the transportation and disposal conditional exemption of sections 33-24-05-850 through 33-24-05-949.
- f. The manifest number of the shipment that will contain the exempted waste.
- g. A certification that all the information provided is true, complete, and accurate. The statement must be signed by an authorized representative.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-906. [Reserved]**

**33-24-05-907. [Reserved]**

**33-24-05-908. [Reserved]**

**33-24-05-909. [Reserved]**

**33-24-05-910. Recordkeeping for the transportation and disposal conditional exemption.** In addition to those records required by the generator's, treater's, or other handler's nuclear regulatory commission or nuclear regulatory commission agreement state license, the generator, treater, or other handler must keep records as follows:

1. The generator, treater, or other handler must follow the applicable existing recordkeeping requirements under sections 33-24-05-40 and 33-24-05-256 to demonstrate that the waste has met land disposal restriction treatment standards prior to claiming the exemption.
2. The generator, treater, or other handler must keep a copy of all notifications and return receipts required under sections 33-24-05-915 and 33-24-05-916 for three years after the exempted waste is sent for disposal.
3. The generator, treater, or other handler must keep a copy of all notifications and return receipts required under subsection 1 of section



33-24-05-905 for three years after the last exempted waste is sent for disposal.

4. The generator, treater, or other handler must keep a copy of the notification and return receipt required under subsection 2 of section 33-24-05-905 for three years after the exempted waste is sent for disposal.
5. If the generator, treater, or other handler is not already subject to nuclear regulatory commission or nuclear regulatory commission agreement state equivalent manifest and transportation regulations for the shipment of the waste, the generator, treater, or other handler must also keep all other documents related to tracking the exempted waste as required under chapter 33-10-04.1 (10 CFR 20.2006), including applicable NARM requirements, in addition to the records specified in subsections 1 through 4 of section 33-24-05-910.
6. The retention period referred to in this section is extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the department.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-911. [Reserved]**

**33-24-05-912. [Reserved]**

**33-24-05-913. [Reserved]**

**33-24-05-914. [Reserved]**

**33-24-05-915. Loss of transportation and disposal conditional exemption.**

1. Any waste will automatically lose the transportation and disposal exemption if the generator, treater, or other handler fails to manage it in accordance with all of the conditions specified in section 33-24-05-895.
  - a. When the generator, treater, or other handler fails to meet any of the conditions specified in section 33-24-05-895 for any wastes, the generator, treater, or other handler must report to the department, in writing by certified delivery, within thirty days of learning of the failure. The report must be signed by an authorized representative certifying that the information provided is true, accurate, and complete. This report must include:

- (1) The specific condition or conditions that the generator, treater, or other handler failed to meet for the waste;
    - (2) A description of the waste (including the waste name, hazardous waste code or codes and quantity) that lost the exemption; and
    - (3) The date or dates on which the generator, treater, or other handler failed to meet the condition or conditions for the waste.
  - b. If the failure to meet any of the conditions may endanger human health or the environment, the generator, treater, or other handler must also immediately notify the department orally within twenty-four hours and follow up with a written notification within five days.
2. The department may terminate the generator's, treater's, or other handler's ability to claim a conditional exemption for the waste, or require the generator, treater, or other handler to meet additional conditions to claim a conditional exemption, for serious or repeated noncompliance with any requirement or requirements of sections 33-24-05-850 through 33-24-05-949.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-05-916. Procedures to reclaim a lost transportation and disposal conditional exemption for low-level mixed waste.**

1. The generator, treater, or other handler may reclaim the transportation and disposal exemption for a waste after the generator, treater, or other handler has received a return receipt confirming that the department has received notification of the loss of the exemption specified in subsection 1 of section 33-24-05-915 and if:
  - a. The generator, treater, or other handler again meets the conditions specified in section 33-24-05-895 for the waste; and
  - b. The generator, treater, or other handler sends a notice, by certified delivery, to the department that the generator, treater, or other handler is reclaiming the exemption for the waste. The notice must be signed by an authorized representative certifying that the information provided is true, accurate, and complete. The notice must:
    - (1) Explain the circumstances of each failure.

