

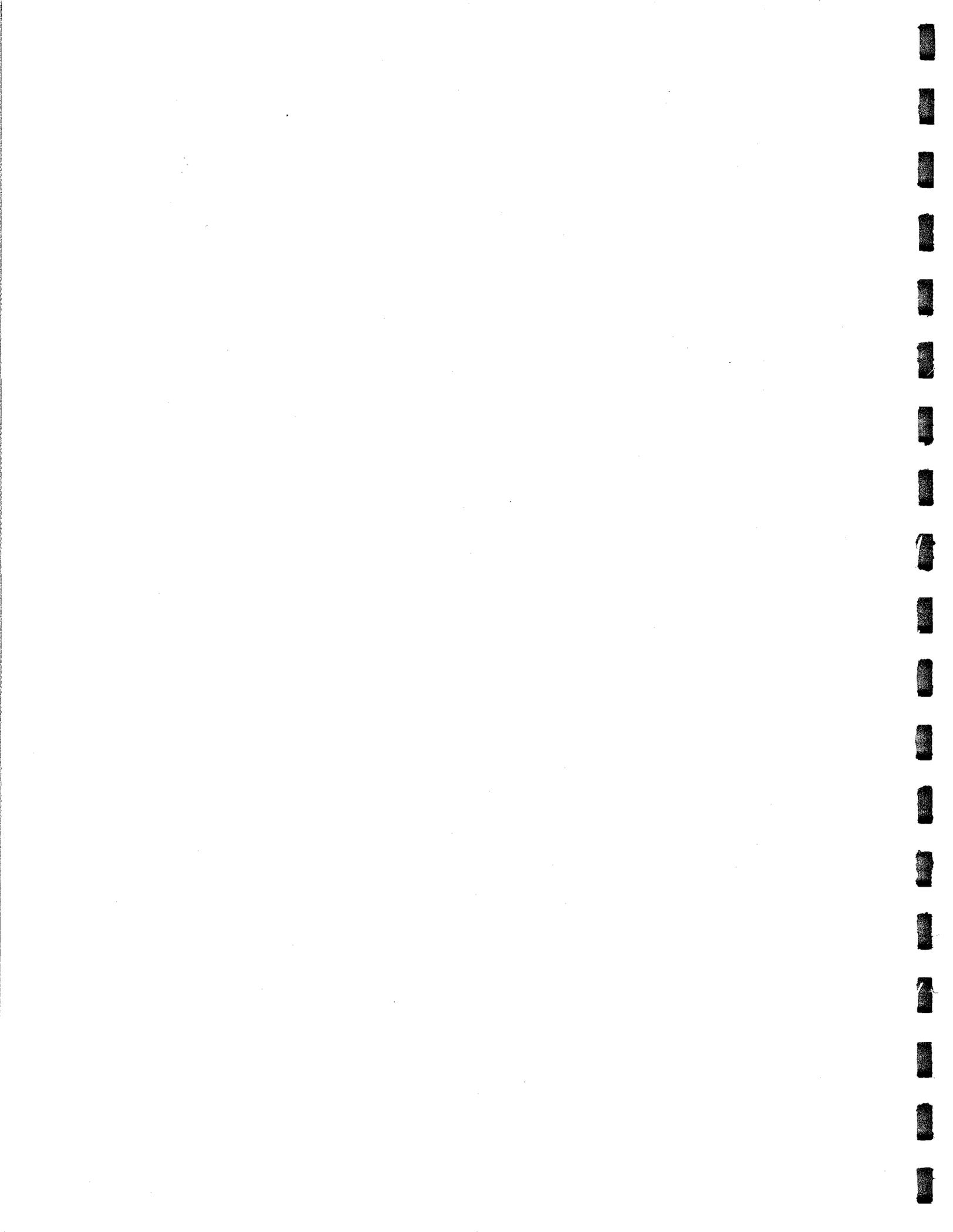
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ARTICLE 33-24

HAZARDOUS WASTE MANAGEMENT

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CHAPTER 33-24-01  
GENERAL PROVISIONS

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33-24-01-01. **Purpose.** It is the purpose of this article to provide for the comprehensive regulation of hazardous waste from "cradle-to-grave" in order to protect public health, safety and welfare, and to enhance the environment for the people of North Dakota.

**History:** Effective January 1, 1984.

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

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

**33-24-01-02. Scope.** This article is applicable to all hazardous waste generators, transporters, and owners or operators of treatment, storage, or disposal facilities.

**History:** Effective January 1, 1984.

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

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

**33-24-01-03. Authority.** The North Dakota state department of health has been authorized to promulgate and administer this article under the provisions of North Dakota Century Code chapter 23-20.3.

**History:** Effective January 1, 1984.

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

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

**33-24-01-04. Definitions.** As used in this article the following words have the meaning ascribed to them unless otherwise made inappropriate by use and context.

1. "Act" means North Dakota Century Code chapter 23-20.3.
2. "Active portion" means that portion of a facility where treatment, storage, or disposal operations are being or have been conducted after the effective date of the Act and which is not a closed portion. (See also "closed portion" and "inactive portion".)
3. "Aquifer" means a geologic formation, group of formations, or part of a formation capable of yielding a significant amount of ground water to wells or springs.
4. "Authorized representative" means the person responsible for the overall operation of a facility or an operational unit (i.e., part of a facility), e.g., the plant manager, superintendent, or person of equivalent responsibility.
5. "Certification" means a statement of professional opinion based on knowledge and belief.
6. "Closed portion" means that portion of a facility which an owner or operator has closed in accordance with the approved facility closure plan and all applicable closure requirements. (See also "active portion" and "inactive portion".)
7. "Confined aquifer" means an aquifer bounded above and below by impermeable beds or by beds of distinctly lower permeability than that of the aquifer itself; an aquifer containing confined ground water.

8. "Constituent" or "hazardous waste constituent" means a constituent that caused the department to list the hazardous waste in chapter 33-24-02, or a constituent listed in Table 1 of section 33-24-02-14.
9. "Container" means any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.
10. "Contingency plan" means a document setting out an organized, planned, and coordinated course of action to be followed in case of a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.
11. "Department" means the North Dakota state department of health.
12. "Designated facility" means a hazardous waste treatment, storage, or disposal facility which has received a hazardous waste permit, or a facility with interim status, as defined by RCRA, or a facility which qualifies for treatment as having been issued a permit under North Dakota Century Code section 23-20.3-05, that has been designated on the manifest by the generator, pursuant to section 33-24-03-04.
13. "Dike" means an embankment or ridge of either natural or manmade materials used to prevent the movement of liquids, sludges, solids, or other materials.
14. "Discharge" or "hazardous waste discharge" means the accidental or intentional spilling, leaking, pumping, pouring, emitting, emptying, or dumping of hazardous waste into or on any land or water.
15. "Disposal" means the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid or hazardous waste into or on any land or water including ground water.
16. "Disposal facility" means a facility or part of a facility at which hazardous waste is intentionally placed into or on any land or water, and at which wastes will remain after closure.
17. "Elementary neutralization unit" means a device which:
  - a. Is used for neutralizing wastes which are hazardous wastes only because they exhibit the corrosivity defined in section 33-24-02-12, or are listed in chapter 33-24-02 only for this reason; and
  - b. Meets the definition of tank, container, transport vehicle, or vessel.

18. "Equivalent method" means any testing or analytical method approved by the department under sections 33-24-01-06 and 33-24-01-07.
19. "Existing hazardous waste management facility" or "existing facility" means a facility which was in operation, or for which construction commenced on or before July 1, 1981. A facility has commenced construction if:
  - a. The owner or operator has obtained all necessary federal, state, and local approvals or permits necessary to begin physical construction; and
  - b. Either of the following:
    - (1) A continuous onsite, physical construction program has begun; or
    - (2) The owner or operator has entered into contractual obligations - which cannot be canceled or modified without substantial loss - for physical construction of the facility to be completed within a reasonable time.
20. "Existing portion" means that land surface area of an existing waste management unit, included in part A of the permit application, as originally filed, on which wastes have been placed prior to the issuance of a permit.
21. "Facility" means all contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units, e.g., one or more landfills, surface impoundments, or combinations of them.
22. "Federal agency" means any department, agency, or other instrumentality of the federal government, any independent agency or establishment of the federal government including any government corporation, and the government printing office.
23. "Federal, state, and local approvals or permits necessary to begin physical construction" means permits and approvals required under federal, state, or local hazardous waste control statutes, regulations, or ordinances.
24. "Food-chain crops" means tobacco, crops grown for human consumption, and crops grown for feed for animals whose products are consumed by humans.

25. "Freeboard" means the vertical distance between the top of a tank or surface impoundment dike, and the surface of the waste contained therein.
26. "Free liquids" means liquids which readily separate from the solid portion of a waste under ambient temperature and pressure.
27. "Generator" means any person, by site, whose act or process produces hazardous waste identified or listed in chapter 33-24-02 or whose act first causes a hazardous waste to become subject to regulation.
28. "Ground water" means water below the land surface in a zone of saturation.
29. "Hazardous waste" means a hazardous waste as defined in chapter 33-24-02.
30. "Hazardous waste constituent". See "constituent".
31. "Hazardous waste number" means the number assigned to each hazardous waste identified in chapter 33-24-02.
32. "Identification number" means the number assigned by the environmental protection agency and the department to each generator, transporter, and treatment, storage, or disposal facility.
33. "Inactive portion" means that portion of a facility which is not operated after the effective date of this chapter. (See also "active portion" and "closed portion".)
34. "Incinerator" means an enclosed device using controlled flame combustion, the primary purpose of which is to thermally break down hazardous waste. Examples of incinerators are rotary kiln, fluidized bed, and liquid injection incinerators.
35. "Incompatible waste" means a hazardous waste which is unsuitable for:
  - a. Placement in a particular device or facility because it may cause corrosion or decay of containment materials, e.g., container inner liners or tank walls; or
  - b. Commingling with another waste or material under uncontrolled conditions because the commingling might produce heat or pressure, fire or explosion, violent reaction, toxic dust, mists, fumes, or gases, or flammable fumes or gases.
36. "Individual generation site" means the contiguous site at or on which one or more hazardous wastes are generated. An

individual generation site, such as a large manufacturing plant, may have one or more sources of hazardous waste, but is considered a single or individual generation site if the site or property is contiguous.

37. "In operation" refers to a facility which is treating, storing, or disposing of hazardous waste.
38. "Injection well" means a well into which fluids are injected. (See also "underground injection".)
39. "Inner liner" means a continuous layer of material placed inside a tank or container which protects the construction materials of the tank or container from the contained waste or reagents used to treat the waste.
40. "International shipment" means the transportation of hazardous waste into or out of the jurisdiction of the United States.
41. "Landfill" means a disposal facility or part of a facility where hazardous waste is placed in or on land and which is not a land treatment facility, a surface impoundment, or an injection well.
42. "Landfill cell" means a discrete volume of a hazardous waste landfill which uses a liner to provide isolation of wastes from adjacent cells or wastes. Examples of landfill cells are trenches and pits.
43. "Land treatment facility" means a facility or part of a facility at which hazardous waste is applied onto or incorporated into the soil surface; such facilities are disposal facilities if the waste will remain after closure.
44. "Leachate" means any liquid, including any suspended components in the liquid, that have percolated through or drained from hazardous waste.
45. "Liner" means a continuous layer of natural or manmade materials beneath or on the sides of a surface impoundment, landfill, or landfill cell, which restricts the downward or lateral escape of hazardous waste, hazardous waste constituents, or leachate.
46. "Major facility" means any facility classified as such by the environmental protection agency in conjunction with the department.
47. "Management" or "hazardous waste management" means the systematic control of the collection, source separation, storage, transportation, processing, treatment, recovery, and disposal of hazardous waste.

48. "Manifest" means the shipping document originated and signed by the generator which contains the information required by section 33-24-03-05.
49. "Manifest document number" means the serially increasing number assigned to the manifest by the generator for recording and reporting purposes.
50. "Mining overburden returned to the minesite" means any material overlying an economic mineral deposit which is removed to gain access to that deposit and is then used for reclamation of a surface mine.
51. "Movement" means that hazardous waste transported to a facility in an individual vehicle.
52. "Municipality" means a city, county, district, association, or other public body created by or pursuant to state law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes.
53. "New hazardous waste management facility" or "new facility" means a facility which began operation, or for which construction commenced, after July 1, 1981. (See also "existing hazardous waste management facility".)
54. "Onsite" means the same or geographically contiguous property which may be divided by public or private right of way, provided the entrance and exit between the properties is at a crossroads intersection, and access is by crossing, as opposed to going along, the right of way. Noncontiguous property owned by the same person, but connected by a right of way which that person controls and to which the public does not have access is also considered onsite property.
55. "Open burning" means the combustion of any material without the following characteristics:
  - a. Control of combustion air to maintain adequate temperature for efficient combustion.
  - b. Containment of the combustion reactions in an enclosed device to provide sufficient residence time and mixing for complete combustion.
  - c. Control of emission of the gaseous combustion products. (See also "incineration" and "thermal treatment".)
56. "Operator" means the person responsible for the overall operation of a facility.
57. "Owner" means the person who owns a facility or part of a facility.

58. "Partial closure" means the closure of a discrete part of a facility in accordance with the applicable closure requirement of chapter 33-24-05 or 40 CFR Part 265, if applicable. For example, partial closure may include the closure of a trench, a unit operation, a landfill cell, or a pit, while other parts of the facility continue in operation or will be placed in operation in the future.
59. "Person" means an individual, trust, firm, joint stock company, federal agency, corporation (including a government corporation), partnership, association, state, municipality, commission, political subdivision of a state, or any interstate body.
60. "Personnel" or "facility personnel" means all persons who work, at, or oversee the operation of, a hazardous waste facility, and whose actions or failure to act may result in noncompliance with the requirements of chapter 33-24-05 or 40 CFR Part 265, if applicable.
61. "Pile" means any noncontainerized accumulation of solid, nonflowing hazardous waste that is used for treatment or storage.
62. "Point source" means any discernible, confined, and discrete conveyance, including any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.
63. "Publicly owned treatment works" means any device or system used in the treatment (including recycling or reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by this state or a municipality. This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a publicly owned treatment works providing treatment.
64. "Representative sample" means a sample of a universe or whole, e.g., waste pile, lagoon, or ground water, which can be expected to exhibit the average properties of the universe or whole.
65. "Runoff" means any rainwater, leachate, or other liquid that drains over land from any part of a facility.
66. "Run-on" means any rainwater, leachate, or other liquid that drains over land onto any part of a facility.
67. "Saturated zone" or "zone of saturation" means that part of the earth's crust in which all voids are filled with water.

68. "Sludge" means any solid, semisolid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant.
69. "Solid waste" means a solid waste as defined in section 33-24-02-02.
70. "State" means this state.
71. "Storage" means the holding of hazardous waste at a site for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere.
72. "Surface impoundment" or "impoundment" means a facility or part of a facility which is a natural topographic depression, manmade excavation, or diked area formed primarily of earthen materials (although it may be lined with manmade materials), which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well. Examples of surface impoundments are holding, storage, settling, and aeration pits, ponds, and lagoons.
73. "Tank" means a stationary device, designed to contain an accumulation of hazardous waste, which is constructed primarily of nonearthen materials, e.g., wood, concrete, steel, or plastic, which provide structural support.
74. "Thermal treatment" means the treatment of hazardous waste in a device which uses elevated temperatures as the primary means to change the chemical, physical, or biological character or composition of the hazardous waste. Examples of thermal treatment processes are incineration, molten salt, pyrolysis, calcination, wet air oxidation, and microwave discharge. (See also "incinerator" and open burning.")
75. "Totally enclosed treatment facility" means a facility for the treatment of hazardous waste which is directly connected to an industrial production process and which is constructed and operated in a manner which prevents the release of any hazardous waste or any constituent thereof into the environment during treatment. An example is a pipe in which waste acid is neutralized.
76. "Transfer facility" means any transportation-related facility including loading docks, parking areas, storage areas or other similar areas where shipments of hazardous waste are held during the normal course of transportation.
77. "Transportation" means the movement of hazardous wastes by air, rail, highway, or water.

78. "Transport vehicle" means a motor vehicle or railcar used for the transportation of cargo by any mode. Each cargo-carrying body (trailer, railroad freight car, etc.) is a separate transport vehicle.
79. "Transporter" means a person engaged in the offsite transportation of hazardous waste by air, rail, highway, or water.
80. "Treatment" means any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste nonhazardous, or less hazardous; safer to transport, store, or dispose of; or amenable for recovery, amenable for storage, or reduced in volume.
81. "Treatment zone" means a soil area of the unsaturated zone of a land treatment unit within which hazardous constituents are degraded, transformed, or immobilized.
82. "Underground injection" means the subsurface emplacement of fluids through a bored, drilled, or driven well; or through a dug well, where the depth of the dug well is greater than the largest surface dimension. (See also "injection well".)
83. "United States" means the fifty states, the District of Columbia, the commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the commonwealth of the northern Mariana Islands.
84. "Unsaturated zone" or "zone of aeration" means the zone between the land surface and the water table.
85. "Uppermost aquifer" means the natural geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.
86. "Vessel" includes every description of watercraft, used or capable of being used as a means of transportation on the water.
87. "Wastewater treatment unit" means a device which:
- a. Is part of a wastewater treatment facility which is subject to regulation under either section 402 or 307(b) of the Clean Water Act;
  - b. Receives and treats or stores an influent wastewater which is a hazardous waste as identified in section 33-24-02-03, or generates and accumulates a wastewater treatment sludge

which is a hazardous waste as defined in section 33-24-02-03, or treats or stores a wastewater treatment sludge which is a hazardous waste as defined in section 33-24-02-03; and

c. Meets the definition of tank.

88. "Water (bulk shipment)" means the bulk transportation of hazardous waste which is loaded or carried onboard a vessel without containers or labels.
89. "Well" means any shaft or pit dug or bored into the earth, generally of a cylindrical form and often walled with bricks or tubing to prevent the earth from caving in.
90. "Well injection". (See "underground injection".)

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

33-24-01-05. **References.** When used in this article, the following publications are incorporated by reference:

1. "ASTM Standard Test Methods for Flash Point of Liquids by Setaflash Closed Tester", ASTM Standard D-3278-78, available from the American society for testing and materials, 1916 Race Street, Philadelphia, Pennsylvania 19103.
2. "ASTM Standard Test Methods for Flash Point by Pensky-Martens Closed Tester," ASTM Standard D-93-97 or D-93-80, available from the American society for testing and materials, 1916 Race Street, Philadelphia, Pennsylvania 19103.
3. "Flammable and Combustible Liquids Code" (1977 or 1981), available from the national fire protection association, 470 Atlantic Avenue, Boston, Massachusetts 02210.
4. "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods" (1980), EPA publication number SW-846, available from the United States environmental protection agency, solid waste information, 26 West Saint Clair Street, Cincinnati, Ohio 45268.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-01-06. General rulemaking petitions.**

1. Any person may petition the department to modify or revoke any provisions in chapters 33-24-01 through 33-24-05. This section sets forth general requirements which apply to all such petitions. Section 33-24-01-07 sets forth additional requirements for petitions to add a testing or analytical method to chapter 33-24-02 or 33-24-05. Section 33-24-01-08 sets forth additional requirements for petitions to exclude a waste at a particular facility from section 33-24-02-03 or the lists of hazardous wastes in chapter 33-24-02.
2. Each petition must be submitted to the department by certified mail and must include:
  - a. The petitioner's name and address.
  - b. A statement of the petitioner's interest in the proposed action.
  - c. A description of the proposed action, including (where appropriate) suggested regulatory language.
  - d. A statement of the need and justification for the proposed action, including any supporting tests, studies, or other information.
3. The department will make a tentative decision to grant or deny a petition and will publish notice of such tentative decision.
4. Upon the written request of any interested person, the department may, at its discretion, hold an informal public hearing to consider oral comments on the tentative decision. A person requesting a hearing must state the issues to be raised and explain why written comments would not suffice to communicate the person's views. The department, may in any case, decide on its own motion to hold an informal public hearing.
5. After evaluating all public comments, the department will make a final decision.

**History:** Effective January 1, 1984.

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

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

**33-24-01-07. Petitions for equivalent testing or analytical methods.**

1. Any person seeking to add a testing or analytical method to chapter 33-24-02 or 33-24-05 may petition for a regulatory amendment to this section and section 33-24-01-06. To be

successful the person must demonstrate to the satisfaction of the department that the proposed method is equal to or superior to the corresponding method prescribed in chapter 33-24-02 or 33-24-05, in terms of its sensitivity, accuracy, and precision, i.e., reproducibility.

2. Each petition must include, in addition to the information required by section 33-24-01-06:
  - a. A full description of the proposed method, including all procedural steps and equipment used in the method.
  - b. A description of the types of wastes or waste matrices for which the proposed method may be used.
  - c. Comparative results obtained from using the proposed method with those obtained from using the relevant or corresponding methods prescribed in chapter 33-24-02 or 33-24-05.
  - d. An assessment of any factors which may interfere with, or limit the use of, the proposed method.
  - e. A description of the quality control procedures necessary to ensure the sensitivity, accuracy, and precision of the proposed method.
3. After receiving a petition for an equivalent method, the department may request any additional information of the proposed method which it may reasonably require to evaluate the method.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-01-08. Petitions to amend chapter 33-24-02 to exclude a waste produced at a particular facility.**

1. Any person seeking to exclude a waste at a particular generating facility from the list in chapter 23-24-02 may petition for a regulatory amendment under this section and section 33-24-01-06. To be successful, the petitioner must demonstrate to the satisfaction of the department that the waste produced by a particular generating facility does not meet any of the criteria under which the waste was listed as a hazardous waste and, in the case of an acutely hazardous waste listed under subdivision b of subsection 1 of section 33-24-02-09, that it also does not meet the criterion of subsection c of subsection 1 of section 33-24-02-09. A waste which is so excluded may still, however, be a hazardous waste by operation of sections 33-24-02-10 through 33-24-02-14.

2. The procedures in this section and section 33-24-01-06 may also be used to petition the department for a regulatory amendment to exclude from paragraph 2 of subdivision b of subsection 1, or from subsection 3, of section 33-24-02-03, a waste which is described in those sections and is either a waste listed in chapter 33-24-02, contains a waste listed in chapter 33-24-02, or is derived from a waste listed in chapter 33-24-02. This exclusion may only be issued for a particular generating, storage, treatment, or disposal facility. The petitioner must make the same demonstration as required by subsection 1 of this section, except that where the waste is a mixture of solid waste and one or more listed hazardous wastes or derived from one or more hazardous wastes, the petitioner's demonstration may be made with respect to each constituent listed waste or the waste mixture as a whole. A waste which is so excluded may still be a hazardous waste by operation of sections 33-24-02-10 through 33-24-02-14.
3. If the waste is listed with codes "I", "C", "R", or "E" in chapter 33-24-02, the petitioner must show that demonstration samples of the waste do not exhibit the relevant characteristics defined in section 33-24-02-11, 33-24-02-12, 33-24-02-13, or 33-24-02-14 using any applicable test methods prescribed therein.
4. If the waste is listed with a code "T" in chapter 33-24-02, the petitioner must demonstrate that:
  - a. Demonstration samples of the waste do not contain the constituent (as defined in Appendix IV that caused the department to list the waste, using the appropriate test methods prescribed in Appendix III; or
  - b. The waste does not meet the criterion of subdivision c of subsection 1 of section 33-24-02-09 when considering the factors in paragraphs 1 through 11 of that subdivision.
5. If the waste is listed with the code "H" in chapter 33-24-02, the petitioner must demonstrate that the waste does not meet both the following criteria:
  - a. The criterion of subdivision b of subsection 1 of section 33-24-02-09.
  - b. The criterion of subdivision c of subsection 1 of section 33-24-02-09 when considering the factors listed in paragraphs 1 through 11 of that subdivision.
6. Reserved for listing radioactive wastes.
7. Reserved for listing infectious wastes.

8. Demonstration samples must consist of enough representative samples, but in no case less than four samples, taken over a period of time sufficient to represent the variability or the uniformity of the waste.
9. Each petition must include, in addition to the information required by subsection 2 of section 33-24-01-06:
  - a. The name and address of the laboratory facility performing the sampling or tests of the wastes.
  - b. The names and qualifications of the persons sampling and testing the wastes.
  - c. The dates of sampling and testing.
  - d. The location of the generating facility.
  - e. A description of the manufacturing processes or other operations and feed materials producing the waste and an assessment of whether such processes, operations, or feed materials can or might produce a waste that is not covered by the demonstration.
  - f. A description of the waste and an estimate of average and maximum monthly and annual quantities of waste covered by the demonstration.
  - g. Pertinent data on and discussion of the factors delineated in the respective criterion for listing a hazardous waste where the demonstration is based on the factors in subdivision c of subsection 1 of section 33-24-02-09.
  - h. A description of the methodologies and equipment used to obtain the representative sample.
  - i. A description of the sample handling and preparation techniques, including techniques used for extraction, containerization and preservation of the sample.
  - j. A description of the tests performed (including results).
  - k. The names and model numbers of the instruments used in performing the tests.
  - l. The following statement signed by the generator of the waste or the generator's authorized representative:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that

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

10. After receiving a petition for an exclusion, the department may request any additional information which it may reasonably require to evaluate the petition.
11. An exclusion will only apply to the waste generated at the individual facility covered by the demonstration and will not apply to wastes from any other facility.
12. The department may exclude only part of the waste for which the demonstration is submitted where it has reason to believe that variability of the waste justifies a partial exclusion.
13. The department may (but is not required to ) grant a temporary exclusion before making a final decision under subsection 4 of section 33-24-01-06 whenever it finds that there is a substantial likelihood that an exclusion will be finally granted.

**History:** Effective January 1, 1984.

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

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

CHAPTER 33-24-02  
IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

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33-24-02-01. Purpose and scope.

1. This chapter identifies those solid wastes which are subject to regulation as hazardous wastes and which are subject to the notification requirements.
2. This chapter identifies only some of the materials which are hazardous wastes under North Dakota Century Code chapter 23-20.3. A material which is not a hazardous waste identified in this chapter is still a hazardous waste for purposes of North Dakota Century Code chapter 23-20.3 if:
  - a. In the case of North Dakota Century Code section 23-20.3-06 the department has reason to believe that the material may be a hazardous waste within the meaning of subsection 5 of North Dakota Century Code section 23-20.3-02.

- b. In the case of North Dakota Century Code section 23-20.3-08, the statutory elements are established.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-02-02. Definition of solid waste.**

1. A solid waste is any garbage, refuse, sludge, or any other waste material which is not excluded under subsection 1 of section 33-24-02-04.
2. An "other waste material" is any solid, liquid, semisolid, or contained gaseous material, resulting from industrial, commercial, mining, or agricultural operations, or from community activities which:
  - a. Is discarded or is being accumulated, stored, or physically, chemically, or biologically treated prior to being discarded;
  - b. Has served its original intended use and sometimes is discarded; or
  - c. Is a manufacturing or mining byproduct and sometimes is discarded.
3. A material is "discarded" if it is abandoned (and not used, reused, reclaimed, or recycled) by being:
  - a. Disposed of;
  - b. Burned or incinerated, except where the material is being burned for a fuel for the purpose of recovering usable energy; or
  - c. Physically, chemically, or biologically treated (other than burned or incinerated) in lieu of or prior to being disposed of.
4. A material is "disposed of" if it is discharged, deposited, injected, dumped, spilled, leaked, or placed into or on any land or water so that such material or any constituent thereof may enter the environment or be emitted into the air or discharged into ground or surface waters.
5. A "manufacturing or mining byproduct" is a material that is not one of the primary products of a particular manufacturing or mining operation, is a secondary and incidental product of the particular operation and would not be solely and separately manufactured or mined by the particular

manufacturing or mining operation. The term does not include an intermediate manufacturing or mining product which results from one of the steps in a manufacturing or mining process and is typically processed through the next step of the process within a short time.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-02-03. Definition of hazardous waste.**

1. A solid waste, as defined in section 33-24-02-02, is a hazardous waste if:
  - a. It is not excluded from regulation as a hazardous waste under subsection 2 of section 33-24-02-04; and
  - b. It meets any of the following criteria:
    - (1) It exhibits any of the characteristic of hazardous waste identified in this chapter.
    - (2) It is listed in this chapter and has not been excluded from the lists in this chapter under sections 33-24-01-06 and 33-24-01-08.
    - (3) It is a mixture of a solid waste and a hazardous waste that is listed in this chapter solely because it exhibits one or more of the characteristics of hazardous waste identified in this chapter, unless the resulting mixture no longer exhibits any characteristic of hazardous waste identified in this chapter.
    - (4) It is a mixture of solid waste and one or more hazardous wastes listed in this chapter and has not been excluded from this paragraph under sections 33-24-01-06 and 33-24-01-08; however, the following mixtures of solid wastes and hazardous wastes listed in this chapter are not hazardous wastes (except by application of paragraph 1 or 2 of subdivision b of subsection 1) if the generator can demonstrate that the mixture consists of wastewater the discharge of which is subject to regulation under subsections 18 and 19, or 25 of North Dakota Century Code section 61-28-04 (including wastewater at the facilities which have eliminated the discharge of wastewater) and:
      - (a) One or more of the following spent solvents listed in section 33-24-02-16 - carbon

tetrachloride, tetrachloroethylene, trichloroethylene - provided that the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed one part per million;

- (b) One or more of the following spent solvents listed in section 33-24-02-16 - methylene chloride, 1,1,1-trichloroethane, chlorobenzene, o-dichlorobenzene, cresols, cresylic acid, nitrobenzene, toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, spent chlorofluorocarbon solvents - provided that the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed twenty-five parts per million;
- (c) One of the following wastes listed in section 33-24-02-17 - heat exchanger bundle cleaning sludge from the petroleum refining industry (environmental protection agency hazardous waste number K050);
- (d) A discarded chemical commercial product, or chemical intermediate listed in section 33-24-02-18, arising from de minimus losses of these materials from manufacturing operations in which these materials are used as raw materials or are produced in the manufacturing process. For purposes of this subparagraph, "de minimus" losses include those from normal material handling operations, e.g., spills from the unloading or transfer of materials from bins or other containers and leaks from pipes, valves, or other devices used to transfer materials; minor leaks of process equipment, storage tanks or containers; leaks from well-maintained pump packings and seals; sample purgings; relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; and rinsate from empty containers or from containers that are rendered empty by that rinsing; or

- (e) Wastewater resulting from laboratory operations containing toxic (T) wastes listed in this chapter, provided that the annualized average flow of laboratory wastewater does not exceed one percent of total wastewater flow into the headworks of the facility's wastewater treatment or pretreatment system, or provided the wastes combined annualized average concentration does not exceed one part per million in the headworks of the facility's wastewater treatment or pretreatment facility. Toxic (T) wastes used in laboratories that are demonstrated not to be discharged to wastewater are not to be included in this calculation.
- 2. A solid waste which is not excluded from regulation under subdivision a of subsection 1 becomes a hazardous waste when any of the following events occur:
    - a. In the case of a waste listed in this chapter, when the waste first meets the listing description set forth in this chapter.
    - b. In the case of a mixture of solid waste and one or more listed hazardous wastes, when a hazardous waste listed in this chapter is first added to the solid waste.
    - c. In the case of any other waste (including a waste mixture), when the waste exhibits any of the characteristics identified in this chapter.
  - 3. Unless and until it meets the criteria of subsection 4:
    - a. A hazardous waste will remain a hazardous waste.
    - b. Any solid waste generated from the treatment, storage, or disposal of a hazardous waste, including any sludge, spill residue, ash, emission control dust, or leachate (but not including precipitation runoff), is a hazardous waste.
  - 4. Any solid waste described in subsection 3 is not a hazardous waste if it meets the following criteria:
    - a. In the case of any solid waste, it does not exhibit any of the characteristics of hazardous waste identified in this chapter.

- b. In the case of a waste which is a listed waste under this chapter, contains a waste listed in this chapter or is derived from a waste listed in this chapter, it also has been excluded from subsection 3 under sections 33-24-01-06 and 33-24-01-08.

**History:** Effective January 1, 1984.

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

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

#### **33-24-02-04. Exclusions.**

1. **Materials which are not solid wastes.** The following materials are not solid wastes for the purpose of this chapter:
  - a. Domestic sewage and any mixture of domestic sewage and other wastes that passes through a sewer system to a publicly owned treatment works for treatment. "Domestic sewage" means untreated sanitary wastes that pass through a sewer system.
  - b. Industrial wastewater discharges that are point source discharges subject to regulation under subsections 18 and 19 of North Dakota Century Code section 61-28-04. (Comment: This exclusion applies only to the actual point source discharge. It does not exclude industrial wastewaters while they are being collected, stored, or treated before discharge, nor does it exclude sludges that are generated by industrial wastewater treatment.)
  - c. Irrigation return flows.
  - d. Source, special nuclear or byproduct material as defined by the Atomic Energy Act of 1954, as amended [42 U.S.C. 2011 et seq.].
  - e. Materials subjected to in situ mining techniques which are not removed from the ground as part of the extraction process.
2. **Solid wastes which are not hazardous wastes.** The following solid wastes are not hazardous wastes:
  - a. Household waste, including household waste that has been collected, transported, stored, treated, disposed, recovered, e.g., refuse-derived fuel, or reused. "Household waste" means any waste material (including garbage, trash, and sanitary wastes in septic tanks) derived from households (including single and multiple residences, hotels, and motels).

- b. Solid wastes generated by any of the following and which are returned to the soils as fertilizers:
  - (1) The growing and harvesting of agricultural crops.
  - (2) The raising of animals, including animal manures.
- c. Mining overburden returned to the minesite.
- d. Fly ash waste, bottom ash waste, slag waste, and flue gas emission control wastes generated primarily from the combustion of coal or other fossil fuels.
- e. Drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil, natural gas, or geothermal energy.
- f. The following chromium-containing wastes:
  - (1) Wastes which fail the test for the characteristic of EP toxicity because chromium is present or are listed in this chapter due to the presence of chromium, which do not fail the test for the characteristic of EP toxicity for any other constituent or are not listed due to the presence of any other constituent, and which do not fail the test for any other characteristic, if it is shown by a waste generator or by waste generators that:
    - (a) The chromium in the waste is exclusively (or nearly exclusively) trivalent chromium;
    - (b) The waste is generated from an industrial process which uses trivalent chromium exclusively (or nearly exclusively) and the process does not generate hexavalent chromium; and
    - (c) The waste is typically and frequently managed in nonoxidizing environments.
  - (2) Specific wastes which meet the standard of paragraph 1 (so long as they do not fail the test for the characteristic of EP toxicity, and do not fail the test for any other characteristics) are:
    - (a) Chrome (blue) trimmings, chrome (blue) shavings, sewer screenings, and wastewater treatment sludges, generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome

tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

- (b) Buffing dust generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue.
- (c) Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; and through-the-blue.
- (d) Waste scrap leather from the leather tanning industry, the shoe manufacturing industry, and other leather product manufacturing industries.
- (e) Wastewater treatment sludges from the production of  $TiO_2$  pigment using chromium-bearing ores by the chloride process.

g. Solid waste from the extraction, beneficiation and processing of ores and minerals (including coal), including phosphate rock and overburden from the mining of uranium ore.

h. Cement kiln dust waste.

i. Solid waste which consists of discarded wood or wood products which fails the test for the characteristic of EP toxicity and which is not a hazardous waste for any other reason, if the waste is generated by persons who utilize the arsenical-treated wood and wood products for these materials intended end use.

3. **Hazardous wastes which are exempted from certain regulations.** A hazardous waste which is generated in a product or raw material storage tank, a product or raw material transport vehicle or vessel, a product or raw material pipeline, or in a manufacturing process unit or an associated non-waste-treatment-manufacturing unit, is not subject to regulation under chapters 33-24-03 through 33-24-07 or to the notification requirements until it exits the unit in which it was generated, unless the unit is a surface impoundment, or unless the hazardous waste remains in the unit more than ninety days after the unit ceases to be operated for manufacturing, or for storage or transportation of product or raw materials.

4. **Samples.**

a. Except as provided in subdivision b, a sample of solid waste or a sample of water, soil, or air, which is collected for the sole purpose of testing to determine its characteristics or composition, is not subject to any requirements of this chapter or chapters 33-24-03 through 33-24-07 or to the notification requirements when:

- (1) The sample is being transported to a laboratory for the purpose of testing;
- (2) The sample is being transported back to the sample collector after testing;
- (3) The sample is being stored by the sample collector before transport to a laboratory for testing;
- (4) The sample is being stored in a laboratory before testing;
- (5) The sample is being stored in a laboratory after testing but before it is returned to the sample collector; or
- (6) The sample is being stored temporarily in the laboratory after testing for a specific purpose, e.g., until conclusion of a court case or enforcement action where further testing of the sample may be necessary.

b. In order to qualify for the exemption in paragraphs 1 and 2 of subdivision a, a sample collector shipping samples to a laboratory and a laboratory returning samples to a sample collector must:

- (1) Comply with the United States department of transportation, the United States postal service, or any other applicable shipping requirement; or
- (2) Comply with the following requirements if the sample collector determines that the United States department of transportation, the United States postal service, or other shipping requirements do not apply to the shipment of the sample:
  - (a) Assure that the following information accompanies the sample:
    - [1] The sample collector's name, mailing address, and telephone number.
    - [2] The laboratory's name, mailing address, and telephone number.

[3] The quantity of the sample.

[4] The date of shipment.

[5] A description of the sample.

(b) Package the sample so that it does not leak, spill, or vaporize from its packaging.

c. This exemption does not apply if the laboratory determines that the waste is hazardous but the laboratory is no longer meeting any of the conditions stated in subdivision a.

**History:** Effective January 1, 1984.

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

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

**33-24-02-05. Special requirements for hazardous waste generated by small quantity generators.**

1. A generator is a small quantity generator in a calendar month if the generator generates less than one thousand kilograms of hazardous waste in that month.
2. Except for those wastes identified in subsections 5 and 6, a small quantity generator's hazardous wastes are not subject to regulation under chapters 33-24-03 through 33-24-07, and the notification requirements, provided the generator complies with the requirements of subsection 7.
3. Hazardous waste that is beneficially used or reused or legitimately recycled or reclaimed and that is excluded from regulation by subsection 1 of section 33-24-02-06 is not included in the quantity determinations of this section and is not subject to any requirements of this section. Hazardous waste that is subject to the special requirements of subsection 2 of section 33-24-02-06 is included in the quantity determinations of this section and is subject to the requirements of this section.
4. In determining the quantity of hazardous waste generated, a generator need not include:
  - a. The generator's hazardous waste when it is removed from onsite storage; or
  - b. Hazardous waste produced by onsite treatment of the generator's hazardous waste.
5. If a small quantity generator generates acutely hazardous waste in a calendar month in quantities greater than set forth

below, all quantities of that acutely hazardous waste are subject to regulations under chapters 33-24-03 through 33-24-07, and the notification requirements:

- a. A total of one kilogram of commercial chemical products and manufacturing chemical intermediates having the generic names listed in subsection 5 of section 33-24-02-18, and off-specification commercial chemical products and manufacturing chemical intermediates which, if they met specifications, would have the generic names listed in subsection 5 of section 33-24-02-18.
  - b. A total of one hundred kilograms of any residue or contaminated soil, water, or other debris resulting from the cleanup of a spill, into or on any land or water, of any commercial chemical products or manufacturing chemical intermediates having the generic names listed in subsection 5 of section 33-24-02-18; or any residue or contaminated soil, water, or other debris resulting from the cleanup of a spill, into or on any land or water, of any off-specification commercial chemical products or manufacturing chemical intermediates which, if they met specifications, would have the generic names listed in subsection 5 of section 33-24-02-18.
6. A small quantity generator may accumulate hazardous waste onsite. If the generator accumulates at any time more than a total of one thousand kilograms of the generator's hazardous waste, or the generator's acutely hazardous wastes in quantities greater than set forth in subdivision a or b of subsection 5, all of those accumulated wastes for which the accumulation limit was exceeded are subject to regulations under chapters 33-24-03 through 33-24-07, and the notification requirements. The time period of section 33-24-03-12 for accumulation of wastes onsite begins for a small quantity generator when the accumulated wastes exceed the applicable exclusion level.
7. In order for hazardous wastes generated by a small quantity generator to be excluded from full regulation under this section, the generator must:
- a. Comply with section 33-24-03-02;
  - b. If the generator stores the generator's hazardous waste onsite, store it in compliance with the requirements of subsection 6; and
  - c. Either treat or dispose of the generator's hazardous waste in an onsite facility, or ensure delivery to an offsite storage, treatment or disposal facility, either of which is:

- (1) Permitted under 40 CFR Part 122 or chapter 33-24-06;
  - (2) Treated as having a permit under section 33-24-06-16 or in interim status under 40 CFR Parts 122 and 265;
  - (3) Permitted, licensed, or registered by any state to manage municipal or industrial solid or hazardous waste; or
  - (4) A facility which:
    - (a) Beneficially uses or reuses or legitimately recycles or reclaims the generator's wastes; or
    - (b) Treats the generator's waste prior to beneficial use or reuse or legitimate recycling or reclamation.
8. Hazardous waste subject to the reduced requirements of this section may be mixed with nonhazardous waste and remain subject to these reduced requirements even though the resultant mixture exceeds the quantity limitations identified in this section, unless the mixture meets any of the characteristics of hazardous waste identified in this chapter.
9. If a small quantity generator mixes a solid waste with a hazardous waste that exceeds a quantity exclusion level of this section, the mixture is subject to full regulation.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-02-06. Special requirements for hazardous waste which is used, reused, recycled, or reclaimed.**

1. Except as otherwise provided in subsection 2, a hazardous waste which meets any of the following criteria is not subject to regulation under chapters 33-24-03 through 33-24-07 and is not subject to the notification requirements until such time as the department promulgates regulations to the contrary:
  - a. It is being beneficially used or reused or legitimately recycled or reclaimed.
  - b. It is being accumulated, stored, or physically, chemically, or biologically treated prior to beneficial use or reuse or legitimate recycling or reclamation.
  - c. It is one of the following materials being used, reused, recycled, or reclaimed in the specified manner: spent pickle liquor which is reused in wastewater treatment at a

facility holding a North Dakota pollutant discharge elimination system permit, or which is being accumulated, stored, or physically, chemically or biologically treated before such reuse.

2. Except for those wastes listed in subdivision c of subsection 1, a hazardous waste that is a sludge, or that is listed in section 33-24-02-16 or 33-24-02-17, or that contains one or more hazardous wastes listed in section 33-24-02-16 or 33-24-02-17; and that is transported or stored prior to being used, reused, recycled, or reclaimed is subject to the notification requirements and the applicable regulations under chapters 33-24-03 through 33-24-07 with respect to such transportation or storage.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-02-07. Residues of hazardous wastes in empty containers.**

1. Unless empty as defined in subsection 2, 3, or 4, any hazardous waste in either a container or an inner liner removed from a container is subject to regulation under chapters 33-24-02 through 33-24-07 and to the notification requirements.
2. A container or an inner liner removed from a container that has held any hazardous waste, except a waste that is a compressed gas or that is identified in subsection 3 of section 33-24-02-18, is empty if:
  - a. All wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container, e.g., pouring, pumping, and aspirating; and
  - b. One of the following:
    - (1) No more than two and one-half centimeters [1 inch] of residue remain on the bottom of the container or inner liner;
    - (2) No more than three percent by weight of the total capacity of the container remains in the container or inner liner if the container is less than or equal to one hundred ten gallons [416.40 liters] in size; or
    - (3) No more than three-tenths of one percent by weight of the total capacity of the container remains in the container or inner liner if the container is greater than one hundred ten gallons [416.40 liters] in size.

3. A container that has held a hazardous waste that is a compressed gas is empty when the pressure in the container approaches atmospheric levels.
4. A container or an inner liner removed from a container that has held a hazardous waste identified in subsection 3 of section 33-24-02-18 is empty if:
  - a. The container or inner liner has been triple-rinsed using a solvent capable of removing the commercial chemical product or manufacturing chemical intermediate;
  - b. The container or inner liner has been cleaned by another method that has been shown in the scientific literature or by tests conducted by the generator, to achieve equivalent removal; or
  - c. In the case of a container, the inner liner that prevented contact of the commercial chemical product or manufacturing chemical intermediate with the container has been removed.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-02-08. Criteria for identifying the characteristics of hazardous waste.**

1. The department shall identify and define a characteristic of hazardous waste in this chapter only upon determining that:
  - a. A solid waste that exhibits the characteristic may:
    - (1) Cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or
    - (2) Pose a substantial present or potential hazard to human health or the environment when it is improperly treated, stored, transported, disposed of, or otherwise managed; and
  - b. The characteristic can be:
    - (1) Measured by an available standardized test method which is reasonably within the capability of generators of solid waste or private sector laboratories that are available to serve generators of solid waste; or

- (2) Reasonably detected by generators of solid waste through their knowledge of their waste.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

### 33-24-02-09. Criteria for listing hazardous waste.

1. The department shall list a solid waste as a hazardous waste only upon determining that the solid waste meets one of the following criteria:
  - a. It exhibits any of the characteristics of hazardous waste identified in this chapter.
  - b. It has been found to be fatal to humans in low doses or, in the absence of data on human toxicity, it has been shown in studies to have an oral LD 50 toxicity (rat) of less than fifty milligrams per kilogram, and inhalation LC 50 toxicity (rat) of less than two milligrams per liter, or a dermal LD 50 toxicity (rabbit) of less than two hundred milligrams per kilogram or is otherwise capable of causing or significantly contributing to an increase in serious irreversible, or incapacitating reversible, illness. (Waste listed in accordance with these criteria will be designated acute hazardous waste.)
  - c. It contains any of the toxic constituents listed in Appendix V, unless after considering any of the following factors, the department concludes that the waste is not capable of posing a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of or otherwise managed:
    - (1) The nature of the toxicity presented by the constituent.
    - (2) The concentration of the constituent in the waste.
    - (3) The potential of the constituent or any toxic degradation product of the constituent to migrate from the waste into the environment under the types of improper management considered in paragraph 7.
    - (4) The persistence of the constituent or any toxic degradation product of the constituent.
    - (5) The potential for the constituent or any toxic degradation product of the constituent to degrade

into nonharmful constituents and the rate of degradation.

- (6) The degree to which the constituent or any degradation product of the constituent bioaccumulates in ecosystems.
- (7) The plausible types of improper management to which the waste could be subjected.
- (8) The quantities of the waste generated at individual generation sites or on a statewide basis.
- (9) The nature and severity of the human health and environmental damage that has occurred as a result of the improper management of wastes containing the constituent.
- (10) Action taken by other governmental agencies or regulatory programs based on the health or environmental hazard posed by the waste or waste constituent.
- (11) Such other factors as may be appropriate.

Substances will be listed on Appendix V only if they have been shown in scientific studies to have toxic, carcinogenic, mutagenic or teratogenic effects on human or other life forms. (Wastes listed in accordance with these criteria will be designated toxic wastes.)

2. The department may list classes or types of solid waste as hazardous wastes if it has reason to believe that individual wastes, within the class or type of waste, typically or frequently are hazardous under the definition of hazardous waste found in subsection 5 of North Dakota Century Code section 23-20.3-02.
3. The department will use the criteria for listing specified in this section to establish the exclusion limits referred to in subsection 3 of section 33-24-02-05.

**History:** Effective January 1, 1984.

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

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

#### **33-24-02-10. General characteristics of hazardous waste.**

1. A solid waste, as defined in section 33-24-02-02 which is not excluded from regulation as a hazardous waste under subsection 2 of section 33-24-02-04 is a hazardous waste if it exhibits any of the characteristics identified in this

chapter. (Comment: Section 33-24-03-02 sets forth the generator's responsibility to determine whether the generator's waste exhibits one or more of the characteristics identified in this chapter.)

2. A hazardous waste which is identified by a characteristic in this chapter, but is not listed as a hazardous waste in this chapter, is assigned a hazardous waste number set forth in the respective characteristic in this chapter. This number must be used in complying with the notification requirements and certain recordkeeping and reporting requirements under chapters 33-24-03 through 33-24-06.
3. For purposes of sections 33-24-02-10 through 33-24-02-14 the department will consider a sample obtained using any of the applicable sampling methods specified in Appendix I to be a representative sample within the meaning of chapter 33-24-01.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

#### 33-24-02-11. Characteristic of ignitability.

1. A solid waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:
  - a. It is a liquid, other than an aqueous solution containing less than twenty-four percent alcohol by volume, and has a flashpoint less than sixty degrees Celsius [140 degrees Fahrenheit], as determined by a Penske-Martins Closed Cup Tester, using the test method specified in ASTM Standard D-93-79 or D-93-80, or a Setaflash Closed Cup Tester, using the test method specified in ASTM Standard D-3278-78, or as determined by an equivalent test method approved by the department under procedures set forth in sections 33-24-01-06 and 33-24-01-07.
  - b. It is not a liquid and is capable, under standard temperature and pressure of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously that it creates a hazard.
  - c. It is an ignitable compressed gas as defined in 49 CFR 173.300 and as determined by the test methods described in that regulation or equivalent test methods approved by the department.
  - d. It is an oxidizer as defined in 49 CFR 173.151.

2. A solid waste that exhibits the characteristic of ignitability, but is not listed as a hazardous waste in this chapter has a hazardous waste number of D001.

**History:** Effective January 1, 1984.

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

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

#### **33-24-02-12. Characteristic of corrosivity.**

1. A solid waste exhibits the characteristic of corrosivity if a representative sample of the waste has either of the following properties:
  - a. It is aqueous and has a pH less than or equal to two or greater than or equal to twelve and five-tenths, as determined by a pH meter, using either the test method specified in the "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods" (incorporated by reference, see section 33-24-01-05), or an equivalent test method approved by the department.
  - b. It is a liquid and corrodes steel (SAE 1020) at a rate greater than six and thirty-five-hundredths millimeters [0.250 inch] per year at a test temperature of fifty-five degrees Celsius [130 degrees Fahrenheit] as determined by the test method specified in National Association of Corrosion Engineers (NACE) Standard TM-01-69 as standardized in Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods" (incorporated by reference, see section 33-24-01-05), or an equivalent test method approved by the department.
2. A solid waste that exhibits the characteristic of corrosivity, but is not listed as a hazardous waste in this chapter has a hazardous waste number of D002.

**History:** Effective January 1, 1984.

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

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

#### **33-24-02-13. Characteristic of reactivity.**

1. A solid waste exhibits the characteristic of reactivity if a representative sample of the waste has any of the following properties:
  - a. It is normally unstable and readily undergoes violent change without detonating.
  - b. It reacts violently with water.

- c. It forms potentially explosive mixtures with water.
  - d. When mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.
  - e. It is a cyanide or sulfide bearing waste which, when exposed to pH conditions between two and twelve and five-tenths, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.
  - f. It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.
  - g. It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.
  - h. It is a forbidden explosive as defined in 49 CFR 173.51, or a Class A explosive as defined in 49 CFR 173.53 or a Class B explosive as defined in 49 CFR 173.88.
2. A solid waste that exhibits the characteristic of reactivity, but is not listed as a hazardous waste in this chapter has the hazardous waste number of D003.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

#### 33-24-02-14. Characteristic of EP toxicity.

1. A solid waste exhibits the characteristic of EP toxicity if, using the test methods described in Appendix II or equivalent methods approved by the department, the extract from a representative sample of the waste contains any of the contaminants listed in Table 1 at a concentration equal to or greater than the respective value given in that table. Where the waste contains less than one-half of one percent filterable solid, the waste itself, after filtering, is considered to be the extract for the purposes of this section.
2. A solid waste that exhibits the characteristic of EP toxicity, but is not listed as a hazardous waste in this chapter has a hazardous waste number specified in Table 1 which corresponds to the toxic contaminant causing it to be hazardous.

TABLE 1  
 MAXIMUM CONCENTRATION OF CONTAMINANTS  
 FOR CHARACTERISTIC OF EP TOXICITY

<u>Hazardous Waste Number</u>	<u>Contaminant</u>	<u>Maximum Concentration, mg/l</u>
D004	Arsenic	5.0
D005	Barium	100.0
D006	Cadmium	1.0
D007	Chromium	5.0
D008	Lead	5.0
D009	Mercury	0.2
D010	Selenium	1.0
D011	Silver	5.0
D012	Endrin <sup>1</sup>	0.02
D013	Lindane <sup>2</sup>	0.4
D014	Methoxychlor <sup>3</sup>	10.0
D015	Toxaphene <sup>4</sup>	0.5
D016	2,4-D <sup>5</sup>	10.0
D017	2,4,5-TP Silvex <sup>6</sup>	1.0

1 1,2,3,4,10,10-hexachloro-1,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4-endo, endo-5,8-dimethane naphthalene

2 1,2,3,4,5,6-hexachlorocyclohexane, gamma isomer

3 1,1,1-trichloro-2,2-bis [p-methoxyphenyl] ethane

4 C<sub>10</sub> H<sub>10</sub> Cl<sub>8</sub>, technical chlorinated camphene, 67-69% chlorine

5 2,4-dichlorophenoxyacetic acid

6 2,4,5-trichlorophenoxyprpionic acid

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

33-24-02-15. Lists of hazardous wastes.

1. A solid waste is a hazardous waste if it is listed in sections 33-24-02-15 through 33-24-02-18, unless it has been excluded from these lists under section 33-24-01-06 or 33-24-01-08.
2. The department will indicate its basis for listing the classes or types of wastes listed in this chapter by employing one or more of the following hazard codes:

<u>Waste Type</u>	<u>Waste Hazard Code</u>
Ignitable Waste	(I)
Corrosive Waste	(C)
Reactive Waste	(R)
EP Toxic Waste	(E)
Acute Hazardous Waste	(H)
Toxic Waste	(T)

Appendix IV identifies the constituent which caused the department to list the waste as an EP toxic waste (E) or toxic wastes (T) in sections 33-24-02-16 and 33-24-02-17.

3. Each hazardous waste listed in this chapter is assigned a hazardous waste number which precedes the name of the waste. The number must be used in complying with the notification requirements and certain recordkeeping and reporting requirements under chapters 33-24-03 through 33-24-06.
4. The hazardous wastes listed in sections 33-24-02-16 and 33-24-02-17 are subject to the exclusion limits for acutely hazardous wastes established in section 33-24-02-05.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

## Section 33-24-02-16 HAZARDOUS WASTE FROM NONSPECIFIC SOURCES.

Hazardous waste No.	Hazardous waste	Hazard code
<b>Generic:</b>		
P001.....	The following spent halogenated solvents used in degreasing: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; and sludges from the recovery of these solvents in degreasing operations.	(T)
P002.....	The following spent halogenated solvents: tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, and trichlorofluoromethane; and the still bottoms from the recovery of these solvents.	(T)
P003.....	The following spent non-halogenated solvents: xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; and the still bottoms from the recovery of these solvents.	(I)
P004.....	The following spent non-halogenated solvents: cresols and cresylic acid, and nitrobenzene; and the still bottoms from the recovery of these solvents.	(T)
P005.....	The following spent non-halogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, and pyridine; and the still bottoms from the recovery of these solvents.	(I, T)
P006.....	Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.	(T)
P019.....	Wastewater treatment sludges from the chemical conversion coating of aluminum	(T)
F007.....	Spent cyanide plating bath solutions from electroplating operations (except for precious metals electroplating spent cyanide plating bath solutions).	(R, T)
F008.....	Plating bath sludges from the bottom of plating baths from electroplating operations where cyanides are used in the process (except for precious metals electroplating plating bath sludges).	(R, T)
F009.....	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process (except for precious metals electroplating spent stripping and cleaning bath solutions).	(R, T)
F010.....	Quenching bath sludge from oil baths from metal heat treating operations where cyanides are used in the process (except for precious metals heat-treating quenching bath sludges).	(R, T)
F011.....	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations (except for precious metals heat treating spent cyanide solutions from salt bath pot cleaning).	(R, T)
F012.....	Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process (except for precious metals heat treating quenching wastewater treatment sludges).	(T)

Section 33-24-02-17 HAZARDOUS WASTE FROM SPECIFIC SOURCES

Hazardous waste No.	Hazardous waste	Hazard code
<b>Wood Preservation:</b>		
K001.....	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.	(T)
<b>Inorganic Pigments:</b>		
K002.....	Wastewater treatment sludge from the production of chrome yellow and orange pigments.	(T)
K003.....	Wastewater treatment sludge from the production of molybdate orange pigments.	(T)
K004.....	Wastewater treatment sludge from the production of zinc yellow pigments.	(T)
K005.....	Wastewater treatment sludge from the production of chrome green pigments.	(T)
K006.....	Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated).	(T)
K007.....	Wastewater treatment sludge from the production of iron blue pigments.	(T)
K008.....	Oven residue from the production of chrome oxide green pigments.	(T)
<b>Organic Chemicals:</b>		
K009.....	Distillation bottoms from the production of acetaldehyde from ethylene.	(T)
K010.....	Distillation side cuts from the production of acetaldehyde from ethylene.	(T)
K011.....	Bottom stream from the wastewater stripper in the production of acrylonitrile.	(R, T)
K013.....	Bottom stream from the acetonitrile column in the production of acrylonitrile.	(R, T)
K014.....	Bottoms from the acetonitrile purification column in the production of acrylonitrile.	(T)
K015.....	Still bottoms from the distillation of benzyl chloride.	(T)
K016.....	Heavy ends or distillation residues from the production of carbon tetrachloride.	(T)
K017.....	Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin.	(T)
K018.....	Heavy ends from the fractionation column in ethyl chloride production.	(T)
K019.....	Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production.	(T)
K020.....	Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production.	(T)
K021.....	Aqueous spent antimony catalyst waste from fluoromethanes production.	(T)
K022.....	Distillation bottom tars from the production of phenol/acetone from cumene.	(T)
K023.....	Distillation light ends from the production of phthalic anhydride from naphthalene.	(T)
K024.....	Distillation bottoms from the production of phthalic anhydride from naphthalene.	(T)
K093.....	Distillation light ends from the production of phthalic anhydride from ortho-xylene.	(T)
K094.....	Distillation bottoms from the production of phthalic anhydride from ortho-xylene.	(T)
K025.....	Distillation bottoms from the production of nitrobenzene by the nitration of benzene.	(T)
K026.....	Stripping still tails from the production of methy ethyl pyridines.	(T)
K027.....	Centrifuge and distillation residues from toluene diisocyanate production.	(R, T)
K028.....	Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane.	(T)

33-24-02-17. Hazardous waste from specific sources.

K029.....	Waste from the product steam stripper in the production of 1,1,1-trichloroethane.	(T)
K095.....	Distillation bottoms from the production of 1,1,1-trichloroethane.	(T)
K096.....	Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane.	(T)
K030.....	Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene.	(T)
K083.....	Distillation bottoms from aniline production.	(T)
K103.....	Process residues from aniline extraction from the production of aniline.	(T)
K104.....	Combined wastewater streams generated from nitrobenzene/aniline production.	(T)
K085.....	Distillation or fractionation column bottoms from the production of chlorobenzenes.	(T)
K105.....	Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes.	(T)
<b>Inorganic Chemicals:</b>		
K071.....	Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used.	(T)
K073.....	Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production.	(T)
K106.....	Wastewater treatment sludge from the mercury cell process in chlorine production.	(T)
<b>Pesticides:</b>		
K031.....	By-product salts generated in the production of MSMA and cacodylic acid.	(T)
K032.....	Wastewater treatment sludge from the production of chlordane.	(T)
K033.....	Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane.	(T)
K034.....	Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane.	(T)
K097.....	Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane.	(T)
K035.....	Wastewater treatment sludges generated in the production of creosote.	(T)
K036.....	Still bottoms from toluene reclamation distillation in the production of disulfoton.	(T)
K037.....	Wastewater treatment sludges from the production of disulfoton.	(T)
K038.....	Wastewater from the washing and stripping of phorate production.	(T)
K039.....	Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate.	(T)
K040.....	Wastewater treatment sludge from the production of phorate.	(T)
K041.....	Wastewater treatment sludge from the production of toxaphene.	(T)
K098.....	Untreated process wastewater from the production of toxaphene.	(T)
K042.....	Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T.	(T)
K043.....	2,6-Dichlorophenol waste from the production of 2,4-D.	(T)
K099.....	Untreated wastewater from the production of 2,4-D.	(T)
<b>Explosives:</b>		
K044.....	Wastewater treatment sludges from the manufacturing and processing of explosives.	(R)
K045.....	Spent carbon from the treatment of wastewater containing explosives.	(R)
K046.....	Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds.	(T)
K047.....	Pink/red water from TNT operations.	(R)

**Petroleum Refining:**

K048..... Dissolved air flotation (DAF) float from the petroleum refining industry. (T)  
K049..... Slop oil emulsion solids from the petroleum refining industry. (T)  
K050..... Heat exchanger bundle cleaning sludge from the petroleum refining industry. (T)  
K051..... API separator sludge from the petroleum refining industry. (T)  
K052..... Tank bottoms (leaded) from the petroleum refining industry. (T)

**Iron and Steel:**

K061..... Emission control dust/sludge from the primary production of steel in electric furnaces. (T)  
K062..... Spent pickle liquor from steel finishing operations. (C, T)

**Secondary Lead:**

K069..... Emission control dust/sludge from secondary lead smelting. (T)  
K100..... Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting. (T)

**Veterinary Pharmaceuticals:**

K084..... Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. (T)  
K101..... Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. (T)  
K102..... Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. (T)

**Ink Formulation:**

K086..... Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead. (T)

**Coking:**

K060..... Ammonia still lime sludge from coking operations. (T)  
K087..... Decanter tank tar sludge from coking operations. (T)

33-24-02-18. Discarded commercial chemical products and associated specification materials, containers, and spill residues. The following materials or items are hazardous wastes if and when they are discarded or intended to be discarded:

1. Any commercial chemical product, or manufacturing chemical intermediate having the generic name listed in subsection 5 or 6.
2. Any off-specification commercial chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in subsection 5 or 6.
3. Any residue remaining in a container or an inner liner removed from a container that has been used to hold any commercial chemical product or manufacturing chemical intermediate having the generic name listed in subsection 5, or any container or inner liner removed from a container that has been used to hold any off-specification chemical product and manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in subsection 5, unless:
  - a. The container or inner liner has been triple-rinsed using a solvent capable of removing the commercial chemical product or manufacturing chemical intermediate;
  - b. The container or inner liner has been cleaned by another method that has been shown in the scientific literature or by tests conducted by the generator, to achieve equivalent removal; or
  - c. In the case of a container, the inner liner that prevented contact of the commercial chemical product or manufacturing chemical intermediate with the container has been removed.
4. Any residue or contaminated soil, water, or other debris, resulting from the cleanup of a spill, into or on any land or water, of any commercial chemical product or manufacturing chemical intermediate having the generic name listed in subsection 5 or 6, or any residue or contaminated soil, water, or other debris resulting from the cleanup of a spill into or on any land or water of any off-specification chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in subsection 5 or 6. (Comment: The phrase "commercial chemical product or manufacturing chemical intermediate having the generic name listed in ..." refers to a chemical substance which is manufactured or formulated for commercial or manufacturing use, which consists of the commercially pure grade of the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which

the chemical is the sole active ingredient. It does not refer to a material, such as a manufacturing process waste, that contains any of the substances listed in subsection 5 or 6. Where a manufacturing process is deemed to be a hazardous waste because it contains a substance listed in subsection 5 or 6, such waste will be listed in either section 33-24-02-16 or 33-24-02-17 or will be identified as a hazardous waste by the characteristics set forth in this chapter.)

5. The commercial chemical products or manufacturing chemical intermediates, referred to in subsections 1 through 4, are identified as acute hazardous wastes (H) and are subject to the small quantity exclusion defined in subsection 5 of section 33-24-02-05. These wastes and their corresponding hazardous waste numbers are:

Hazardous waste No.	Substance
P023.....	Acetaldehyde, chloro-
P002.....	Acetamide, N-(aminothioxomethyl)-
P057.....	Acetamide, 2-fluoro-
P050.....	Acetic acid, fluoro-, sodium salt
P066.....	Acetimidic acid, N-[(methylcarbamoyl)oxy]thio-, methyl ester
P001.....	3-(alpha-acetonylbenzy)-4-hydroxycoumarin and salts
P002.....	1-Acetyl-2-thiourea
P003.....	Acrolein
P070.....	Aldicarb
P004.....	Aldrin
P005.....	Allyl alcohol
P006.....	Aluminum phosphide
P007.....	5-(Aminomethyl)-3-isoxazolol
P008.....	4-Aminopyridine
P009.....	Ammonium picrate (R)
P119.....	Ammonium vanadate
P010.....	Arsenic acid
P012.....	Arsenic (III) oxide
P011.....	Arsenic (V) oxide
P011.....	Arsenic pentoxide
P012.....	Arsenic trioxide
P030.....	Arsine, diethyl-
P054.....	Aziridine
P013.....	Barium cyanide
P024.....	Benzenamine, 4-chloro-
P077.....	Benzenamine, 4-nitro-
P028.....	Benzene, (chloromethyl)-
P042.....	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-
P014.....	Benzenethiol
P028.....	Benzyl chloride

Hazardous waste No.	Substance
P039.....	Disulfoton
P049.....	2,4-Dithiobiuret
P109.....	Dithiopyrophoric acid, tetraethyl ester
P050.....	Endosulfan
P080.....	Endothall
P051.....	Endrin
P042.....	Epinephrine
P046.....	Ethanamine, 1,1-dimethyl-2-phenyl-
P084.....	Ethenamine, N-methyl-N-nitroso-
P101.....	Ethyl cyanide
P054.....	Ethylenimine
P097.....	Famphur
P056.....	Fluorine
P057.....	Fluoroacetamide
P058.....	Fluoroacetic acid, sodium salt
P065.....	Fulminic acid, mercury(II) salt (R,T)
P059.....	Heptachlor
P051.....	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo,endo-1,4:5,8-demethanonaphthalene
P037.....	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo,exo-1,4:5,8-demethanonaphthalene
P060.....	1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-endo,endo-dimethanonaphthalene
P004.....	1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-endo,exo-dimethanonaphthalene
P060.....	Hexachlorohexahydro-exo,exo-dimethanonaphthalene
P062.....	Hexaethyl tetraphosphate
P116.....	Hydrazinecarbothioamide

P015.....	Beryllium dust	P068.....	Hydrazine, methyl-
P016.....	Bis(chloromethyl)ether	P063.....	Hydrocyanic acid
P017.....	Bromoacetone	P063.....	Hydrogen cyanide
P018.....	Brucine	P096.....	Hydrogen phosphide
P021.....	Calcium cyanide	P064.....	Isocyanic acid, methyl ester
P123.....	Camphene, octachloro-	P007.....	3(2H)-isoxazolone, 5-(aminomethyl)-
P103.....	Carbamimidoseleonic acid	P092.....	Mercury, (acetato-O)phenyl-
P022.....	Carbon bisulfide	P065.....	Mercury fulminate (R,T)
P022.....	Carbon disulfide	P016.....	Methane, oxybis(chloro-
P095.....	Carbonyl chloride	P112.....	Methano, tetranitro- (R)
P033.....	Chlorine cyanide	P118.....	Methanethiol, trichloro-
P023.....	Chloroacetaldehyde	P059.....	4,7-Methano-1H-indone, 1,4,5,6,7,8,8-hopta- chloro-3a,4,7,7a-tetrahydro-
P024.....	p-Chloroaniline	P066.....	Methomyl
P026.....	1-(o-Chlorophenyl)thiourea	P067.....	2-Methylaziridine
P027.....	3-Chlorophropionitrile	P068.....	Methyl hydrazine
P029.....	Copper cyanides	P064.....	Methyl isocyanate
P030.....	Cyanides (soluble cyanide salts), not elsewhere specified	P069.....	2-Methylactonitrile
P031.....	Cyanogen	P071.....	Methyl parathion
P033.....	Cyanogen chloride	P072.....	alpha-Naphthylthiourea
P036.....	Dichlorophenylarsine	P073.....	Nickel carbonyl
P037.....	Dieldrin	P074.....	Nickel cyanide
P038.....	Diethylarsine	P074.....	Nickel(II) cyanide
P039.....	O,O-Diethyl S-[2-(ethylthio)ethyl], phosphorodi- thioate	P073.....	Nickel tetracarbonyl
P041.....	Diethyl-p-nitrophenyl phosphate	P075.....	Nicotine and salts
P040.....	O,O-Diethyl O-pyrazinyl phosphorothioate	P076.....	Nitric oxide
P043.....	Diisopropyl fluorophosphate	P077.....	p-Nitroaniline
P044.....	Dimethoate	P078.....	Nitrogen dioxide
P045.....	3,3-Dimethyl-1-(methylthio)-2-butanone, O- [(methylamino)carbonyl] oxime	P076.....	Nitrogen(II) oxide
P071.....	O,O-Dimethyl O-p-nitrophenyl phosphorothioate	P078.....	Nitrogen(IV) oxide
P082.....	Dimethylnitrosamine	P081.....	Nitroglycerine (R)
P046.....	alpha, alpha-Dimethylphenethylamine	P082.....	N-Nitrosodimethylamine
P047.....	4,6-Dinitro-o-cresol and salts	P084.....	N-Nitrosomethylvinylamine
P034.....	4,6-Dinitro-o-cyclohexylphenol	P050.....	5-Norbornene-2,3-dimethanol, 1,4,5,6,7,7-hexa- chloro, cyclic sulfite
P048.....	2,4-Dinitrophenol	P085.....	Octamethylpyrophosphoramidate
P020.....	Dinoseb	P087.....	Osmium oxide
P085.....	Diphosphoramidate, octamethyl-	P087.....	Osmium tetroxide
		P088.....	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid

P089.....	Parathion	P008.....	4-Pyridinamine
P034.....	Phenol, 2-cyclohexyl-4,6-dinitro-	P075.....	Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl-, and salts
P048.....	Phenol, 2,4-dinitro	P111.....	Pyrophosphoric acid, tetraethyl ester
P047.....	Phenol, 2,4-dinitro-6-methyl-	P103.....	Selenourea
P020.....	Phenol, 2,4-dinitro-6-(1-methylpropyl)-	P104.....	Silver cyanide
P009.....	Phenol, 2,4,6-trinitro-, ammonium salt (R)	P105.....	Sodium azide
P036.....	Phenyl dichloroarsine	P106.....	Sodium cyanide
P092.....	Phenylmercuric acetate	P107.....	Strontium sulfide
P093.....	N-Phenylthiourea	P108.....	Strychnidin-10-one, and salts
P094.....	Phorate	P018.....	Strychnidin-10-one, 2,3-dimethoxy-
P095.....	Phosgene	P108.....	Strychnine and salts
P096.....	Phosphine	P115.....	Sulfuric acid, thallium(I) salt
P041.....	Phosphoric acid, diethyl p-nitrophenyl ester	P109.....	Tetraethyldithiopyrophosphate
P044.....	Phosphorodithioic acid, O,O-dimethyl S-[(2- (methylamino)-2-oxoethyl)ester	P110.....	Tetraethyl lead
P043.....	Phosphorofluoric acid, bis(1-methylethyl)-ester	P111.....	Tetraethylpyrophosphate
P094.....	Phosphorothioic acid, O,O-diethyl S-(ethylthio) methyl ester	P112.....	Tetranitromethane (R)
P089.....	Phosphorothioic acid, O,O-diethyl O-(p-nitro- phenyl) ester	P062.....	Tetraphosphoric acid, hexaethyl ester
P040.....	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester	P113.....	Thallic oxide
P097.....	Phosphorothioic acid, O,O-dimethyl O-[p- (dimethylamino)-sulfonyl]phenyl]ester	P113.....	Thallium(III) oxide
P110.....	Plumbane, tetraethyl-	P114.....	Thallium(I) selenite
P098.....	Potassium cyanide	P115.....	Thallium(I) sulfate
P099.....	Potassium silver cyanide	P045.....	Thiofanox
P070.....	Propanal, 2-methyl-2-(methylthio)-, O-[(methyl- amino)carbonyl]oxime	P049.....	Thioimidodicarbonic diamide
P101.....	Propanenitrile	P014.....	Thiophenol
P027.....	Propanenitrile, 3-chloro-	P116.....	Thiosemicarbazide
P069.....	Propanenitrile, 2-hydroxy-2-methyl-	P026.....	Thiourea, (2-chlorophenyl)-
P081.....	1,2,3-Propanetriol, trinitrate-(R)	P072.....	Thiourea, 1-naphthalenyl-
P017.....	2-Propanone, 1-bromo-	P093.....	Thiourea, phenyl-
P102.....	Propargyl alcohol	P123.....	Toxaphene
P003.....	2-Propenal	P118.....	Trichloromethanethiol
P005.....	2-Propen-1-ol	P119.....	Vanadic acid, ammonium salt
P067.....	1,2-Propylenimine	P120.....	Vanadium pentoxide
P102.....	2-Propyn-1-ol	P120.....	Vanadium(V) oxide
		P001.....	Warfarin
		P121.....	Zinc cyanide
		P122.....	Zinc phosphide (R,T)

6. The commercial chemical products, manufacturing chemical intermediates, or off-specification commercial chemical products referred to in subsections 1 through 4, are identified as toxic wastes (T) unless otherwise designated and are subject to the small quantity exclusion defined in subsections 1 and 6 of section 33-24-02-05. (Comment: For the convenience of the regulated community, the primary hazardous properties of these materials have been indicated by the letters T (toxicity), R (reactivity), I (ignitability), and C (corrosivity). Absence of a letter indicates that the compound is only listed for toxicity.)

These wastes and their corresponding hazardous waste numbers are:

U001.....	Acetaldehyde (I)	U093.....	Benzenamine, N,N'-dimethyl-4-phenylazo-
U034.....	Acetaldehyde, trichloro-	U158.....	Benzenamine, 4,4'-methylenobis(2-chloro-
U187.....	Acetamide, N-(4-ethoxyphenyl)-	U222.....	Benzenamine, 2-methyl-, hydrochloride
U005.....	Acetamide, N-9H-fluoren-2-yl-	U181.....	Benzenamine, 2-methyl-5-nitro
U112.....	Acetic acid, ethyl ester (I)	U019.....	Benzene (I,T)
U144.....	Acetic acid, lead salt	U038.....	Benzeneacetic acid, 4-chloro-alpha-(4-chloro- phenyl)-alpha-hydroxy, ethyl ester
U214.....	Acetic acid thallium(I) salt	U030.....	Benzene, 1-bromo-4-phenoxy-
U002.....	Acetone (I)	U037.....	Benzene, chloro-
U003.....	Acetonitrile (I,T)	U190.....	1,2-Benzenedicarboxylic acid anhydride
U004.....	Acetophenone	U028.....	1,2-Benzenedicarboxylic acid, [bis(2-ethyl- hexyl)] ester
U005.....	2-Acetylaminofluorene	U069.....	1,2-Benzenedicarboxylic acid, dibutyl ester
U006.....	Acetyl chloride (C,R,T)	U088.....	1,2-Benzenedicarboxylic acid, diethyl ester
U007.....	Acrylamide	U102.....	1,2-Benzenedicarboxylic acid, dimethyl ester
U008.....	Acrylic acid (I)	U107.....	1,2-Benzenedicarboxylic acid, di-n-octyl ester
U009.....	Acrylonitrile	U070.....	Benzene, 1,2-dichloro-
U150.....	Alanine, 3-[p-bis(2-chloroethyl)amino]phenyl-,L-	U071.....	Benzene, 1,3-dichloro-
U011.....	Amitrole	U072.....	Benzene, 1,4-dichloro-
U012.....	Aniline (I,T)	U017.....	Benzene, (dichloromethyl)-
U014.....	Auramine	U223.....	Benzene, 1,3-diisocyanatomethyl-(R,T)
U015.....	Azasorine	U239.....	Benzene, dimethyl-(I,T)
U010.....	Azirino(2',3':3,4)pyrrolo(1,2-a)indole-4,7- dione, 6-amino-0-[[[(aminocarbonyloxy) methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy- 5-methyl-,	U201.....	1,3-Benzenediol
U157.....	Benz[j]aceanthrylene, 1,2-dihydromethyl-	U127.....	Benzene, hexachloro-
U016.....	Benz[c]acridine	U056.....	Benzene, hexahydro-(I)
U016.....	3,4-Benzacridine	U108.....	Benzene, hydroxy-
U017.....	Benzal chloride	U220.....	Benzene, methyl-
U018.....	Benz[a]anthracene	U105.....	Benzene, 1-methyl-1-2,4-dinitro
U018.....	1,2-Benzanthracene	U106.....	Benzene, 1-methyl-2,6-dinitro
U094.....	1,2-Benzanthracene, 7,12-dimethyl-	U203.....	Benzene, 1,2-methylenedioxy-4-allyl-
U012.....	Benzenamine (I,T)	U141.....	Benzene, 1,2-methylenedioxy-4-propenyl
U014.....	Benzenamine, 4,4'-carbonimidoylbis(N,N'- dimethyl-	U090.....	Benzene, 1,2-methylenedioxy-4-propyl
U049.....	Benzenamine, 4-chloro-2-methyl-	U055.....	Benzene, (1-methylethyl)-(I)
		U169.....	Benzene, nitro-(I,T)
		U183.....	Benzene, pentachloro-

U185..... Benzene, pentachloro-nitro-  
 U020..... Benzenesulfonic acid chloride (C,R)  
 U020..... Benzenesulfonyl chloride (C,R)  
 U207..... Benzene, 1,2,4,5-tetrachloro-  
 U023..... Benzene, (trichloromethyl)-(C,R,T)  
 U234..... Benzene, 1,3,5-trinitro-(R,T)  
 U021..... Benzidine  
 U202..... 1,2-Benzisothiazolin-3-one, 1,1-dioxide  
 U120..... Benzo[j,k]fluorene  
 U022..... Benzo[a]pyrene  
 U022..... 3,4-Benzopyrene  
 U197..... p-Benzoquinone  
 U023..... Benzotrichloride (C,R,T)  
 U050..... 1,2-Benzphenanthrene  
 U085..... 2,2'-Bioxirane (I,T)  
 U021..... (1,1'-Biphenyl)-4,4'-diamine  
 U073..... (1,1'-Biphenyl)-4,4'-diamine, 3,3'-dichloro-  
 U091..... (1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethoxy-  
 U095..... (1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethyl-  
 U024..... Bis(2-chloroethoxy) methane  
 U027..... Bis(2-chloroisopropyl) ether  
 U244..... Bis(dimethylthiocarbamoyl) disulfide  
 U028..... Bis (2-ethylhexyl) phthalate  
 U246..... Bromine cyanide  
 U225..... Bromoform  
 U030..... 4-Bromophenyl phenyl ether  
 U128..... 1,3-Butadiene, 1,1,2,3,4,4-hexachloro-  
 U172..... 1-Butanamine, N-butyl-N-nitroso-  
 U035..... Butanoic acid, 4-(Dis(2-chloroethyl)amino)  
           benzene-  
 U031..... 1-Butanol (I)  
 U159..... 2-Butanone (I,T)  
 U160..... 2-Butanone peroxide (R,T)  
 U053..... 2-Butenal  
 U074..... 2-Butene, 1,4-dichloro- (I,T)  
 U031..... n-Butyl alcohol (I)  
 U136..... Cacodylic acid

U032..... Calcium chromate  
 U238..... Carbamic acid, ethyl ester  
 U178..... Carbamic acid, methylnitroso-, ethyl ester  
 U176..... Carbamide, N-ethyl-N-nitroso-  
 U177..... Carbamide, N-methyl-N-nitroso-  
 U219..... Carbamide, thio-  
 U097..... Carbamoyl chloride, dimethyl-  
 U215..... Carbonic acid, dithallium(I) salt  
 U156..... Carbonochloridic acid, methyl ester (I,T)  
 U033..... Carbon oxyfluoride (R,T)  
 U211..... Carbon tetrachloride  
 U033..... Carbonyl fluoride (R,T)  
 U034..... Chloral  
 U035..... Chlorambucil  
 U036..... Chlordane, technical.  
 U026..... Chlornaphazine  
 U037..... Chlorobenzene  
 U039..... 4-Chloro-m-cresol  
 U041..... 1-Chloro-2,3-epoxypropane  
 U042..... 2-Chloroethyl vinyl ether  
 U044..... Chloroform  
 U046..... Chloromethyl methyl ether  
 U047..... beta-Chloronaphthalene  
 U048..... o-Chlorophenol  
 U049..... 4-Chloro-o-toluidine, hydrochloride  
 U032..... Chromic acid, calcium salt  
 U050..... Chrysene  
 U051..... Creosote  
 U052..... Cresols  
 U052..... Cresylic acid  
 U053..... Crotonaldehyde  
 U055..... Cumene (I)  
 U246..... Cyanogen bromide  
 U197..... 1,4-Cyclohexadienedione  
 U056..... Cyclohexane (I)  
 U057..... Cyclohexanone (I)  
 U130..... 1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-