- (2) Certify that each failure that caused the generator, treater, or other handler to lose the exemption for the waste has been corrected and that the generator, treater, or other handler again meets all conditions for the waste as of the date specified in the notice.
  - (3) Describe plans the generator, treater, or other handler has implemented, listing the specific steps taken, to ensure that conditions will be met in the future.
  - (4) Include any other information the department should consider when reviewing the notice reclaiming the exemption.
2. The department may terminate a reclaimed conditional exemption if the department finds that the generator's, treater's, or other handler's claim is inappropriate based on factors including failure to correct the problem; unsatisfactory explanation of the circumstances of the failure; or failure to implement a plan with steps to prevent another failure to meet the conditions of section 33-24-05-895. In reviewing a reclaimed conditional exemption under this section, the department may add conditions to the exemption to ensure that transportation and disposal activities will protect human health and the environment.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

33-24-05-917. [Reserved]

33-24-05-918. [Reserved]

33-24-05-919. [Reserved]

33-24-05-920. [Reserved]

33-24-05-921. [Reserved]

33-24-05-922. [Reserved]

33-24-05-923. [Reserved]

33-24-05-924. [Reserved]

33-24-05-925. [Reserved]

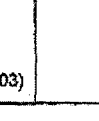
33-24-05-926. [Reserved]

33-24-05-927. [Reserved]

33-24-05-928. [Reserved]  
33-24-05-929. [Reserved]  
33-24-05-930. [Reserved]  
33-24-05-931. [Reserved]  
33-24-05-932. [Reserved]  
33-24-05-933. [Reserved]  
33-24-05-934. [Reserved]  
33-24-05-935. [Reserved]  
33-24-05-936. [Reserved]  
33-24-05-937. [Reserved]  
33-24-05-938. [Reserved]  
33-24-05-939. [Reserved]  
33-24-05-940. [Reserved]  
33-24-05-941. [Reserved]  
33-24-05-942. [Reserved]  
33-24-05-943. [Reserved]  
33-24-05-944. [Reserved]  
33-24-05-945. [Reserved]  
33-24-05-946. [Reserved]  
33-24-05-947. [Reserved]  
33-24-05-948. [Reserved]  
33-24-05-949. [Reserved]



**Notification of Hazardous Waste Activity Form (page 1 of 3)**

<b>NORTH DAKOTA HAZARDOUS WASTE SITE IDENTIFICATION FORM</b>																						
North Dakota Department of Health Division of Waste Management - Hazardous Waste Program																						
Replaces Page 1-3 of EPA Form 8700-23																						
Mail completed form to: NDDH, PO Box 5520, Bismarck ND 58508-5520		(01/03)																				
<b>1. Reason for Submittal: Check correct box(es)</b> <input type="checkbox"/> Initial Notification and obtain a State/EPA ID Number for hazardous waste, universal waste, or used oil activities. <input type="checkbox"/> To provide Subsequent Notification to update information. (Sections 2, 6 and 10 MUST be completed). <input type="checkbox"/> As a First RCRA Hazardous Waste Part A Permit Application. (Pages 4-7 of 8700-23 must also be submitted) (this information will also be used as a subsequent notification). <input type="checkbox"/> As a component of a Revised RCRA Hazardous Waste Part A Permit Application (Amendment # _____) (this information will also be used as a subsequent notification). <input type="checkbox"/> As a component of the Biennial Hazardous Waste Report (this information will also be used as a subsequent notification).																						
<b>2. Site State/EPA ID Number:</b> <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> (Initial notification leave blank)																						
<b>3. Site Legal Name:</b>																						
<b>4. Site Street Address:</b> (Physical address, <u>no</u> post office box or route number)																						
City:	State:																					
County Name:	Zip Code:																					
<b>5. Site Land Type:</b> <input type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input type="checkbox"/> Federal <input type="checkbox"/> Indian <input type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Other																						
<b>6. North American Industry Classification System (NAICS) Code(s) for the Site:</b> (5 or 6 digit codes only)																						
A.	B.																					
C.	D.																					
<b>7. Site Mailing Address:</b> (if the mailing address is the same as the street address, enter "same")																						
Street or P. O. Box:																						
City:	State:	Zip Code:																				
<b>8. Site Contact Person:</b> (If the contact mailing address is the same as the street address, enter "same" in the street box)																						
First Name:	MI:	Last Name:																				
Phone Number:		Phone Number Extension:																				
Street or P. O. Box:																						
City:	State:	Zip Code:																				

**APPENDIX IV (continued)**  
**Notification of Hazardous Waste Activity Form (page 2 of 3)**

STATE/EPA ID Number		
<b>9. Legal Owner and Operator of the Site:</b> (If the operator is the same as the owner, enter "same" in the name of site operator box. If the owner and operator mailing address is the same as the site mailing address, enter "same" in the street box.)		
A. Name of Site's Legal Owner:	Date Became Owner (mm/dd/yyyy):	
Owner Type: <input type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input type="checkbox"/> Federal <input type="checkbox"/> Indian <input type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Other		
Street or P. O. Box:		
City:	State:	Zip Code:
B. Name of Site's Operator:		Date Became Operator (mm/dd/yyyy):
Operator Type: <input type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input type="checkbox"/> Federal <input type="checkbox"/> Indian <input type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Other		
Street or P. O. Box:		
City:	State:	Zip Code:
<b>10. Type of Regulated Waste Activity (Mark the appropriate boxes for activities that apply to your Site).</b>		
<b>A. Hazardous Waste Activities</b>		
<b>1. Generator of Hazardous Waste</b> (Choose only one of the following three categories.)		
For Items 2 through 6, mark all that apply.		
<input type="checkbox"/> a. LQG: Greater than 1,000 kg/mo (2,200 lbs./mo.) or	<input type="checkbox"/> 2. Transporter of Hazardous Waste	
<input type="checkbox"/> b. SQG: 100 to 1,000 kg/mo (220 - 2,200 lbs./mo.) or	<input type="checkbox"/> 3. Treater, Storer, or Disposer of Hazardous Waste (at your site) Note: A hazardous waste permit is required for this activity.	
<input type="checkbox"/> c. CESQG: Less than 100 kg/mo (220 lbs./mo.)	<input type="checkbox"/> 4. Recycler of Hazardous Waste (at your site) Note: A hazardous waste permit may be required for this activity.	
<b>In addition, indicate other generator activities. (Mark all that apply)</b>		
<input type="checkbox"/> d. United States Importer of Hazardous Waste	<input type="checkbox"/> 5. Exempt Boiler and/or Industrial Furnace	
<input type="checkbox"/> e. Mixed Waste (hazardous and radioactive) Generator	<input type="checkbox"/> a. Small Quantity On-site Burner Exemption	
	<input type="checkbox"/> b. Smelting, Melting, and Refining Furnace Exemption	
	<input type="checkbox"/> 6. Underground Injection Control	

**Notification of Hazardous Waste Activity Form (page 3 of 3)**

STATE/EPA ID Number						
<b>B. Universal Waste Activities</b>				<b>C. Used Oil Activities (Mark all boxes that apply.)</b>		
<b>1. Large Quantity Handler of Universal Waste</b> (accumulates 5,000 kg or more of any universal waste (calculated collectively) at any one time). Indicate types of universal waste generated and/or accumulated at your site. (Mark all boxes that apply):				<b>1. Used Oil Transporter - Indicate Type(s) of Activity(ies)</b>  <input type="checkbox"/> a. Transporter <input type="checkbox"/> b. Transfer Facility		
<div style="text-align: center;">Generate                  Accumulate</div>				<b>2. Used Oil Processor and/or Re-refiner - Indicate Type(s) of Activity(ies)</b>  <input type="checkbox"/> a. Processor <input type="checkbox"/> b. Re-refiner		
<input type="checkbox"/> a. Batteries <input type="checkbox"/> <input type="checkbox"/> b. Pesticides <input type="checkbox"/> <input type="checkbox"/> c. Mercury Containing Devices <input type="checkbox"/> <input type="checkbox"/> d. Lamps <input type="checkbox"/>				<input type="checkbox"/> 3. Off-Specification Used Oil Burner		
<input type="checkbox"/> 2. Destination Facility for Universal Waste  (Note: A hazardous waste permit may be required for this activity).				<b>4. Used Oil Fuel Marketer - Indicate Type(s) of Activity(ies)</b>  <input type="checkbox"/> a. Marketer Who Directs Shipment of Off-Specification Used Oil to Off-Specification Used Oil Burner <input type="checkbox"/> b. Marketer Who First Claims the Used Oil Meets the Specifications		
<b>11. Description of Hazardous Wastes</b>						
Hazardous Waste Numbers for Regulated Hazardous Wastes. Please list the hazardous waste numbers of the hazardous wastes handled at your site (e.g., D001, D003, F007, U112). Use an additional page if more spaces are needed.						
<b>12. Comments</b>						
<b>13. Certification.</b> I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.						
Signature of owner, operator, or an authorized representative				Name and Official Title (type or print)		Date Signed (mm/dd/yyyy)

**APPENDIX V**  
**Extraction Procedure (EP) Toxicity Test Method and Structural Integrity Test**  
**~~(SW-846, Method 1310A)~~ (Method 1310)**

Note: The extraction procedure (EP), method 1310, is published in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846, as incorporated by reference in section 33-24-01-05.