U058.....	Cyclophosphamide	U108.....	1,4-Diethylene dioxide
U240.....	2,44-D, salts and esters	U086.....	N,N-Diethylhydrazine
U059.....	Daunomycin	U087.....	O,O-Diethyl-S-methyl-dithiophosphate
U060.....	DDD	U088.....	Diethyl phthalate
U061.....	DDT	U089.....	Diethylstilbestrol
U142.....	Dacachlorooctahydro-1,3,4-metheno-2H-cyclobuta- (c,d)-pentalen-2-one	U148.....	1,2-Dihydro-3,6-pyridazinedione
U062.....	Diallate	U090.....	Dihydrosafrole
U133.....	Diamine (R,T)	U091.....	3,3'-Dimethoxybenzidine
U221.....	Diaminotoluene	U092.....	Dimethylamino (I)
U063.....	Dibenz(a,h)anthracene	U093.....	Dimethylaminoazobenzene
U063.....	1,2:5,6-Dibenzanthracene	U094.....	7,12-Dimethylbenz(a)anthracene
U064.....	1,2:7,8-Dibenzopyrene	U095.....	3,3'-Dimethylbenzidine
U064.....	Dibenz[a,i]pyrene	U096.....	alpha,alpha-Dimethylbenzylhydroperoxide (R)
U066.....	1,2-Dibromo-3-chloropropane	U097.....	Dimethylcarbamoyl chloride
U069.....	Dibutyl phthalate	U098.....	1,1-Dimethylhydrazine
U062.....	S-(2,3-Dichloroallyl) diisopropylthiocarbamate	U099.....	1,2-Dimethylhydrazine
U070.....	o-Dichlorobenzene	U101.....	2,4-Dimethylphenol
U071.....	m-Dichlorobenzene	U102.....	Dimethyl phthalate
U072.....	p-Dichlorobenzene	U103.....	Dimethyl sulfate
U073.....	3,3'-Dichlorobenzidine	U105.....	2,4-Dinitrotoluene
U074.....	1,4-Dichloro-2-butene (I,T)	U106.....	2,6-Dinitrotoluene
U075.....	Dichlorodifluoromethane	U107.....	Di-n-octyl phthalate
U192.....	3,5-Dichloro-N-(1,1-dimethyl-2-propynyl) benzamide	U108.....	1,4-Dioxane
U060.....	Dichloro diphenyl dichloroethane	U109.....	1,2-Diphenylhydrazine
U061.....	Dichloro diphenyl trichloroethane	U110.....	Dipropylamine (I)
U078.....	1,1-Dichloroethylene	U111.....	Di-N-propylnitrosamine
U079.....	1,2-Dichloroethylene	U001.....	Ethanal (I)
U025.....	Dichloroethyl ether	U174.....	Ethanamine, N-ethyl-N-nitroso-
U081.....	2,4-Dichlorophenol	U067.....	Ethane, 1,2-dibromo-
U082.....	2,6-Dichlorophenol	U076.....	Ethane, 1,1-dichloro-
U240.....	2,4-Dichlorophenoxyacetic acid, salts and esters	U077.....	Ethane, 1,2-dichloro-
U083.....	1,2-Dichloropropane	U114.....	1,2-Ethanediybiscarbamodithioic acid
U084.....	1,3-Dichloropropane	U131.....	Ethane, 1,1,1,2,2,2-hexachloro-
U085.....	1,2:3,4-Diepoxybutane (I,T)	U024.....	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-
		U003.....	Ethanenitrile (I,T)
		U117.....	Ethane, 1,1'-oxybis-(I)

U025.....	Ethane, 1,1'-oxybis(2-chloro-	U125.....	Furfural (I)
U184.....	Ethane, pentachloro-	U124.....	Furfuran (I)
U208.....	Ethane, 1,1,1,2-tetrachloro-	U206.....	D-Glucopyranose, 2-deoxy-2(3-methyl-3-ni
U209.....	Ethane, 1,1,2,2-tetrachloro-		trosoureido)-
U218.....	Ethanethioamide	U126.....	Glycidylaldehyde
U227.....	Ethane, 1,1,1-trichloro-	U163.....	Guanidine, N-nitroso-N-methyl-N'nitro-
U247.....	Ethane, 1,1,1-trichloro-2,2-bis(p-methoxyphenyl)	U127.....	Hexachlorobenzene
U043.....	Ethene, chloro-	U128.....	Hexachlorobutadiene
U042.....	Ethene, 2-chloroethoxy-	U129.....	Hexachlorocyclohexane (gamma isomer)
U078.....	Ethene, 1,1-dichloro-	U130.....	Hexachlorocyclopentadiene
U079.....	Ethene, trans-1,2-dichloro-	U131.....	Hexachloroethane
U210.....	Ethene, 1,1,2,2-tetrachloro-	U132.....	Hexachlorophene
U173.....	Ethanol, 2,2'-(nitrosodimino)bis-	U243.....	Hexachloropropene
U004.....	Ethanone, 1-phenyl-	U133.....	Hydrazine (R,T)
U006.....	Ethanoyl chloride (C,R,T)	U086.....	Hydrazine, 1,2-diethyl-
U112.....	Ethyl acetate (I)	U098.....	Hydrazine, 1,1-dimethyl-
U113.....	Ethyl acrylate (I)	U099.....	Hydrazine, 1,2-dimethyl-
U238.....	Ethyl carbamate (urethan)	U109.....	Hydrazine, 1,2-diphenyl-
U038.....	Ethyl 4,4'-dichlorobenzilate	U134.....	Hydrofluoric acid (C,T)
U114.....	Ethylenebis(dithiocarbamic acid)	U134.....	Hydrogen fluoride (C,T)
U067.....	Ethylene dibromide	U135.....	Hydrogen sulfide
U077.....	Ethylene dichloride	U096.....	Hydroperoxide, 1-methyl-1-phenylethyl- (R)
U115.....	Ethylene oxide (I,T)	U136.....	Hydroxydimethylarsine oxide
U116.....	Ethylene thiourea	U116.....	2-Imidazolidinethione
U117.....	Ethyl ether (I)	U137.....	Indeno (1,2,3-cd)pyrene
U076.....	Ethylidene dichloride	U139.....	Iron dextran
U118.....	Ethylmethacrylate	U140.....	Isobutyl alcohol (I,T)
U119.....	Ethyl methanesulfonate	U141.....	Isosafrole
U139.....	Ferric dextran	U142.....	Kepona
U120.....	Fluoranthene	U143.....	Lasiocarpine
U122.....	Formaldehyde	U144.....	Lead acetate
U123.....	Formic acid (C,T)	U145.....	Lead phosphate
U124.....	Furan (I)	U146.....	Lead subacetate
U125.....	2-Furancarboxaldehyde (I)	U129.....	Lindane
U147.....	2,5-Furandione	U147.....	Maleic anhydride
U213.....	Furan, tetrahydro- (I)	U148.....	Maleic hydrazide

U149..... Malononitrile  
 U150..... Melphalan  
 U151..... Mercury  
 U152..... Methacrylonitrile (I,T)  
 U092..... Methanamine, N-methyl- (I)  
 U029..... Methane, bromo-  
 U045..... Methane, chloro- (I,T)  
 U046..... Methane, chloromethoxy-  
 U068..... Methane, dibromo-  
 U080..... Methane, dichloro-  
 U075..... Methane, dichlorodifluoro-  
 U138..... Methane, iodo-  
 U119..... Methanesulfonic acid, ethyl ester  
 U211..... Methane, tetrachloro-  
 U121..... Methane, trichlorofluoro-  
 U153..... Methanethiol (I,T)  
 U225..... Methane, tribromo-  
 U044..... Methane, trichloro-  
 U121..... Methane, trichlorofluoro-  
 U123..... Methanoic acid (C,T)  
 U036..... 4,7-Methanoindan, 1,2,4,5,6,7,8,8-octachloro-  
           3a,4,7,7a-tetrahydro-  
 U154..... Methanol (I)  
 U155..... Methapyrilene  
 U247..... Methoxychlor  
 U154..... Methyl alcohol (I)  
 U029..... Methyl bromide  
 U186..... 1-Methylbutadiene (I)  
 U045..... Methyl chloride (I,T)  
 U156..... Methyl chlorocarbonate (I,T)  
 U226..... Methylchloroform  
 U157..... 3-Methylcholanthrene  
 U158..... 4,4'-Methylenebis (2-chloroaniline)  
 U132..... 2,2'-Methylenebis (3,4,6-trichlorophenol)  
 U068..... Methylene bromide  
 U080..... Methylene chloride  
 U122..... Methylene oxide

U159..... Methyl ethyl ketone (I,T)  
 U160..... Methyl ethyl ketone peroxide (R,T)  
 U138..... Methyl iodide  
 U161..... Methyl isobutyl ketone (I)  
 U162..... Methyl methacrylate (I,T)  
 U163..... N-Methyl-N'-nitro-N-nitrosoguanidine  
 U161..... 4-Methyl-2-pentanone (I)  
 U164..... Methylthiouracil  
 U010..... Mitomycin C  
 U059..... 5,12-Naphthacenedione, (8S-cis)-8-acetyl-10-  
           [(3-amino-2,3,6-trideoxy-alpha-L-lyxo-  
           hexopyranosyl)oxyl]-7,8,9,10-tetrahydro-  
           6,8,11-trihydroxy-1-methoxy-  
 U165..... Naphthalene  
 U047..... Naphthalene, 2-chloro-  
 U166..... 1,4-Naphthalenedione  
 U236..... 2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-  
           dimethyl-(1,1'-biphenyl)-4,4'diyl)]-bis  
           (azo)bis(5-amino-4-hydroxy)-tetrasodium salt  
 U166..... 1,4-Naphthaquinone  
 U167..... 1-Naphthylamine  
 U168..... 2-Naphthylamine  
 U167..... alpha-Naphthylamine  
 U168..... beta-Naphthylamine  
 U026..... 2-Naphthylamine, N,N'-bis(2-chloro-methyl)-  
 U169..... Nitrobenzene (I,T)  
 U170..... p-Nitrophenol  
 U171..... 2-Nitropropane (I)  
 U172..... N-Nitrosodi-n-butylamine  
 U173..... N-Nitrosodiethanolamine  
 U174..... N-Nitrosodietylamine  
 U111..... N-Nitroso-N-propylamine  
 U176..... N-Nitroso-N-ethylurea  
 U177..... N-Nitroso-N-methylurea  
 U178..... N-Nitroso-N-methylurethane  
 U179..... N-Nitrosopiperidine  
 U180..... N-Nitrosopyrrolidine

U181.....	5-Nitro-o-toluidine	U027.....	Propane, 2,3'-oxybis(2-chloro-
U193.....	1,2-Oxathiolane, 2,2-dioxide	U193.....	1,3-Propane sulfone
U058.....	2H-1,3,2-Oxazaphosphorine, 2-[bis(2-chloro-ethyl)amino]tetrahydro-,oxide 2-	U235.....	1-Propanol, 2,3-dibromo-, phosphate (3:1)
U115.....	Oxirane (I,T)	U126.....	1-Propanol, 2,3-epoxy-
U041.....	Oxirane, 2-(chloromethyl)-	U140.....	1-Propanol, 2-methyl- (I,T)
U182.....	Paraldehyde	U002.....	2-Propanone (I)
U183.....	Pentachlorobenzene	U007.....	2-Propenamide
U184.....	Pentachloroethane	U084.....	Propene, 1,3-dichloro-
U105.....	Pentachloronitrobenzene	U243.....	1-Propene, 1,1,2,3,3,3-hexachloro-
U242.....	Pentachlorophenol	U009.....	2-Propenenitrile
U186.....	1,3-Pentadiene (I)	U152.....	2-Propenenitrile, 2-methyl- (I,T)
U187.....	Phonacetin	U008.....	2-Propenoic acid (I)
U180.....	Phenol	U113.....	2-Propenoic acid, ethyl ester (I)
U048.....	Phenol, 2-chloro-	U118.....	2-Propenoic acid, 2-methyl-, ethyl ester
U039.....	Phenol, 4-chloro-3-methyl-	U162.....	2-Propenoic acid, 2-methyl-, methyl ester (I,T)
U081.....	Phenol, 2,4-dichloro-	U233.....	Propionic acid, 2-(2,4,5-trichlorophenoxy)-
U082.....	Phenol, 2,6-dichloro-	U194.....	n-Propylamine (I,T)
U101.....	Phenol, 2,4-dimethyl-	U083.....	Propylene dichloride
U170.....	Phenol, 4-nitro-	U196.....	Pyridine
U242.....	Phenol, pentachloro-	U155.....	Pyridine, 2-[(2-(dimethylamino)-2-thenylamino)-
U212.....	Phenol, 2,3,4,6-tetrachloro-	U179.....	Pyridine, hexahydro-N-nitroso-
U230.....	Phenol, 2,4,5-trichloro-	U191.....	Pyridine, 2-methyl-
U231.....	Phenol, 2,4,6-trichloro-	U164.....	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thio-
U137.....	1,10-(1,2-phenylene)pyrene	U180.....	Pyrrole, tetrahydro-N-nitroso-
U145.....	Phosphoric acid, Lead salt	U200.....	Reserpine
U087.....	Phosphorodithioic acid, O,O-diethyl, S-methyl-ester	U201.....	Resorcinol
U189.....	Phosphorous sulfide (R)	U202.....	Saccharin and salts
U190.....	Phthalic anhydride	U203.....	Safrole
U191.....	2-Picoline	U204.....	Selenious acid
P192.....	Pronamide	U204.....	Selenious dioxide
U194.....	1-Propanamine (I,T)	U205.....	Selenium disulfide (R,T)
U110.....	1-Propanamine, N-propyl-(I)	U015.....	L-Serine, diazoacetate (ester)
U066.....	Propane, 1,2-dibromo-3-chloro-	U233.....	Silvex
U149.....	Propanedinitrile	U089.....	4,4'-Stilbenediol, alpha,alpha'-diethyl-
U171.....	Propane, 2-nitro- (I)	U206.....	Streptozotocin
		U135.....	Sulfur hydride

U103..... Sulfuric acid, dimethyl ester  
 U189..... Sulfur phosphide (R)  
 U205..... Sulfur selenide (R,T)  
 U232..... 2,4,5-T  
 U207..... 1,2,4,5-Tetrachlorobenzene  
 U208..... 1,1,1,2-Tetrachloroethane  
 U209..... 1,1,2,2-Tetrachloroethane  
 U210..... Tetrachloroethylene  
 U212..... 2,3,4,6-Tetrachlorophenol  
 U213..... Tetrahydrofuran (I)  
 U214..... Thallium(I) acetate  
 U215..... Thallium(I) carbonate  
 U216..... Thallium(I) chloride  
 U217..... Thallium(I) nitrate  
 U218..... Thioacetamide  
 U153..... Thiomethanol (I,T)  
 U219..... Thiourea  
 U244..... Thiram  
 U220..... Toluene  
 U221..... Toluenediamine

U223..... Toluene diisocyanate (R,T)  
 U222..... O-Toluidine hydrochloride  
 U011..... 1H-1,2,4-Triazol-3-amine  
 U226..... 1,1,1-Trichloroethane  
 U227..... 1,1,2-Trichloroethane  
 U228..... Trichloroethene  
 U228..... Trichloroethylene  
 U121..... Trichloromonofluoromethane  
 U230..... 2,4,5-Trichlorophenol  
 U231..... 2,4,6-Trichlorophenol  
 U232..... 2,4,5-Trichlorophenoxyacetic acid  
 U234..... sym-Trinitrobenzene (R,T)  
 U182..... 1,3,4-Trioxane, 2,4,5-trimethyl-  
 U235..... Tris(2,3-dibromopropyl)phosphate  
 U236..... Trypan blue  
 U237..... Uracil, 5[bis(2-chloromethyl)amino]-  
 U237..... Uracil mustard  
 U043..... Vinyl chloride  
 U239..... Xylene (I)  
 U200..... Yohimban-16-carboxylic acid, 11,17-dimethoxy-  
 18-[(3,4,5-trimethoxy-benzoyl)oxy]-, methyl  
 ester,

## APPENDIX I - REPRESENTATIVE SAMPLING METHODS

The methods and equipment used for sampling waste materials will vary with the form and consistency of the waste materials to be sampled. Samples collected using the sampling protocols listed below, for sampling waste with properties similar to the indicated materials, will be considered by the Agency to be representative of the waste.

- Extremely viscous liquid - ASTM Standard D140-70 Crushed or powdered material - ASTM Standard D346-75 Soil or rock-like material - ASTM Standard D420-69 Soil-like material - ASTM Standard D1452-65
- Fly Ash-like material - ASTM Standard D2234-76 [ASTM Standards are available from ASTM, 1916 Race St., Philadelphia, PA 19103]
- Containerized liquid wastes - "COLIWASA" described in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods,"<sup>1</sup> U.S. Environmental Protection Agency, Office of Solid Waste, Washington, D.C. 20460. [Copies may be obtained from Solid Waste Information, U.S. Environmental Protection Agency, 26 W. St. Clair St., Cincinnati, Ohio 45268]
- Liquid waste in pits, ponds, lagoons, and similar reservoirs. - "Pond Sampler" described in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods."<sup>1</sup>

This manual also contains additional information on application of these protocols.

## APPENDIX II - EP TOXICITY TEST PROCEDURE

### A. Extraction Procedure (EP)

1. A representative sample of the waste to be tested (minimum size 100 grams) shall be obtained using the methods specified in Appendix I or any other method capable of yielding a representative sample within the meaning of Part 260. [For detailed guidance on conducting the various aspects of the EP see "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods" (incorporated by reference, see 260.11).]
2. The sample shall be separated into its component liquid and solid phases using the method described in "Separation Procedure" below. If the solid residue<sup>1</sup> obtained using this method totals less than 0.5% of the original weight of the waste, the residue can be discarded and the operator shall treat the liquid phase as the extract and proceed immediately to Step 8.
3. The solid material obtained from the Separation Procedure shall be evaluated for its particle size. If the solid material has a surface area per gram of material equal to, or greater than, 3.1 cm<sup>2</sup> or passes through a 9.5 mm (0.375 inch) standard sieve, the operator shall proceed to Step 4. If the surface area is smaller or the particle size larger than specified above, the solid material shall be prepared for extraction by crushing, cutting, or grinding the material so that it passes through a 9.5 mm (0.375 inch) sieve or, if the material is in a single piece, by subjecting the material to the "Structural Integrity Procedure" described below.
4. The solid material obtained in Step 3 shall be weighed and placed in an extractor with 16 times its weight of deionized water. Do not allow the material to dry prior to weighing. For purposes of this test, an acceptable extractor is one which will impart sufficient agitation to the mixture to not only prevent stratification of the sample and extraction fluid but also insure that all sample surfaces are continuously brought into contact with well mixed extraction fluid.
5. After the solid materials and deionized water are placed in the extractor, the operator shall begin agitation and measure the pH of the solution in the extractor. If the pH is greater than 5.0, the pH of the solution shall be decreased to 5.0 ± 0.2 by adding 0.5N

<sup>1</sup>These methods are also described in "Samplers and Sampling Procedures for Hazardous Waste Streams," EPA 600/2-80-018, January 1980.

acetic acid. If the pH is equal to or less than 5.0, no acetic acid should be added. The pH of the solution shall be monitored, as described below, during the course of the extraction and if the pH rises above 5.2, 0.5N acetic acid shall be added to bring the pH down to  $5.0 \pm 0.2$ . However, in no event shall the aggregate amount of acid added to the solution exceed 4 ml of acid per gram of solid. The mixture shall be agitated for 24 hours and maintained at  $20^{\circ}\text{--}40^{\circ}\text{C}$  ( $68^{\circ}\text{--}104^{\circ}\text{F}$ ) during this time. It is recommended that the operator monitor and adjust the pH during the course of the extraction with a device such as the Type 45-A pH Controller manufactured by Chemtrix, Inc., Hillsboro, Oregon 97123 or its equivalent, in conjunction with a metering pump and reservoir of 0.5N acetic acid. If such a system is not available, the following manual procedure shall be employed:

(a) A pH meter shall be calibrated in accordance with the manufacturer's specifications.

(b) The pH of the solution shall be checked and, if necessary, 0.5N acetic acid shall be manually added to the extractor until the pH reaches  $5.0 \pm 0.2$ . The pH of the solution shall be adjusted at 15, 30 and 60 minute intervals, moving to the next longer interval if the pH does not have to be adjusted more than 0.5N pH units.

(c) The adjustment procedure shall be continued for at least 6 hours.

(d) If at the end of the 24-hour extraction period, the pH of the solution is not below 5.2 and the maximum amount of acid (4 ml per gram of solids) has not been added, the pH shall be adjusted to  $5.0 \pm 0.2$  and the extraction continued for an additional four hours, during which the pH shall be adjusted at one hour intervals.

6. At the end of the 24 hour extraction period, deionized water shall be added to the extractor in an amount determined by the following equation:

$$V = (20)(W) - 16(W) - A$$

V=ml deionized water to be added

W=weight in grams of solid charged to extractor

A=ml of 0.5N acetic acid added during extraction

7. The material in the extractor shall be separated into its component liquid and solid phases as described under "Separation Procedure."

8. The liquids resulting from Steps 2 and 7 shall be combined. This combined liquid (or the waste itself if it has less than  $\frac{1}{2}$  percent solids, as noted in step 2) is the extract and shall be analyzed for the presence of any of the contaminants specified in Table 1 of 261.24 using the Analytical Procedures designated below.

#### Separation Procedure

Equipment: A filter holder, designed for filtration media having a nominal pore size of 0.45 micrometers and capable of applying a  $5.3 \text{ kg/cm}^2$  (75 psi) hydrostatic pressure to the solution being filtered, shall be used. For mixtures containing nonabsorptive solids, where separation can be effected without imposing a  $5.3 \text{ kg/cm}^2$  pressure differential, vacuum filters employing a 0.45 micrometers filter media can be used. (For further guidance on filtration equipment or procedures see "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" incorporated by reference, see 260.11.) Procedure:

<sup>2</sup>This procedure is intended to result in separation of the "free" liquid portion of the waste from any solid matter having a particle size 0.45 um. If the sample will not filter, various other separation techniques can be used to aid in the filtration. As described above, pressure filtration is employed to speed up the filtration process. This does not alter the nature of the separation. If liquid does not separate during filtration, the waste can be centrifuged. If separation occurs during centrifugation, the liquid portion (centrifugate) is filtered through the 0.45 um filter prior to becoming mixed with the liquid portion of the waste obtained from the initial filtration. Any material that will not pass through the filter after centrifugation is considered a solid and is extracted.

(i) Following manufacturer's directions, the filter unit shall be assembled with a filter bed consisting of a 0.45 micrometer filter membrane. For difficult or slow to filter mixtures a prefilter bed consisting of the following prefilters in increasing pore size (0.65 micrometer membrane, fine glass fiber prefilter, and coarse glass fiber prefilter) can be used.

(ii) The waste shall be poured into the filtration unit.

(iii) The reservoir shall be slowly pressurized until liquid begins to flow from the filtrate outlet at which point the pressure in the filter shall be immediately lowered to 10-15 psig. Filtration shall be continued until liquid flow ceases.

(iv) The pressure shall be increased stepwise in 10 psi increments to 75 psig and filtration continued until flow ceases or the pressurizing gas begins to exit from the filtrate outlet.

(v) The filter unit shall be depressurized, the solid material removed and weighed and then transferred to the extraction apparatus, or, in the case of final filtration prior to analysis, discarded. Do not allow the material retained on the filter pad to dry prior to weighing.

(vi) The liquid phase shall be stored at 4°C for subsequent use in Step 8.

#### B. Structural Integrity Procedure

Equipment: A Structural Integrity Tester having 3.18 cm (1.25 inch) diameter hammer weighing 0.33 kg (0.73 lbs.) and having a free fall of 15.24 cm (6 in.) shall be used. This device is available from Associated Design and Manufacturing Company, Alexandria, VA 22314, as Part No. 125, or it may be fabricated to meet the specifications shown in Figure 1.

#### Procedure

1. The sample holder shall be filled with the material to be tested. If the sample of waste is a large monolithic block, a portion shall be cut from the block having the dimensions of a 3.3 cm (1.3 in.) diameter x 7.1 cm (2.8 in.) cylinder. For a fixated waste, samples may be cast in the form of a 3.3 cm (1.3 in.) diameter x 7.1 cm (2.8 in.) cylinder for purposes of conducting this test. In such cases, the waste may be allowed to cure for 30 days prior to further testing.

2. The sample holder shall be placed into the Structural Integrity Tester, than the hammer shall be raised to its maximum height and dropped. This shall be repeated fifteen times.

3. The material shall be removed from the sample holder, weighed, and transferred to the extraction apparatus for extraction.

#### Analytical Procedures for Analyzing Extract Contaminants

The test methods for analyzing the extract are as follows:

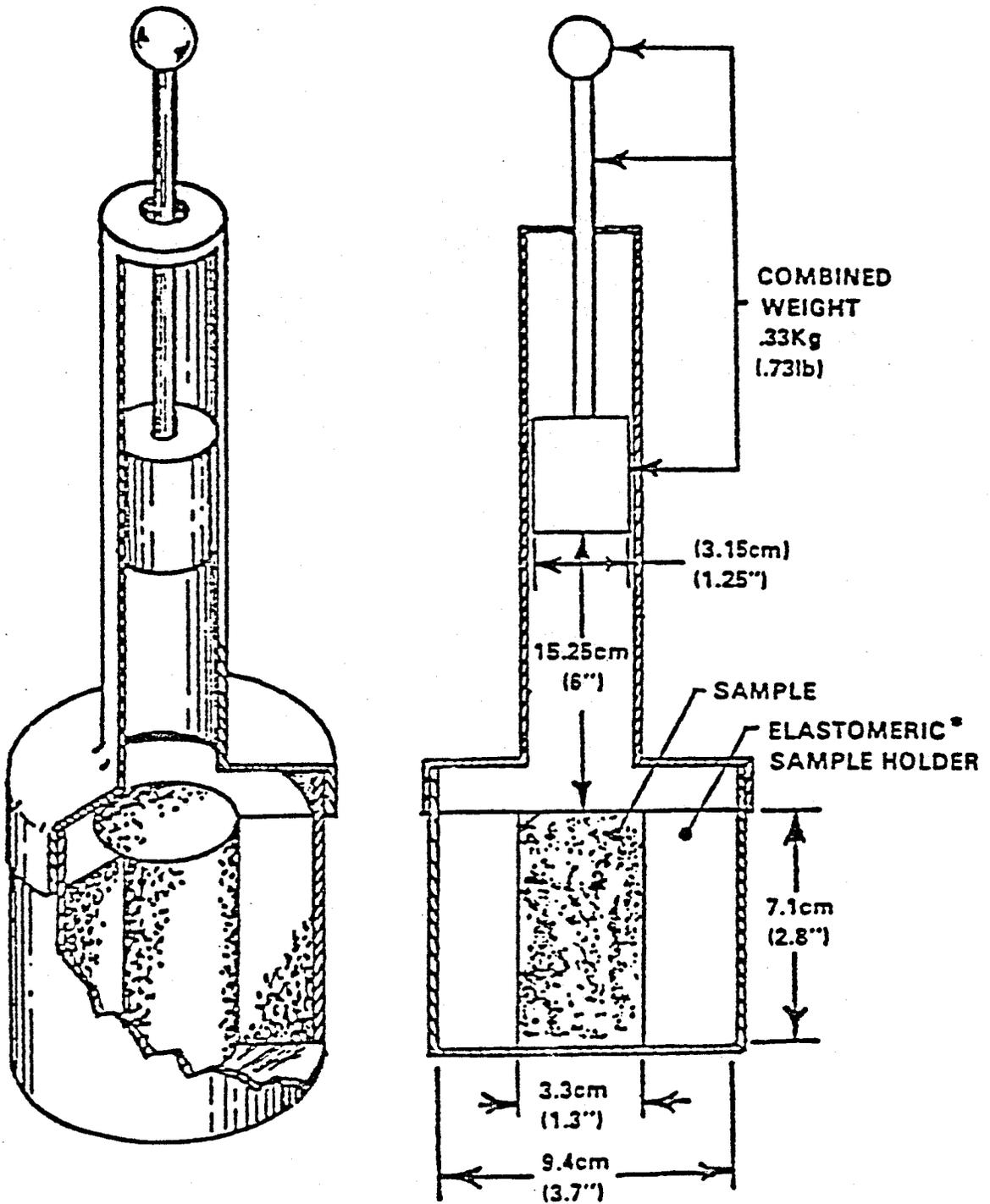
1. For arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, endrin, lindane, methoxychlor, toxaphene, 2,4-D (2,4-dichlorophenoxyacetic acid) or 2,4,5-TP (2,4,5-trichlorophenoxypropionic acid): "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods" (incorporated by reference, see 260.11).

2. (Reserved)

For all analyses, the methods of standard addition shall be used for quantification of species concentration.

1. The percent solids is determined by drying the filter pad at 80°C until it reaches constant weight and then calculating the percent solids using the following equation:

$$100 = \% \text{solids} \frac{(\text{weight of pad} + \text{solid}) - (\text{tare weight of pad})}{\text{initial weight of sample}}$$



\*ELASTOMERIC SAMPLE HOLDER FABRICATED OF MATERIAL FIRM ENOUGH TO SUPPORT THE SAMPLE

Figure 1

COMPACTION TESTER

## APPENDIX III

### CHEMICAL ANALYSIS TEST METHODS

Tables 1, 2, and 3 specify the appropriate analytical procedures described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (incorporated by reference, see section 33-24-01-05), which shall be used in determining whether the waste in question contains a given toxic constituent. Table 1 identifies the analytical class and the approved measurement techniques for each organic chemical listed in Appendix IV. Table 2 identifies the corresponding methods for the inorganic species. Table 3 identifies the specific sample preparation and measurement instrument introduction techniques which may be suitable for both the organic and inorganic species as well as the matrices of concern.

Prior to final selection of the analytical method the operator should consult the specific method descriptions in SW-846 for additional guidance on which of the approved methods should be employed for a specific waste analysis situation.

TABLE 1 - Analytical Characteristics of Organic Chemicals

Compound	Sample handling class/fraction	Non-GC methods	Measurement techniques		
			GC/MS	GC	Conventional Detector
Acetonitrile.....	Volatile.....	.....	8.24	8.03	NSD
Acrolein.....	Volatile.....	.....	8.24	8.03	NSD
Acrylamide.....	Volatile.....	.....	8.24	8.01	PID
Acrylonitrile.....	Volatile.....	.....	8.24	8.03	NSD
Benzene.....	Volatile.....	.....	8.24	8.02	PID
Benzo(a)anthracene.....	Extractable/DN.....	8.10 (HPLC)	8.25	8.10	FID
Benzo(a)pyrene.....	Extractable/DN.....	8.10 (HPLC)	8.25	8.10	FID
Benzotrichloride.....	Extractable/DN.....	.....	8.25	8.12	ECD
Benzyl chloride.....	Volatile or Extractable/DN.....	.....	8.24	8.01	NSD
			8.25	8.12	ECD
Benz(b)fluoranthene.....	Extractable/DN.....	8.10 (HPLC)	8.25	8.10	PID
Bis(2-chloroethoxymethane)....	Volatile.....	.....	8.24	8.01	NSD
Bis(2-chloroethyl)ether.....	Volatile.....	.....	8.24	8.01	NSD
Bis(2-chloroisopropyl)ether....	Volatile.....	.....	8.24	8.01	NSD
Carbon disulfide.....	Volatile.....	.....	8.24	8.01	NSD
Carbon tetrachloride.....	Volatile.....	.....	8.24	8.01	NSD
Chlordane.....	Extractable/DN.....	.....	8.25	8.08	NSD
Chlorinated dibenzodioxins....	Extractable/DN.....	.....	8.25	8.08	ECD
Chlorinated biphenyls.....	Extractable/DN.....	.....	8.25	8.08	NSD
Chloroacetaldehyde.....	Volatile.....	.....	8.24	8.01	NSD
Chlorobenzene.....	Volatile.....	.....	8.24	8.01	NSD
				8.02	PID
Chloroform.....	Volatile.....	.....	8.24	8.01	NSD
Chloromethane.....	Volatile.....	.....	8.24	8.01	NSD
2-Chlorophenol.....	Extractable/DN.....	.....	8.25	8.04	FID, ECD
Chrysene.....	Extractable/DN.....	8.10 (HPLC)	8.25	8.10	FID
Creosote.....	Extractable/DN.....	.....	8.25	8.10	ECD
Cresol(s).....	Extractable/A.....	.....	8.25	8.04	FID, ECD
Cresylic acid(s).....	Extractable/A.....	.....	8.25	8.04	FID, ECD
Dichlorobenzene(s).....	Extractable/DN.....	.....	8.25	8.01	NSD
				8.02	PID
				8.12	ECD
Dichloroethane(s).....	Volatile.....	.....	8.24	8.01	NSD
Dichloromethane.....	Volatile.....	.....	8.24	8.01	NSD
Dichlorophenoxy-acetic acid...	Extractable/A.....	.....	8.25	8.40	NSD
Dichloropropanol.....	Extractable/DN.....	.....	8.25	8.12	ECD
2,4-Dimethylphenol.....	Extractable/A.....	.....	8.25	8.04	FID, ECD
Dinitrobenzene.....	Extractable/DN.....	.....	8.25	8.09	FID, ECD
4,6-Dinitro-o-cresol.....	Extractable/A.....	.....	8.25	8.04	FID, ECD
2,4-Dinitrotoluene.....	Extractable/DN.....	.....	8.25	8.09	FID, ECD
Endrin.....	Extractable/P.....	.....	8.25	8.08	NSD
Ethyl ether.....	Volatile.....	.....	8.24	8.01	FID
				8.02	FID

Formaldehyde.....	Volatile.....	.....	8.24	8.01	FID
Formic acid.....	Extractable/BN.....	.....	8.25	8.06	FID
Heptachlor.....	Extractable/P.....	.....	8.25	8.06	HSD
Hexachlorobenzene.....	Extractable/BN.....	.....	8.25	8.12	ECD
Hexachlorobutadiene.....	Extractable/BN.....	.....	8.25	8.12	ECD
Hexachloroethane.....	Extractable/BN.....	.....	8.25	8.12	ECD
Hexachlorocyclopentadiene.....	Extractable/BN.....	.....	8.25	8.12	ECD
Lindane.....	Extractable/P.....	.....	8.25	8.08	HSD
Maleic anhydride.....	Extractable/BN.....	.....	8.25	8.06	ECD, FID
Methanol.....	Volatile.....	.....	8.24	8.01	FID
Methomyl.....	Extractable/BN.....	8.32 (HPLC)	.....	.....	.....
Methyl ethyl ketone.....	Volatile.....	.....	8.25	8.01	FID
Methyl isobutyl ketone.....	Volatile.....	.....	8.25	8.01	FID
Naphthalene.....	Extractable/BN.....	.....	8.25	8.10	FID
Naphthoquinone.....	Extractable/BN.....	.....	8.25	8.06	ECD, FID
Nitrobenzene.....	Extractable/BN.....	.....	8.25	8.09	ECD, FID
4-Nitrophenol.....	Extractable/A.....	.....	8.24	8.04	ECD, FID
Paraldehyde(trimer of acetaldehyde).....	Volatile.....	.....	8.24	8.01	FID
Pentachlorophenol.....	Extractable/A.....	.....	8.25	8.04	ECD
Phenol.....	Extractable/A.....	.....	8.25	8.04	ECD, FID
Phorate.....	Extractable/BN.....	.....	.....	8.22	FPD
Phosphorodithioic acid esters.....	Extractable/BN.....	.....	.....	8.06	ECD, FID
Phthalic anhydride.....	Extractable/BN.....	.....	8.25	8.06	ECD, FID
2-Picoline.....	Extractable/BN.....	.....	8.25	8.06	ECD, FID
Pyridine.....	Extractable/BN.....	.....	8.25	8.09	ECD, FID
Tetrachlorobenzene(s).....	Extractable/BN.....	.....	8.25	8.12	ECD
Tetrachloroethane(s).....	Volatile.....	.....	8.24	8.01	HSD
Tetrachloroethene.....	Volatile.....	.....	8.24	8.01	HSD
Tetrachlorophenol.....	Extractable/A.....	.....	8.24	8.04	ECD
Toluene.....	Volatile.....	.....	8.24	8.02	PID
Toluenediamine.....	Extractable/BN.....	.....	8.25	.....	.....
Toluene diisocyanate(s).....	Extractable/nonaqueous.....	.....	8.25	8.06	FID
Toxaphene.....	Extractable/P.....	.....	8.25	8.08	HSD
Trichloroethane.....	Volatile.....	.....	8.24	8.01	HSD
Trichloroethene(s).....	Volatile.....	.....	8.24	8.01	HSD
Trichlorofluoromethane.....	Volatile.....	.....	8.24	8.01	HSD
Trichlorophenol(s).....	Extractable/A.....	.....	8.25	8.04	HSD
2,4,5-TP (Silvex).....	Extractable/A.....	.....	8.25	8.40	HSD
Trichloropropane.....	Volatile.....	.....	8.24	8.01	HSD
Vinyl chloride.....	Volatile.....	.....	8.24	8.01	HSD
Vinylidene chloride.....	Volatile.....	.....	8.24	8.01	HSD
Xylene.....	Volatile.....	.....	8.24	8.02	PID

ECD = Electron capture detector; FID = Flame ionization detector; FPD = Flame photometric detector; HSD = Halide specific detector; HPLC = High pressure liquid chromatography; NSD = Nitrogen-specific detector; PID = Photoionization detector.

TABLE 2 - Analytical Characteristics of Inorganic Species

Species	Sample handling	Measurement technique	Method number
Antimony.....	Digestion.....	Atomic absorption-furnace/flame.....	8.50
Arsenic.....	Hydride.....	Atomic absorption-flame.....	8.51
Barium.....	Digestion.....	Atomic absorption-furnace/flame.....	8.52
Cadmium.....	Digestion.....	Atomic absorption-furnace/flame.....	8.53
Chromium.....	Digestion.....	Atomic absorption-furnace/flame.....	8.54
Cyanides.....	Hydrolysis.....	Atomic absorption-spectroscopy.....	8.55
Lead.....	Digestion.....	Atomic absorption-furnace/flame.....	8.56
Mercury.....	Cold Vapor.....	Atomic absorption.....	8.57
Nickel.....	Digestion.....	Atomic absorption-furnace/flame.....	8.58
Selenium.....	Hydride digestion.....	Atomic absorption-furnace/flame.....	8.59
Silver.....	Digestion.....	Atomic absorption-furnace/flame.....	8.60

TABLE 3 - Sample Preparation/Sample Introduction Techniques

Sample handling class	Physical characteristics of waste <sup>1</sup>		
	Fluid	Paste	Solid
Volatile	Purge and trap Direct injection	Purge and trap Headspace	Headspace
Semivolatile and nonvolatile	Direct injection Shake out	Shake out	Shake out; Soxhlet Sonication
Inorganic	Direct injection Digestion Hydride	Digestion Hydride	Digestion Hydride

<sup>1</sup>For purposes of this Table, fluid refers to readily pourable liquids, which may or may not contain suspended particles. Paste-like materials, while fluid in the sense of flowability, can be thought of as being thixotropic or plastic in nature, e.g. paints. Solid materials are those wastes which can be handled, without a container (i.e., can be piled up without appreciable sagging).

Procedure and Method Number(s)

Digestion - See appropriate procedure for element of interest.  
 Direct injection - 8.80  
 Headspace - 8.82  
 Hydride - See appropriate procedure for element of interest.  
 Purge and trap - 8.83  
 Shake out - 8.84  
 Sonication - 8.85  
 Soxhlet - 8.86

APPENDIX IV - BASIS FOR LISTING HAZARDOUS WASTE

EPA hazardous  
waste no.

Hazardous constituents for which listed

F001.....	Tetrachloroethylene, methylene chloride trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chlorinated fluorocarbons.
F002.....	Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane.
F003.....	N.A.
F004.....	Cresols and cresylic acid, nitrobenzene.
F005.....	Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine.
F006.....	Cadmium, hexavalent chromium, nickel, cyanide (complexed).
F007.....	Cyanide (salts).
F008.....	Cyanide (salts).
F009.....	Cyanide (salts).
F010.....	Cyanide (salts).
F011.....	Cyanide (salts).
F012.....	Cyanide (complexed).
F019.....	Hexavalent chromium, cyanide (complexed).
K001.....	Pentachlorophenol, phenol, 2-chlorophenol, p-chloro-m-cresol, 2,4-dimethylphenyl, 2,4-dinitrophenol, trichlorophenols, tetrachlorophenols, 2,4-dinitrophenol, cresosote, chrysene, naphthalene, fluoranthene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benz(a)anthracene, dibenz(a)anthracene, acenaphthalene.
K002.....	Hexavalent chromium, lead.
K003.....	Hexavalent chromium, lead.
K004.....	Hexavalent chromium.
K005.....	Hexavalent chromium, lead.
K006.....	Hexavalent chromium.
K007.....	Cyanide (complexed), hexavalent chromium,
K008.....	Hexavalent chromium.
K009.....	Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid.
K010.....	Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid, chloroacetaldehyde.
K011.....	Acrylonitrile, acetonitrile, hydrocyanic acid.
K013.....	Hydrocyanic acid, acrylonitrile, acetonitrile.
K014.....	Acetonitrile, acrylamide.
K015.....	Benzyl chloride, chlorobenzene, toluene, benzotrithloride.
K016.....	Hexachlorobenzene, hexachlorobutadiene, carbon tetrachloride, hexachloroethane, perchloroethylene.
K017.....	Epichlorohydrin, chloroethers [bis(chloromethyl) ether and bis (2-chloroethyl) ethers], trichloropropane, dichloropropanols.
K018.....	1,2-dichloroethane, trichloroethylene, hexachlorobutadiene, hexachlorobenzene.
K019.....	Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane), trichloroethylene, tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride.