(Previous text deleted with Tables 1, 2, and 3)



**APPENDIX VI**  
**Treatment Standards**  
**(As concentrations in the treatment residual extract)**

~~Note: The treatment standards for F001-F005 Spent Solvent Wastes appear in sections 33-24-05-281, 33-24-05-282, 33-24-05-283.~~

**Compounds With Henry's Law Constant Less Than 0.1 Y/X**

<u>Compound name</u>	<u>CAS No.</u>
<u>Acetaldol</u>	<u>107-89-1</u>
<u>Acetamide</u>	<u>60-35-5</u>
<u>2-Acetylaminofluorene</u>	<u>53-96-3</u>
<u>3-Acetyl-5-hydroxypiperidine</u>	
<u>3-Acetyl piperidine</u>	<u>618-42-8</u>
<u>1-Acetyl-2-thiourea</u>	<u>591-08-2</u>
<u>Acrylamide</u>	<u>79-06-1</u>
<u>Acrylic acid</u>	<u>79-10-7</u>
<u>Adenine</u>	<u>73-24-5</u>
<u>Adipic acid</u>	<u>124-04-9</u>
<u>Adiponitrile</u>	<u>111-69-3</u>
<u>Alachlor</u>	<u>15972-60-8</u>
<u>Aldicarb</u>	<u>116-06-3</u>
<u>Ametryn</u>	<u>834-12-8</u>
<u>4-Aminobiphenyl</u>	<u>92-67-1</u>
<u>4-Aminopyridine</u>	<u>504-24-5</u>
<u>Aniline</u>	<u>62-53-3</u>
<u>o-Anisidine</u>	<u>90-04-0</u>
<u>Anthraquinone</u>	<u>84-65-1</u>
<u>Atrazine</u>	<u>1912-24-9</u>
<u>Benzenearsonic acid</u>	<u>98-05-5</u>
<u>Benzenesulfonic acid</u>	<u>98-11-3</u>
<u>Benzidine</u>	<u>92-87-5</u>
<u>Benzo(a)anthracene</u>	<u>56-55-3</u>
<u>Benzo(k)fluoranthene</u>	<u>207-08-9</u>
<u>Benzoic acid</u>	<u>65-85-0</u>
<u>Benzo(g,h,i)perylene</u>	<u>191-24-2</u>
<u>Benzo(a)pyrene</u>	<u>50-32-8</u>

**Compounds With Henry's Law Constant Less Than 0.1 Y/X**

<u>Compound name</u>	<u>CAS No.</u>
<u>Benzyl alcohol</u>	<u>100-51-6</u>
<u>gamma-BHC</u>	<u>58-89-9</u>
<u>Bis(2-ethylhexyl)phthalate</u>	<u>117-81-7</u>
<u>Bromochloromethyl acetate</u>	
<u>Bromoxynil</u>	<u>1689-84-5</u>
<u>Butyric acid</u>	<u>107-92-6</u>
<u>Caprolactam (hexahydro-2H-azepin-2-one)</u>	<u>105-60-2</u>
<u>Catechol (o-dihydroxybenzene)</u>	<u>120-80-9</u>
<u>Cellulose</u>	<u>9004-34-6</u>
<u>Cell wall</u>	
<u>Chlorhydrin (3-Chloro-1,2-propanediol)</u>	<u>96-24-2</u>
<u>Chloroacetic acid</u>	<u>79-11-8</u>
<u>2-Chloroacetophenone</u>	<u>93-76-5</u>
<u>p-Chloroaniline</u>	<u>106-47-8</u>
<u>p-Chlorobenzophenone</u>	<u>134-85-0</u>
<u>Chlorobenzilate</u>	<u>510-15-6</u>
<u>p-Chloro-m-cresol (6-chloro-m-cresol)</u>	<u>59-50-7</u>
<u>3-Chloro-2,5-diketopyrrolidine</u>	
<u>Chloro-1,2-ethane diol</u>	
<u>4-Chlorophenol</u>	<u>106-48-9</u>
<u>Chlorophenol polymers (2-chlorophenol &amp; 4-chlorophenol)</u>	<u>95-57-8 &amp;</u> <u>106-48-9</u>
<u>1-(o-Chlorophenyl)thiourea</u>	<u>5344-82-1</u>
<u>Chrysene</u>	<u>218-01-9</u>
<u>Citric acid</u>	<u>77-92-9</u>
<u>Creosote</u>	<u>8001-58-9</u>
<u>m-Cresol</u>	<u>108-39-4</u>
<u>o-Cresol</u>	<u>95-48-7</u>
<u>p-Cresol</u>	<u>106-44-5</u>
<u>Cresol (mixed isomers)</u>	<u>1319-77-3</u>
<u>4-Cumylphenol</u>	<u>27576-86</u>
<u>Cyanide</u>	<u>57-12-5</u>
<u>4-Cyanomethyl benzoate</u>	

**Compounds With Henry's Law Constant Less Than 0.1 Y/X**

<u>Compound name</u>	<u>CAS No.</u>
<u>Diazinon</u>	<u>333-41-5</u>
<u>Dibenzo(a,h)anthracene</u>	<u>53-70-3</u>
<u>Dibutylphthalate</u>	<u>84-74-2</u>
<u>2,5-Dichloroaniline (N,N'-dichloroaniline)</u>	<u>95-82-9</u>
<u>2,6-Dichlorobenzonitrile</u>	<u>1194-65-6</u>
<u>2,6-Dichloro-4-nitroaniline</u>	<u>99-30-9</u>
<u>2,5-Dichlorophenol</u>	<u>333-41-5</u>
<u>3,4-Dichlorotetrahydrofuran</u>	
<u>Dichlorvos (DDVP)</u>	<u>62-73-7</u>
<u>Diethanolamine</u>	<u>111-42-2</u>
<u>N,N-Diethylaniline</u>	<u>91-66-7</u>
<u>Diethylene glycol</u>	<u>111-46-6</u>
<u>Diethylene glycol dimethyl ether (dimethyl Carbitol)</u>	<u>111-96-6</u>
<u>Diethylene glycol monobutyl ether (butyl Carbitol)</u>	<u>112-34-5</u>
<u>Diethylene glycol monoethyl ether acetate (Carbitol acetate)</u>	<u>112-15-2</u>
<u>Diethylene glycol monoethyl ether (Carbitol Cellosolve)</u>	<u>111-90-0</u>
<u>Diethylene glycol monomethyl ether (methyl Carbitol)</u>	<u>111-77-3</u>
<u>N,N'-Diethylhydrazine</u>	<u>1615-80-1</u>
<u>Diethyl (4-methylumbelliferyl) thionophosphate</u>	<u>299-45-6</u>
<u>Diethyl phosphorothioate</u>	<u>126-75-0</u>
<u>N,N'-Diethylpropionamide</u>	<u>15299-99-7</u>
<u>Dimethoate</u>	<u>60-51-5</u>
<u>2,3-Dimethoxystychnidin-10-one</u>	<u>357-57-3</u>
<u>4-Dimethylaminoazobenzene</u>	<u>60-11-7</u>
<u>7,12-Dimethylbenz(a)anthracene</u>	<u>57-97-6</u>
<u>3,3-Dimethylbenzidine</u>	<u>119-93-7</u>
<u>Dimethylcarbamoyl chloride</u>	<u>79-44-7</u>
<u>Dimethyldisulfide</u>	<u>624-92-0</u>
<u>Dimethylformamide</u>	<u>68-12-2</u>
<u>1,1-Dimethylhydrazine</u>	<u>57-14-7</u>
<u>Dimethylphthalate</u>	<u>131-11-3</u>
<u>Dimethylsulfone</u>	<u>67-71-0</u>
<u>Dimethylsulfoxide</u>	<u>67-68-5</u>