K020.....	Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes, (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane), trichloroethylene, tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride.
K021.....	Antimony, carbon tetrachloride, chloroform.
K022.....	Phenol, tars (polycyclic aromatic hydrocarbons).
K023.....	Phthalic anhydride, maleic anhydride.
K024.....	Phthalic anhydride, 1,4-naphthoquinone.
K025.....	Meta-dinitrobenzene, 2,4-dinitrotoluene.
K026.....	Paraldehyde, pyridines, 2-picolina.
K027.....	Toluene diisocyanate, toluene-2,4-diamine.
K028.....	1,1,1--trichloroethane, vinyl chloride.
K029.....	1,2-dichloroethane, 1,1,1-trichloroethane, vinyl chloride, vinylidene chloride, chloroform.
K030.....	Hexachlorobenzene, hexachlorobutadiene, hexachloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, ethylene dichloride.
K031.....	Arsenic.
K032.....	Hexachlorocyclopentadiene.
K033.....	Hexachlorocyclopentadiene.
K034.....	Hexachlorocyclopentadiene.
K035.....	Creosote, chrysene, naphthalene, fluoranthene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benzo(a)anthracene.
K036.....	Toluene, phosphorodithioic and phosphoro-thioic acid esters.
K037.....	Toluene, phosphorodithioic and phosphoro-thioic acid esters.
K038.....	Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters.
K039.....	Phosphorodithioic and phosphorothioic acid esters.
K040.....	Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters.
K041.....	Toxaphene.
K042.....	Hexachlorobenzene, ortho-dichlorobenzene.
K043.....	2,4-dichlorophenol, 2,6-dichlorophenol, 2,4,6-trichlorophenol.
K044.....	N.A.
K045.....	N.A.
K046.....	Lead.
K047.....	N.A.
K048.....	Hexavalent chromium, lead.
K049.....	Hexavalent chromium, lead.
K050.....	Hexavalent chromium.
K051.....	Hexavalent chromium, lead.
K052.....	Lead.
K060.....	Cyanide, naphthalene, phenolic compounds, arsenic.
K061.....	Hexavalent chromium, lead, cadmium.
K062.....	Hexavalent chromium, lead.
K069.....	Hexavalent chromium, lead, cadmium.
K071.....	Mercury.
K073.....	Chloroform, carbon tetrachloride, hexachloroethane, trichloroethane, tetrachloroethylene, dichloroethylene, 1,1,2,2-tetrachloroethane.
K083.....	Aniline, diphenylamine, nitrobenzene, phenylenediamine.
K084.....	Arsenic.
K085.....	Benzene, dichlorobenzenes, trichlorobenzenes, tetrachlorobenzenes, pentachlorobenzene, hexachlorobenzene, benzyl chloride.
K086.....	Lead, hexavalent chromium.
K087.....	Phenol, naphthalene.

K093.....	Phthalic anhydride, maleic anhydride.
K094.....	Phthalic anhydride.
K095.....	1,1,2-trichloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane.
K096.....	1,2-dichloroethane, 1,1,1-trichloroethane, 1,1,2-trichloroethane.
K097.....	Chlordane, heptachlor.
K098.....	Toxaphene.
K099.....	2,4-dichlorophenol, 2,4,6-trichlorophenol.
K100.....	Hexavalent chromium, lead, cadmium.
K101.....	Arsenic.
K102.....	Arsenic.
K103.....	Aniline, nitrobenzene, phenylenediamine.
K104.....	Aniline, benzene, diphenylamine, nitrobenzene, phenylenediamine.
K105.....	Benzene, monochlorobenzene, dichlorobenzenes, 2,4,6-trichlorophenol.
K106.....	Mercury.

---

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

APPENDIX V - HAZARDOUS CONSTITUENTS

Acetonitrile(Ethanimitrile)  
 Acetophenone(Ethanone,1-phenyl)  
 3-(alpha-Acetylbenzyl)-4-hydroxycoumarin and salts(Warfarin)  
 2-Acetylaminofluorene (Acetamide, N-(9H-fluoren-2-yl)-)  
 Acetyl chloride(Ethanoyl chloride)  
 1-Acetyl-2-thiourea (Acetamide, N-(aminothioxomethyl)-)  
 Acrolein(2-Propenal)  
 Acrylamide(2-Propenamamide)  
 Acrylonitrile(2-Propenenitrile)  
 Aflatoxins  
 Aldrin (1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a,8b-hexahydro-endo,exo-1,4:5,8-Dimethanonaphthalene)  
 Allyl alcohol(2-Propen-1-ol)  
 Aluminum phosphide  
 4-Aminobiphenyl([1,1'-Biphenyl]-4-amine)  
 6-Amino-1,1a,2,8,8a,8b-hexahydro-8-(hydroxymethyl)-8a-methoxy-5-methyl-carbamate azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione, (ester) (Mitomycin C) (Azirion[2'3':3,4]pyrrolo(1,2-a)indole-4,7-dione, 6-amino-8-(((amino-carbonyl)oxy)methyl)-1,1a,2,8,8a,8b-hexahydro-8amethoxy-5-methyl-)  
 5-(Aminomethyl)-3-isoxazolo {3(2H)-Isoxazolone, 5-(aminomethyl)-} 4-Aminopyridine(4-Pyridinamine)  
 Amitrole(1H-1,2,4-Triazol-3-amine)  
 Aniline(Benzenamine)  
 Antimony and compounds,N.O.S.\*  
 Aramite(Sulfurous acid, 2-chloroethyl-, 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester)  
 Arsenic and compounds,N.O.S.\*  
 Arsenic acid(Orthoarsenic acid)  
 Arsenic pentoxide(Arsenic(V)oxide)  
 Arsenic trioxide(Arsenic(III)oxide)  
 Auramine (Benzenamine, 4,4'-carbonimidoylbis[N,N-Dimethyl-, monohydrochloride])  
 Azaserine(L-Serine,diazoacetate(ester))  
 Barium and compounds,N.O.S.\*  
 Barium cyanide  
 Benz[c]acridine(3,4-Benzacridine)  
 Benz[a]anthracene(1,2-Benzanthracene)  
 Benzene(Cyclohexatriene)  
 Benzenearsonic acid(Arsonic acid,phenyl-)  
 Benzene,dichloromethyl-(Benzal chloride)  
 Benzenethiol(Thiophenol)  
 Benzidine([1,1'-Biphenyl]-4,4'diamine)  
 Benzo[b]fluoranthene (2,3-Benzofluoranthene)  
 Benzo[j]fluoranthene (7,8-Benzofluoranthene)  
 Benzo[a]pyrene(3,4-Benzopyrene)  
 p-Benzoquinone(1,4-Cyclohexadienedione)  
 Benzotrichloride(Benzene,trichloromethyl-)  
 Benzyl chloride(Benzene,(chloromethyl)-)  
 Beryllium and compounds,N.O.S.\*  
 Bis(2-chloroethoxy)methane (Ethane, 1,1'-[methylenebis(oxy)bis[2-chloro-])  
 Bis(2-chloroethyl) ether (Ethane, 1,1'-oxybis[2-chloro-])  
 N,N-Bis(2-chloroethyl)-2-naphthylamine (Chlornaphazine)  
 Bis(2-chloroisopropyl) ether (Propane, 2,2'-oxybis[2-chloro-])  
 Bis(chloromethyl) ether (Methane,oxybis[chloro-])  
 Bis(2-ethylhexyl) phthalate (1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester)  
 Bromoacetone(2-Propanone,1-bromo-)  
 Bromomethane(Methyl bromide)  
 4-Bromophenyl phenyl ether (Benzene, 1-bromo-4-phenoxy-)  
 Brucine(Strychnidin-10-one,2,3-dimethoxy-)  
 2-Butanone peroxide(Methyl ethyl ketone, peroxide)  
 Butyl benzyl phthalate (1,2-Benzenedicarboxylic acid, butyl phenyl-methyl ester)  
 2-sec-Butyl-4,6-dinitrophenol (DNBP) (Phenol,2,4-dinitro-6-(1-methyl-propyl)-)  
 Cadmium and compounds,N.O.S.\*  
 Calcium chromate(Chromic acid, calcium salt)  
 Calcium cyanide  
 Carbon disulfide(Carbon bisulfide)  
 Carbon oxyfluoride(Carbonyl fluoride)

Chloral (Acetaldehyde, trichloro-)  
 Chlorambucil (Butanoic acid, 4-[bis(2-chloroethyl)amino]benzene-)  
 Chlordane (alpha and gamma isomers) (4,7-Methanoindan, 1,2,4,5,6,7,8,8-octachloro-3,4,7,7a-tetrahydro-) (alpha and gamma isomers)  
 Chlorinated benzenes, N.O.S.\*  
 Chlorinated ethane, N.O.S.\*  
 Chlorinated fluorocarbons, N.O.S.\*  
 Chlorinated naphthalene, N.O.S.\*  
 Chlorinated phenol, N.O.S.\*  
 Chloroacetaldehyde (Acetaldehyde, chloro-)  
 Chloroalkyl ethers, N.O.S.\*  
 p-Chloroaniline (Benzenamine, 4-chloro-)  
 Chlorobenzene (Benzene, chloro-)  
 Chlorobenzilate (Benzenoacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester)  
 p-Chloro-m-cresol (Phenol, 4-chloro-3-methyl)  
 1-Chloro-2,3-epoxypropane (Oxirane, 2-(chloromethyl)-)  
 2-Chloroethyl vinyl ether (Ethene, (2-chloroethoxy)-)  
 Chloroform (Methane, trichloro-)  
 Chloromethane (Methyl chloride)  
 Chloromethyl methyl ether (Methane, chloromethoxy-)  
 2-Chloronaphthalene (Naphthalene, beta-chloro-)  
 2-Chlorophenol (Phenol, o-chloro-)  
 1-(o-Chlorophenyl)thiourea (Thiourea, (2-chlorophenyl)-)  
 3-Chloropropionitrile (Propanenitrile, 3-chloro-)  
 Chromium and compounds, N.O.S.\*  
 Chrysene (1,2-Benzphenanthrene)  
 Citrus red No. 2 (2-Naphthol, 1-[(2,5-dimethoxyphenyl)azo]-)  
 Coal tars  
 Copper cyanide  
 Creosote (Creosote, wood)  
 Cresols (Cresylic acid) (Phenol, methyl-)  
 Crotonaldehyde (2-Butenal)  
 Cyanides (soluble salts and complexes), N.O.S.\*  
 Cyanogen (Ethanedinitrile)  
 Cyanogen bromide (Bromine cyanide)  
 Cyanogen chloride (Chlorine cyanide)  
 Cycasin (beta-D-Glucopyranoside, (methyl-ONN-azoxy)methyl-)  
 2-Cyclohexyl-4,6-dinitrophenol (Phenol, 2-cyclohexyl-4,6-dinitro-)  
 Cyclophosphamide (2H-1,3,2-Oxazaphosphorine, [bis(2-chloroethyl)amino]-tetrahydro-, 2-oxide)  
 Daunomycin (5,12-Naphthacenedione, (8S-cis)-8-acetyl-10-[(3-amino-2,3,6-trideoxy)-alpha-L-lyxo-hexopyranosyl]oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-)  
 DDD (Dichlorodiphenyldichloroethane) (Ethane, 1,1-dichloro-2,2-bis(p-chlorophenyl)-)  
 DDE (Ethylene, 1,1-dichloro-2,2-bis(4-chlorophenyl)-)  
 DDT (Dichlorodiphenyltrichloroethane) (Ethane, 1,1,1-trichloro-2,2-bis(p-chlorophenyl)-)  
 Diallate (S-(2,3-dichloroallyl)diisopropylthiocarbamate)  
 Dibenz[a,h]acridine (1,2,5,6-Dibenzacridine)  
 Dibenz[a,j]acridine (1,2,7,8-Dibenzacridine)  
 Dibenz[a,h]anthracene (1,2,5,6-Dibenzanthracene)  
 7H-Dibenz[c,g]carbazole (3,4,5,6-Dibenzcarbazole)  
 Dibenzo[a,e]pyrene (1,2,4,5-Dibenzpyrene)  
 Dibenzo[a,h]pyrene (1,2,5,6-Dibenzpyrene)  
 Dibenzo[a,i]pyrene (1,2,7,8-Dibenzpyrene)  
 1,2-Dibromo-3-chloropropane (Propane, 1,2-dibromo-3-chloro-)  
 1,2-Dibromoethane (Ethylene dibromide)  
 Dibromomethane (Methylene bromide)  
 Di-n-butyl phthalate (1,2-Benzenedicarboxylic acid, dibutyl ester)  
 o-Dichlorobenzene (Benzene, 1,2-dichloro-)  
 m-Dichlorobenzene (Benzene, 1,3-dichloro-)  
 p-Dichlorobenzene (Benzene, 1,4-dichloro-)  
 Dichlorobenzene, N.O.S.\* (Benzene, dichloro-, N.O.S.\*)  
 3,3'-Dichlorobenzidine ([1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-)  
 1,4-Dichloro-2-butene (2-Butene, 1,4-dichloro-)  
 Dichlorodifluoromethane (Methane, dichlorodifluoro-)  
 1,1-Dichloroethane (Ethylidene dichloride)  
 1,2-Dichloroethane (Ethylene dichloride)  
 trans-1,2-Dichloroethene (1,2-Dichloroethylene)  
 Dichloroethylene, N.O.S.\* (Ethene, dichloro-, N.O.S.\*)  
 1,1-Dichloroethylene (Ethene, 1,1-dichloro-)  
 Dichloromethane (Methylene chloride)

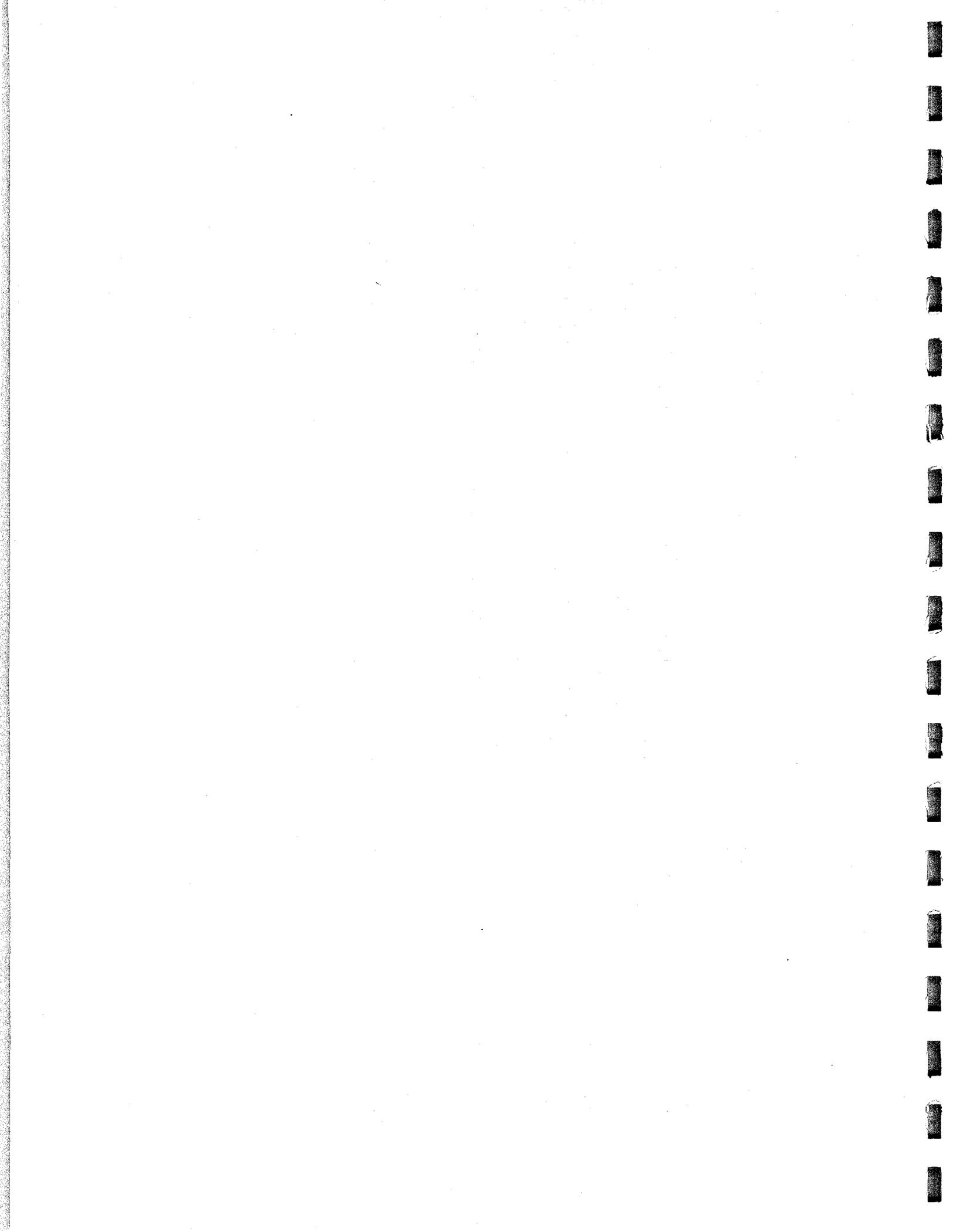
2,4-Dichlorophenol(Phenol,2,4-dichloro-)  
 2,6-Dichlorophenol(Phenol,2,6-dichloro-)  
 2,4-Dichlorophenoxyacetic acid(2,4-D),salts and esters(Acetic acid,  
 2,4-dichlorophenoxy-,salts and esters)  
 Dichlorophenylarsine (Phenyl dichloroarsine)  
 Dichloropropane, N.O.S.\* (Propane, dichloro-,N.O.S.\*)  
 1,2-Dichloropropane(Propylene dichloride)  
 Dichloropropanol, N.O.S.\* (Propanol,dichloro-,N.O.S.\*)  
 Dichloropropene, N.O.S.\* (Propene, dichloro-,N.O.S.\*)  
 1,3-Dichloropropene (1-Propene, 1,3-dichloro-)  
 Dieldrin (1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octa-hydro-  
 endo,exo-1,4:5,8-Dimethanonaphthalene)  
 1,2:3,4-Diepoxybutane(2,2'-Bioxirane)  
 Diethylarsine(Arsine,diethyl-)  
 N,N-Diethylhydrazine (Hydrazine, 1,2-diethyl)  
 O,O-Diethyl S-methyl ester of phosphorodithioic acid (Phosphorodithioic  
 acid, O,O-diethyl S-methyl ester)  
 O,O-Diethylphosphoric acid, O-p-nitrophenyl ester (Phosphoric acid, diethyl  
 p-nitrophenyl ester)  
 Diethyl phthalate(1,2-Benzenedicarboxylic acid,diethyl ester)  
 O,O-Diethyl O-2-pyrazinyl phosphorothioate (Phosphorothioic acid, O,O-  
 diethyl O-pyrazinyl ester)  
 Diethylstilbesterol (4,4'-Stilbenediol, alpha,alpha-diethyl, bis(dihydrogen  
 phosphate,(E)-)  
 Dihydrosafrole (Benzene, 1,2-methylenedioxy-4-propyl-)  
 3,4-Dihydroxy-alpha-(methylamino)methyl benzyl alcohol (1,2-Benzenediol,  
 4-[1-hydroxy-2-(methylamino)ethyl]-)  
 Diisopropylfluorophosphate (DFP) (Phosphorofluoric acid, bis(1-methyl-  
 ethyl)ester)  
 Dimethoate (Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-  
 oxoethyl]ester)  
 3,3'-Dimethoxybenzidine ([1,1'-Biphenyl]-4,4'diamine,3-3'-dimethoxy-)  
 p-Dimethylaminoazobenzene(Benzenamine,N,N-dimethyl-4-(phenylazo)-)  
 7,12-Dimethylbenz[a]anthracene (1,2-Benzanthracene,7,12-dimethyl-)  
 3,3'-Dimethylbenzidine ([1,1'-Biphenyl]-4,4'diamine,3,3'-dimethyl-)  
 Dimethylcarbamoyl chloride (Carbamoyl chloride,dimethyl-)  
 1,1-Dimethylhydrazine (Hydrazine, 1,1-dimethyl-)  
 1,2-Dimethylhydrazine (Hydrazine, 1,2-dimethyl-)  
 3,3-Dimethyl-1-(methylthio)-2-butanone, O-[(methylamino) carbonyl]oxime  
 (Thiofanox)  
 alpha,alpha-Dimethylphenethylamine(Ethanamine,1,1-dimethyl-2-phenyl-)  
 2,4-Dimethylphenol(Phenol,2,4-dimethyl-)  
 Dimethyl phthalate (1,2-Benzenedicarboxylic acid,dimethyl ester)  
 Dimethyl sulfate (Sulfuric acid, dimethyl ester)  
 Dinitrobenzene, N.O.S.\* (Benzene, dinitro-N.O.S.\*)  
 4,6-Dinitro-o-cresol and salts (Phenol, 2,4-dinitro-6-methyl-,and salts)  
 2,4-Dinitrophenol(Phenol,2,4-dinitro-)  
 2,4-Dinitrotoluene (Benzene, 1-methyl-2,4-dinitro-)  
 2,6-Dinitrotoluene (Benzene, 1-methyl-2,6-dinitro-)  
 Di-n-octyl phthalate (1,2-Benzenedicarboxylic acid,dioctyl ester)  
 1,4-Dioxane(1,4-Diethylene oxide)  
 Diphenylamine(Benzenamine,N-phenyl-)  
 1,2-Diphenylhydrazine (Hydrazine, 1,2-diphenyl-)  
 Di-n-propylnitrosamine (N-Nitroso-di-n-propylamine)  
 Disulfoton (O,O-diethyl S-[2-(ethylthio)ethyl]phosphorodithioate)  
 2,4-Dithiobiuret (Thioimidodicarbonic diamide)  
 Endosulfan (5-Norbornene, 2,3-dimethanol, 1,4,5,6,7,7-hexachloro-,cyclic  
 sulfite)  
 Endrin and metabolites (1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,  
 7,8,8a-octahydro-endo,endo-1,4:5,8-dimethanonaphthalene, and metabolites)  
 Ethyl carbamate(Urethan)(Carbamic acid, ethyl ester)  
 Ethyl cyanide(propanenitrile)  
 Ethylenebisdithiocarbamic acid, salts and esters (1,2-Ethanediybiscarba-  
 modithioic acid,salts and esters)  
 Ethyleneimine(Aziridine)  
 Ethylene oxide(Oxirane)  
 Ethylenethiourea(2-Imidazolidinethione)  
 Ethyl methacrylate (2-Propenoic acid, 2-methyl-,ethyl ester)  
 Ethyl methanesulfonate (Methanesulfonic acid, ethyl ester)  
 Fluoranthene(Benzo[j,k]fluorene)  
 Fluorine  
 2-Fluoroacetamide(Acetamide,2-fluoro-)  
 Fluoroacetic acid, sodium salt(Acetic acid, fluoro-,sodium salt)  
 Formaldehyde(Methylene oxide)

Formic acid(Methanoic acid)  
 Glycidylaldehyde(1-Propanol-2,3-epoxy)  
 Halomethane,N.O.S.\*  
 Heptachlor (4,7-Methano-1H-indene,1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-)  
 Heptachlor epoxide (alpha, beta, and gamma isomers) (4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7-tetrahydro-, alpha, beta, and gamma isomers)  
 Hexachlorobenzene (Benzene, hexachloro-)  
 Hexachlorobutadiene (1,3-Butadiene, 1,1,2,3,4,4-hexachloro-)  
 Hexachlorocyclohexane (all isomers) (Lindane and isomers)  
 Hexachlorocyclopentadiene (1,3-Cyclopentadiene,1,2,3,4,5,5-hexachloro-)  
 Hexachloroethane (Ethane, 1,1,1,2,2,2-hexachloro-)  
 1,2,3,4,10-10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-endo,endo-dimethanonaphthalene (Hexachlorohexahydro-endo,endo-dimethanonaphthalene)  
 Hexachlorophene (2,2'-Methylenebis(3,4,6-trichlorophenol)  
 Hexachloropropene (1-Propene, 1,1,2,3,3,3-hexachloro-)  
 Hexaethyl tetraphosphate (Tetraphosphoric acid,hexaethyl ester).  
 Hydrazine(Diamine)  
 Hydrocyanic acid(Hydrogen cyanide)  
 Hydrofluoric acid(Hydrogen fluoride)  
 Hydrogen sulfide(Sulfur hydride)  
 Hydroxydimethylarsine oxide (Cacodylic acid)  
 Indeno(1,2,3-cd)pyrene (1,10-(1,2-phenylene)pyrene)  
 Iodomethane(Methyl iodide)  
 Iron dextran(Ferric dextran)  
 Isocyanic acid, methyl ester (Methyl isocyanate)  
 Isobutyl alcohol(1-Propanol,2-methyl-)  
 Isosafrole (Benzene, 1,2-methylenedioxy-4-allyl-)  
 Kepone (Decachlorooctahydro-1,3,4-Methano-2H-cyclobuta[cd]pentalen-2-one)  
 Lasiocarpine (2-Butenoic acid, 2-methyl-, 7-[(2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy)methyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester)  
 Lead and compounds,N.O.S.\*  
 Lead acetate(Acetic acid,lead salt)  
 Lead phosphate(Phosphoric acid,lead salt)  
 Lead subacetate (Lead, bis(acetato-O)tetrahydroxytri-)  
 Maleic anhydrid (2,5-Furandione)  
 Maleic hydrazide(1,2-Dihydro-3,6-pyridazinedione)  
 Malononitrile(Propanedinitrile)  
 Melphalan (Alanine, 3-[p-bis(2-chloroethyl)amino]phenyl-,L-)  
 Mercury fulminate(Fulminic acid,mercury salt)  
 Mercury and compounds,N.O.S.\*  
 Methacrylonitrile (2-Propenenitrile, 2-methyl-)  
 Methanethiol(Thiomethanol)  
 Methapyrilene (Pyridine, 2-[(2-dimethylamino)ethyl]-2-thenylamino-)  
 Metholmyl (Acetimidic acid, N-[(methylcarbomoyl)oxy]thio-, methyl ester)  
 Methoxychlor (Ethane, 1,1,1-trichloro-2,2'-bis(p-methoxyphenyl)-)  
 2-Methylaziridine(1,2-Propylenimine)  
 3-Methylcholanthrene (Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-)  
 Methyl chlorocarbonate (Carbonochloridic acid,methyl ester)  
 4,4'-Methylenebis(2-chloraniline) (Benzenamine,4,4'-methylenebis-(2-chloro-)  
 Methyl ethyl ketone(MEK)(2-Butanone)  
 Methyl hydrazine(Hydrazine,methyl-)  
 2-Methylactonitrile (Propanenitrile, 2-hydroxy-2-methyl-)  
 Methyl methacrylate (2-Propenoic acid, 2-methyl-,methyl ester)  
 Methyl methanesulfonate(Methanesulfonic acid,methyl ester)  
 2-Methyl-2-(methylthio)propionaldehyde-o-(methylcarbonyl) oxime (Propanal, 2-methyl-2-(methylthio)-,[(methylamino)carbonyl]oxime)  
 N-Methyl-N'-nitro-N-nitrosoguanidine (Guanidine,N-nitroso-N-methyl-N'-nitro-)  
 Methyl parathion(O,O-dimethyl O-(4-nitrophenyl)phosphorothioate)  
 Methylthiouracil (4-1H-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-)  
 Mustard gas(Sulfide, bis(2-chloroethyl)-)  
 Naphthalene  
 1,4-Naphthoquinone (1,4-Naphthalenedione)  
 1-Naphthylamine(alpha-Naphthylamine)  
 2-Naphthylamine(beta-Naphthylamine)  
 1-Naphthyl-2-thiourea(Thiourea, 1-naphthalenyl-).  
 Nickel and compounds,N.O.S.\*  
 Nickel carbonyl(Nickel tetracarbonyl)  
 Nickel cyanide(Nickel(II)cyanide)  
 Nicotine and salts (Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)-,and salts)  
 Nitric oxide(Nitrogen(II)oxide)  
 p-Nitroaniline(Benzenamine,4-nitro-)

Nitrobenzine (Benzene, nitro-)  
 Nitrogen dioxide (Nitrogen (IV) oxide)  
 Nitrogen mustard and hydrochloride salt (Ethanamine, 2-chloro-, N-(2-chloroethyl)-N-methyl-, and hydrochloride salt)  
 Nitrogen mustard N-Oxide and hydrochloride salt (Ethanamine, 2-chloro-, N-(2-chloroethyl)-N-methyl-, and hydrochloride salt)  
 Nitroglycerine (1,2,3-Propanetriol, trinitrate)  
 4-Nitrophenol (Phenol, 4-nitro-)  
 4-Nitroquinoline-1-oxide (Quinoline, 4-nitro-1-oxide-)  
 Nitrosamine, N.O.S.\*  
 N-Nitrosodi-n-butylamine (1-Butanamine, N-butyl-N-nitroso-)  
 N-Nitrosodiethanolamine (Ethanol, 2,2'-(nitrosoimino)bis-)  
 N-Nitrosodiethylamine (Ethanamine, N-ethyl-N-nitroso-)  
 N-Nitrosodimethylamine (Dimethylnitrosamine)  
 N-Nitroso-N-ethylurea (Carbamide, N-ethyl-N-nitroso-)  
 N-Nitrosomethylethylamine (Ethanamine, N-methyl-N-nitroso-)  
 N-Nitroso-N-methylurea (Carbamide, N-methyl-N-nitroso-)  
 N-Nitroso-N-methylurethane (Carbamic acid, methylnitroso-, ethyl ester)  
 N-Nitrosomethylvinylamine (Ethanamine, N-methyl-N-nitroso-)  
 N-Nitrosomorpholine (Morpholine, N-nitroso-)  
 N-Nitrosornicotine (Nicotinic acid, N-nitroso-)  
 N-Nitrosopiperidine (Piperidine, hexahydro-N-nitroso-)  
 Nitrosopyrrolidine (Pyrrolidine, tetrahydro-, N-nitroso-)  
 N-Nitrososarcosine (Sarcosine, N-nitroso-)  
 5-Nitro-o-toluidine (Benzenamine, 2-methyl-5-nitro-)  
 Octamethylpyrophosphoramide (Diphosphoramide, octamethyl-)  
 Osmium tetroxide (Osmium (VIII) oxide)  
 7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid (Endothal)  
 Paraldehyde (1,3,5-Trioxane, 2,4,6-trimethyl-)  
 Parathion (Phosphorothioic acid, O,O-diethyl O-(p-nitrophenyl) ester)  
 Pentachlorobenzene (Benzene, pentachloro-)  
 Pentachloroethane (Ethane, pentachloro-)  
 Pentachloronitrobenzene (PCNB) (Benzene, pentachloronitro-)  
 Pentachlorophenol (Phenol, pentachloro-)  
 Phenacetin (Acetamide, N-(4-ethoxy-phenyl-))  
 Phenol (Benzene, hydroxy-)  
 Phenylenediamine (Benzenediamine)  
 Phenylmercury acetate (Mercury, acetato-phenyl-)  
 N-Phenylthiourea (Thiourea, phenyl-)  
 Phosgene (Carbonyl chloride)  
 Phosphine (Hydrogen phosphide)  
 Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester (Phorate)  
 Phosphorothioic acid, O,O-dimethyl O-[p-((dimethylamino)sulfonyl)phenyl] ester (Famphur)  
 Phthalic acid esters, N.O.S.\* (Benzene, 1,2-dicarboxylic acid, esters, N.O.S.\*)  
 Phthalic anhydride (1,2-Benzenedicarboxylic acid anhydride)  
 2-Picoline (Pyridine, 2-methyl-)  
 Polychlorinated biphenyl, N.O.S.\*  
 Potassium cyanide  
 Potassium silver cyanide (Argentate (1-), dicyano-, potassium)  
 Pronamide (3,5-Dichloro-N-(1,1-dimethyl-2-propynyl)benzamide)  
 1,3-Propane sultone (1,2-Oxathiolane, 2,2-dioxide)  
 n-Propylamine (1-Propanamine)  
 Propylthiouracil (Undecamethylenediamine, N,N'-bis(2-chlorobenzyl)-, dihydrochloride)  
 2-Propyn-1-ol (Propargyl alcohol)  
 Pyridine  
 Reserpine (Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester)  
 Resorcinol (1,3-Benzenediol)  
 Saccharin and salts (1,2-Benzoisothiazolin-3-one, 1,1-dioxide, and salts)  
 Safrole (Benzene, 1,2-methylenedioxy-4-allyl-)  
 Selenious acid (Selenium dioxide)  
 Selenium and compounds, N.O.S.\*  
 Selenium sulfide (Sulfur selenide)  
 Selenourea (Carbamimidoseleonic acid)  
 Silver and compounds, N.O.S.\*  
 Silver cyanide  
 Sodium cyanide  
 Streptozotocin (D-Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido-))  
 Strontium sulfide  
 Strychnine and salts (Strychnidine-10-one, and salts)  
 1,2,4,5-Tetrachlorobenzene (Benzene, 1,2,4,5-tetrachloro)

2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) (Dibenzo-p-dioxin, 2,3,7,8-tetra-  
 chloro-)  
 Tetrachloroethane, N.O.S.\* (Ethane, tetrachloro-, N.O.S.\*)  
 1,1,1,2-Tetrachloroethane (Ethane, 1,1,1,2-tetrachloro-)  
 1,1,2,2-Tetrachloroethane (Ethane, 1,1,2,2-tetrachloro-)  
 Tetrachloroethane (Ethane, 1,1,2,2-tetrachloro-)  
 Tetrachloromethane (Carbon tetrachloride)  
 2,3,4,6-Tetrachlorophenol (Phenol, 2,3,4,6-tetrachloro-)  
 Tetraethyldithiopyrophosphate (Dithiopyrophosphoric acid, tetraethyl-ester)  
 Tetraethyl lead (Plumbane, tetraethyl-)  
 Tetraethylpyrophosphate (Pyrophosphoric acid, tetraethyl ester)  
 Tetranitromethane (Methane, tetranitro-)  
 Thallium and compounds, N.O.S.\*  
 Thallous oxide (Thallium(III)oxide)  
 Thallium(I)acetate (Acetic acid, thallium(I)salt)  
 Thallium(I)carbonate (Carbonic acid, dithallium(I)salt)  
 Thallium(I)chloride  
 Thallium(I)nitrate (Nitric acid, thallium(I)salt)  
 Thallium selenite  
 Thallium(I)sulfate (Sulfuric acid, thallium(I)salt)  
 Thioacetamide (Ethanethioamide)  
 Thiosemicarbazide (Hydrazinecarbothioamide)  
 Thiourea (Carbamide thio-)  
 Thiuram (Bis(dimethylthiocarbonyl) disulfide)  
 Toluene (Benzene, methyl-)  
 Toluenediamine (Diaminotoluene)  
 o-Toluidine hydrochloride (Benzeneamine, 2-methyl-, hydrochloride)  
 Toluene diisocyanate (Benzene, 1,3-diisocyanatomethyl-)  
 Toxaphene (Camphene, octachloro-)  
 Tribromomethane (Bromoform)  
 1,2,4-Trichlorobenzene (Benzene, 1,2,4-trichloro-)  
 1,1,1-Trichloroethane (Methyl chloroform)  
 1,1,2-Trichloroethane (Ethane, 1,1,2-trichloro-)  
 Trichloroethane (Trichloroethylene)  
 Trichloromethanethiol (Methanethiol, trichloro-)  
 Trichloromonofluoromethane (Methane, trichlorofluoro-)  
 2,4,5-Trichlorophenol (Phenol, 2,4,5-trichloro-)  
 2,4,6-Trichlorophenol (Phenol, 2,4,6-trichloro-)  
 2,4,5-Trichlorophenoxyacetic acid (2,4,5-T) (Acetic acid, 2,4,5-trichloro-  
 phenoxy-)  
 2,4,5-Trichlorophenoxypropionic acid (2,4,5-TP) (Silvex) (Propionic acid,  
 2-(2,4,5-trichlorophenoxy)-)  
 Trichloropropane, N.O.S.\* (Propane, trichloro-, N.O.S.\*)  
 1,2,3-Trichloropropane (Propane, 1,2,3-trichloro-)  
 O,O,O-Triethyl phosphorothioate (Phosphorothioic acid, O,O,O-triethyl ester)  
 sym-Trinitrobenzene (Benzene, 1,3,5-trinitro-)  
 Tris(1-aziridinyl) phosphine sulfide (Phosphine sulfide, tris(1-aziridinyl-)  
 Tris(2,3-dibromopropyl) phosphate (1-Propanol, 2,3-dibromo-, phosphate)  
 Trypan blue (2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl(1,1'-  
 biphenyl)-4,4'-diyl)bis(azo)]bis(5-amino-4-hydroxy-, tetrasodium salt)  
 Uracil mustard (Uracil 5-[bis(2-chloroethyl)amino]-)  
 Vanadic acid, ammonium salt (ammonium vanadate)  
 Vanadium pentoxide (Vanadium(V)oxide)  
 Vinyl chloride (Ethene, chloro-)  
 Zinc cyanide  
 Zinc phosphide

[46 FR 27477, May 20, 1981; 46 FR 29708, June 3, 1981]



**CHAPTER 33-24-03  
STANDARDS FOR GENERATORS**

Section	
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33-24-03-02	Hazardous Waste Determination
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33-24-03-04	General Requirements of the Manifest
33-24-03-05	Required Information on the Manifest
33-24-03-06	Number of Copies of the Manifest
33-24-03-07	Use of the Manifest
33-24-03-08	Packaging
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33-24-03-10	Marking
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33-24-03-12	Accumulation Time
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**33-24-03-01. Scope and applicability.** This chapter establishes standards for generators of hazardous waste.

1. A generator who treats, stores, or disposes of hazardous waste onsite must only comply with the following sections of this chapter with respect to that waste: Section 33-24-03-02 for determining whether or not the generator has a hazardous waste, 33-24-03-03 for obtaining an identification number, 33-24-03-12 for accumulation of hazardous waste, subsections 3 and 4 of section 33-24-03-13 for recordkeeping, 33-24-03-16 for additional reporting and if applicable, 33-24-03-18 for farmers.
2. Any person who imports hazardous waste into the United States through this state must comply with the standards applicable to generators established in this chapter.
3. A farmer who generates waste pesticides which are hazardous waste and who complies with all the requirements of section 33-24-03-18 is not required to comply with other standards in chapters 33-24-03 through 33-24-06 with respect to such pesticides.

4. A person who generates a hazardous waste as defined in chapter 33-24-02 is subject to the compliance requirements and penalties prescribed in North Dakota Century Code chapter 23-20.3 if the person does not comply with the requirements of this chapter.
5. An owner or operator who initiates a shipment of hazardous waste from a treatment, storage, or disposal facility must comply with the generator standards established in this chapter. (Note: The provisions of section 33-24-03-12 are applicable to the onsite accumulation of hazardous waste by generators. Therefore, the provisions of section 33-24-03-12 only apply to owners or operators who are shipping hazardous waste which they generated at that facility.)

**History:** Effective January 1, 1984.

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

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

**33-24-03-02. Hazardous waste determination.** A person who generates a solid waste as defined in section 33-24-02-02 must determine if that waste is a hazardous waste using the following method:

1. The person should first determine if the waste is excluded from regulation under section 33-24-02-04.
2. The person must then determine if the waste is listed as a hazardous waste in chapter 33-24-02.
3. If the waste is not listed as a hazardous waste in section 33-24-02, the person must determine whether the waste is identified in section 33-24-02 by either:
  - a. Testing the waste according to the methods set forth in chapter 33-24-02 or an equivalent method as approved by the department; or
  - b. Applying knowledge of the hazard characteristic of the waste in light of the materials or the processes used.

**History:** Effective January 1, 1984.

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

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

**33-24-03-03. Identification number and registration certificate.**

1. A generator may not treat, store, dispose of, transport, or offer for transportation, hazardous waste without having received an identification number and a registration certificate from the department.

2. A generator who has not received an identification number and a registration certificate may obtain one by applying to the department. Upon receiving the request the department will assign an identification number and issue a registration certificate to the generator.
3. A generator may not offer the generator's hazardous waste to transporters that have not received an identification number and a registration certificate, or to treatment, storage, or disposal facilities that have not received an identification number and applied for a permit.
4. The department may assess and collect reasonable fees for the issuance of registration certificates.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03, 23-20.3-05.1

Law Implemented: NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05.1

#### 33-24-03-04. General requirements of the manifest.

1. A generator who transports, or offers for transportation, hazardous waste for offsite treatment, storage, or disposal must prepare a manifest before transporting the waste offsite.
2. A generator must designate on the manifest one facility which is permitted to handle the waste described on the manifest.
3. A generator may also designate on the manifest one alternate facility which is permitted to handle the generator's waste in the event an emergency prevents delivery of the waste to the primary designated facility.
4. If the transporter is unable to deliver the hazardous waste to the designated facility or the alternate facility, the generator must either designate another facility or instruct the transporter to return the waste.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

#### 33-24-03-05. Required information on the manifest.

1. The manifest must contain all of the following information:
  - a. A manifest document number.
  - b. The generator's name, mailing address, telephone number, and identification number.

- c. The name and identification number of each transporter.
- d. The name, address, and identification number of the designated facility and an alternate facility, if any.
- e. The description of the waste, e.g., proper shipping name, etc., required by regulations of the United States department of transportation in 49 CFR 172.101, 172.202, and 172.203.
- f. The total quantity of each hazardous waste by units of weight or volume and the type and number of containers as loaded into or onto the transport vehicle.

2. The following certification must appear on the manifest:

This is to certify that the above-named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the department of transportation and the environmental protection agency.

**History:** Effective January 1, 1984.

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

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

**33-24-03-06. Number of copies of the manifest.** The manifest must consist of at least the number of copies which will provide the generator, each transporter, and the owner or operator of the designated facility with one copy each for their records and another copy to be returned to the generator.