**Compounds With Henry's Law Constant Less Than 0.1 Y/X**

<u>Compound name</u>	<u>CAS No.</u>
<u>4,6-Dinitro-o-cresol</u>	<u>534-52-1</u>
<u>1,2-Diphenylhydrazine</u>	<u>122-66-7</u>
<u>Dipropylene glycol (1,1'-oxydi-2-propanol)</u>	<u>110-98-5</u>
<u>Endrin</u>	<u>72-20-8</u>
<u>Epinephrine</u>	<u>51-43-4</u>
<u>mono-Ethanolamine</u>	<u>141-43-5</u>
<u>Ethyl carbamate (urethane)</u>	<u>5-17-96</u>
<u>Ethylene glycol</u>	<u>107-21-1</u>
<u>Ethylene glycol monobutyl ether (butyl Cellosolve)</u>	<u>111-76-2</u>
<u>Ethylene glycol monoethyl ether (Cellosolve)</u>	<u>110-80-5</u>
<u>Ethylene glycol monoethyl ether acetate (Cellosolve acetate)</u>	<u>111-15-9</u>
<u>Ethylene glycol monomethyl ether (methyl Cellosolve)</u>	<u>109-86-4</u>
<u>Ethylene glycol monophenyl ether (phenyl Cellosolve)</u>	<u>122-99-6</u>
<u>Ethylene glycol monopropyl ether (propyl Cellosolve)</u>	<u>2807-30-9</u>
<u>Ethylene thiourea (2-imidazolidinethione)</u>	<u>96-45-7</u>
<u>4-Ethylmorpholine</u>	<u>100-74-3</u>
<u>3-Ethylphenol</u>	<u>620-17-7</u>
<u>Fluoroacetic acid, sodium salt</u>	<u>62-74-8</u>
<u>Formaldehyde</u>	<u>50-00-0</u>
<u>Formamide</u>	<u>75-12-7</u>
<u>Formic acid</u>	<u>64-18-6</u>
<u>Fumaric acid</u>	<u>110-17-8</u>
<u>Glutaric acid</u>	<u>110-94-1</u>
<u>Glycerin (Glycerol)</u>	<u>56-81-5</u>
<u>Glycidol</u>	<u>556-52-5</u>
<u>Glycinamide</u>	<u>598-41-4</u>
<u>Glyphosate</u>	<u>1071-83-6</u>
<u>Guthion</u>	<u>86-50-0</u>
<u>Hexamethylene-1,6-diisocyanate (1,6-diisocyanatohexane)</u>	<u>822-06-0</u>
<u>Hexamethyl phosphoramidate</u>	<u>680-31-9</u>
<u>Hexanoic acid</u>	<u>142-62-1</u>
<u>Hydrazine</u>	<u>302-01-2</u>
<u>Hydrocyanic acid</u>	<u>74-90-8</u>



**Compounds With Henry's Law Constant Less Than 0.1 Y/X**

<u>Compound name</u>	<u>CAS No.</u>
<u>Hydroquinone</u>	<u>123-31-9</u>
<u>Hydroxy-2-propionitrile (hydracrylonitrile)</u>	<u>109-78-4</u>
<u>Indeno (1,2,3-cd) pyrene</u>	<u>193-39-5</u>
<u>Lead acetate</u>	<u>301-04-2</u>
<u>Lead subacetate (lead acetate, monobasic)</u>	<u>1335-32-6</u>
<u>Leucine</u>	<u>61-90-5</u>
<u>Malathion</u>	<u>121-75-5</u>
<u>Maleic acid</u>	<u>110-16-7</u>
<u>Maleic anhydride</u>	<u>108-31-6</u>
<u>Mesityl oxide</u>	<u>141-79-7</u>
<u>Methane sulfonic acid</u>	<u>75-75-2</u>
<u>Methomyl</u>	<u>16752-77-5</u>
<u>p-Methoxyphenol</u>	<u>150-76-5</u>
<u>Methyl acrylate</u>	<u>96-33-3</u>
<u>4,4'-Methylene-bis-(2-chloroaniline)</u>	<u>101-14-4</u>
<u>4,4'-Methylenediphenyl diisocyanate (diphenyl methane diisocyanate)</u>	<u>101-68-8</u>
<u>4,4'-Methylenedianiline</u>	<u>101-77-9</u>
<u>Methylene diphenylamine (MDA)</u>	
<u>5-Methylfurfural</u>	<u>620-02-0</u>
<u>Methylhydrazine</u>	<u>60-34-4</u>
<u>Methyliminoacetic acid</u>	
<u>Methyl methane sulfonate</u>	<u>66-27-3</u>
<u>1-Methyl-2-methoxyaziridine</u>	
<u>Methylparathion</u>	<u>298-00-0</u>
<u>Methyl sulfuric acid (sulfuric acid, dimethyl ester)</u>	<u>77-78-1</u>
<u>4-Methylthiophenol</u>	<u>106-45-6</u>
<u>Monomethylformamide (N-methylformamide)</u>	<u>123-39-7</u>
<u>Nabam</u>	<u>142-59-6</u>
<u>alpha-Naphthol</u>	<u>90-15-3</u>
<u>beta-Naphthol</u>	<u>135-19-3</u>
<u>alpha-Naphthylamine</u>	<u>134-32-7</u>
<u>beta-Naphthylamine</u>	<u>91-59-8</u>

**Compounds With Henry's Law Constant Less Than 0.1 Y/X**

<u>Compound name</u>	<u>CAS No.</u>
<u>Neopentyl glycol (dimethylolpropane)</u>	<u>126-30-7</u>
<u>Niacinamide</u>	<u>98-92-0</u>
<u>o-Nitroaniline</u>	<u>88-74-4</u>
<u>Nitroglycerin</u>	<u>55-63-0</u>
<u>2-Nitrophenol</u>	<u>88-75-5</u>
<u>4-Nitrophenol</u>	<u>100-02-7</u>
<u>N-Nitrosodimethylamine</u>	<u>62-75-9</u>
<u>Nitrosoguanidine</u>	<u>674-81-7</u>
<u>N-Nitroso-n-methylurea</u>	<u>684-93-5</u>
<u>N-Nitrosomorpholine (4-nitrosomorpholine)</u>	<u>59-89-2</u>
<u>Oxalic acid</u>	<u>144-62-7</u>
<u>Parathion</u>	<u>56-38-2</u>
<u>Pentaerythritol</u>	<u>115-77-5</u>
<u>Phenacetin</u>	<u>62-44-2</u>
<u>Phenol</u>	<u>108-95-2</u>
<u>Phenylacetic acid</u>	<u>103-82-2</u>
<u>m-Phenylene diamine</u>	<u>108-45-2</u>
<u>o-Phenylene diamine</u>	<u>95-54-5</u>
<u>p-Phenylene diamine</u>	<u>106-50-3</u>
<u>Phenyl mercuric acetate</u>	<u>62-38-4</u>
<u>Phorate</u>	<u>298-02-2</u>
<u>Phthalic anhydride</u>	<u>85-44-9</u>
<u>alpha-Picoline (2-methyl pyridine)</u>	<u>109-06-8</u>
<u>1,3-Propane sultone</u>	<u>1120-71-4</u>
<u>beta-Propiolactone</u>	<u>57-57-8</u>
<u>Proporur (Baygon)</u>	
<u>Propylene glycol</u>	<u>57-55-6</u>
<u>Pyrene</u>	<u>129-00-0</u>
<u>Pyridinium bromide</u>	<u>39416-48-3</u>
<u>Quinoline</u>	<u>91-22-5</u>
<u>Quinone (p-benzoquinone)</u>	<u>106-51-4</u>
<u>Resorcinol</u>	<u>108-46-3</u>
<u>Simazine</u>	<u>122-34-9</u>

**Compounds With Henry's Law Constant Less Than 0.1 Y/X**

<u>Compound name</u>	<u>CAS No.</u>
<u>Sodium acetate</u>	<u>127-09-3</u>
<u>Sodium formate</u>	<u>141-53-7</u>
<u>Strychnine</u>	<u>57-24-9</u>
<u>Succinic acid</u>	<u>110-15-6</u>
<u>Succinimide</u>	<u>123-56-8</u>
<u>Sulfanilic acid</u>	<u>121-47-1</u>
<u>Terephthalic acid</u>	<u>100-21-0</u>
<u>Tetraethyldithiopyrophosphate</u>	<u>3689-24-5</u>
<u>Tetraethylenepentamine</u>	<u>112-57-2</u>
<u>Thiofanox</u>	<u>39196-18-4</u>
<u>Thiosemicarbazide</u>	<u>79-19-6</u>
<u>2,4-Toluenediamine</u>	<u>95-80-7</u>
<u>2,6-Toluenediamine</u>	<u>823-40-5</u>
<u>3,4-Toluenediamine</u>	<u>496-72-0</u>
<u>2,4-Toluene diisocyanate</u>	<u>584-84-9</u>
<u>p-Toluic acid</u>	<u>99-94-5</u>
<u>m-Toluidine</u>	<u>108-44-1</u>
<u>1,1,2-Trichloro-1,2,2-trifluoroethane</u>	<u>76-13-1</u>
<u>Triethanolamine</u>	<u>102-71-6</u>
<u>Triethylene glycol dimethyl ether</u>	
<u>Tripropylene glycol</u>	<u>24800-44-0</u>
<u>Warfarin</u>	<u>81-81-2</u>
<u>3,4-Xylenol (3,4-dimethylphenol)</u>	<u>95-65-8</u>

**APPENDIX VII**  
**List of Halogenated Organic Compounds Regulated Under**  
**Section 33-24-05-272**

In determining the concentration of HOCs in a hazardous waste for purposes of the Section 33-24-05-272 land disposal prohibition, the department has defined the HOCs that must be included in the calculation as any compounds having a carbon-halogen bond which are listed in this Appendix (see Section 33-24-05-251). Appendix VII consists of the following compounds:

**List of Halogenated Organic Compounds Regulated Under**  
**Section 33-24-05-272**

**I. Volatiles**

Bromodichloromethane  
Bromomethane  
Carbon Tetrachloride  
Chlorobenzene  
2-Chloro-1,3-butadiene  
Chlorodibromomethane  
Chloroethane  
2-Chloroethyl vinyl ether  
Chloroform  
Chloromethane  
3-Chloropropene  
1,2-Dibromo-3-chloropropane  
1,2-Dibromomethane  
Dibromomethane  
Trans-1,4-Dichloro-2-butene  
Dichlorodifluoromethane  
1,1-Dichloroethane  
1,2-Dichloroethane  
1,1-Dichloroethylene  
Trans-1,2-Dichloroethene  
1,2-Dichloropropane  
Trans-1,3-Dichloropropene  
cis-1,3-Dichloropropene  
Iodomethane  
Methylene chloride

**II. Semivolatiles**

Bis(2-chloroethoxy)ethane  
Bis(2-chloroethyl)ether  
Bis(2-chloroisopropyl)ether  
p-Chloroaniline  
Chlorobenzilate  
P-Chloro-m-cresol  
2-Chloronaphthalene  
2-Chlorophenol  
3-Chloropropionitrile  
m-Dichlorobenzene  
o-Dichlorobenzene  
p-Dichlorobenzene  
3,3'-Dichlorobenzidine  
2,4-Dichlorophenol  
2,6-Dichlorophenol  
Hexachlorobenzene  
Hexachlorobutadiene  
Hexachlorocyclopentadiene  
Hexachloroethane  
Hexachloropropene  
Hexachloropropene  
4,4'-Methylenebis(2-chloroaniline)  
Pentachlorobenzene  
Pentachloroethane  
Pentachloronitrobenzene



**List of Halogenated Organic Compounds Regulated Under  
Section 33-24-05-272**

<u>1,1,1,2-Tetrachloroethane</u>	<u>Pentachlorophenol</u>
<u>1,1,2,2-Tetrachloroethane</u>	<u>Pronamide</u>
<u>Tetrachloroethene</u>	<u>1,2,4,5-Tetrachlorobenzene</u>
<u>Tribromomethane</u>	<u>2,3,4,6-Tetrachlorophenol</u>
<u>1,1,1-Trichloroethane</u>	<u>1,2,4-Trichlorobenzene</u>
<u>1,1,2-Trichloroethane</u>	<u>2,4,5-Trichlorophenol</u>
<u>Trichloroethene</u>	<u>2,4,6-Trichlorophenol</u>
<u>Trichloromonofluoromethane</u>	<u>Tris(2,3-dibromopropyl)phosphate</u>
<u>1,2,3-Trichloropropane</u>	
<u>Vinyl Chloride</u>	

**III. Organochlorine Pesticides**

Aldrin  
alpha-BHC  
beta-BHC  
delta-BHC  
gamma-BHC  
Chlorodane  
DDD  
DDE  
DDT  
Dieldrin  
Endosulfan I  
Endosulfan II  
Endrin  
Endrin aldehyde  
Heptachlor  
Heptachlor epoxide  
Isodrin  
Kepone  
Methoxychlor  
Toxaphene

**IV. Phenoxyacetic Acid Herbicides**

2,4-Dichlorophenoxyacetic acid

**VI. Dioxins and Furans**

Hexachlorodibenzo-p-dioxins  
Hexachlorodibenzofuran  
Pentachlorodibenzo-p-dioxins  
Pentachlorodibenzofuran  
Tetrachlorodibenzo-p-dioxins  
Tetrachlorodibenzofuran  
2,3,7,8-Tetrachlorodibenzo-p-dioxin

**List of Halogenated Organic Compounds Regulated Under  
Section 33-24-05-272**

Silvex

2,4,5-T

**V. PCBs**

Aroclor 1016

Aroclor 1221

Aroclor 1232

Aroclor 1242

Aroclor 1248

Aroclor 1254

Aroclor 1260

PCBs not otherwise specified

**APPENDIX VIII**  
**Organometallic Lab Packs**

~~Appendix VIII - wastes excluded from lab packs under the alternative treatment standards of subsection 3 of section 33-24-05-282. Hazardous waste with the following hazardous waste codes may not be placed in lab packs under the alternative lab pack treatment standards of subsection 3 of section 33-24-05-282: D009, F019, K003, K004, K005, K006, K062, K071, K100, K106, P010, P011, P012, P076, P078, U134, U151~~

**Wastes Excluded From Lab Packs**  
**Under the Alternative Treatment Standards of Subsection 3 of**  
**Section 33-24-05-282**

Hazardous waste with the following hazardous waste codes may not be placed in lab packs under the alternative lab pack treatment standards of subsection 3 of section 33-24-05-282: D009, F019, K003, K004, K005, K006, K062, K071, K100, K106, P010, P011, P012, P076, P078, U134, and U151.