**History:** Effective January 1, 1984.

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

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

**33-24-03-07. Use of the manifest.**

1. The generator must:
  - a. Sign the manifest certification by hand.
  - b. Obtain the handwritten signature of the initial transporter and date of acceptance on the manifest.
  - c. Retain one copy, in accordance with subsection 1 of section 33-24-03-13.
2. The generator must give the transporter the remaining copies of the manifest.

3. For shipments of hazardous waste within the United States solely by water (bulk shipments only), the generator must send three copies of the manifest dated and signed in accordance with this section to the owner or operator of the designated facility or the last water (bulk shipment) transporter to handle the waste in the United States if exported by water. Copies of the manifest are not required for each transporter.
4. For rail shipments of hazardous waste within the United States which originate at the site of generation, the generator must send at least three copies of the manifest dated and signed in accordance with this section to:
  - a. The next nonrail transporter, if any;
  - b. The designated facility if transported solely by rail; or
  - c. The last rail transporter to handle the waste in the United States if exported by rail.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-03-08. Packaging.** Before transporting hazardous waste or offering hazardous waste for transportation offsite, a generator must package the waste in accordance with the applicable department of transportation regulations on packaging under 49 CFR Parts 173, 178, and 179.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-03-09. Labeling.** Before transporting or offering hazardous waste for transportation offsite, a generator must label each package in accordance with the applicable department of transportation regulations on hazardous materials under 49 CFR Part 172.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-03-10. Marking.**

1. Before transporting or offering hazardous waste for transportation offsite, a generator must mark each package of hazardous waste in accordance with the applicable department of transportation regulations on hazardous materials under 49 CFR Part 172.

2. Before transporting hazardous waste or offering hazardous waste for transportation offsite, a generator must mark each container of one hundred ten gallons [416.40 liters] or less used in such transportation with the following words and information displayed in accordance with the requirements of 49 CFR 172.304:

HAZARDOUS WASTE - Federal Law prohibits improper disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency.

Generator Name and Address \_\_\_\_\_.  
Manifest Document Number \_\_\_\_\_.

**History:** Effective January 1, 1984.  
**General Authority:** NDCC 23-20.3-03  
**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-03-11. Placarding.** Before transporting hazardous waste or offering hazardous waste for transportation offsite, a generator must placard or offer the initial transporter the appropriate placards according to department of transportation regulations for hazardous materials under 49 CFR Part 172, Subpart F.

**History:** Effective January 1, 1984.  
**General Authority:** NDCC 23-20.3-03  
**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04

**33-24-03-12. Accumulation Time.**

1. A generator may accumulate hazardous waste onsite without a permit for ninety days or less, provided that:
  - a. The waste is placed in containers and the generator complies with sections 33-24-05-90 through 33-24-05-93, 33-24-05-95, and 33-24-05-96, or in tanks, provided the generator complies with the requirements of sections 33-24-05-105 through 33-24-05-109.
  - b. The date upon which each period of accumulation begins is clearly marked and visible for inspection on each container.
  - c. While being accumulated onsite, each container and tank is properly labeled or marked with the words "Hazardous Waste".
  - d. The generator complies with the requirements for owners or operators in sections 33-24-05-16, 33-24-05-31 through 33-24-05-49, and 33-24-05-51 through 33-24-05-69.

2. A generator who accumulates hazardous waste for more than ninety days, is an operator of a storage facility, and is subject to the requirements of chapter 33-24-05 and the permit requirements of chapter 33-24-06, unless the generator has been granted an extension to the ninety-day period. Such extension may be granted by the department if hazardous wastes must remain onsite for longer than ninety days due to unforeseen, temporary, and uncontrollable circumstances. An extension of up to thirty days may be granted at the discretion of the department on a case-by-case basis.

**History:** Effective January 1, 1984.

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

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

### **33-24-03-13. Recordkeeping.**

1. A generator must keep a copy of each manifest signed in accordance with subsection 1 of section 33-24-03-07 for three years or until the generator receives a signed copy from the designated facility which received the waste. This signed copy must be retained as a record for at least three years from the date the waste was accepted by the initial transporter.
2. A generator must keep a copy of each annual report and exception report for a period of at least three years from the due date of the report, March first of each year.
3. A generator must keep records of any test results, waste analyses, or other determinations made in accordance with section 33-24-03-02 for at least three years from the date the waste was last sent to onsite or offsite treatment, storage, or disposal.
4. The periods for retention referred to in this section are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the department.

**History:** Effective January 1, 1984.

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

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

### **33-24-03-14. Annual reporting.**

1. A generator who ships the generator's hazardous waste offsite must prepare and submit a single copy of an annual report to the department by March first of each year. The annual report must be submitted on department-approved forms (available from the department's division of environmental waste management

and research), must cover generator activities during the previous calendar year, and must include the following information:

- a. The identification number, name, and address of the generator.
  - b. The calendar year covered by the report.
  - c. The identification number, name, and address for each offsite treatment, storage, or disposal facility to which waste was shipped during the reporting year; for exported shipments, the report must give the name and address of the foreign facility.
  - d. The name and identification number of each transporter used during the reporting year.
  - e. A description, hazardous waste number (from chapter 33-24-02), department of transportation hazard class, and quantity of each hazardous waste shipped offsite. This information must be listed by the identification number of each offsite facility to which waste was shipped.
  - f. The certification signed by the generator or the generator's authorized representative.
2. Any generator who treats, stores, or disposes of hazardous waste onsite must submit an annual report covering those wastes in accordance with the provisions of chapters 33-24-05 and 33-24-06.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

#### 33-24-03-15. Exception reporting.

1. A generator who does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within thirty-five days of the date the waste was accepted by the initial transporter must contact the transporter or the owner or operator of the designated facility to determine the status of the hazardous waste.
2. A generator must submit an exception report to the department if the generator has not received a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within forty-five days of the date the waste was accepted by the initial transporter. The exception report must include:

- a. A legible copy of the manifest for which the generator does not have confirmation of delivery;
- b. A cover letter signed by the generator or the generator's authorized representative explaining the efforts taken to locate the hazardous waste and the results of those efforts.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

#### 33-24-03-16. Additional reporting.

1. Any generator who makes an offsite shipment of hazardous waste must send to the department a copy of the signed manifest or shipping paper:
  - a. When first signed by the generator and transporter; and
  - b. As signed by and received from the designated facility or alternate facility.
2. The department, as it deems necessary, may require generators to furnish additional reports concerning the quantities and disposition of wastes identified or listed in this article.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

#### 33-24-03-17. International shipments.

1. Any person who exports hazardous waste to a foreign country or imports hazardous waste from a foreign country into this state must comply with the requirements of this section.
2. When shipping hazardous waste outside the United States, the generator must:
  - a. Notify the department and the environmental protection agency (office of international activities) in writing four weeks before the initial shipment of hazardous waste to each country in each calendar year.
    - (1) The waste must be identified by its hazardous waste identification number and its department of transportation shipping description.
    - (2) The name and address of the foreign consignee must be included in this notice.

- (3) These notices must be sent to the North Dakota state department of health, division of environmental waste management and research.
  - b. Require that the foreign consignee confirm the delivery of the waste in the foreign country. A copy of the manifest signed by the foreign consignee may be used for this purpose.
  - c. Meet the requirements under section 33-24-03-05 for the manifest, except that:
    - (1) In place of the name, address, and identification number of the designated facility, the name and address of the foreign consignee must be used.
    - (2) The generator must identify the point of departure from the United States through which the waste must travel before entering a foreign country.
3. A generator must file an exception report if:
- a. He has not received a copy of the manifest signed by the transporter stating the date and place of departure from the United States within forty-five days from the date it was accepted by the initial transporter; or
  - b. Within ninety days from the date the waste was accepted by the initial transporter, the generator has not received written confirmation from the foreign consignee that the hazardous waste was received.
4. When importing hazardous waste, a person must meet all requirements of section 33-24-03-05 for the manifest except that:
- a. In place of the generator's name, address, and identification number, the name and address of the foreign generator and the importer's name, address, and identification number must be used.
  - b. In place of the generator's signature on the certification statement, the United States importer or the importer's agent must sign and date the certification and obtain the signature of the initial transporter.

**History:** Effective January 1, 1984.

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

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

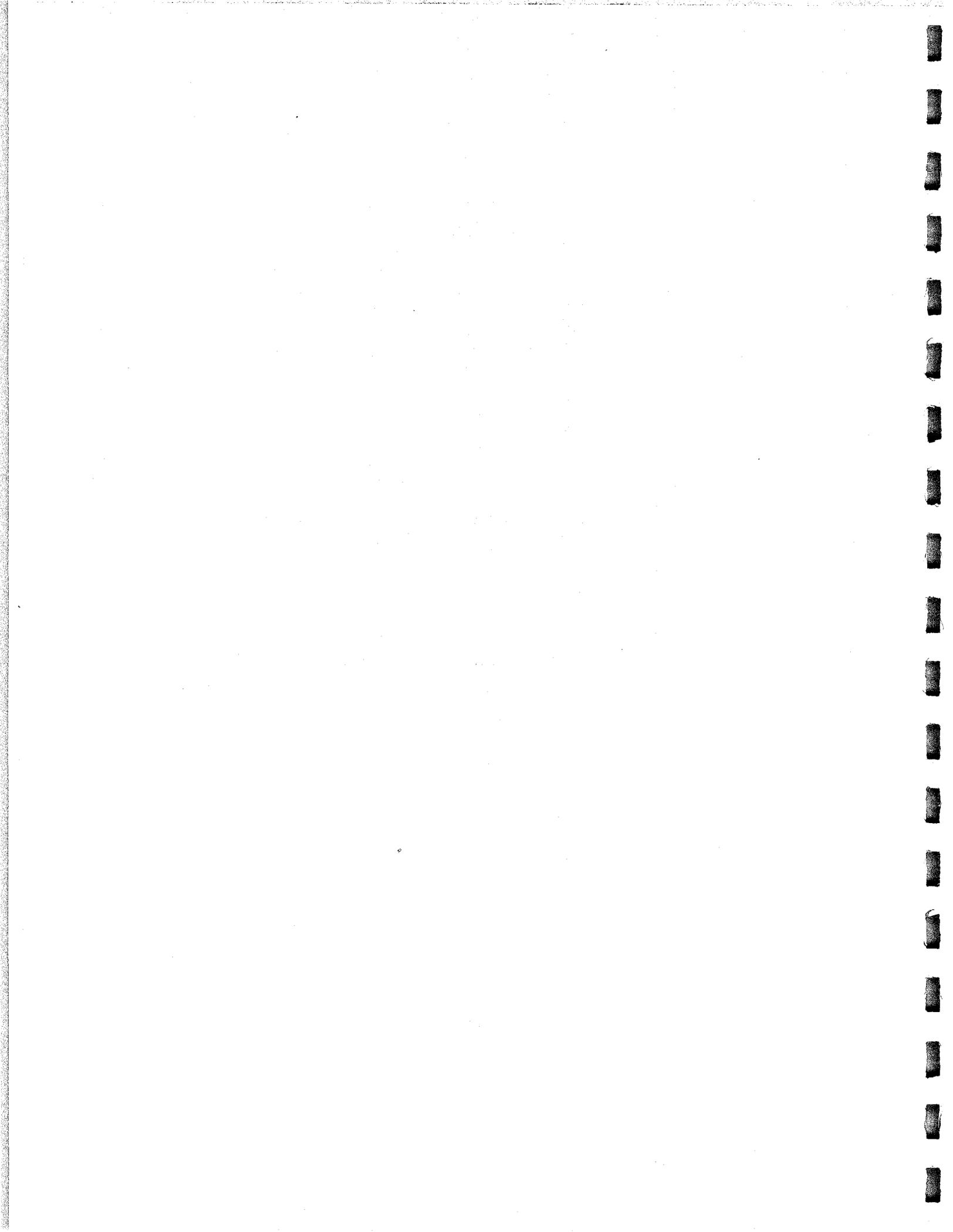
**33-24-03-18. Farmers.** A farmer disposing of waste pesticides from the farmer's own use which are hazardous wastes is not required to

comply with standards in this chapter or chapters 33-24-05 and 33-24-06 if the farmer triple-rinses each emptied pesticide container in accordance with subsection 3 of section 33-24-02-18 and disposes of the pesticide residues on the farmer's own farm in a manner consistent with the disposal instructions on the pesticide label.

**History:** Effective January 1, 1984.

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

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



**CHAPTER 33-24-04  
STANDARDS FOR TRANSPORTERS**

Section	
33-24-04-01	Scope
33-24-04-02	Identification Number and Registration Certificate
33-24-04-03	Transfer Facility Requirements
33-24-04-04	The Manifest System
33-24-04-05	Compliance with the Manifest
33-24-04-06	Recordkeeping
33-24-04-07	Immediate Action
33-24-04-08	Discharge Cleanup

**33-24-04-01. Scope.**

1. This chapter establishes standards which apply to persons transporting hazardous waste within this state if the transportation requires a manifest under chapter 33-24-03.
2. This chapter does not apply to onsite transportation of hazardous waste by generators or by owners or by operators of permitted hazardous waste management facilities.
3. A transporter of hazardous waste must also comply with chapter 33-24-03 if the transporter:
  - a. Transports hazardous waste into this state from abroad; or
  - b. Mixes hazardous waste of different department of transportation shipping descriptions by placing them into a single container.

**History:** Effective January 1, 1984.

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

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

**33-24-04-02. Identification number and registration certificate.**

1. A transporter may not transport hazardous wastes without having received an identification number and a registration certificate from the department.
2. A transporter who has not received an identification number and a registration certificate may obtain them by applying to the department. Upon receiving the request, the department

will assign an identification number and issue a registration certificate to the transporter.

3. The department may assess and collect reasonable fees for the issuance of registration certificates.

**History:** Effective January 1, 1984.

**General Authority:** NDCC 23-20.3-03, 23-20.3-05.1

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05.1

**33-24-04-03. Transfer facility requirements.** A transporter who stores manifested shipments of hazardous waste in containers meeting the requirements of section 33-24-03-08 at a transfer facility for a period of ten days or less is not subject to regulation under chapters 33-24-05 and 33-24-06 with respect to the storage of those wastes.

**History:** Effective January 1, 1984.

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

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

**33-24-04-04. The manifest system.**

1. A transporter may not accept hazardous waste from a generator unless it is accompanied by a manifest, signed by the generator in accordance with the provisions of chapter 33-24-03.
2. Before transporting the hazardous waste, the transporter must sign and date the manifest acknowledging acceptance of the hazardous waste from the generator. The transporter must return a signed copy to the generator before leaving the generator's property.
3. The transporter must ensure that the manifest accompanies the hazardous waste.
4. A transporter who delivers a hazardous waste to another transporter or to the designated facility must:
  - a. Obtain the date of delivery and the handwritten signature of that transporter or of the owner or operator of the designated facility on the manifest.
  - b. Retain one copy of the manifest in accordance with section 33-24-04-06.
  - c. Give remaining copies of the manifest to the accepting transporter or designated facility.
5. The requirements of subsections 3, 4, and 6 do not apply to water (bulk shipment) transporters if:

- a. The hazardous waste is delivered by water (bulk shipment) to the designated facility;
  - b. A shipping paper containing all the information required on the manifest (excluding the identification numbers, generator certification, and signatures) accompanies the hazardous waste;
  - c. The delivering transporter obtains the date of delivery and handwritten signature of the owner or operator of the designated facility on either the manifest or the shipping paper;
  - d. The person delivering the hazardous waste to the initial water (bulk shipment) transporter obtains the date of delivery and signature of the water (bulk shipment) transporter on the manifest and forwards it to the designated facility; and
  - e. A copy of the shipping paper or manifest is retained by each water (bulk shipment) transporter.
6. For shipments involving rail transportation, the requirements of subsections 3, 4, and 5 do not apply and the following requirements do apply:
- a. When accepting hazardous waste from nonrail transporter, the initial rail transporter must:
    - (1) Sign and date the manifest acknowledging acceptance of the hazardous waste.
    - (2) Return a signed copy of the manifest to the nonrail transporter.
    - (3) Forward at least three copies of the manifest to:
      - (a) The next nonrail transporter, if any;
      - (b) The designated facility, if the shipment is delivered to that facility by rail; or
      - (c) The last rail transporter designated to handle the waste in the United States.
    - (4) Retain one copy of the manifest and rail shipping paper in accordance with section 33-24-04-06.
  - b. Rail transporters must ensure that a shipping paper containing all the information required on the manifest (excluding the identification numbers, generator certification, and signatures) accompanies the hazardous waste at all times.

- c. When delivering hazardous waste to the designated facility, a rail transporter must:
    - (1) Obtain the date of delivery and handwritten signature of the owner or operator of the designated facility on the manifest or shipping paper (if the manifest has not been received by the facility).
    - (2) Retain a copy of the manifest or signed shipping paper in accordance with section 33-24-04-06.
  - d. When delivering hazardous waste to a nonrail transporter, a rail transporter must:
    - (1) Obtain the date of delivery and the handwritten signature of the next nonrail transporter on the manifest.
    - (2) Retain a copy of the manifest in accordance with section 33-24-04-06.
  - e. Before accepting hazardous waste from a rail transporter, a nonrail transporter must sign and date the manifest and provide a copy to the rail transporter.
7. Transporters who transport hazardous waste out of the United States must:
- a. Indicate on the manifest the date the hazardous waste left the United States.
  - b. Sign the manifest and retain one copy in accordance with subsection 3 of section 33-24-04-06.
  - c. Return a signed copy of the manifest to the generator.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-04-05. Compliance with the manifest.**

- 1. The transporter must deliver the entire quantity of hazardous waste which the transporter has accepted from a generator or a transporter to:
  - a. The designated facility listed on the manifest;
  - b. The alternate designated facility if the hazardous waste cannot be delivered to the designated facility because an emergency prevents delivery;

- c. The next designated transporter; or
  - d. The place outside the United States designated by the generator.
2. If the hazardous waste cannot be delivered in accordance with subsection 1, the transporter must contact the generator for further directions and must revise the manifest according to the generator's instructions.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

#### 33-24-04-06. Recordkeeping.

1. A transporter of hazardous waste must keep a copy of the manifest signed by the transporter, the generator, and the next designated transporter or the owner or operator of the designated facility for a period of three years from the date the hazardous waste was accepted by the initial transporter.
2. For shipments delivered to the designated facility by water (bulk shipment), each water (bulk shipment) transporter must retain a copy of the shipping paper containing all of the information required in subdivision b of subsection 5 in section 33-24-04-04 for a period of three years from the date the hazardous waste was accepted by the initial transporter.
3. For shipments of hazardous waste by rail within the United States:
  - a. The initial rail transporter must keep a copy of the manifest and shipping paper with all the information required in subdivision b of subsection 6 of section 33-24-04-04 for a period of three years from the date the hazardous waste was accepted by the waste transporter; and
  - b. The final rail transporter must keep a copy of the signed manifest (or the shipping paper if signed by the designated facility in lieu of the manifest) for a period of three years from the date the hazardous waste was accepted by the initial transporter.
4. A transporter who transports hazardous waste out of the United States must keep a copy of the manifest indicating that the hazardous waste left the United States for a period of three years from the date the hazardous waste was accepted by the initial transporter.
5. The periods of retention referred to in this section are extended automatically during the course of any unresolved

enforcement action regarding the regulated activity or as requested by the department.

**History:** Effective January 1, 1984.

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

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

**33-24-04-07. Immediate action.**

1. In the event of a discharge of hazardous waste during transportation, the transporter must take appropriate immediate action to protect human health and the environment, e.g., notify local authorities and dike the discharge area.
2. If a discharge of hazardous waste occurs during transportation and an official of a state or local government or a federal agency, acting within the scope of official responsibilities, determines that immediate removal of the waste is necessary to protect human health or the environment, that official may authorize the removal of the waste by transporters who do not have identification numbers and without the preparation of a manifest.
3. An air, rail, highway, or water transporter who has discharged hazardous waste must:
  - a. Give notice, if required by 49 CFR 171.15 to the national response center (800-424-8802 or 202-426-2675); and
  - b. Report in writing as required by 49 CFR 171.16 to the director, office of hazardous materials regulations, materials transportation bureau, department of transportation, Washington, District of Columbia 20590.
4. A water (bulk shipment) transporter who has discharged hazardous waste must give the same notice as required by 33 CFR 153.203 for oil and hazardous substances.

**History:** Effective January 1, 1984.

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

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

**33-24-04-08. Discharge cleanup.** A transporter must clean up any hazardous waste discharge that occurs during transportation or take such action as may be required or approved by federal, state, or local officials so that the hazardous waste discharge no longer presents a hazard to human health or the environment.

**History:** Effective January 1, 1984.

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

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

**CHAPTER 33-24-05**  
**STANDARDS FOR TREATMENT, STORAGE, AND DISPOSAL FACILITIES**

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#### 33-24-05-01. Purpose, scope, and applicability.

1. The purpose of this chapter is to establish minimum standards which define the acceptable management of hazardous waste.
2. The standards in this chapter apply to owners and operators of all facilities which treat, store, or dispose of hazardous waste, except as specifically provided otherwise in this chapter or chapter 33-24-02.
3. The requirements of this chapter apply to a person disposing of hazardous waste by means of underground injection subject to a permit issued under an underground injection control program approved or promulgated under the Safe Drinking Water Act only to the extent they are required by chapter 33-24-06.

4. The requirements of this chapter apply to the owner or operator of a publically owned treatment works which treats, stores, or disposes of hazardous waste only to the extent they are included in a hazardous waste permit by rule granted to such a person under chapter 33-24-06.
5. The requirements of this chapter do not apply to:
  - a. The owner or operator of a facility permitted, licensed, or registered by the department to manage municipal or industrial solid waste, if the only hazardous waste the facility treats, stores, or disposes of is excluded from regulation under section 33-24-02-05.
  - b. The owner or operator of a facility which treats or stores hazardous wastes, which treatment or storage meets the criteria in subsection 1 of section 33-24-02-06, except to the extent that subsection 2 of section 33-24-02-06 provides otherwise.
  - c. A generator accumulating waste onsite in compliance with section 33-24-03-12.
  - d. A farmer disposing of waste pesticides from the farmer's own use in compliance with section 33-24-03-18.
  - e. The owner or operator of a totally enclosed treatment facility, as defined in section 33-24-01-04.
  - f. The owner or operator of an elementary neutralization or a wastewater treatment unit as defined in section 33-24-01-04.
  - g. Immediate response activities.
    - (1) Except as provided in paragraph 2, a person engaged in treatment or containment activities during immediate response to any of the following situations:
      - (a) A discharge of hazardous waste.
      - (b) An imminent and substantial threat of a discharge of hazardous waste.
      - (c) A discharge of material which, when discharged, becomes a hazardous waste.
    - (2) An owner or operator of a facility otherwise regulated by this chapter shall comply with all applicable requirements of sections 33-24-05-15 through 33-24-05-36.

- (3) Any person who is covered by paragraph 1 and continues or initiates hazardous waste treatment or containment activities after the immediate response is over is subject to all applicable requirements of this chapter and chapters 33-24-06 and 33-24-07.
- h. A transporter storing manifested shipments of hazardous waste in containers meeting the requirements of section 33-24-03-08 at a transfer facility for a period of ten days or less.
- i. The addition of absorbent material to waste in a container (as defined in section 33-24-01-04) or the addition of waste to absorbent material in a container, provided that these actions occur at the time waste is first placed in a container, and subsection 2 of section 33-24-05-08 and sections 33-24-05-90 and 33-24-05-91 are complied with.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-02. Identification number and permit.** Every facility owner or operator shall apply to the department for an identification number and a permit. The department may assess and collect reasonable fees for the review and issuance of permits.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03, 23-20.3-05.1

Law Implemented: NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05, 23-20.3-05.1

**33-24-05-03. Required notices.**

1. The owner or operator of a facility that has arranged to receive hazardous waste from a foreign source shall notify the department and the environmental protection agency in writing at least four weeks in advance of the date the waste is expected to arrive at the facility. Notice of subsequent shipments of the same waste from the same foreign source is not required.
2. Before transferring ownership or operation of a facility during its operating life, or of a disposal facility during the postclosure care period, the owner or operator shall notify the new owner or operator in writing of the requirements in this chapter.
3. The owner or operator of a facility that receives hazardous waste from an offsite source (except where the owner or operator is also the generator) shall inform the generator in

writing that the owner or operator has the appropriate permit for, and will accept, the waste the generator is shipping. The owner or operator shall keep a copy of this written notice as part of the operating record.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

### 33-24-05-04. General waste analysis.

#### 1. Waste analysis requirements.

- a. Before an owner or operator treats, stores, or disposes of any hazardous waste the owner or operator shall obtain a detailed chemical and physical analysis of a representative sample of the waste. At a minimum this analysis must contain all the information which must be known to treat, store, or dispose of the waste in accordance with the requirements of this chapter or a permit issued under chapter 33-24-06.
  - b. The analysis may include data developed under chapter 33-24-02 and existing published or documented data on the hazardous waste or on waste generated from similar processes.
  - c. The analysis must be repeated as necessary to ensure that it is accurate and up-to-date. At a minimum, the analysis must be repeated:
    - (1) When the owner or operator is notified, or has reason to believe, that the process or operation generating the hazardous waste has changed; and
    - (2) For offsite facilities when the results of the inspection required in subdivision d indicate that the hazardous waste received at the facility does not match the waste designated on the accompanying manifest or shipping paper.
  - d. The owner or operator of an offsite facility shall inspect and if necessary, analyze each hazardous waste movement received at the facility to determine whether it matches the identity of the waste specified on the accompanying manifest or shipping paper.
2. The owner or operator shall develop and follow a written waste analysis plan which describes the procedures which the owner or operator will carry out to comply with subsection 1. The owner or operator must keep this plan at the facility. At a minimum, the plan must specify:

- a. The parameters for which each hazardous waste will be analyzed and the rationale for the selection of these parameters, i.e., how analysis for these parameters will provide sufficient information on the waste's properties to comply with subsection 1.
  - b. The test methods which will be used to test for these parameters.
  - c. The sampling method which will be used to obtain a representative sample of the waste to be analyzed. A representative sample may be obtained using either:
    - (1) One of the sampling methods described in Appendix 1 of chapter 33-24-02; or
    - (2) An equivalent sampling method.
  - d. The frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up-to-date.
  - e. For offsite facilities the waste analysis that hazardous waste generators have agreed to supply.
  - f. Where applicable, the methods which will be used to meet the additional waste analysis requirements for specific waste management methods as specified in sections 33-24-05-08 and 33-24-05-145.
3. For offsite facilities, the waste analysis plan required in subsection 2 must also specify the procedures which will be used to inspect and analyze each movement of hazardous waste received at the facility to ensure that it matches the identity of the waste designated on the accompanying manifest or shipping paper. At a minimum, the plan must describe:
    - a. The procedures which will be used to determine the identity of each movement of waste managed at the facility.
    - b. The sampling method which will be used to obtain a representative sample of the waste to be identified, if the identification method includes sampling.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

33-24-05-05. Security.

1. The owner or operator shall prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of the owner's or operator's facility, unless the owner or operator can demonstrate to the department that:
  - a. Physical contact with the waste, structures, or equipment with the active portion of the facility will not injure unknowing or unauthorized persons or livestock which may enter the active portion of the facility.
  - b. Disturbance of the waste or equipment, by the unknowing or unauthorized entry of persons or livestock onto the active portion of a facility, will not cause a violation of the requirements of this chapter.
2. Unless exempt under subdivisions a and b of subsection 1, the facility must have:
  - a. A twenty-four-hour surveillance system, e.g., television monitoring or surveillance by guards or facility personnel, which continuously monitors and controls entry onto the active portion of the facility; or
  - b. Both of the following:
    - (1) An artificial or natural barrier, e.g., a fence in good repair or a fence combined with a cliff, which completely surrounds the active portion of the facility.
    - (2) A means to control entry, at all times, through the gates or other entrances to the active portion of the facility, e.g., an attendant, television monitors, locked entrance, or controlled roadway access to the facility.
3. Unless exempt under subdivisions a and b of subsection 1, a sign with a legend, "Danger - Unauthorized Personnel Keep Out", must be posted at each entrance to the active portion of a facility, and at other locations, in sufficient numbers to be seen from any approach to this active portion, and must be legible from a distance of at least twenty-five feet [7.62 meters]. The legend must be written in English and in any other language predominant in the area surrounding the facility. Existing signs with a legend other than "Danger - Unauthorized Personnel Keep Out" may be used if the legend on the sign indicates that only authorized personnel are allowed

facilities that dispose of hazardous waste in landfills, except as section 33-24-05-01 provides otherwise.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-177. Design and operating requirements.**

1. A landfill (except for an existing portion of a landfill which qualifies for an exemption in accordance with subsection 6) must be designed, constructed, and installed to prevent any migration of wastes out of the landfill to the adjacent subsurface soil or ground water or surface water at any time during the active life (including the closure period) of the landfill.
  - a. The landfill (including its underlying liners) must be located entirely above the seasonal high water table.
  - b. The landfill must be underlain by two liners which are designed and constructed in a manner to prevent the migration of liquids into or out of the space between the liners. Both liners must meet all the specifications of subsection 2.
  - c. A leak detection system must be designed, constructed, maintained, and operated between the liners to detect any migration of liquid into the space between the liners.
  - d. The landfill must have a leachate collection and removal system above the top liner that is designed, constructed, maintained, and operated in accordance with subsection 3.
2. The liners must be constructed of materials that prevent waste from passing into the liners during the active life of the facility. The liners must be:
  - a. Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation.
  - b. Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift.

- c. Installed to cover all surrounding earth likely to be in contact with the waste or leachate.
3. A leachate collection and removal system immediately above the liner must be designed, constructed, maintained, and operated to collect and remove leachate from the landfill. The department will specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed thirty centimeters [one foot]. The leachate collection and removal system must be:
  - a. Constructed of materials that are:
    - (1) Chemically resistant to the waste managed in the landfill and the leachate expected to be generated.
    - (2) Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials and by any equipment used at the landfill.
  - b. Designed and operated to function without clogging through the scheduled closure of the landfill.
4. If liquid leaks into the leak detection system the owner or operator shall:
  - a. Notify the department of the leak in writing within seven days after detecting the leak.
  - b. Within a period of time specified in the permit, remove accumulated liquid, repair or replace the liner which is leaking to prevent the migration of liquids through the liner, and obtain a certification from a qualified engineer that to the best of his knowledge and opinion the leak has been stopped.
5. The owner or operator will be exempted from the requirements of subsection 1 if the department finds, based on a demonstration by the owner or operator that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents (see section 33-24-05-50) into the ground water or surface water at any future time. In deciding whether to grant an exemption, the department will consider:
  - a. The nature and quantity of the wastes.
  - b. The proposed alternate design and operation.
  - c. The hydrogeologic setting of the facility, including the attenuative capacity and thickness of the liners and soils

present between the landfill and ground water or surface water.

- d. All of the factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to ground water or surface water.
6. The department, on a case-by-case basis, may exempt an existing portion of a hazardous waste landfill from subsection 1 if the owner or operator demonstrates that the owner's or operator's existing design and operating practices, together with the location of the facility, will prevent migration of any hazardous constituents into the ground water or surface water during the active life of the facility (including the closure period) and the postclosure care period.
7. The owner or operator shall design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the landfill during peak discharge from at least a twenty-five-year storm.
8. The owner or operator shall design, construct, operate, and maintain a runoff management system to collect and control at least the water volume resulting from a twenty-four-hour, twenty-five-year storm.
9. Collection and holding facilities (e.g., tanks or basins) associated with run-on and runoff control systems must be emptied or otherwise managed expeditiously after storms to maintain design capacity of this system.
10. If the landfill contains any particulate matter which may be subject to wind dispersal, the owner or operator shall cover or otherwise manage the landfill to control wind dispersal.
11. The department will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this section are satisfied.

**History:** Effective January 1, 1984.

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

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

#### **33-24-05-178. Monitoring and inspection.**

1. During construction or installation, the liners (except in the case of existing portions of landfills exempt from subsection 1 of section 33-24-05-177) and cover systems (e.g., membranes, sheets or coating) must be inspected for uniformity, damage, and imperfections (e.g., holes, cracks,

thin spots, or foreign materials) immediately after construction or installation:

- a. Synthetic liners and covers must be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters.
- b. Soil based and admixed liners and covers must be inspected for imperfections, including lenses, cracks, channels, root holes, or other structural nonuniformities that may cause an increase in the permeability of the liner or cover.

These inspections must be conducted by an independent, qualified professional.

2. While a landfill is in operation it must be inspected weekly and after storms to detect evidence of any of the following:
  - a. Deterioration, malfunctions, or improper operation of run-on and runoff control systems.
  - b. The presence of liquids in leak detection systems where installed.
  - c. Proper functioning of wind dispersal control systems where present.
  - d. The presence of leachate in and proper functioning of leachate collection and removal systems where present.

**History:** Effective January 1, 1984.

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

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

**33-24-05-179. Surveying and recordkeeping.** The owner or operator of a landfill shall maintain the following items in the operating records required under section 33-24-05-40:

1. On a map, the exact location and dimensions, including depth, of each cell with respect to permanently surveyed benchmarks.
2. The contents of each cell and the approximate location of each hazardous waste type within each cell.

**History:** Effective January 1, 1984.

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

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

33-24-05-180. Closure and postclosure care.

1. At final closure of the landfill or upon closure of any cell, the owner or operator shall cover the landfill or cell with a final cover designed and constructed to:
  - a. Provide long-term minimization of migration of liquids through the closed landfill.
  - b. Function with minimum maintenance.
  - c. Promote drainage and minimize erosion or abrasion of the cover.
  - d. Accommodate settling and subsidence so that the cover's integrity is maintained.
  - e. Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.
2. After final closure the owner or operator shall comply with all postclosure requirements contained in sections 33-24-05-65 through 33-24-05-68 including maintenance and monitoring throughout the postclosure care period (specified in the permit under section 33-24-05-65). The owner or operator shall:
  - a. Maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, or other events.
  - b. Maintain and monitor the leak detection system where such a system is present.
  - c. Continue to operate the leachate collection and removal system until leachate is no longer detected.
  - d. Maintain and monitor the ground water monitoring system and comply with all other applicable requirements of sections 33-24-05-47 through 33-24-05-58.
  - e. Prevent run-on and runoff from eroding or otherwise damaging the final cover.
  - f. Protect and maintain surveyed benchmarks used in complying with section 33-24-05-179.

3. During the postclosure care period if liquid leaks into a leak detection system, the owner or operator shall notify the department of the leak in writing within seven days after detecting the leak.

**History:** Effective January 1, 1984.

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

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

**33-24-05-181. Special requirements for ignitable or reactive waste.**

1. Except as provided in subsection 2 and in section 33-24-05-185, ignitable or reactive waste may not be placed in a landfill unless the waste is treated, rendered, or mixed before or immediately after placement in the landfill so that:
  - a. The resulting waste mixture or dissolution of material no longer meets the definition of ignitable or reactive waste under section 33-24-02-11 or 33-24-02-13; and
  - b. Subsection 2 of section 33-24-05-08 is complied with.
2. Ignitable wastes in containers may be landfilled without meeting the requirements of subsection 1, provided that the wastes are disposed of in such a way that they are protected from any material or conditions which may cause them to ignite. At a minimum, ignitable wastes must be disposed of in nonleaking containers which are carefully handled and placed so as to avoid heat, sparks, rupture, or any other condition that might cause ignition of the wastes; must be covered daily with soil or other noncombustible material to minimize the potential for ignition of the wastes; and may not be disposed of in cells that contain or will contain other wastes which may generate heat sufficient to cause ignition of the waste.

**History:** Effective January 1, 1984.

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

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

**33-24-05-182. Special requirements for incompatible wastes.**  
Incompatible wastes or incompatible wastes and materials may not be placed in the same landfill cell unless subsection 2 of section 33-24-05-08 is complied with.

**History:** Effective January 1, 1984.

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

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

**33-24-05-183. Special requirements for liquid wastes.**

1. Bulk or noncontainerized liquid waste or waste containing free liquids may not be placed in a landfill unless:
  - a. The landfill has a liner and leachate collection and removal system that meets the requirements of section 33-24-05-177; or
  - b. Before disposal the liquid waste or waste containing free liquids is treated or stabilized, chemically or physically, e.g., by mixing with an absorbent solid, so that free liquids are no longer present.
2. Containers holding free liquids may not be placed in a landfill unless:
  - a. All free standing liquid has been removed by decanting or other methods; has been mixed with absorbent or solidified so that free standing liquid is no longer observed; or has been otherwise eliminated;
  - b. The container is very small such as an ampule;
  - c. The container is designed to hold free liquids for use other than storage such as a battery or capacitor; or
  - d. The container is a lab pack as defined in and is disposed of in accordance with section 33-24-05-185.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-184. Special requirements for containers.** Unless they are very small such as an ampule, containers must be either:

1. At least ninety percent full when placed in the landfill; or
2. Crushed, shredded, or similarly reduced in volume to the maximum practical extent before burial in the landfill.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-185. Disposal of small containers of hazardous waste in overpacked drums (lab packs).** Small containers of hazardous waste in overpacked drums (lab packs) may be placed in a landfill if the following requirements are met:

1. Hazardous waste must be packaged in nonleaking inside containers. The inside containers must be of a design and constructed of a material that will not react dangerously with, be decomposed by, or be ignited by the contained waste. Inside containers must be tightly and securely sealed. The inside containers must be of the size and type specified in the department of transportation hazardous materials regulations [49 CFR, Parts 173, 178, and 179] if those regulations specify particular inside container for the waste.
2. The inside containers must be overpacked in an open head department of transportation specification metal shipping container [49 CFR, Parts 178 and 179] of no more than four hundred sixteen-liter [110-gallon] capacity and surrounded by, at a minimum, a sufficient quantity of absorbent material to completely absorb all of the liquid contents of the inside containers. The metal outer container must be full after packing with inside containers and absorbent material.
3. The absorbent material used must not be capable of reacting dangerously with, being decomposed by, or being ignited by the contents of the inside containers in accordance with subsection 2 of section 33-24-05-08.
4. Incompatible wastes as defined in section 33-24-01-04 may not be placed in this same outside container.
5. Reactive wastes, other than cyanide or sulfide-bearing waste, as defined in subsection e of subsection 1 of section 33-24-02-13 must be treated or rendered nonreactive prior to packaging in accordance with subsections 1 through 4. Cyanide and sulfide-bearing reactive waste may be packed in accordance with subsections 1 through 4 without first being treated or rendered nonreactive.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

33-24-05-186. [Reserved]

33-24-05-187. [Reserved]

33-24-05-188. [Reserved]

33-24-05-189. [Reserved]

33-24-05-190. [Reserved]

33-24-05-191. [Reserved]

33-24-05-192. [Reserved]

- 33-24-05-193. [Reserved]
- 33-24-05-194. [Reserved]
- 33-24-05-195. [Reserved]
- 33-24-05-196. [Reserved]
- 33-24-05-197. [Reserved]
- 33-24-05-198. [Reserved]
- 33-24-05-199. [Reserved]
- 33-24-05-200. [Reserved]

## APPENDIX I RECORDKEEPING INSTRUCTIONS

The recordkeeping instructions of section 33-24-05-40 specify that an owner or operator shall keep a written operating record at the facility. This appendix provides additional instructions for keeping portions of the operating record. See subsection 2 of section 33-24-05-40 for additional recordkeeping requirements.

The following information must be recorded as it becomes available and maintained in the operating record until closure of the facility in the following manner:

Records of each hazardous waste received, treated, stored, or disposed of at the facility which include the following:

1. A description by its common name and the hazardous waste numbers from chapter 33-24-02 which apply to the waste. The waste description must also include the wastes' physical form, i.e., liquid, sludge, soil or contained gas. If the waste is not listed in chapter 33-24-02 the description must also include the process that produced it (for example, solid filter cake from the production of \_\_\_\_\_, hazardous waste number W051).

Each hazardous waste listed in and each hazardous waste characteristic defined in chapter 33-24-02 has a four digit hazardous waste number assigned to it. This number must be used for recordkeeping and reporting purposes. Where more than one hazardous waste number applies, the waste description must include all applicable numbers.

2. The estimated or manifest-reported weight or volume and density, where applicable, in one of the units of measure specified in Table 1.
3. The methods (by handling codes as specified in Table 2) and the dates of treatment, storage, or disposal.

TABLE 1

<u>Unit of Measure</u>	<u>Symbol</u> <sup>1</sup>	<u>Density</u>
Pounds	P	
Short Tons (2,000 lbs)	T	
Gallons (US)	G	P/G
Cubic Yards	Y	T/Y
Kilograms	K	
Tonnes (1,000 kg)	M	
Liters	L	K/L
Cubic Meters	C	M/C

<sup>1</sup> Single digit symbols are used here for data processing purposes.

TABLE 2  
HANDLING CODES FOR TREATMENT, STORAGE, AND DISPOSAL METHODS

Enter the handling codes listed below that most closely represents the techniques used at the facility to treat, store, or dispose of each quantity of hazardous waste received.

1. STORAGE

- S01 Container (barrel, drum, etc.)
- S02 Tank
- S03 Waste Pile
- S04 Surface Impoundment
- S05 Other (Specify)

2. THERMAL TREATMENT

- T06 Liquid Injection Incinerator
- T07 Rotary Kiln Incinerator
- T08 Fluidized Bed Incinerator
- T09 Multiple Hearth Incinerator
- T10 Infrared Furnace Incinerator
- T11 Molten Salt Destructor
- T12 Pyrolysis
- T13 Wet Air Oxidation
- T14 Calcination
- T15 Microwave Discharge
- T16 Cement Kiln
- T17 Lime Kiln
- T18 Other (Specify)

3. CHEMICAL TREATMENT

- T19 Absorption Mound
- T20 Absorption Field
- T21 Chemical Fixation
- T22 Chemical Oxidation
- T23 Chemical Precipitation
- T24 Chemical Reduction
- T25 Chlorination
- T26 Chlorinolysis
- T27 Cyanide Destruction
- T28 Degradation
- T29 Detoxification
- T30 Ion Exchange
- T31 Neutralization
- T32 Ozonation
- T33 Photolysis
- T34 Other (Specify)

4. PHYSICAL TREATMENT BY SEPARATION OF COMPOUNDS

- T35 Centrifigation

- T36 Clarification
- T37 Coagulation
- T38 Decanting
- T39 Encapsulation
- T40 Filtration
- T41 Flocculation
- T42 Flotation
- T43 Foaming
- T44 Sedimentation
- T45 Thickening
- T46 Ultrafiltration
- T47 Other (Specify)

5. PHYSICAL TREATMENT BY REMOVAL OF SPECIFIC COMPONENTS

- T48 Absorption - Molecular Sieve
- T49 Activated Carbon
- T50 Blending
- T51 Catalysis
- T52 Crystallization
- T53 Dialysis
- T54 Distillation
- T55 Electrodialysis
- T56 Electrolysis
- T57 Evaporation
- T58 High Gradient Magnetic Separation
- T59 Leaching
- T60 Liquid Ion Exchange
- T61 Liquid - Liquid Extraction
- T62 Reverse Osmosis
- T63 Solvent Recovery
- T64 Stripping
- T65 Sand Filter
- T66 Other (Specify)

6. BIOLOGICAL TREATMENT

- T67 Activated Sludge
- T68 Aerobic Lagoon
- T69 Aerobic Tank
- T70 Anaerobic Lagoon
- T71 Composting
- T72 Septic Tank
- T73 Spray Irrigation
- T74 Thickening Filter
- T75 Trickling Filter
- T76 Waste Stabilization Pond
- T77 Other (Specify)
- T78 Reserved
- T79 Reserved

7. DISPOSAL

D80 Underground Injection  
D81 Landfill  
D82 Land Treatment  
D83 Reserved  
D84 Surface Impoundment (to be closed as a landfill)  
D85 Other (Specify)

APPENDIX II  
COCHRAN'S APPROXIMATION TO THE  
BEHRENS - FISHER STUDENT'S T-TEST

Using all the available background data ( $n_b$  readings) calculate the background mean ( $X_b$ ) and background variance ( $S_b^2$ ). For the single monitoring well under investigation ( $n_m$  reading), calculate the monitoring mean ( $X_m$ ) and monitoring variance ( $S_m^2$ ).

For any set of data ( $X_1, X_2 \dots X_n$ ) the mean is calculated by:

$$\bar{X} = \frac{X_1 + X_2 \dots + X_n}{n}$$

And the variance is calculated by:

$$S^2 = \frac{(X_1 - \bar{X})^2 + (X_2 - \bar{X})^2 \dots + (X_n - \bar{X})^2}{n-1}$$

Where "n" denotes the number of observations in the set of data.

The T-Test uses these data summary measures to calculate a T-statistic ( $T^*$ ) and a comparison T-statistic ( $T_c$ ). The  $T^*$  is compared to the  $T_c$  value and a conclusion reached as to whether there has been a statistically significant change in any indicator parameter.

The T-statistic for all parameters, except pH and similar monitoring parameters, is:

$$T^* = \frac{X_m - \bar{X}_B}{\sqrt{\frac{S_m^2}{n_M} + \frac{S_B^2}{n_B}}}$$

If the value of this T-statistic is negative, then there is no significant difference between the monitoring data and the background data. It should be noted that significantly small negative values may be indicative of a failure of the assumption made for test validity or errors have been made in collecting the background data.

The T-statistic ( $T_c$ ) against which  $T^*$  will be compared necessitates finding  $T_b$  and  $T_m$  from standard (one-tailed) tables where:

$T_B$  = T-tables ( $n_B - 1$ ) degrees of freedom at the 0.05 level of significance.

$T_m$  = T-tables with ( $n_m - 1$ ) degrees of freedom at the 0.05 level of significance.

Finally, the special weightings  $W_B$  and  $W_m$  are defined as:

$$W_B = \frac{S_B^2}{n_B} \quad \text{and} \quad W_m = \frac{S_m^2}{n_m}$$

And so the comparison T-statistic is:

$$T_C = \frac{W_B T_B + W_m T_m}{W_B + W_m}$$

The T-statistic ( $T^*$ ) is now compared with the comparison T-statistic ( $T_C$ ) using the following decision rule:

If  $T^*$  is equal to or larger than  $T_C$ , then conclude that there most likely has been a significant increase in this specific parameter.

If  $T^*$  is less than  $T_C$ , then conclude that most likely there has not been a change in this specific parameter.

The T-statistic for testing pH and similar monitoring parameters is constructed in the same manner as previously described, except the negative sign (if any) is discarded and the caviot concerning the negative value is ignored. The standard (two-tailed) tables are used in the construction  $T_C$  for pH and similar monitoring parameters.

If  $T^*$  is equal to or larger than  $T_C$ , then conclude that there most likely has been a significant increase (if the initial  $T^*$  had been negative, this would imply a significant decrease).

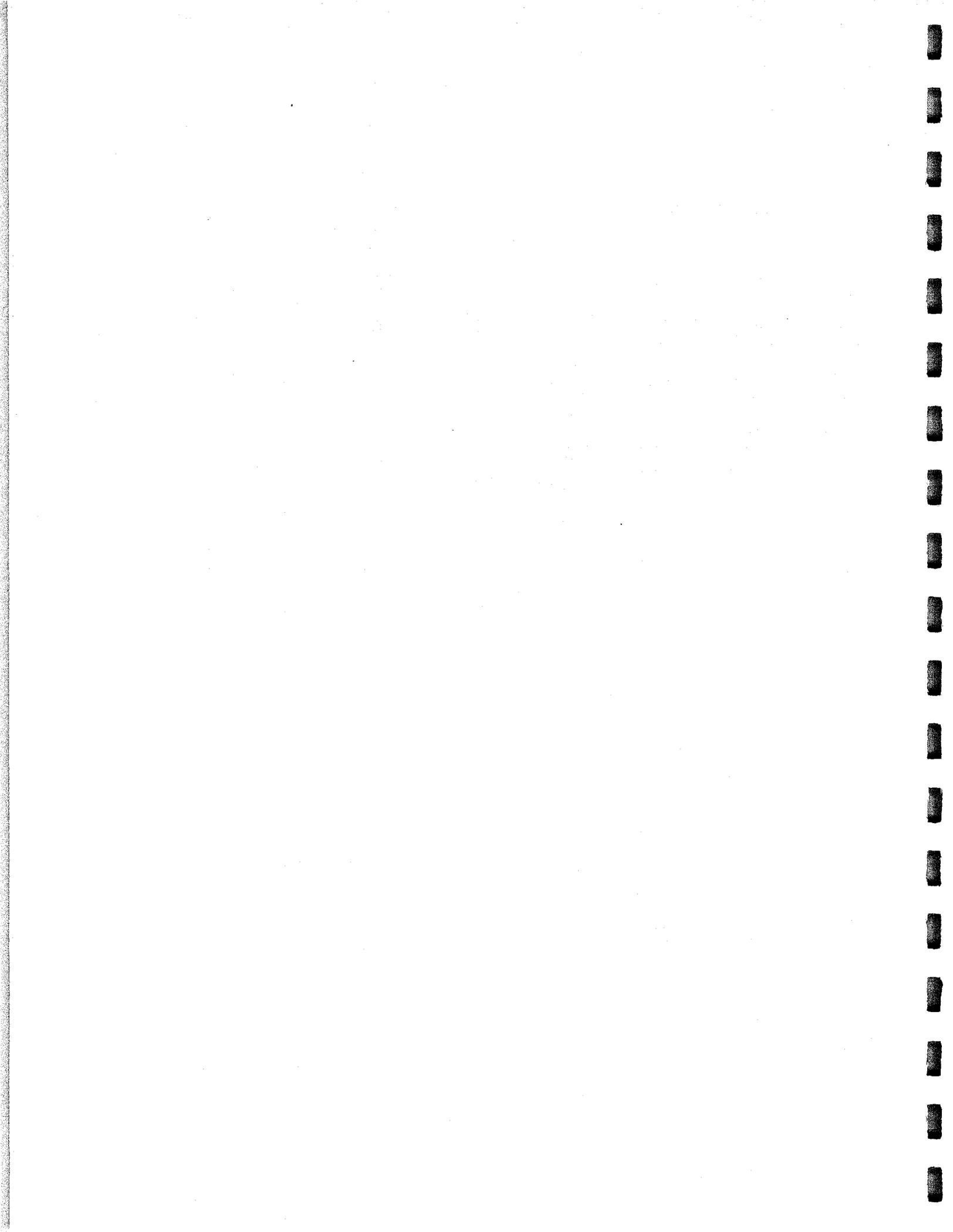
If  $T^*$  is less than  $T_C$  then conclude that there most likely has been no change.

A further discussion of the test may be found in STATISTICAL METHODS (6th Edition, Section 4.14) by G.W. Snedecor and W.G. Cochran, or PRINCIPLES AND PROCEDURES OF STATISTICS (1st Edition, Section 5.8) by R.G.D. Steel and J.H. Torrie.

STANDARD T-TABLES  
0.05 LEVEL OF SIGNIFICANCE

<u>Degrees of Freedom</u>	<u>T-Values (1-tailed)</u>	<u>T-Values (2-tailed)</u>
1	6.314	12.706
2	2.920	4.303
3	2.353	3.182
4	2.132	2.776
5	2.015	2.571
6	1.943	2.447
7	1.895	2.365
8	1.860	2.306
9	1.833	2.262
10	1.812	2.228
11	1.796	2.201
12	1.782	2.179
13	1.771	2.160
14	1.761	2.145
15	1.753	2.131
16	1.746	2.120
17	1.740	2.110
18	1.734	2.101
19	1.729	2.093
20	1.725	2.086
21	1.721	2.080
22	1.717	2.074
23	1.714	2.069
24	1.711	2.064
25	1.708	2.060
30	1.697	2.042
40	1.684	2.021

Taken from 40 CFR, Part 264, Appendix IV, 47FR34329, July 26, 1982.



**CHAPTER 33-24-06  
PERMITS**

Section	
33-24-06-01	Application for a Permit
33-24-06-02	Continuation of Expiring Permits
33-24-06-03	Signatories to Permit Applications and Reports
33-24-06-04	Conditions Applicable to Permits
33-24-06-05	Establishing Permit Conditions
33-24-06-06	Duration and Scope of Permits
33-24-06-07	Schedules of Compliance
33-24-06-08	Requirements for Recording and Reporting of Monitoring Results
33-24-06-09	Considerations Under Other State and Federal Laws
33-24-06-10	Effect of a Permit
33-24-06-11	Transfer of Permits
33-24-06-12	Major Modification or Revocation and Reissuance of Permits
33-24-06-13	Termination of Permits
33-24-06-14	Minor Modifications of Permits
33-24-06-15	Noncompliance and Program Reporting by the Department
33-24-06-16	Operating Status Prior to Final Administrative Disposition of the Permit Application
33-24-06-17	Contents of a Permit Application
33-24-06-18	Permits by Rule
33-24-06-19	Short Term and Phased Permits
33-24-06-20	Interim Permits for Underground Injection Control Wells
33-24-06-21	Fees

**33-24-06-01. Application for a permit.**

1. **Permit application.** Any person who is required to have a permit (including new applicants and permittees with expiring permits) shall complete, sign, and submit an application to the department as described in this section and section 33-24-06-16. Persons currently authorized with interim status shall apply for permits when required by the department. Persons covered by permits by rule need not apply. Procedures for applications, issuance, and administration of emergency permits are found exclusively in section 33-24-06-19.
2. **Who must have a permit?** North Dakota Century Code chapter 23-20.3 requires that a permit be obtained for the treatment, storage, or disposal of any hazardous waste as identified in

chapter 33-24-02. Owners and operators of hazardous waste management units must have permits during the active life (including the closure period) of the unit, during any compliance period specified under section 33-24-05-53, including any extension of that period under subsection 3 of section 33-24-05-53 and, for any unit which closes after January 26, 1983, during any postclosure care period required under section 33-24-05-65.

a. **Specific inclusions.** Hazardous waste permits are required for:

- (1) Injection wells that dispose of hazardous waste, and associated surface facilities that treat, store, or dispose of hazardous waste (see section 33-24-06-20). However, the owner or operator with an underground injection control permit will be deemed to have a hazardous waste permit for the injection well itself if the owner or operator complies with requirements of subsection 2 of section 33-24-06-18.
- (2) Treatment, storage, or disposal of hazardous waste at facilities requiring a North Dakota pollutant discharge elimination system permit. However, the owner or operator of a publicly owned treatment works receiving hazardous waste will be deemed to have a hazardous waste permit for that waste if the owner or operator complies with the requirements of subsection 3 of section 33-24-06-18.

b. **Specific exclusions.** Hazardous waste permits are not required for:

- (1) Generators who accumulate hazardous waste onsite for less than ninety days, as provided in section 33-24-03-12.
- (2) Farmers who dispose of hazardous waste pesticides from their own use as provided in section 33-24-03-18.
- (3) Persons who own or operate facilities solely for the treatment, storage, or disposal of hazardous waste excluded from regulation by section 33-24-02-04 or 33-24-02-05.
- (4) Owners or operators of totally enclosed treatment facilities as defined in section 33-24-01-04.
- (5) Owners or operators of elementary neutralization units as defined in section 33-24-01-04.

- (6) Transporters storing manifested shipments of hazardous waste in containers meeting the requirements of section 33-24-03-08 at a transfer facility for a period of ten days or less.
  - (7) Persons mixing absorbent material and waste in a container, provided this mixing occurs at the time waste is first placed in the container, and the person complies with sections 33-24-05-90 and 33-24-05-91, and subsection 2 of section 33-24-05-08.
  - (8) Immediate response activities.
    - (a) A person is not required to obtain a hazardous waste permit for treatment or containment activities taken during immediate response to any of the following situations:
      - [1] A discharge of a hazardous waste.
      - [2] An imminent and substantial threat of a discharge of hazardous waste.
      - [3] A discharge of a material which, when discharged, becomes a hazardous waste.
    - (b) Any person who continues or initiates hazardous waste treatment or containment activities after the immediate response is over is subject to all applicable requirements of this chapter for those activities.
3. **Who applies?** When a facility or activity is owned by one person but is operated by another person, it is the operator's duty to obtain a permit, however, the owner must also sign the permit application.
  4. **Completeness.** The department will not issue a permit before receiving a complete application for a permit, except for permits by rule, or emergency permits. An application for a permit is complete when the department receives an application form and any supplemental information which is completed to its satisfaction. The completeness of any application for a permit shall be judged independently of the status of any other permit application or permit for the same facility or activity.
  5. **Information requirements.** All applicants for hazardous waste permits shall provide the information required by section 33-24-06-17 to the department.
  6. **Recordkeeping.** Applicants shall keep records of all data used to complete permit applications and any supplemental

information submitted under this chapter for a period of at least three years from the date the application is signed.

7. When to apply for a permit.

a. Existing hazardous waste management facilities.

(1) Owners and operators of existing hazardous waste management facilities shall submit part A of their permit application (see subsection 1 of section 33-24-06-17) to the department no later than:

(a) Six months after the date of publication of rules which first require them to comply with the standards set forth in chapter 33-24-05; or

(b) Thirty days after the date they first become subject to the standards set forth in chapter 33-24-05,

whichever occurs first.

(2) The department may extend the date by which owners and operators of specified classes of existing hazardous waste management facilities must submit part A of their permit application if it finds that:

(a) There has been substantial confusion as to whether the owners and operators of such facilities were required to file a permit application; and

(b) Such confusion is attributable to ambiguities in the department's rules in chapters 33-24-01 through 33-24-05.

(3) The department may, by compliance order, extend the date by which the owner or operator of an existing hazardous waste management facility must submit the first part of the permit application.

(4) The owner and operator of an existing hazardous waste management facility may be required to submit part B of the permit application at any time. Any owner or operator must be allowed at least six months from the date of request to submit the application. Any owner or operator of an existing hazardous waste management facility may voluntarily submit an application at any time.

(5) Failure to furnish a requested permit application on time or to furnish in full the information required by the application is grounds for termination of the

facility's operating status under the procedures of chapter 33-24-07.

b. New hazardous waste management facilities.

- (1) Except as provided in paragraph 3 no person may begin physical construction of a new hazardous waste management facility without having submitted a complete permit application and having received a finally effective hazardous waste permit.
- (2) An application for a permit for a new hazardous waste management facility may be filed at any time. Except as provided in paragraph 3, all applications must be submitted at least one hundred eighty days before physical construction is expected to commence.
- (3) Prior to the effective date of sections 33-24-05-89 et seq. which are applicable to the facility, a person may begin physical construction of a new hazardous waste management facility, except for landfills, injection wells, land treatment facilities, or surface impoundments without having received a finally effective hazardous waste permit if, prior to beginning physical construction, the person has:
  - (a) Obtained the federal, state, and local approvals or permits necessary to begin physical construction;
  - (b) Submitted part A of the permit application; and
  - (c) Made a commitment to complete physical construction of the facility within a reasonable time.

The person may continue physical construction of the new hazardous waste management facility after the effective date of sections 33-24-05-89 et seq. which are applicable to this facility, if that person submits the permit application on or before the effective date of such standards (or on some later date specified by the department). Such persons may not operate the new hazardous waste management facility without having received a finally effective hazardous waste permit.

8. Updating permit applications.

- a. If any owner or operator of a hazardous waste management facility has filed part A of a permit application and has

not yet filed part B, the owner or operator shall amend part A of the application with the department:

- (1) No later than the effective date of regulatory provisions listing or designating wastes as hazardous, if the facility is treating, storing, or disposing of any of those listed or designated wastes; or
- (2) As necessary to comply with the provisions of section 33-24-06-16 for changes prior to the department making final administrative disposition of the application.

b. The owner or operator of a facility who fails to comply with the updating requirements of subdivision a of this subsection is not authorized to treat, store, dispose of those wastes not covered by a duly filed part A of the application.

9. **Reapplications.** Any hazardous waste management facility with an effective permit shall submit a new application at least one hundred eighty days before the expiration date of the effective permit unless permission for a later date has been granted by the department (the department shall not grant permission for applications to be submitted later than the expiration date of the existing permit).

**History:** Effective January 1, 1984.

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

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

**33-24-06-02. Continuation of expiring permits.**

1. The conditions of an expired permit (including expired permits issued by the environmental protection agency) continue in force until the effective date of a new permit if:
  - a. The permittee has submitted a timely application which is a complete application for a new permit; and
  - b. The department, through no fault of the permittee, does not issue a new permit with an effective date on or before the expiration date of the previous permit (for example, when issuance is impractical due to time or resource constraints).
2. **Effect.** Permits continued under this section remain fully effective and enforceable.

3. Enforcement. When the permittee is not in compliance with the conditions of the expiring or expired permit the department may choose to do any or all of the following:
  - a. Initiate enforcement action based upon the permit which has been continued.
  - b. Issue a notice of intent to deny the new permit. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit.
  - c. Issue a new permit with appropriate conditions.
  - d. Take other actions authorized by this article.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

#### 33-24-06-03. Signatories to permit applications and reports.

1. Applications. All hazardous waste permit applications must be signed as follows:
  - a. For a corporation: by a principle executive officer of at least the level of vice president.
  - b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively.
  - c. For a municipality, state, federal, or other public agency: by either a principle executive officer or ranking elected official.
2. Reports. All reports required by permits, and other information requested by the department must be signed by a person described in subsection 1, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
  - a. The authorization is made in writing by a person described in subsection 1;
  - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a

named individual or any individual occupying a named position.)

c. The written authorization is submitted to the department.

3. **Changes to authorization.** If an authorization under subsection 2 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of subsection 2 must be submitted to the department prior to or together with any reports, information, or applications to be signed by an authorized representative.
4. **Certification.** Any person signing a document under subsection 1 or 2 shall make the following certification:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

**History:** Effective January 1, 1984.

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

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

**33-24-06-04. Conditions applicable to permits.** The following conditions apply to all hazardous waste permits. All conditions applicable to permits must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to this article must be given in the permit.

1. **Duty to comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the North Dakota Century Code and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. However, the permittee need not comply with the conditions of this permit to the extent and for the duration such noncompliance is authorized in an emergency permit. (See section 33-24-06-19.)
2. **Duty to reapply.** If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit.

3. **Need to halt or reduce activity not a defense.** It is not a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
4. **Duty to mitigate.** The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.
5. **Proper operation and maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance include effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.
6. **Permit actions.** This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
7. **Property rights.** This permit does not convey any property rights of any sort or any exclusive privilege.
8. **Duty to provide information.** The permittee shall furnish to the department, within a reasonable time, any relevant information which the department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the department, upon request, copies of records required to be kept by this permit.
9. **Inspection and entry.** The permittee shall allow the department, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:
  - a. Enter at reasonable times upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

- b. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized, any substances or parameters at any location.

10. Monitoring and records.

- a. Samples and measurements taken for the purposes of monitoring must be representative of the monitoring activity.
- b. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report, or application. This period may be extended by the request of the department at any time.
- c. Records of monitoring information must include:
  - (1) The date, exact place, and time of sampling or measurements.
  - (2) The individuals who performed the sampling or measurements.
  - (3) The dates analyses were performed.
  - (4) The individuals who performed the analyses.
  - (5) The analytical techniques or methods used.
  - (6) The results of such analyses.
- d. The permittee shall maintain records from all ground water monitoring wells and associated ground water surface elevations for the active life of the facility, and, for disposal facilities, for the postclosure care period as well.

11. Signatory requirement. All applications, reports, or information submitted to the department must be signed and certified. (See section 33-24-06-03.)

12. Reporting requirements.

- a. **Planned changes.** The permittee shall give notice to the department as soon as possible of any planned physical alterations or additions to the permitted facility. For a new hazardous waste management facility, the permittee may not commence treatment, storage, or disposal of hazardous waste; and for a facility being modified, the permittee may not treat, store, or dispose of hazardous waste in the modified portion of the facility, until:
- (1) The permittee has submitted to the department by certified mail or hand delivery a letter signed by the permittee and a registered professional engineer stating that the facility has been constructed or modified in compliance with the permit; and
  - (2) Either of the following:
    - (a) The department has inspected the modified or newly constructed facility and finds it is in compliance with the conditions of the permit; or
    - (b) Within fifteen days of the date of submission of the letter in paragraph 1, the permittee has not received notice from the department of its intent to inspect. If so, prior inspection by the department is waived and the permittee may commence treatment, storage, or disposal of hazardous waste.
- b. **Anticipated noncompliance.** The permittee shall give advance notice to the department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- c. **Transfers.** This permit is not transferable to any person except after notice to the department. The department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary. (See section 33-24-06-11; in some cases, modification or revocation and reissuance is mandatory.)
- d. **Monitoring reports.** Monitoring results must be reported at the intervals specified elsewhere in this permit.
- e. **Compliance schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than fourteen days following each schedule date.

f. Twenty-four-hour reporting.

- (1) The permittee shall report any noncompliance which may endanger health or the environment.
- (2) Any information shall be provided orally within twenty-four hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which must be reported orally:
  - (a) Information concerning release of any hazardous waste that may cause an endangerment to public drinking water supplies.
  - (b) Any information of a release or discharge of hazardous waste, or of a fire or explosion from a hazardous waste management facility, which could threaten the environment or human health outside the facility. The description of the occurrence and its cause must include:
    - [1] Name, address, and telephone number of the owner or operator.
    - [2] Name, address, and telephone number of the facility.
    - [3] Date, time, and type of incident.
    - [4] Name and quantity of materials involved.
    - [5] The extent of injuries, if any.
    - [6] An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable.
    - [7] Estimated quantity and disposition of recovered material that resulted from the incident.
- (3) A written submission must also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

- (4) The department may waive the five-day written notice requirement in favor of a written report within fifteen days.
- g. **Other noncompliance.** The permittee shall report all instances of noncompliance not reported under subdivisions a, d, e, and f, at the time monitoring reports are submitted. The reports must contain the information listed in subdivision f.
  - h. **Manifest discrepancy reports.** If a significant discrepancy in a manifest is discovered, the permittee shall attempt to reconcile the discrepancy. If not resolved within fifteen days, the permittee shall submit a letter report, including a copy of the manifest to the department.
  - i. **Unmanifested waste report.** An unmanifested waste report must be submitted to the department within fifteen days of receipt of unmanifested waste.
  - j. **Annual report.** An annual report must be submitted by March first of each calendar year covering facility activities during the previous calendar year.
  - k. **Other information.** Where the permittee becomes aware that the permittee failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the department, the permittee shall promptly submit such facts or information.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

### 33-24-06-05. Establishing permit conditions.

#### 1. Additional conditions.

- a. The department shall establish conditions in permits, as required on a case-by-case basis:
  - (1) To provide for and assure compliance with all applicable requirements of North Dakota Century Code chapter 23-20.3 and its regulations. In satisfying this provision, the department may incorporate applicable requirements of chapter 33-24-05 directly into the permit or establish other permit conditions that are based on that chapter; and

(2) To establish duration and scope of the permit (section 33-24-06-06), schedules of compliance (section 33-24-06-07), procedures for recording and reporting of monitoring results (section 33-24-06-08), and conditions consistent with other state and federal laws (section 33-24-06-09).

b. The department shall also establish any other reasonable conditions which it deems necessary.

c. Any statutory or regulatory requirement which takes effect prior to final administrative disposition of a permit is an applicable requirement within the meaning of this section. Any requirement which takes effect prior to the modification or revocation and reissuance of a permit, to the extent allowed in section 33-24-06-12, is also an applicable requirement. Both provide a means for reopening state permit proceedings at the discretion of the department where the new requirements are of sufficient magnitude to make additional proceedings desirable.

2. **Incorporation.** All permit conditions must be incorporated either expressly or by reference. If incorporated by reference, a specific citation to the applicable regulations or requirements must be given in the permit.

**History:** Effective January 1, 1984.

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

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

### **33-24-06-06. Duration and scope of permits.**

1. Hazardous waste permits are effective for a fixed term of five years.

2. Except as provided in section 33-24-06-02, the term of a permit may not be extended by modification beyond the maximum duration specified in this section.

3. Permits for less than an entire facility. The department may issue or deny a permit for one or more units at a facility without simultaneously issuing or denying a permit to all of the units at the facility. The status of any unit for which a permit has not been issued or denied is not affected by the issuance or denial of a permit to any other unit at the facility.

**History:** Effective January 1, 1984.

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

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

33-24-06-07. Schedules of compliance.

1. The permit may, when appropriate, specify a schedule of compliance leading to compliance with North Dakota Century Code chapter 23-20.3 and its regulations.
  - a. **Time for compliance.** Any schedules of compliance under this section must require compliance as soon as possible.
  - b. **Interim dates.** Except as provided in paragraph 2 of subdivision a of subsection 2, if a permit establishes a schedule of compliance which exceeds one year from the date of permit issuance, the schedule must set forth interim requirements and the dates for their achievement.
    - (1) The time between interim dates may not exceed one year.
    - (2) If the time necessary for completion of any interim requirements (such as the construction of a control facility) is more than one year and is not readily divisible into stages for completion, the permit must specify interim dates for the submission of reports of progress toward completion of the interim requirements and indicate a projected completion date.
  - c. **Reporting.** The permit must be written to require that no later than fourteen days following each interim date and the final date of compliance, the permittee shall notify the department in writing of its compliance or noncompliance with the interim or final requirements.
2. **Alternative schedules of compliance.** A permit applicant or permittee may cease conducting regulated activities [by receiving a terminal volume of hazardous waste and closing (and conducting postclosure care, where applicable) pursuant to applicable requirements] rather than continue to operate and meet permit requirements as follows:
  - a. If the permittee decides to cease conducting regulated activities at a given time within the term of a permit which has already been issued:
    - (1) The permit may be modified to contain a new or additional schedule leading to timely cessation of activities; or
    - (2) The permittee shall cease conducting permitted activities before noncompliance with any interim or final compliance schedule requirement already specified in the permit.

- b. If the decision to cease conducting regulated activities is made before issuance of a permit whose term will include the termination date, the permit must contain a schedule leading to termination which will ensure timely compliance with applicable requirements.
- c. If the permittee is undecided whether to cease conducting regulated activities, the department may issue or modify a permit to contain two schedules as follows:
  - (1) Both schedules must contain an identical interim deadline requiring a final decision on whether to cease conducting regulated activities no later than a date which ensures sufficient time to comply with applicable requirements in a timely manner if the decision is to continue conducting regulated activities.
  - (2) One schedule must lead to timely compliance with applicable requirements.
  - (3) The second schedule must lead to cessation of regulated activities by a date which will ensure timely compliance with applicable requirements.
  - (4) Each permit containing two schedules must require that after the permittee has made a final decision under paragraph 1 the permittee shall (a): follow the schedule leading to compliance if the decision is to continue conducting regulated activities; or (b): follow the schedule leading to termination if the decision is to cease conducting regulated activities.
- d. The applicant's or permittee's decision to cease conducting regulated activities must be evidenced by a firm public commitment satisfactory to the department such as a resolution of the board of directors of a corporation.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-06-08. Requirements for recording and reporting of monitoring results. All permits shall specify:**

- 1. Requirements concerning the proper use, maintenance, and installation, when appropriate, of monitoring equipment or methods (including biological monitoring methods when appropriate).

2. Required monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity including, when appropriate, continuous monitoring.
3. Applicable reporting requirements based upon the impact of the regulated activity and as specified in chapter 33-24-05. Reporting must be no less frequent than specified in that chapter.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-06-09. Considerations under other state and federal laws.**

Permits must be issued in a manner and must contain conditions consistent with requirements of other applicable laws of this state and the federal government.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-06-10. Effect of a permit.**

1. Compliance with a permit during its term constitutes compliance for purposes of enforcement, with North Dakota Century Code chapter 33-20.3. However, a permit may be modified, revoked and reissued, or terminated during its term for cause as set forth in sections 33-24-06-12 and 33-24-06-13.
2. The issuance of a permit does not convey any property rights of any sort, or any exclusive privilege.
3. The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-06-11. Transfer of permits.** A permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued (under subdivision b of subsection 2 of section 33-24-06-12) or a minor modification made (under subsection 4 of section 33-24-06-14), to identify the new permittee and incorporate such other requirements as may be necessary under North Dakota Century Code chapter 23-20.3.

**History:** Effective January 1, 1984.

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

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

**33-24-06-12. Major modification or revocation and reissuance of permits.** When the department receives any information [e.g., inspects the facility, receives information submitted by the permittee as required in the permit (see section 33-24-06-04), receives a request for modification or revocation and reissuance, or conducts a review of the permit file] it may determine whether or not one or more of the causes listed in subsections 1 and 2 for modification, or revocation and reissuance, or both, exist. If cause exists, the department may modify or revoke and reissue the permit accordingly, subject to the limitations of subsection 3, and may request an updated application if necessary. When a permit is modified, only the conditions subject to modification are reopened. If a permit is revoked and reissued, the entire permit is reopened and subject to revision and the permit is reissued for a new term. See subdivision b of subsection 3 of section 33-24-07-03. If cause does not exist under this section or section 33-24-06-14, the department may not modify or revoke and reissue the permit. If a permit modification satisfies the criteria in section 33-24-06-14 for "minor modifications" the permit may be modified without a draft permit or public review. Otherwise a draft permit must be prepared and other procedures in chapter 33-24-07 followed.

1. **Causes for modifications.** The following are causes for modification, but not revocation and reissuance of permits. However, the following may be causes for revocation and reissuance as well as modification when the permittee requests or agrees:
  - a. **Alterations.** There are material and substantial alterations or additions to the permitted facility or activity which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit.
  - b. **Information.** The department has received information that was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and would have justified the application of different permit conditions at the time of issuance.

c. New regulation. The standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued. Permits may be modified during their terms for this cause only as follows:

(1) For promulgation of amended standards or regulations, when:

(a) The permit condition requested to be modified was based on an effective rule in chapters 33-24-01 through 33-24-05;

(b) The department has revised, withdrawn, or modified that portion of the rule on which the permit condition was based; and

(c) A permittee requests modification in accordance with section 33-24-07-03 within ninety days after the department's action on which the request is based.

(2) For judicial decisions, a court of competent jurisdiction has remanded and stayed effective regulations, if the remand and stay concern that portion of the regulations on which the permit condition was based and a request is filed by the permittee in accordance with section 33-24-07-03 within ninety days of judicial remand.

d. Compliance schedules. The department determines good cause exists for modification of a compliance schedule, such as an act of God, strike, flood, or materials shortage or other events over which the permittee has little or no control and for which there is no reasonably available remedy.

e. The department may modify a permit:

(1) When modification of a closure plan is required under subsection 2 of section 33-24-05-61 or subsection 2 of section 33-24-05-66.

(2) After the department receives the notification of expected closure under section 33-24-05-62, when the department determines that extension of the ninety- or one hundred eighty-day periods under section 33-24-05-62, modifications of the thirty-year postclosure period under subsection 1 of section 33-24-05-65, continuation of security requirements under subsection 2 of section 33-24-05-65, or permission to disturb the integrity of the

containment system under subsection 3 of section 33-24-05-65 are unwarranted.

- (3) When the permittee has filed a request under subsection 3 of section 33-24-05-79 for a variance to the level of financial responsibility or when the department demonstrates under subsection 4 of section 33-24-05-79 that an upward adjustment of the level of financial responsibility is required.
  - (4) When the corrective action program specified in the permit under section 33-24-05-57 has not brought the regulated unit into compliance with the ground water protection standard within a reasonable period of time.
  - (5) To include a detection monitoring program meeting the requirements of section 33-24-05-55 when the owner or operator has been conducting a compliance monitoring program under section 33-24-05-56 or a corrective action program under section 33-24-05-57 and the compliance period ends before the end of the postclosure care period for the unit.
  - (6) When a permit requires a compliance monitoring program under section 33-24-05-56, but monitoring data collected prior to permit issuance indicate that the facility is exceeding the ground water protection standard.
  - (7) To include conditions applicable to units at a facility that were not previously included in the facility's permit.
  - (8) When a land treatment unit is not achieving complete treatment of hazardous constituents under its current permit conditions.
2. **Causes for modification or revocation and reissuance.** The following are causes to modify or, alternatively, revoke and reissue a permit:
- a. Cause exists for termination under section 33-24-06-13, and the department determines that modification or revocation and reissuance is appropriate.
  - b. The department has received notification (as required in the permit, see subsection 4 of section 33-24-06-14) of a proposed transfer of the permit.
3. **Facility siting.** Suitability of the facility location will not be considered at the time of permit modification or revocation and reissuance unless new information or standards indicate

that a threat to human health or the environment exists which was unknown at the time of permit issuance.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

### 33-24-06-13. Termination of permits.

1. The following are causes for terminating a permit during its term, or for denying a permit renewal application:
  - a. Noncompliance by the permittee with any condition of the permit;
  - b. The permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts or the permittee's misrepresentation of any relevant facts at any time; or
  - c. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination.
2. The department shall follow the applicable procedures in chapter 33-24-07 in terminating any permit under this section.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

33-24-06-14. Minor modifications of permits. Upon the consent of the permittee, the department may modify a permit to make the correction or allowances for changes in the permitted activity listed in this section, without following the procedures of chapter 33-24-07. Any permit modification not processed as a minor modification under this section must be made for cause and with a draft permit and public notice as required in section 33-24-06-12. Minor modifications may only:

1. Correct typographical errors.
2. Require more frequent monitoring or reporting by the permittee.
3. Change an interim compliance date in a schedule of compliance; provided, the new date is not more than one hundred twenty days after the date specified in the existing permit and does not interfere with attainment of the final compliance date requirement.

4. Allow for a change in ownership or operational control of a facility where the department determines that no other change in the permit is necessary; provided, that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittees has been submitted to the department.
5. Change the lists of facility emergency coordinators or equipment in the permit's contingency plan.
6. Change estimates of maximum inventory under subdivision b of subsection 1 of section 33-24-05-61.
7. Change estimates of expected year of closure or schedules for final closure under subdivision d of subsection 1 of section 33-24-05-61.
8. Approve periods longer than ninety days or one hundred eighty days under subsections 1 and 2 of section 33-24-05-62.
9. Change the ranges of the operating requirements set in the permit to reflect the results of the trial burn; provided, that the change is minor.
10. Change the operating requirements set in the permit for conducting a trial burn, provided the change is minor.
11. Grant one extension of the time period for determining operational readiness following completion of construction for up to seven hundred twenty hours operating time for treatment of hazardous waste.
12. Change the treatment program required for land treatment units under section 33-24-05-161 to improve the treatment of hazardous constituents provided that the change is minor.
13. Change any conditions specified in the permit for land treatment units to reflect the results of field tests or laboratory analyses used in making a treatment demonstration in accordance with subsection 3 of section 33-24-06-19; provided, that the change is minor.
14. Allow a second treatment demonstration for land treatment to be conducted when the results of the first demonstration have not shown the conditions under which the waste or wastes can be treated completely as required in subsection 1 of section 33-24-05-162; provided, the conditions for the second demonstration are substantially the same as the conditions for the first demonstration.

**History:** Effective January 1, 1984.

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

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

33-24-06-15. Noncompliance and program reporting by the department. The department shall submit any reports required under this section to the environmental protection agency regional administrator. For purposes of this section only, hazardous waste permittees includes facilities with operating status defined by subsection 1 of section 33-24-06-16, when appropriate.

1. Quarterly reports. The department shall submit quarterly narrative reports for major facilities as follows:
  - a. Format. The report must use the following format:
    - (1) An alphabetized list by permittee name. When two or more permittees have the same name, the lowest permit number must be entered first.
    - (2) For each entry on a list, include the following information in the following order:
      - (a) Name, location, and permit number of the noncomplying permittee.
      - (b) A brief description and date of each instance of noncompliance for that permittee. Instances of noncompliance may include one or more of the kinds set forth in subdivision b.
      - (c) The dates and a brief description of the actions taken by the department to ensure compliance.
      - (d) Status of the instances of noncompliance with the date of the review of the status or the date of resolution.
      - (e) Any details which tend to explain or mitigate the instances of noncompliance.
  - b. Instances of noncompliance to be reported. Any instances of noncompliance within the following categories must be reported in successive reports until the noncompliance is reported as resolved. Once noncompliance is reported as resolved it need not appear in subsequent reports.
    - (1) Failure to complete construction elements. When the permittee has failed to complete, by the date specified in the permit, an element of a compliance schedule involving either planning for construction (e.g., award of a contract, preliminary plans), or a construction step (e.g., begin construction, attain operation level); and the permittee has not returned to compliance by accomplishing the requirement of the schedule within thirty days from the date a compliance schedule is due under the permit.

- (2) Modifications to schedules of compliance. When a schedule of compliance in the permit has been modified under section 33-24-06-12 or 33-24-06-14 because of the permittee's noncompliance.
- (3) Failure to complete or provide compliance schedule or monitoring reports. When the permittee has failed to complete or provide a report required in a permit compliance schedule (e.g., progress report or notice of noncompliance or compliance), or a monitoring report; and the permittee has not submitted the complete report within thirty days from the date it is due under the permit for compliance schedules, or from the date specified in the permit for monitoring reports.
- (4) Deficient reports. When the required reports provided by the permittee are so deficient as to cause misunderstanding by the department and thus impede the review of the status of compliance.
- (5) Noncompliance with other permit requirements. Noncompliance must be reported in the following circumstances:
  - (a) Whenever the permittee has violated a permit requirement (other than reported under paragraph 1 or 2), and has not returned to compliance within forty-five days from the date reporting of noncompliance was due under the permit; or
  - (b) When the department determines that a pattern of noncompliance exists for a major facility permittee over the most recent four consecutive reporting periods. This pattern includes any violation of the same requirement in two consecutive reporting periods, and any violation of one or more requirements in each of four consecutive reporting periods; or
  - (c) When the department determines significant permit noncompliance or other significant event has occurred, such as a fire or explosion or migration of fluids into an underground source of drinking water.
- (6) All other. Statistical information must be reported quarterly on all other instances of noncompliance by major facilities with permit requirements not otherwise reported under this subsection.

- c. The department shall submit, in a manner and form prescribed by the regional administrator, quarterly reports concerning noncompliance by transporters (e.g., recordkeeping requirements), and by generators that send their wastes to offsite treatment, storage, or disposal facilities.

**2. Annual reports.**

- a. Annual noncompliance report. The department shall submit statistical reports on nonmajor hazardous waste management permittees indicating the total number reviewed, the number of noncomplying nonmajor permittees, the number of enforcement actions, and number of permit modifications extending compliance deadlines. The statistical information must be organized to follow the types of noncompliance listed in subsection 1.
- b. In addition to the annual noncompliance report, the department shall prepare a "program report" which contains information (in a manner and form prescribed by the regional administrator) on generators and transporters, and the permit status of regulated facilities. The department shall include on a biennial basis summary information on the quantities and types of hazardous waste generated, transported, stored, treated, and disposed during the preceding odd-numbered year. This summary information must be reported in a manner and form prescribed by the regional administrator and according to environmental protection agency characteristics and lists of hazardous wastes at 40 CFR Part 261.

**3. Schedule.**

- a. For all quarterly reports, on the last working day of May, August, November, and February, the department shall submit to the regional administrator information concerning noncompliance with the hazardous waste management requirements in this state in accordance with the following schedule (Reports must also be made available to the public for inspection and copying on this date):

January, February, and March	May 31
April, May, and June	August 31
July, August, and September	November 30
October, November, and December	February 28

- b. For annual reports, the period shall be for one calendar year ending December thirty-first, with reports completed and available to the public no more than sixty days later.

**History:** Effective January 1, 1984.

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

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

**33-24-06-16. Operating status prior to final administrative disposition of the permit application.**

1. Qualifying for such status. Any person who owns or operates an existing hazardous waste management facility shall be treated as having been issued a permit to the extent that person has:
  - a. Complied with section 3010(a) of the Resource Conservation and Recovery Act by filing a notification of hazardous waste activity form with the department.
  - b. Complied with the requirements of subsections 7 and 8 of section 33-24-06-01 governing submission of part A of the application.
2. When the department determines on examination or reexamination of part A of the application that it fails to meet the standards of these rules, it may notify the owner or operator that the application is deficient and that the owner or operator is therefore not entitled to such status. The owner or operator will then be subject to enforcement for operating without a permit.
3. Coverage. During the period of such status, the facility may not:
  - a. Treat, store, or dispose of hazardous waste not specified in part A of the permit application;
  - b. Employ processes not specified in part A of the permit application; or
  - c. Exceed the design capacities specified in part A of the permit application.
4. Changes during such status.
  - a. New hazardous waste not previously identified in part A of the permit application may be treated, stored, or disposed of at a facility if the owner or operator submits a revised part A of the permit application prior to such a change.

- b. Increases in the design capacity of processes used at a facility may be made if the owner or operator submits a revised part A of the permit application prior to such a change (along with a justification explaining the need for the change) and the department approves the change because of a lack of available treatment, storage, or disposal capacity at other hazardous waste management facilities.
  - c. Changes in the processes for the treatment, storage, or disposal of hazardous waste may be made at a facility or additional processes may be added if the owner or operator submits a revised part A of the permit application prior to such a change (along with a justification explaining the need for the change) and the department approves the change because:
    - (1) It is necessary to prevent a threat to human health or the environment because of an emergency situation; or
    - (2) It is necessary to comply with federal, state, or local laws or regulations.
  - d. Changes in the ownership or operational control of a facility may be made if the new owner or operator submits a revised part A of the permit application no later than ninety days prior to the scheduled change. When a transfer of ownership or operational control of a facility occurs, the old owner or operator shall comply with the requirements of sections 33-24-05-74 through 33-24-05-88 (financial requirements) until the new owner or operator has demonstrated to the department that it is complying with those sections. All other duties during such status are transferred effective immediately upon the date of the change of ownership or operational control of the facility. Upon demonstration to the department by the new owner or operator of compliance with the financial requirements, the department shall notify the old owner or operator in writing that it no longer needs to comply with those regulations as of the date of demonstration.
  - e. In no event may changes be made to a hazardous waste management facility during such status which amounts to reconstruction of the facility. Reconstruction occurs when the capital investment in the changes to the facility exceeds fifty percent of the capital cost of a comparable entirely new hazardous waste management facility.
- 5. During such status, owners or operators shall comply with the federal interim status standards, 40 CFR Part 265.
  - 6. Such status terminates when:

- a. Final administrative disposition of a permit application is made; or
- b. Such status is terminated as provided in paragraph 5 of subdivision a of subsection 7 of section 33-24-06-01.

**History:** Effective January 1, 1984.

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

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

**33-24-06-17. Contents of a permit application.**

1. Part A of the application must include the following information:
  - a. The activities conducted by the applicant which require it to obtain a permit.
  - b. Name, mailing address, and location of the facility for which the application is submitted.
  - c. Up to four standard industrial codes which best reflect the principle products or services provided by the facility.
  - d. The operator's name, address, telephone number, ownership status and status as a federal, state, private, public, or other entity.
  - e. A listing of all permits or construction approvals at all governmental levels received or applied for under any of the following programs:
    - (1) Hazardous waste management program under the Resource Conservation and Recovery Act.
    - (2) Underground injection control program under the Safe Drinking Water Act.
    - (3) North Dakota pollutant discharge elimination system program under the Clean Water Act.
    - (4) Prevention of significant deterioration program under the Clean Air Act.
    - (5) Nonattainment program under the Clean Air Act.
    - (6) National emissions standards for hazardous air pollutants preconstruction approval under the Clean Air Act.

- (7) Dredge or fill permits under section 404 of the Clean Water Act.
  - (8) Other relevant environmental permits.
- f. A topographic map (or other map if a topographic map is unavailable), extending one mile [1.61 kilometers] beyond the property boundaries of the source, depicting the facility and each of its intake and discharge structures; each of its hazardous waste treatment, storage, or disposal facilities; each well where fluids from the facility are injected underground; and those well springs, other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant in the map area.
  - g. A brief description of the nature of the business.
  - h. The latitude and longitude of the facility.
  - i. The name, address, and telephone number of the owner of the facility.
  - j. An indication of whether the facility is new or existing and whether it is a first or revised application.
  - k. For existing facilities, a scale drawing of the facility showing the location of all past, present, and future treatment, storage, and disposal area.
  - l. For existing facilities, photographs of the facility clearly delineating all existing structures; existing treatment, storage, and disposal areas; and types of future treatment, storage, and disposal areas.
  - m. A description of the processes to be used for treating, storing, and disposing of hazardous waste, and the design capacity of these items.
  - n. A specification of the hazardous wastes listed or designated under chapter 33-24-02 to be treated, stored, or disposed at the facility; an estimate of the quantity of such waste to be treated, stored, or disposed annually; and a general description of the processes to be used for such wastes.
2. The information requirements for part B of the permit application presented below reflect the standards in chapter 33-24-05. These information requirements are necessary in order for the department to determine compliance with chapter 33-24-05 standards. If owners and operators of hazardous waste management facilities can demonstrate that the information required for part B of the application cannot be

provided to the extent required, the department may make allowances for submission of such information on a case-by-case basis. Information required for part B of the application must be submitted to the department and signed in accordance with requirements in section 33-24-06-03. Certain technical data, such as design drawings and specifications, and engineering studies must be certified by a registered professional engineer. Part B of the application includes the following (information in subdivisions a through r is required for all hazardous waste management facilities except as section 33-24-05-01 provides otherwise; that in subdivisions s through y is additional information required for specific types of facilities; and that in subdivisions z through gg is additional information regarding protection of ground water, and is required for surface impoundments, piles, land treatment units, and landfills, except as otherwise provided in subsection 2 of section 33-24-05-47):

- a. General description of the facility.
- b. Chemical and physical analyses of the hazardous waste to be handled at the facility. At a minimum, these analyses must contain all the information which must be known to treat, store, or dispose of the waste properly in accordance with chapter 33-24-05.
- c. A copy of the waste analysis plan required by subsection 2 of section 33-24-05-04 and, if applicable, subsection 3 of section 33-24-05-04.
- d. A description of the security procedures and equipment required by section 33-24-05-05, or a justification demonstrating the reason for requesting a waiver of this requirement.
- e. A copy of the general inspection schedule required by subsection 2 of section 33-24-05-06; include, where applicable, as part of the inspection schedule, specific requirements in sections 33-24-05-93, 33-24-05-106, 33-24-05-117, 33-24-05-132, 33-24-05-163, and 33-24-05-178.
- f. A justification of any request for waivers of the preparedness and prevention requirements of sections 33-24-05-15 through 33-24-05-25.
- g. A copy of the contingency plan required by sections 33-24-05-26 through 33-24-05-36. Include, where applicable, as part of the contingency plan, specific requirements in section 33-24-05-118.
- h. A description of procedures, structures, or equipment used at the facility to:

- (1) Prevent hazards in unloading operations, e.g., ramps and special forklifts;
  - (2) Prevent runoff from hazardous waste handling areas to other areas of the facility or environment, or to prevent flooding, e.g., berms, dikes, and trenches;
  - (3) Prevent contamination of water supplies;
  - (4) Mitigate effects of equipment failure and power outages; and
  - (5) Prevent undue exposure of personnel to hazardous waste, e.g., protective clothing.
- i. A description of precautions to prevent accidental ignition or reaction of ignitable, reactive, or incompatible wastes as required to demonstrate compliance with section 33-24-05-08, including documentation demonstrating compliance with subsection 3 of section 33-24-05-08.
  - j. Traffic pattern, estimated volume (number, type of vehicles) and control (e.g., show turns across traffic lanes and stacking lanes, if appropriate); describe access road, surfacing and load bearing capacity; show traffic control signals.
  - k. [Reserved]
  - l. An outline of both the introductory and continuing programs by owners or operators to prepare persons to operate and maintain a hazardous waste management facility in a safe manner as required to demonstrate compliance with section 33-24-05-07. A brief description of how training will be designed to meet actual job tasks in accordance with requirements in subdivision c of subsection 1 of section 33-24-05-07.
  - m. A copy of the closure plan and where applicable, the postclosure plan required by sections 33-24-05-61 and 33-24-05-66. Include where applicable, as part of the plans, specific requirements in sections 33-24-05-97, 33-24-05-107, 33-24-05-119, 33-24-05-135, 33-24-05-167, 33-24-05-180, and 33-24-05-151.
  - n. For existing facilities, documentation that a notice has been placed in the deed or appropriate alternate instrument as required by section 33-24-05-68.
  - o. The most recent closure and, where applicable, postclosure cost estimate for the facility prepared in accordance with

section 33-24-05-76 plus a copy of the financial assurance mechanisms adopted in compliance with section 33-24-05-77.

- p. Where applicable, a copy of the insurance policy or other documentation which comprises compliance with the requirements of section 33-24-05-79. For a new facility, documentation showing the amount of insurance meeting the specification of subsection 1, and subsection 2 if applicable, of section 33-24-05-79, that the owner or operator plans to have in effect before initial receipt of hazardous waste for treatment, storage, or disposal. A request for a variance in the amount of required coverage, for a new or existing facility, may be submitted as specified in subsection 3 of section 33-24-05-79.
- q. A topographic map showing a distance of one thousand feet [304.8 meters] around the facility at a scale of two and five-tenths centimeters [1 inch] equal to not more than sixty-one meters [200 feet]. (The department may allow the use of other scales on a case-by-case basis.) Contours must be shown on the map. The contour interval must be sufficient to clearly show the pattern of surface water flow in the vicinity of and from each operational unit of the facility. For example, contours with an interval of one and five-tenths meters [5 feet], if relief is greater than six and one-tenth meters [20 feet], or an interval of six-tenths meter [2 feet], if relief is less than six and one-tenth meters [20 feet]. Owners and operators of hazardous waste management facilities located in mountainous areas should use larger contour intervals to adequately show topographic profiles of the facilities. The map must clearly show the following:
- (1) Map scale and date.
  - (2) One hundred-year floodplain area.
  - (3) Surface waters including intermittent streams.
  - (4) Surrounding land uses (residential, commercial, agricultural, recreational).
  - (5) A wind rose, i.e., prevailing wind speed and direction.
  - (6) Orientation of the map (north arrow).
  - (7) Legal boundaries of the hazardous waste management facility site.
  - (8) Access control (fences, gates).

- (9) Injection and withdrawal wells, both onsite and offsite.
  - (10) Buildings; treatment, storage, or disposal operations; or other structures (recreation areas, runoff control systems, access and internal roads, storm, sanitary, and processed sewerage systems, loading and unloading areas, fire control facilities, etc.).
  - (11) Barriers for drainage or flood control.
  - (12) Location of operational units within the hazardous waste management facility site, where hazardous waste is (or will be) treated, stored, or disposed (include equipment cleanup areas).
- r. Applicants may be required to submit such information as may be necessary to enable the department to carry out its duties under federal or other state laws as required in section 33-24-06-09.
- s. For facilities that store containers of hazardous waste, except as otherwise provided in section 33-24-05-89:
- (1) A description of the containment system to demonstrate compliance with section 33-24-05-94. Show at least the following:
    - (a) Basic design parameters, dimensions, and materials of construction.
    - (b) How the design promotes drainage or how containers are kept from contact with standing liquids in the containment system.
    - (c) Capacity of the containment system relative to the number and volume of containers to be stored.
    - (d) Provisions for preventing or managing run-on.
    - (e) How accumulated liquids can be analyzed and removed to prevent overflow.
  - (2) For storage areas that store containers holding wastes that do not contain free liquids, a demonstration of compliance with subsection 3 of section 33-24-05-94, including:
    - (a) Test procedures and results or other documentation or information to show that the wastes do not contain free liquids; and

- (b) A description of how the storage area is designed or operated to drain and remove liquids or how containers are kept from contact with standing liquids.
  - (3) Sketches, drawings, or data demonstrating compliance with section 33-24-05-95 (location of buffer zone and containers holding ignitable or reactive wastes) and subsection 3 of section 33-24-05-96 (location of incompatible wastes), where applicable.
  - (4) Where incompatible wastes are stored or otherwise managed in containers, a description of the procedures used to ensure compliance with subsections 1 and 2 of section 33-24-05-96 and subsections 2 and 3 of section 33-24-05-08.
- t. For facilities that use tanks to store or treat hazardous waste, except as otherwise provided in section 33-24-05-103, description of design and operation procedures which demonstrate compliance with the requirements of sections 33-24-05-104, 33-24-05-105, 33-24-05-108, and 33-24-05-109, including:
- (1) References to design standards or other available information used (or to be used) in design and construction of the tank.
  - (2) A description of design specifications, including identification of construction materials and lining materials (include pertinent characteristics such as corrosion or erosion resistance).
  - (3) Tank dimensions, capacity, and shell thickness.
  - (4) A diagram of piping, instrumentation, and process flow.
  - (5) Description of feed systems, safety cutoff, bypass systems, and pressure controls (e.g., vents).
  - (6) Description of procedures for handling incompatible, ignitable, or reactive wastes, including the use of buffer zones.
- u. For facilities that store, treat, or dispose of hazardous waste in surface impoundments, except as otherwise provided in section 33-24-05-01:
- (1) A list of the hazardous wastes placed or to be placed in each surface impoundment.

- (2) Detailed plans and an engineering report describing how the surface impoundment is or will be designed, constructed, operated, and maintained to meet the requirements of section 33-24-05-116. This submission must address the following items as specified in that section.
- (a) The liner system. Submit detailed plans and an engineering report explaining the location of the saturated zone in relation to the surface impoundment, and the design of the double-liner system that incorporates a leak detection system between the liners. If an exemption from the requirement for a liner system is sought as provided by subsection 2 of section 33-24-05-116, submit detailed plans and engineering and hydrogeologic reports as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the ground water or surface water at any future time. If an exemption is sought from the design and operating requirements for an existing portion of the surface impoundment as provided by subsection 3 of section 33-24-05-116, the owner or operator shall submit detailed plans and engineering and hydrogeologic reports as appropriate, describing how the existing design and operating practices, together with the location of the facility will prevent migration of any hazardous constituents into the ground water or surface water during the active life of the facility (for impoundments to be closed in accordance with subdivision a of subsection 1 of section 33-24-05-119), or the active life and the postclosure care period (for impoundments to be closed in accordance with subdivision b of subsection 1 of section 33-24-05-119).
  - (b) Prevention of overtopping.
  - (c) Structural integrity of dikes.
- (3) A description of how each surface impoundment, including the liner and cover systems and appurtenances for control of overtopping will be inspected in order to meet the requirements of subsections 1 and 2 of section 33-24-05-117. This information should be included in the inspection plan submitted under subdivision e of subsection 2 of this section.

- (4) A certification by a qualified engineer which attests to the structural integrity of each dike as required under subsection 3 of section 33-24-05-117. For new units, the owner or operator must submit a statement by a qualified engineer that the engineer will provide such a certification upon completion of construction in accordance with the plans and specifications.
  - (5) A description of the procedure to be used for removing a surface impoundment from service as required under subsections 2 and 3 of section 33-24-05-118. This information should be included in the contingency plan submitted under subdivision g of subsection 2 of this section.
  - (6) A description of how hazardous waste residues and contaminated materials will be removed from the unit at closure as required under subdivision a of subsection 1 of section 33-24-05-119. For any wastes not to be removed from the unit upon closure, the owner or operator shall submit detailed plans and an engineering report describing how subsection 2 and subdivision b of subsection 1 of section 33-24-05-118 will be complied with. This information should be included in the closure plan and where applicable, the postclosure plan submitted under subdivision m of subsection 2 of this section.
  - (7) If ignitable or reactive wastes are to be placed in a surface impoundment an explanation of how section 33-24-05-120 will be complied with.
  - (8) If incompatible wastes or incompatible wastes and materials will be placed in the surface impoundment, an explanation of how section 33-24-05-121 will be complied with.
- v. For facilities that treat or store hazardous waste in waste piles, except as otherwise provided in section 33-24-05-01:
- (1) A list of hazardous wastes placed, or to be placed, in each waste pile.
  - (2) If an exemption is sought to section 33-24-05-131 and sections 33-24-05-47 through 33-24-05-58, as provided by subsection 3 of section 33-24-05-130, an explanation of how the requirements of subsection 3 of section 33-24-05-130 will be complied with.
  - (3) Detailed plans and an engineering report describing how the pile is or will be designed, constructed,

operated, and maintained to meet the requirements of section 33-24-05-131. This submission must address the following items as specified in that section:

- (a) The liner system. If an exemption is sought from the design and operating requirements as provided by subsection 5 of section 33-24-05-131, the owner or operator shall submit detailed plans and engineering and hydrogeologic reports as appropriate describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the ground water or surface water at any future time. If an exemption from the design and operating requirements is sought for an existing portion of a pile as provided by subsection 6 of section 33-24-05-131, the owner or operator shall submit detailed plans and engineering and hydrogeologic reports as appropriate describing how the existing design and operating practices, together with the location of the facility, will prevent migration of any hazardous constituents into the ground water or surface water during the active life of the facility (including the closure period).
  - (b) The location of the seasonal high water table.
  - (c) If applicable, a description of how the wastes will be periodically removed and the liner inspected in accordance with subdivision b of subsection 1 of section 33-24-05-131.
  - (d) Control of run-on.
  - (e) Control of runoff.
  - (f) Management of collection and holding units associated with run-on and runoff control systems.
  - (g) Control of wind dispersal of particulate matter, where applicable.
- (4) A description of how each waste pile, including the liner and appurtenances for control of run-on and runoff, will be inspected in order to meet the requirements of subsections 1 and 2 of section 33-24-05-132. This information should be included in the inspection plan submitted under subdivision e of subsection 2 of this section.

- (5) If treatment is carried out on or in the pile, details of the process and equipment used, and the nature and quality of the residuals.
  - (6) If ignitable or reactive wastes are to be placed in a waste pile an explanation of how the requirements of section 33-24-05-133 will be complied with.
  - (7) If incompatible wastes or incompatible wastes and materials will be placed in a waste pile, an explanation of how section 33-24-05-134 will be complied with.
  - (8) A description of how hazardous waste residues and contaminated materials will be removed from the waste pile at the closure, as required under subsection 1 of section 33-24-05-135. For any wastes not to be removed from the waste pile upon closure, the owner or operator must submit detailed plans and an engineering report describing how subsections 1 and 2 of section 33-24-05-180 will be complied with. This information should be included in the closure plan and where applicable, the postclosure plan, submitted under subdivision m of subsection 2 of this section.
- w. For facilities that incinerate hazardous waste, except as section 33-24-05-144 provides otherwise, the applicant must fulfill the requirements of paragraph 1, 2, or 3.
- (1) When seeking an exemption in accordance with subsection 1 of section 33-24-05-144, submit a demonstration that the waste to be burned:
    - (a) Is hazardous (either listed in or fails the characteristic tests in chapter 33-24-02) solely because it is:
      - [1] Ignitable, or corrosive, or both; or
      - [2] Reactive for characteristics other than those in subdivisions d and e of subsection 1 of section 33-24-02-13, and will not be burned when other hazardous wastes are present in the combustion zone; and
    - (b) Contains insignificant concentrations of the hazardous constituents listed in Appendix V of chapter 33-24-02.
  - (2) Submit a trial burn plan or the results of a trial burn including all required determinations in accordance with subsection 2 of section 33-24-06-19.

(3) In lieu of a trial burn, the applicant may submit the following information:

(a) An analysis of each waste or mixture of wastes to be burned including:

[1] Heat value of the waste in the form and composition in which it will be burned.

[2] Viscosity (if applicable), or description of physical form of the waste.

[3] An identification of any hazardous organic constituents listed in chapter 33-24-02, Appendix V of this article which are present in the waste to be burned, except that the applicant need not analyze for constituents listed in chapter 33-24-02, Appendix V, of this article which would reasonably not be expected to be found in the waste. The constituents excluded from analysis must be identified and the basis for their exclusion stated. The waste analysis must rely on analytical techniques specified in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods" (incorporated by reference, see section 33-24-01-05), or their equivalent.

[4] An approximate quantification of the hazardous constituent identified in the waste, within the precision specified in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods" (incorporated by reference, see section 33-24-01-05).

[5] A quantification of those hazardous constituents in the waste which may be designated as principle organic hazardous constituents based on data submitted from the other trial or operational burns which demonstrate compliance with the performance standard in section 33-24-05-147.

(b) A detailed engineering description of the incinerator, including:

[1] Manufacturer's name and model number of incinerator.

[2] Type of incinerator.

- [3] Linear dimension of incinerator unit including cross-sectional area of combustion chamber.
- [4] Description of auxiliary fuel system (type/feed).
- [5] Capacity of prime mover.
- [6] Description of automatic waste feed cutoff systems.
- [7] Stack gas monitoring and pollution control monitoring system.
- [8] Nozzle and burner design.
- [9] Construction materials.
- [10] Location and description and temperature, pressure, and flow indicating devices and control devices.

(c) A description and analysis of the waste to be burned compared with the waste for which data from operational or trial burns are provided to support the contention that a trial burn is not needed. The data should include those items listed in subparagraph a of paragraph 3 of subdivision w. This analysis should specify the principle organic hazardous constituents which the applicant has identified in the waste for which a permit is sought and any differences from the principle organic hazardous constituents in the waste for which burn data are provided.

(d) The design and operating conditions of the incinerator unit to be used, compared with that for which comparable burn data are available.

(e) A description of the results submitted from any previously conducted trial burns including:

[1] Sampling and analysis techniques used to calculate performance standards in section 33-24-05-147.

[2] Methods and results of monitoring temperatures, waste feed rates, carbon monoxide, and an appropriate indicator of combustion gas velocity (including a

statement concerning the precision and accuracy of this measurement).

[3] The certification and results required by paragraph 7 of subdivision b of subsection 2 of section 33-24-06-19.

(f) The expected incinerator operation information to demonstrate compliance with sections 33-24-05-147 and 33-24-05-149 including:

[1] Expected carbon monoxides level in the stack exhaust gas.

[2] Waste feed rate.

[3] Combustion zone temperature.

[4] Indication of combustion gas velocity.

[5] Expected stack gas volume, flow rate, and temperature.

[6] Computed residence time for waste in the combustion zone.

[7] Expected hydrochloric acid removal efficiency.

[8] Expected fugitive emissions and their control procedures.

[9] Proposed waste feed cutoff limits based on the identified significant operating parameters.

(g) Such supplemental information as the department finds necessary to achieve the purposes of this subdivision.

(h) Waste analysis data, including that submitted in subparagraph a of paragraph 3 of subdivision w, sufficient to allow the department to specify as permit principle organic hazardous constituents those constituents for which destruction and removal efficiencies will be required.

(4) The department shall approve a permit application without a trial burn if it finds that:

(a) The wastes are sufficiently similar; and

- (b) The incinerator units are sufficiently similar, and the data from other trial burns are adequate to specify (under section 33-24-05-149) operating conditions that will ensure that the performance standards in section 33-24-05-147 will be met.
- x. For facilities that use land treatment to dispose of hazardous waste, except as otherwise provided in section 33-24-05-01:
- (1) A description of plans to conduct a treatment demonstration as required under section 33-24-05-162. The description must include the following information:
    - (a) The wastes for which the demonstration will be made and the potential hazardous constituents in the waste.
    - (b) The data sources to be used to make the demonstration, e.g., literature, laboratory data, field data, or operating data.
    - (c) Any specific laboratory or field test that will be conducted, including:
      - [1] The type of test, e.g., column leaching, degradation.
      - [2] Materials and methods, including analytical procedures.
      - [3] Expected time for completion.
      - [4] Characteristics of the unit that will be simulated in the demonstration, including treatment zone characteristics, climatic conditions, and operating practices.
  - (2) A description of a land treatment program as required under section 33-24-05-161. This information must be submitted with the plans for the treatment demonstration and updated following the treatment demonstration. The land treatment program must address the following items:
    - (a) The wastes to be land treated.
    - (b) Design measures and operating practices necessary to maximize treatment in accordance with subsection 1 of section 33-24-05-163, including:

- [1] Waste application method and rate.
  - [2] Measures to control soil pH.
  - [3] Enhancement of microbial or chemical reactions.
  - [4] Control of moisture content.
- (c) Provisions for unsaturated zone monitoring, including:
- [1] Sampling equipment, procedures, and frequency.
  - [2] Procedures for selecting sampling locations.
  - [3] Analytical procedures.
  - [4] Chain of custody control.
  - [5] Procedures for establishing background values.
  - [6] Statistical methods for interpreting results.
  - [7] Justification for any hazardous constituents recommended for selection as principle hazardous constituents in accordance with the criteria for such selection in subsection 1 of section 33-24-05-165.
- (d) A list of hazardous constituents reasonably expected to be in or derived from the waste to be land treated based on waste analysis performed pursuant to section 33-24-05-04.
- (e) The proposed dimensions of the treatment zone.
- (3) A description of how the unit is, or will be designed, constructed, operated, and maintained in order to meet the requirements of section 33-24-05-163. This submission must address the following items:
- (a) Control of run-on.
  - (b) Collection and control of runoff.

- (c) Minimization of runoff of hazardous constituents from the treatment zone.
  - (d) Management of collection and holding facilities associated with run-on and runoff control systems.
  - (e) Periodic inspection of the unit. This information should be included in the inspection plan submitted under subdivision e.
  - (f) Control of wind dispersal of particulate matter, if applicable.
- (4) If food chain crops are to be grown in or on the treatment zone of the land treatment unit, a description of how the demonstration required under subsection 1 of section 33-24-05-164 will be conducted including:
- (a) Characteristics of the food chain crop for which the demonstration will be made.
  - (b) Characteristics of the waste treatment zone and waste application method and rate to be used in the demonstration.
  - (c) Procedures for crop growth, sample collection, sample analysis, and data evaluation.
  - (d) Characteristics of the comparison crop, including the location and conditions under which it was or will be grown.
- (5) If food chain crops are to be grown and cadmium is present in the land treated waste, a description of how the requirements of subsection 5 of section 33-24-05-164 will be complied with.
- (6) A description of the vegetative cover to be applied to closed portions of the facility and a plan for maintaining such cover during the postclosure care period as required under subdivision h of subsection 1 and subdivision b of subsection 3 of section 33-24-05-167. This information should be included in the closure plan and where applicable, the postclosure care plan submitted under subdivision m.
- (7) If ignitable or reactive wastes will be placed in or on the treatment zone, an explanation of how the requirements of section 33-24-05-168 will be complied with.

- (8) If incompatible wastes or incompatible wastes or materials will be placed in or on the same treatment zone, an explanation of how section 33-24-05-169 will be complied with.
- y. For facilities that dispose of hazardous waste in landfills, except as otherwise provided in section 33-24-05-01:
- (1) A list of the hazardous wastes placed or to be placed in each landfill or landfill cell.
  - (2) Detailed plans and an engineering report describing how the landfill is or will be designed, constructed, operated, and maintained to comply with the requirements of section 33-24-05-177. This submission must address the following items as specified in that section:
    - (a) The liner system and leachate collection and removal system. If an exemption from the design and operating requirements for the landfill is sought as provided by subsection 5 of section 33-24-05-177 submit detailed plans and engineering and hydrogeologic reports as appropriate describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituent into the ground water or surface water at any future time. If an exemption from the design and operating requirements is sought for an existing portion of a landfill as provided by subsection 6 of section 33-24-05-177, the owner or operator shall submit detailed plans and engineering and hydrogeologic reports as appropriate describing how the existing design and operating practices, together with the location of the facility, will prevent migration of any hazardous constituents into the ground water or surface water during the active life of of the facility (including the closure period) and the postclosure care period.
    - (b) Control of run-on.
    - (c) Control of runoff.
    - (d) Management of collection and holding facilities associated with run-on and runoff control systems.

- (e) Control of wind dispersal of particulate matter where applicable.
- (3) Detailed plans and an engineering report explaining the location of the saturated zone in location to the landfill. The design of the double-liner system that incorporates a leak detection system between the liners, and a leachate collection and removal system above the liner.
- (4) A description of how each landfill, including the liner and cover systems will be inspected in order to meet the requirements of subsections 1 and 2 of section 33-24-05-178. This information should be included in the inspection plan submitted under subdivision e.
- (5) Detailed plans and an engineering report describing the final cover which will be applied to each landfill or landfill cell at closure in accordance with subsection 1 of section 33-24-05-180 and a description of how each landfill will be maintained and monitored after closure in accordance with subsection 2 of that section. This information should be included in the closure and postclosure plans submitted under subdivision m.
- (6) If ignitable or reactive wastes will be landfilled, an explanation of how the requirements of section 33-24-05-181 will be complied with.
- (7) If incompatible wastes or incompatible wastes and materials will be landfilled an explanation of how section 33-24-05-182 will be complied with.
- (8) If bulk or noncontainerized liquid waste or waste containing free liquids is to be landfilled an explanation of how the requirements of section 33-24-05-183 will be complied with.
- (9) If containers of hazardous waste are to be landfilled an explanation of how the requirements of section 33-24-05-184 or 33-24-05-185, as applicable, will be complied with.
- z. A summary of the ground water monitoring data obtained during the federal interim status period under 40 CFR Part 265.90 through 265.94, were applicable, or during the period of operating status prior to final administrative approval of the permit application under section 33-24-06-16.

- aa. Identification of the uppermost aquifer and aquifers hydraulically interconnected beneath the facility property, including ground water flow direction and rate, and the basis for such identification, i.e., the information obtained from hydrogeologic investigations of the facility area.
- bb. On the topographic map required under subdivision q a delineation of the waste management area, the property boundary, the proposed "point of compliance" as defined under section 33-24-05-52, the proposed location of ground water monitoring wells as required under section 33-24-05-54 and, to the extent possible, the information required in subdivision aa.
- cc. A description of any plume of contamination that has entered the ground water from a regulated unit at the time the application is submitted that:
  - (1) Delineates the extent of the plume on the topographic map required under subdivision q.
  - (2) Identifies the concentration of each chapter 33-24-02, Appendix V, constituent throughout the plume or identifies the maximum concentrations of each Appendix V constituent in the plume.
- dd. Detailed plans and an engineering report describing the proposed ground water monitoring program to be implemented to meet the requirements of section 33-24-05-54.
- ee. If the presence of hazardous constituents has not been detected in the ground water at the time of permit application the owner or operator must submit sufficient information, supporting data, and analyses to establish a detection monitoring program which meets the requirements of section 33-24-05-55. This submission must address the following items as specified under that section:
  - (1) A proposed list of indicator parameters, waste constituents, or reaction products that can provide a reliable indication of hazardous constituents in the ground water.
  - (2) A proposed ground water monitoring system.
  - (3) Background values for each proposed monitoring parameter or constituent or procedures to calculate such values.
  - (4) A description of proposed sampling analysis and statistical comparison procedures to be utilized in evaluating ground water monitoring data.

ff. If the presence of hazardous constituents has been detected in the ground water at the point of compliance at the time of permit application, the owner or operator shall submit sufficient information, supporting data, and analyses to establish a compliance monitoring program which meets the requirements of section 33-24-05-56. The owner or operator shall also submit an engineering feasibility plan for a corrective action program necessary to meet the requirements of section 33-24-05-57, except as provided in subdivision e of subsection 8 of section 33-24-05-55. To demonstrate compliance with section 33-24-05-56 the owner or operator shall address the following items:

- (1) A description of the wastes previously handled at the facility.
- (2) A characterization of the contaminated ground water, including concentrations of hazardous constituents.
- (3) A list of hazardous constituents for which compliance monitoring will be undertaken in accordance with sections 33-24-05-54 and 33-24-05-56.
- (4) Proposed concentration limits for each hazardous constituent based on the criteria set forth in subsection 1 of section 33-24-05-51, including a justification for establishing any alternate concentration limits.
- (5) Detailed plans and an engineering report describing the proposed ground water monitoring system in accordance with the requirements of section 33-24-05-54.
- (6) A description of proposed sampling analysis and statistical comparison procedures to be utilized in evaluating ground water monitoring data.

gg. If hazardous constituents have been measured in the ground water which exceed the concentration limits established under Table 1 of section 33-24-05-51, or if ground water monitoring conducted at the time of permit application under sections 33-24-05-47 through 33-24-05-51 at the waste boundary indicates the presence of hazardous constituents from the facility in ground water over background concentrations, the owner or operator shall submit sufficient information, supporting data, and analyses to establish a corrective action program which meets the requirements of section 33-24-05-57. However, an owner or operator is not required to submit information to establish a corrective action program if the owner or operator demonstrates to the department that alternate

concentration limits will protect human health and the environment after considering the criteria listed in subsection 2 of section 33-24-05-51. An owner or operator who is not required to establish a corrective action program for this reason shall instead submit sufficient information to establish a compliance monitoring program which meets the requirements of section 33-24-05-56 and subdivision ee of subsection 2 of this section. To demonstrate compliance with section 33-24-05-57 the owner or operator shall address, at a minimum, the following items:

- (1) A characterization of the contaminated ground water, including concentrations of hazardous constituents.
- (2) The concentration limit for each hazardous constituent found in the ground water as set forth in section 33-24-05-51.
- (3) Detailed plans and an engineering report describing the corrective action to be taken.
- (4) A description of how the ground water monitoring program will assess the adequacy of the corrective action.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-06-18. Permits by rule.** Notwithstanding any other provision of this chapter or chapter 33-24-07, the following are deemed to have a hazardous waste permit if the conditions listed are met:

1. **Injection wells.** The owner or operator of an injection well disposing of hazardous waste, if the owner or operator:
  - a. Has a permit for underground injection issued under 40 CFR Part 144 or 145; and
  - b. Complies with the conditions of that permit and the requirements of section 33-25-01-18 (requirements for wells managing hazardous waste) of article 33-25 (underground injection control).
2. **Publicly owned treatment works.** The owner or operator of a publicly owned treatment works which accepts for treatment hazardous waste, if the owner or operator:
  - a. Has a North Dakota pollutant discharge elimination system permit;

- b. Complies with the conditions of that permit; and:
- c. Complies with the following:
  - (1) Section 33-24-05-02, identification number.
  - (2) Section 33-24-05-38, use of manifest system.
  - (3) Section 33-24-05-39, manifest discrepancies.
  - (4) Subsection 1 and subdivision a of subsection 2 of section 33-24-05-40, operating record.
  - (5) Section 33-24-05-42, annual report.
  - (6) Section 33-24-05-43, unmanifested waste report.
  - (7) If the waste meets all state, and local pretreatment requirements which would be applicable to the waste if it were being discharged into the publicly owned treatment works through a sewer, pipe, or similar conveyance.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

Law Implemented: NDCC 23-20.3-03, 23-30.3-04, 23-20.3-05

#### 33-24-06-19. Short term and phased permits.

- 1. **Emergency permits.** Notwithstanding any other provisions of this chapter or chapter 33-24-07, if the department finds an imminent and substantial endangerment to human health or the environment, the department may issue a temporary emergency permit to a nonpermitted facility to allow treatment, storage, or disposal of hazardous waste or a permitted facility to allow treatment, storage, or disposal of a hazardous waste not covered by an effective permit. This emergency permit:
  - a. May be oral or written. If oral, it shall be followed in five days by a written emergency permit.
  - b. May not exceed ninety days in duration.
  - c. Must clearly specify the hazardous wastes to be received and the manner and location of their treatment, storage, or disposal.
  - d. May be terminated by the department at any time without process if it determines that termination is appropriate to protect human health and the environment.

e. Must be accompanied by a public notice published under subsection 4 of section 33-24-07-06, including:

- (1) Name and address of the office granting the emergency authorization.
- (2) Name and location of the permitted hazardous waste management facility.
- (3) A brief description of the wastes involved.
- (4) A brief description of the action authorized and reasons for authorizing it.
- (5) Duration of the emergency permit.

f. Must incorporate, to the extent possible and not inconsistent with the emergency situation, all applicable requirements of this chapter and chapter 33-24-05.

## 2. Hazardous waste incinerator permits.

a. For the purposes of determining operational readiness following completion of physical construction, the department shall establish permit conditions, including, but not limited to, allowable waste feeds and operating conditions in the permit to a new hazardous waste incinerator. These permit conditions will be effective for the minimum time required to bring the incinerator to a point of operational readiness sufficient to conduct a trial burn, not to exceed seven hundred twenty hours operating time for treatment of hazardous waste. The department may extend the duration of this operational period once for up to seven hundred twenty additional hours at the request of the applicant when good cause is shown. The permit may be modified to reflect the extension according to section 33-24-06-14 (minor modifications of permits).

- (1) Applicants shall submit a statement with the permit application which suggests the conditions necessary to operate in compliance with the performance standards of section 33-24-05-147 during this period. This statement should include, at a minimum, restrictions on waste constituents, waste feed rates, and the operating parameters identified in section 33-24-05-149.
- (2) The department will review this statement and any other relevant information submitted with the permit application and specify requirements for this period sufficient to meet the performance standards of

section 33-24-05-147 based on its engineering judgment.

b. For the purposes of determining feasibility of compliance with the performance standards of section 33-24-05-147 and of determining adequate operating conditions under section 33-24-05-149, the department shall establish conditions in the permit to a new hazardous waste incinerator to be effective during the trial burn.

(1) Applicants must propose a trial burn plan prepared under paragraph 2 with the permit application.

(2) The trial burn plan must include the following information:

(a) An analysis of each waste or mixture of wastes to be burned which includes:

[1] Heat value of the waste in the form and composition in which it will be burned.

[2] Viscosity (if applicable), or description of physical form of the waste.

[3] An identification of any hazardous organic constituents listed in chapter 33-24-02, Appendix V, which are present in the wastes to be burned, except that the applicant need not analyze for constituents listed in chapter 33-24-02, Appendix V, which would reasonably not be expected to be found in the waste. The constituents excluded from analysis must be identified and the basis for their exclusion stated. The waste analysis must rely on analytical techniques specified in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods" (incorporated by reference, see section 33-24-01-05), or their equivalent.

[4] An approximate quantification of the hazardous constituents identified in the waste within the precision produced by the analytical methods specified in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods" (incorporated by reference, see section 33-24-01-05), or their equivalent.

- (b) A detailed engineering description of the incinerator for which the trial burn permit is sought including:
- [1] Manufacturer's name and model number of incinerator (if available).
  - [2] Type of incinerator.
  - [3] Linear dimensions of the incinerator unit including cross-sectional area of combustion chamber.
  - [4] Description of the auxiliary fuel system (type/feed).
  - [5] Capacity of prime mover.
  - [6] Description of automatic waste feed cutoff systems.
  - [7] Stack gas monitoring and pollution control equipment.
  - [8] Nozzle and burner design.
  - [9] Construction materials.
  - [10] Location and description of temperature, pressure, and flow indicating and control devices.
- (c) A detailed description of sampling and monitoring procedures including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.
- (d) A detailed test schedule for each waste for which the trial burn is planned including dates, duration, quantity of waste to be burned, and other factors relevant to the department's decision under paragraph 5.
- (e) A detailed test protocol, including, for each waste identified, the ranges of temperature, waste feed rate, combustion gas velocity, use of auxiliary fuel, and any other relevant parameters that will be varied to affect the destruction and removal efficiency of the incinerator.

- (f) A description of, and planned operating conditions for, any emission control equipment which will be used.
  - (g) Procedures for rapidly stopping waste feed, shutting down the incinerator, and controlling emissions in the event of an equipment malfunction.
  - (h) Such other information as the department reasonably finds necessary to determine whether to approve the trial burn plan in light of the purposes of this paragraph and the criteria in paragraph 5.
- (3) In reviewing the trial burn plan, the department shall evaluate the sufficiency of the information provided and may require the applicant to supplement this information, if necessary, to achieve the purposes of this subsection.
- (4) Based on the waste analysis data in the trial burn plan, the department will specify as trial principle organic hazardous constituents (trial principle organic hazardous constituents), those constituents for which destruction and removal efficiencies must be calculated during the trial burn. These trial principle organic hazardous constituents will be specified by the department based on its estimate of the difficulty of incineration of the constituents identified in the waste analysis, the concentration or mass in the waste feed, and, for wastes listed in chapter 33-24-02, the hazardous waste organic constituent or constituents identified in Appendix IV of that chapter as the basis for listing.
- (5) The department shall approve a trial burn plan if it finds that:
- (a) The trial burn is likely to determine whether the incinerator performance standard required by section 33-24-05-147 can be met.
  - (b) The trial burn itself will not present an imminent hazard to human health or the environment.
  - (c) The trial burn will help the department determine operating requirements to be specified under section 33-24-05-149.

- (d) The information sought in subparagraphs a and c cannot reasonably be developed through other means.
- (6) During each approved trial burn (or as soon after the burn as practicable), the applicant must make the following determinations:
- (a) A quantitative analysis of the trial principle organic hazardous constituents in the waste feed to the incinerator.
  - (b) A quantitative analysis of the exhaust gas for the concentration and mass emissions of the trial principle organic hazardous constituents, oxygen, and hydrogen chloride.
  - (c) A quantitative analysis of the scrubber water (if any), ash residues, and other residues, for the purpose of estimating the fate of the trial principle organic hazardous constituents.
  - (d) A computation of destruction and removal efficiency, in accordance with the destruction and removal efficiency formula specified in subsection 1 of section 33-24-05-147.
  - (e) If the hydrogen chloride emission rate exceeds one and eight-tenths kilograms of hydrogen chloride per hour [4 pounds per hour], a computation of the hydrogen chloride removal efficiency in accordance with subsection 2 of section 33-24-05-147.
  - (f) A computation of particulate emissions, in accordance with subsection 3 of section 33-24-05-147.
  - (g) An identification of sources of fugitive emissions and their means of control.
  - (h) A measurement of average, maximum, and minimum temperatures and combustion gas velocity.
  - (i) A continuous measurement of carbon monoxides in the exhaust gas.
  - (j) Such other information as the department may specify as necessary to ensure that the trial burn will determine compliance with the performance standard in section 33-24-05-147 and to establish the operating conditions required

by section 33-24-05-149 as necessary to meet that performance standard.

- (7) The applicant shall submit to the department a certification that the trial burn has been carried out in accordance with the approved trial burn plan, and shall submit the results of all the determinations required in paragraph 6. This submission must be made within ninety days of the completion of the trial burn, or later if approved by the department.
  - (8) All data collected during any trial burn must be submitted to the department following the completion of the trial burn.
  - (9) All submissions required by this subsection must be certified on behalf of the applicant by the signature of a person authorized to sign a permit application or a report under section 33-24-06-03.
  - (10) Based on the results of the trial burn, the department shall set the operating requirements in the final permit according to section 33-24-05-149. The permit modification must proceed as a minor modification according to section 33-24-06-14.
- c. For the purposes of allowing operation of a new hazardous waste incinerator following completion of the trial burn and prior to final modification of the permit conditions to reflect the trial burn results, the department may establish permit conditions including, but not limited to allowable waste feeds and operating conditions sufficient to meet the requirements of section 33-24-05-149 in the permit to a new hazardous waste incinerator. These permit conditions will be effective for the minimum time required to complete sample analysis, data computation, and submission of the trial burn results by the applicant, and modification of the facility permit by the department.
- (1) Applicants shall submit a statement with the permit application which identifies the conditions necessary to operate in compliance with the performance standards of section 33-24-05-147 during this period. This statement should include, at a minimum, restrictions on waste constituents, waste feed rates, and the operating parameters identified in section 33-24-05-149.
  - (2) The department will review this statement and any other relevant information submitted with the permit application and specify those requirements for this period most likely to meet the performance standards

of section 33-24-05-147 based on its engineering judgment.

d. For the purposes of determining feasibility of compliance with the performance standards of section 33-24-05-147 and of determining adequate operating conditions under section 33-24-05-149 the applicant for a permit to an existing hazardous waste incinerator may prepare and submit a trial burn plan and perform a trial burn in accordance with paragraphs 2 through 9 of subdivision b. Applicants who submit trial burn plans and receive approval before submission of a permit application, shall complete the trial burn and submit the results, specified in paragraph 6 of subdivision b, with the permit application. If completion of this process conflicts with the date set for submission of part B of the permit application, the applicant shall contact the department to establish a later date for submission of part B of the application or the trial burn results. If the applicant submits a trial burn plan with part B of the permit application, the trial burn must be conducted and the results submitted within a time period to be specified by the department.

3. **Permits for land treatment demonstrations using field tests or laboratory analyses.**

a. For the purpose of allowing an owner or operator to meet the treatment demonstration requirements of section 33-24-05-162 the department may issue a treatment demonstration permit. The permit must contain only those requirements necessary to meet the standards in subsection 3 of section 33-24-05-162. The permit may be issued either as a treatment or disposal permit covering only the field test or laboratory analyses or as a two-phase facility permit covering field tests or laboratory analyses and design construction, operation, and maintenance of the land treatment unit.

(1) The department may issue a two-phase facility permit if it finds that based on information submitted in the permit application substantial, although incomplete or inconclusive, information already exists on which to base the issuance of a facility permit.

(2) If the department finds that not enough information exists upon which it can establish permit conditions to attempt to provide for compliance with all the requirements of the land treatment requirements in sections 33-24-05-160 through 33-24-05-175, it shall issue a treatment demonstration permit covering only the field test or laboratory analyses.

- b. If the department finds that a phased permit may be issued it will establish as requirements in the first phase of the facility permit conditions for conducting a field test or laboratory analyses. These permit conditions will contain design and operating parameters (including the duration of the tests or analyses and, in the case of field tests, the horizontal and vertical dimensions of the treatment zone), monitoring procedures, postdemonstration cleanup activities, and any other conditions which the department finds may be necessary under subsection 3 of section 33-24-05-162. The department will include conditions in the second phase of the facility permit to attempt to meet all the land treatment requirements in sections 33-24-05-160 through 33-24-05-175 pertaining to unit design, construction, operation, and maintenance. The department will establish these conditions in the second phase of the permit, based upon the substantial but incomplete or inconclusive information contained in the permit application.
- (1) The first phase of the permit will be effective as provided in subsection 2 of section 33-24-07-11.
  - (2) The second phase of the permit will be effective as provided in subdivision d.
- c. When the owner or operator who has been issued a two-phase permit has completed the treatment demonstration the owner or operator shall submit to the department a certification signed by a person authorized to sign a permit application or report under section 33-24-06-03 that the field tests or laboratory analyses have been carried out in accordance with the conditions specified in phase one of the permit for conducting such tests or analyses. The owner or operator shall also submit all data collected during the field tests or laboratory analyses within ninety days of completion of those tests or analyses, unless the department approves a later date.
- d. If the department determines that the results of the field tests or laboratory analyses meet the requirements of section 33-24-05-162, it will modify the second phase of the permit to incorporate any requirements necessary for operation of the facility in compliance with the land treatment requirements of sections 33-24-05-160 through 33-24-05-175, based upon the results of the field tests or laboratory analyses.
- (1) This permit modification may proceed as a minor modification under section 33-24-06-14, provided any such change is minor, or otherwise will proceed as a modification under subdivision b of subsection 1 of section 33-24-06-12.

- (2) If no modifications of the second phase of the permit are necessary, or if only minor modifications are necessary and have been made, the department will give notice of its final decision to the permit applicant and to each person who submitted written comments on the phased permit, or who requested notice of final decision on the second phase of the permit. The second phase of the permit will then become effective as specified in subsection 2 of section 33-24-07-11.
- (3) If modifications under subdivision b of subsection 1 of section 33-24-06-12 are necessary, the second phase of the permit will become effective only after those modifications have been made.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-06-20. Interim permits for underground injection control wells.** The department may issue a permit under this chapter to any Class I underground injection control well injecting hazardous wastes within this state until an underground injection control program has been approved or promulgated. Any such permit must apply and ensure compliance with all applicable requirements of chapter 33-24-05, and must be for a term not to exceed two years. No such permit may be issued after approval or promulgation of an underground injection control program in this state. Any permit under this section must contain a condition providing that it will terminate upon final action by the department under an underground injection control program to issue or deny an underground injection control permit for the facility.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

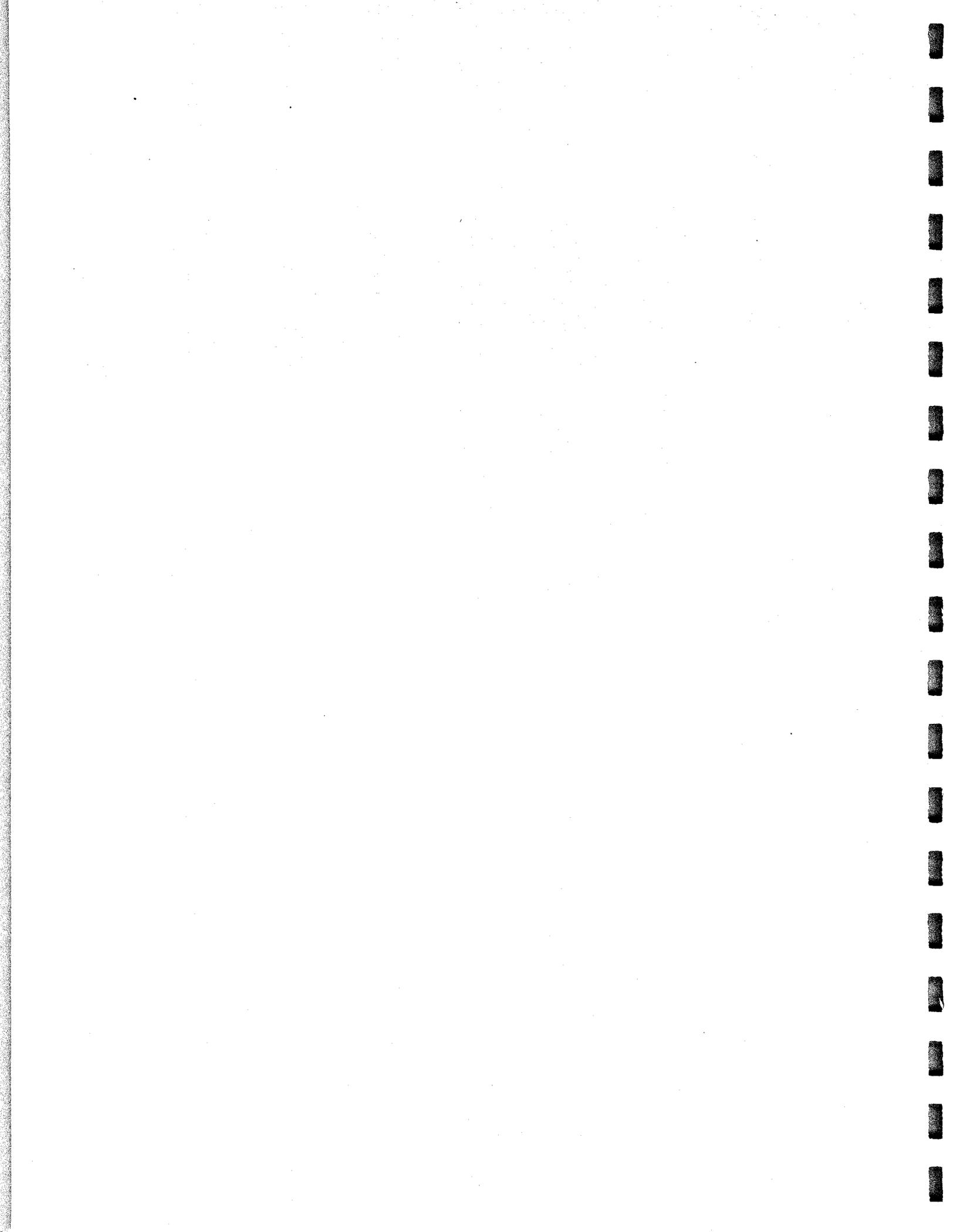
Law Implemented: NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05

**33-24-06-21. Fees.** The department may assess and collect reasonable fees for activities associated with permit applications, and for the issuance, modification, revocation and reissuance, termination, renewal, and transfer of permits.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03, 23-20.3-05.1

Law Implemented: NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05.1



## CHAPTER 33-24-07 PERMITTING PROCEDURES

Section	
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33-24-07-06	Public Notice of Permit Actions and Public Comment Period
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33-24-07-11	Issuance and Effective Date of Permit
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33-24-07-13	Response to Comments

**33-24-07-01. Purpose and scope.** This chapter contains procedures for issuing, modifying, revoking and reissuing, or terminating all permits, other than "emergency permits" (see section 33-24-06-19) and "permits by rule" (see section 33-24-06-18). The latter kinds of permits are governed by chapter 33-24-06. Operating status prior to final administrative approval of the permit application is not a "permit" and is covered by specific provisions in chapter 33-24-06.

**History:** Effective January 1, 1984.

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

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

### **33-24-07-02. Application for a permit.**

#### **1. General requirements.**

- a. Any person who requires a hazardous waste permit shall complete, sign, and submit to the department an application for such a permit. Applications are not required for hazardous waste permits by rule (section 33-24-06-18).

- b. The department shall not begin the processing of a permit until the applicant has fully complied with the application requirements for that permit. (See section 33-24-06-01.)
    - c. Permit applications must comply with the signature and certification requirements of section 33-24-06-03.
2. The department shall review for completeness every application for a hazardous waste permit. Each application for a permit submitted by a new hazardous waste management facility should be reviewed for completeness by the department within thirty days of its receipt. Each application for a permit submitted by an existing hazardous waste management facility (both parts A and B of the application) should be reviewed for completeness within sixty days of receipt. Upon completing the review, the department shall notify the applicant in writing whether the application is complete. If the application is incomplete, the department shall list the information necessary to make the application complete. When the application is for an existing hazardous waste management facility, the department shall specify in the notice of deficiency a date for submitting the necessary information. The department shall notify the applicant that the application is complete upon receiving this information. After the application is completed, the department may request additional information from an applicant, but only when necessary to clarify, modify, or supplement previously submitted material. Requests for such additional information will not render an application incomplete.
3. If an applicant fails or refuses to correct deficiencies in the application, the permit may be denied and appropriate enforcement actions may be taken under the applicable statutory provisions.
4. If the department decides that a site visit is necessary for any reason in conjunction with the processing of an application, it shall notify the applicant and a date shall be scheduled.
5. The effective date of an application is the date on which the department notifies the applicant that the application is complete as provided in subsection 2.
6. For each application from a major new hazardous waste management facility the department shall, no later than the effective date of the application, prepare and mail to the applicant a project decision schedule. The schedule must specify target dates by which the department intends to:
  - a. Prepare a draft permit;

- b. Give public notice;
- c. Complete the public comment period, including any public hearings; and
- d. Issue a final permit.

**History:** Effective January 1, 1984.

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

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

**33-24-07-03. Modification, revocation and reissuance, or termination of permits.**

1. Permits may be modified, revoked, and reissued, or terminated either at the request of any interested person (including the permittee) or upon the department's initiative. However, permits may only be modified, revoked and reissued, or terminated for the reasons specified in section 33-24-06-12 or 33-24-06-13. All requests shall be in writing and shall contain facts or reasons supporting the request.
2. If the department decides the request is not justified, the department shall send the requester a brief written response giving a reason for the decision. Denials of requests for modification, revocation and reissuance, or termination are not subject to public notice, comments, or hearings. Denials by the department may be informally appealed to the department by letter briefly setting forth the relevant facts. The department may then begin modification, revocation, and reissuance, or termination proceedings under subsection 3. The appeal shall be considered denied if the department takes no action on the letter within sixty days after receiving it.
3. Requirements to modify or revoke.
  - a. If the department tentatively decides to modify or revoke and reissue a permit under section 33-24-07-12, it shall prepare a draft permit under section 33-24-07-04 incorporating the proposed changes. The department may request additional information and, in the case of a modified permit, may require the submission of an updated permit application. In the case of revoked and reissued permits, the department shall require the submission of a new application.
  - b. In a permit modification under this section, only those conditions to be modified shall be reopened when a new draft permit is prepared. All other aspects of the existing permit shall remain in effect for the duration of the unmodified permit. When a permit is revoked and reissued under this section, the entire permit is reopened

just as if the permit had expired and was being reissued. During any revocation and reissuance proceeding, the permittee shall comply with all conditions of the existing permit until a new final permit is reissued.

- c. "Minor modifications" as defined in section 33-24-06-14 are not subject to the requirements of this section.
4. If the department tentatively decides to terminate a permit under section 33-24-06-13 it shall issue a notice of intent to terminate. A notice of intent to terminate is a type of draft permit which follows the same procedures as any draft permit prepared under section 33-24-07-04.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

#### 33-24-07-04. Draft permits.

1. Once an application is complete, the department shall tentatively decide whether to prepare a draft permit or to deny the application.
2. If the department tentatively decides to deny the permit application, the department shall issue a notice of intent to deny. A notice of intent to deny the permit application is a type of draft permit which follows the same procedures as any draft permit prepared under this section. (See subsection 4.) If the department's final decision is that the tentative decision to deny the permit application was incorrect, the department shall withdraw the notice of intent to deny and proceed to prepare a draft permit under subsection 3.
3. If the department decides to prepare a draft permit, the department shall prepare a draft permit that contains the following information:
  - a. All conditions under sections 33-24-06-04 and 33-24-06-05.
  - b. All compliance schedules under section 33-24-06-07.
  - c. All monitoring requirements under section 33-24-06-08.
  - d. Standards for treatment, storage, and disposal and other permit conditions under section 33-24-06-04.
4. All draft permits prepared under this section shall be accompanied by a fact sheet (section 33-24-07-05), publicly noticed (section 33-24-07-06), and shall be made available for public comment (section 33-24-07-07). The department shall give notice of opportunity for a public hearing

(section 33-24-07-08), issue a final decision (section 33-24-07-11) and respond to comments (section 33-24-07-13). An appeal may be taken under section 33-24-07-14.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

### 33-24-07-05. Fact sheet.

1. A fact sheet must be prepared for every draft permit for a major hazardous waste management facility or activity, and for every draft permit which the department finds is the subject of widespread public interest or raises major issues. The fact sheet must briefly set forth the principle facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. The department shall send this fact sheet to the applicant and, on request, to any other person.
2. The fact sheet must include, when applicable:
  - a. A brief description of the type of facility or activity which is the subject of the draft permit.
  - b. The type and quantity of wastes, fluids, or pollutants which are proposed to be, or are being treated, stored, disposed of, or injected.
  - c. A brief summary of the basis for the draft permit conditions including references to applicable statutory or regulatory provisions.
  - d. Reasons why any requested variances or alternatives to required standards do or do not appear justified.
  - e. A description of the procedures for reaching a final decision on the draft permit including:
    - (1) The beginning and ending dates of the comment period under section 33-24-07-06 and the address where comments will be received;
    - (2) Procedures for requesting a hearing and the nature of that hearing; and
    - (3) Any other procedures by which the public may participate in the final decision.

- f. Name and telephone number of a person to contact for additional information.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-07-06.** Public notice of permit actions and public comment period.

**1. Scope.**

- a. The department shall give public notice that the following actions have occurred:
- (1) A permit application has been tentatively denied under subsection 2 of section 33-24-07-04.
  - (2) A draft permit has been prepared under subsection 3 of section 33-24-07-04.
  - (3) A hearing has been scheduled under section 33-24-07-08.
  - (4) An appeal has been granted under subsection 3 of section 33-24-07-14.
- b. No public notice is required when a request for permit modification, revocation and reissuance, or termination is denied under subsection 2 of section 33-24-07-03. Written notice of that denial must be given to the requester and to the permittee.
- c. Public notices may describe more than one permit or permit action.

**2. Timing.**

- a. Public notice of the preparation of a draft permit (including a notice of intent to deny a permit application) required under subsection 1 must allow at least forty-five days for public comment.
- b. Public notice of a public hearing must be given at least thirty days before the hearing. (Public notice of the hearing may be given at the same time as public notice of the draft permit and the two notices may be combined.)

- 3. Methods.** Public notice of activities described in subdivision a of subsection 1 must be given by the following methods:

a. By mailing a copy of a notice to the following persons (any person otherwise entitled to receive notice under this subsection may waive that person's rights to receive notice for any classes and categories of permits):

(1) The applicant.

(2) Any other agency which the department knows has issued or is required to issue permits for the same facility or activity, including the environmental protection agency.

(3) Federal and state agencies with jurisdiction over fish, shellfish, and wildlife resources, the advisory council on historic preservation, state historic preservation officers, and other appropriate government authorities, including other affected states.

(4) Persons on a mailing list developed by:

(a) Including those who request in writing to be on the list;

(b) Soliciting persons for "area lists" from participants in past permit proceedings in that area; and

(c) Notifying the public of the opportunity to be put on the mailing list through periodic publication in the public press and in such publications as regional and state funded newsletters, environmental bulletins, or state law journals. (The department may update the mailing list from time to time by requesting written indication of continued interest from those listed. The department may delete from the list the name of any person who fails to respond to such a request.)

b. This notice must comply with subsection 8 of North Dakota Century Code section 23-20.3-05, and must be in a manner constituting legal notice to the public under state law.

c. Any other method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it, including press releases or any other form or medium to elicit public participation.

#### 4. Contents.

a. All public notices. All public notices issued under this chapter must contain the following minimum information:

- (1) Name and address of the office processing the permit action for which notice is being given.
- (2) Name and address of the permittee or permit applicant and, if different, of the facility or activity regulated by the permit.
- (3) A brief description of the business conducted at the facility or activity described in the permit application or the draft permit.
- (4) Name, address, and telephone number of a person from whom interested persons may obtain further information, including copies of the draft permit, fact sheet, and the application.
- (5) A brief description of the comment procedures required by sections 33-24-07-07 and 33-24-07-08 and the time and place of any hearing that will be held, including a statement of procedures to request a hearing (unless a hearing has already been scheduled) and other procedures by which the public may participate in the final permit decision.
- (6) Any additional information considered necessary or proper.

b. **Public notices for hearings.** In addition to the general public notice described in subdivision a, the public notice of a hearing under section 33-24-07-08, must contain the following information:

- (1) Reference to the date of previous public notices relating to the permit.
- (2) Date, time, and place of the hearing.
- (3) A brief description of the nature and purpose of the hearing, including the applicable rules and procedures.

5. **Distribution of copies.** In addition to the general public notice described in subdivision a of subsection 4, all persons identified in paragraphs 1, 2, and 3 of subdivision a of subsection 3 must be mailed a copy of the fact sheet, the permit application (if any), and the draft permit (if any).

**History:** Effective January 1, 1984.

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

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

**33-24-07-07. Public comments and requests for public hearings.**  
During the public comment period provided under section 33-24-07-06, any interested person may submit written comments on the draft permit and may request a public hearing, if no hearing has already been scheduled.

A request for a public hearing must be in writing and must state the nature of the issues proposed to be raised in the hearing. All comments must be considered in making the final decision and must be answered as provided in section 33-24-07-13.

**History:** Effective January 1, 1984.

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

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

**33-24-07-08. Public hearings.**

1. The department shall hold a public hearing:
  - a. Whenever it finds, on the basis of requests, a significant degree of public interest in a draft permit.
  - b. At its discretion, whenever for instance, such a hearing might clarify one or more issues involved in the permit decision.
  - c. Whenever it receives written notice of opposition to a draft permit and a request for a hearing within forty-five days of public notice under subdivision a of subsection 2 of section 33-24-07-06.
2. Whenever possible, the department shall schedule a hearing under this section at a location convenient to the nearest population center to the proposed facility.
3. Public notice of the hearing shall be given as specified in section 33-24-07-06.
4. Whenever a public hearing will be held, the department shall designate a presiding officer for the hearing who shall be responsible for its scheduling and orderly conduct.
5. Any person may submit oral or written statements and data concerning a draft permit. Reasonable limits may be set upon the time allowed for oral statements and the submission of statements in writing may be required. The public comment period under section 33-24-07-06 must automatically be extended to the close of any public hearing under this section. The hearing officer may also extend the comment period by so stating at the hearing.

6. A tape recording or written transcript of the hearing must be made available to the public.

**History:** Effective January 1, 1984.

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

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

**33-24-07-09. Obligation to raise issues and provide information during the public comment period.** All persons, including applicants, who believe any condition of a draft permit is inappropriate or that the department's tentative decision to deny an application, terminate a permit, or prepare a draft permit is inappropriate, shall raise all reasonably ascertainable issues and submit all reasonably available arguments and factual grounds supporting their position, including all supporting material, by the close of the public comment period (including any public hearing) under section 33-24-07-06. All supporting materials must be included in full and may not be incorporated by reference, unless they consist of state or federal statutes or regulations, or other generally available reference materials. Commenters shall make supporting material available to the department. (A comment period longer than thirty days will often be necessary in complicated proceedings to give commenters a reasonable opportunity to comply with the requirements of this section. Commenters may request longer comment periods and they should be freely established under section 33-24-07-06 to the extent that they appear necessary.)

**History:** Effective January 1, 1984.

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

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

**33-24-07-10. Reopening of the public comment period.**

1. If any data, information, or arguments submitted during the public comment period, including information or arguments required under section 33-24-07-09, appear to raise substantial new questions concerning a permit, the department may take one or more of the following actions:
  - a. Prepare a new draft permit, appropriately modified, under section 33-24-07-04.
  - b. Prepare a revised fact sheet under section 33-24-07-05 and reopen the comment period under section 33-24-07-10.
  - c. Reopen or extend the comment period under section 33-24-07-06 to give interested persons an opportunity to comment on the information or arguments submitted.
2. Comments filed during the reopened comment period must be limited to the substantial new questions that caused its

reopening. The public notice under section 33-24-07-06 defines the scope of the reopening.

3. Public notice of any of the above actions must be issued under section 33-24-07-06.

**History:** Effective January 1, 1984.

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

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

### **33-24-07-11. Issuance and effective date of permit.**

1. After the close of the public comment period under section 33-24-07-06 on a draft permit, the department shall issue a final permit decision. The department shall notify the applicant and each person who has submitted written comments or requested notice of the final permit decision. This notice must include reference to the procedures for appealing a decision on a permit or a decision to terminate a permit. For the purposes of this section, a final permit decision means a final decision to issue, deny, modify, revoke and reissue, or terminate a permit.
2. A final permit decision becomes effective thirty days after the service of notice of the decision under subsection 1, unless:
  - a. A later effective date is specified in the decision;
  - b. Review is requested under section 33-24-07-14; or
  - c. No comments required a change in the draft permit, in which case the permit shall become effective immediately upon issuance.

**History:** Effective January 1, 1984.

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

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

### **33-24-07-12. Stays of contested permit conditions.**

1. Stays.
  - a. If a request for review of a permit under section 33-24-07-14 is granted, the effect of the contested permit conditions is stayed and is not subject to judicial review pending final department action. If the permit involves a new facility the applicant is without a permit for the proposed new facility pending final agency action.

- b. Uncontested conditions which are not severable from those contested must be stayed together with the contested conditions. Stayed provisions of permits for existing facilities must be identified by the department. All other provisions of the permit for the existing facility remain fully effective and enforceable.
2. Stays based on cross effects. A stay may be granted based on the grounds that an appeal to the department under section 33-24-07-14 of one permit may result in changes to another permit only when each of the permits involved has been appealed to the department and it has accepted each appeal.
3. Any facility or activity holding an existing permit shall:
  - a. Comply with the conditions of that permit during any modification or revocation and reissuance proceedings under section 33-24-07-03; and
  - b. To the extent conditions of any new permit are stayed under this section, comply with the conditions of the existing permit which corresponds to the stayed conditions, unless compliance with the existing conditions would be technologically incompatible with compliance with other conditions of the new permit which have not been stayed.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

### 33-24-07-13. Response to comments.

1. At the time that a final permit is issued under section 33-24-07-11, the department shall issue a response to comments. This response must:
  - a. Specify which provisions, if any, of the draft permits have been changed in the final permit decision, and the reasons for the change; and
  - b. Briefly describe and respond to all significant comments on the draft permit raised during the public comment period or during any hearing.
2. The response to comments must be available to the public.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

to enter the active portion, and that entry onto the active portion can be dangerous.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-06. General inspection requirements.**

1. The owner or operator shall inspect the facility for malfunctions and deterioration, operator errors, and discharges which may be causing or may lead to release of hazardous waste constituents to the environment, or a threat to human health. The owner or operator shall conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.
2. Schedule requirements.
  - a. The owner or operator shall develop and follow a written schedule for inspecting all monitoring equipment, safety, and emergency equipment, security devices, and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting, or responding to environmental or human health hazards.
  - b. The owner or operator shall keep this schedule at the facility.
  - c. The schedule must identify the types of problems, e.g., malfunctions or deterioration, which are to be looked for during the inspection, e.g., inoperative sump pump, leaking fitting, eroding dike, etc.
  - d. The frequency of inspection may vary for the items on the schedule. However, it should be based on the rate of possible deterioration of equipment and the probability of an environmental or human health incident if the deterioration or malfunction or any operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, must be inspected daily when in use. At a minimum, the inspection schedule must include the items and frequencies called for in sections 33-24-05-93, 33-24-05-106, 33-24-05-117, 33-24-05-132, 33-24-05-150, and 33-24-05-178, where applicable.
3. The owner or operator shall remedy any deterioration or malfunction of equipment or structures which the inspection reveals on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a

hazard is imminent or has already occurred, remedial action must be taken immediately.

4. The owner or operator shall record inspections in an inspection log or summary. The owner or operator shall keep these records for at least three years from the date of inspection. At a minimum, these records must include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

### 33-24-05-07. Personnel training.

#### 1. Initial training requirements.

- a. Facility personnel shall successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of these rules. The owner or operator shall ensure that this program includes all the elements described in the document required under subdivision c of subsection 4.
- b. This program must be directed by a person trained in hazardous waste management procedures, and must include instruction which teaches facility personnel hazardous waste management procedures, including contingency plan implementation, relevant to the positions in which they are employed.
- c. At a minimum, the training program must be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including where applicable:
  - (1) Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment.
  - (2) Key parameters for automatic waste feed cutoff systems.
  - (3) Communications or alarm systems.
  - (4) Response to fires or explosions.
  - (5) Response to ground water contamination incidents.

(6) Shutdown of operations.

2. Facility personnel shall successfully complete the program required in subsection 1 within six months after January 1, 1984, or six months after the date of their employment or assignment to a facility, or to a new position at a facility, whichever is later. Employees hired after January 1, 1984, may not work in unsupervised positions until they have completed the training requirements of subsection 1.
3. Facility personnel shall take part in an annual review of the initial training required in subsection 1.
4. The owner or operator shall maintain the following documents and records at the facility:
  - a. The job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job.
  - b. A written job description for each position listed under subdivision a. This description may be consistent in its degree of specificity with descriptions for other similar positions in the same company location or bargaining unit, but must include the requisite skill, education, or other qualifications and duties of facility personnel assigned to each person.
  - c. A written description of the type and amount of both introductory and continuing training that will be given to each person filling a position listed under subdivision a.
  - d. Records that document that the training or job experience required under subsections 1, 2, and 3 has been given to, and completed by, facility personnel.
5. Training records on current personnel must be kept until closure of the facility. Training records on former employees must be kept for at least three years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

33-24-05-08. General requirements for ignitable, reactive, or incompatible wastes.

1. The owner or operator shall take precautions to prevent accidental ignition or reaction of ignitable or reactive

waste. This waste must be separated and protected from sources of ignition or reaction including, but not limited to: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled, the owner or operator shall confine smoking and open flames to specially designated locations. "No Smoking" signs must be conspicuously placed wherever there is a hazard from ignitable or reactive wastes.

2. Where specifically required by other sections of this chapter, the treatment, storage, or disposal of ignitable or reactive waste, and the mixture or commingling of incompatible wastes, or incompatible wastes and materials, must be conducted so that it does not:
  - a. Generate extreme heat or pressure, fire or explosion, or violent reaction;
  - b. Produce uncontrolled toxic mists, fumes, dust, or gases in sufficient quantity to threaten human health or the environment;
  - c. Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;
  - d. Damage the structural integrity of the device or facility;  
or
  - e. Through other like means threaten human health or the environment.
3. When required to comply with subsection 1 or 2, the owner or operator shall document that compliance. This documentation may be based on references to published scientific or engineering literature data, from trial tests (e.g., bench scale or pilot scale tests), waste analysis (as specified in section 33-24-05-04), or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions.

**History:** Effective January 1, 1984.

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

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

**33-24-05-09. Location standards.** The department will not issue a permit to any facility which is or will be constructed in a location with a geology, hydrogeology, hydrology, or topography which the department reasonably believes is incompatible with the type of hazardous waste management activity occurring or proposed to occur.

Locations which are specifically within the meaning of this section include but are not limited to floodplains, ground water recharge areas, highly permeable soils, high ground water tables, and areas of high topographic relief.

**History:** Effective January 1, 1984.

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

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

33-24-05-10. [Reserved]

33-24-05-11. [Reserved]

33-24-05-12. [Reserved]

33-24-05-13. [Reserved]

33-24-05-14. [Reserved]

33-24-05-15. **Design and operation of facility.** Facilities must be designed, constructed, maintained, and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or nonsudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

**History:** Effective January 1, 1984.

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

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

33-24-05-16. **Required equipment.** All facilities must be equipped with the following, unless it can be demonstrated to the department that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below:

1. An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel.
2. A device, such as a telephone (immediately available at the scene of operations), or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams.
3. Portable fire extinguishers, fire control equipment, including special extinguishing equipment (such as that using foam, inert gas, or dry chemicals), spill control equipment and decontamination equipment.

4. Water at adequate volume and pressure to supply water hose streams, foam-producing equipment, automatic sprinklers, or water spray systems.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-17. Testing and maintenance of equipment.** All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary, to ensure its proper operation in time of emergency.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-18. Access to communications or alarm system.**

1. Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not required under section 33-24-05-16.
2. If there is ever just one employee on the premises while the facility is operating, that employee must have immediate access to a device, such as a telephone, immediately available at the scene of the operation, or a hand-held two-way radio, capable of summoning external emergency assistance, unless such a device is not required under section 33-24-05-16.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-19. Required aisle space.** The owner or operator shall maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless it can be demonstrated to the department that aisle space is not needed for any of these purposes.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

33-24-05-20. Arrangements with local authorities.

1. The owner or operator shall attempt to make the following arrangements, as appropriate for the types of waste handled at the facility and the potential need for the services of these organizations:
  - a. Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazardous places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes.
  - b. Where more than one police and fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department and agreements with any others to provide support to the primary emergency authority.
  - c. Agreements with state emergency response teams, emergency response contractors, and equipment suppliers.
  - d. Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.
2. Where state or local authorities decline to enter into such arrangements, the owner or operator shall document the refusal in the operating record.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

33-24-05-21. [Reserved]

33-24-05-22. [Reserved]

33-24-05-23. [Reserved]

33-24-05-24. [Reserved]

33-24-05-25. [Reserved]

33-24-05-26. Purpose and implementation of contingency plan.

1. Each owner or operator shall have a contingency plan for the facility. The contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or nonsudden release of

hazardous waste or hazardous waste constituents to air, soil, or surface water.

2. The provisions of the plan must be carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

**History:** Effective January 1, 1984.

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

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

### 33-24-05-27. Content of contingency plan.

1. The contingency plan must describe the actions facility personnel must take to comply with sections 33-24-05-26 and 33-24-05-31 in response to fires, explosions, or any unplanned sudden or nonsudden release of hazardous waste or hazardous constituents to air, soil, or surface water at the facility.
2. If the owner or operator has already prepared some other emergency or contingency plan, the owner or operator need only amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with these requirements.
3. The plan must describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and state and local emergency response teams to coordinate emergency services, pursuant to section 33-24-05-20.
4. The plan must list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator and this list must be kept up-to-date. Where more than one is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates.
5. The plan must include a list of all emergency equipment at the facility, such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment, where this equipment is required. This list must be kept up-to-date. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities.
6. The plan must include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe signals to be used to begin evacuation, evacuation routes, and alternate evacuation

routes, in cases where the primary routes could be blocked by releases of hazardous waste or fires.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-28. Copies of contingency plan.** A copy of the contingency plan and all revisions to the plan must be:

1. Maintained at the facility; and
2. Submitted to all local police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-29. Amendment of contingency plan.** The contingency plan must be reviewed, and immediately amended, if necessary, whenever:

1. The facility permit is revised;
2. The plan fails in an emergency;
3. The facility changes in its design, construction, operation, maintenance, or other circumstances, in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;
4. The list of emergency coordinators changes; or
5. The list of emergency equipment changes.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-30. Emergency coordinator.** At all times, there must be at least one employee either on the facility premises or on call, i.e., available to respond to an emergency by reaching the facility within a short period of time, with the responsibility for coordinating all emergency response measures. This emergency coordinator shall be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of wastes handled, the location of all records within the facility, and the facility layout. In addition, this person must

have the authority to commit the resources needed to carry out the contingency plan.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-31. Emergency procedures.**

1. Whenever there is an imminent or actual emergency situation, the emergency coordinator, or the coordinator's designee when the emergency coordinator is on call, shall immediately:
  - a. Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel.
  - b. Notify appropriate state or local agencies with designated response roles if their help is needed.
2. Whenever there is a release, fire, or explosion, the emergency coordinator shall immediately identify the character, exact source, amount, and areal extent of any released materials. The emergency coordinator may do this by observation or review of facility records or manifests and, if necessary, by chemical analysis.
3. Concurrently, the emergency coordinator shall assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion, e.g., the effects of any toxic irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water runoffs from water or chemical agents used to control fire and heat-induced explosions.
4. If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health or the environment outside the facility, the emergency coordinator shall report the coordinator's findings as follows:
  - a. If the coordinator's assessment indicates that evacuation of local areas may be advisable, the coordinator shall immediately notify appropriate local authorities. The coordinator shall be available to help appropriate officials decide whether local areas should be evacuated.
  - b. The coordinator shall immediately notify either the government official designated as the on-scene coordinator for that geographical area or the national response center

(using their 24-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, e.g., release, fire.
  - (4) Name and quantity of materials involved, to the extent known.
  - (5) The extent of injuries, if any.
  - (6) The possible hazard to human health or the environment, outside the facility.
5. During an emergency, the emergency coordinator shall take all reasonable measures to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers.
  6. If the facility stops operations in response to a fire, an explosion or release, the emergency coordinator shall monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.
  7. Immediately after an emergency, the emergency coordinator shall provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.
  8. The emergency coordinator shall ensure that, in the affected areas of the facility:
    - a. No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and
    - b. All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.
  9. The owner or operator shall notify the department and other appropriate state and local authorities, that the facility is in compliance with subsection 8 before operations are resumed in the affected areas of the facility.

10. The owner or operator shall note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within fifteen days after the incident, the owner or operator must submit a written report on the incident to the department. The report must include:
- a. Name, address, and telephone number of the owner or operator.
  - b. Name, address, and telephone number of the facility.
  - c. Date, time, and type of incident, e.g., fire, explosion.
  - d. Name and quantity of materials involved.
  - e. The extent of injuries, if any.
  - f. An assessment of actual or potential hazards to human health or the environment, where this is applicable.
  - g. Estimated quantity and disposition of recovered material that resulted from the incident.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

33-24-05-32. [Reserved]

33-24-05-33. [Reserved]

33-24-05-34. [Reserved]

33-24-05-35. [Reserved]

33-24-05-36. [Reserved]

33-24-05-37. Applicability of manifest system, recordkeeping, and reporting requirements. Sections 33-24-05-37 through 33-24-05-46 apply to owners and operators of both onsite and offsite facilities except as section 33-24-05-01 provides otherwise. 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.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

33-24-05-38. Use of manifest system.

1. If a facility receives hazardous waste accompanied by a manifest, the owner or operator, or the owner's or operator's agent, shall:
  - a. Sign and date each copy of the manifest to certify that the hazardous waste covered by the manifest was received.
  - b. Note any significant discrepancies in the manifest, as defined in subsection 1 of section 33-24-05-39 on each copy of the manifest.
  - c. Immediately give the transporter at least one copy of the signed manifest.
  - d. Within thirty days after the delivery, send a copy of the manifest to the generator.
  - e. Retain at the facility a copy of each manifest for at least three years from the date of delivery.
2. If a facility receives, from a rail or water (bulk shipment) transporter, hazardous waste which is accompanied by a shipping paper containing all the information required on the manifest (excluding the identification numbers, generator's certification, and signatures), the owner or operator, or the owner's or operator's agent, shall:
  - a. Sign and date each copy of the manifest or shipping paper (if the manifest has not been received) to certify that the hazardous waste covered by the shipping paper was received.
  - b. Note any significant discrepancies (as defined in subsection 1 of section 33-24-05-39) in the manifest or shipping paper on each copy of the manifest or shipping paper.
  - c. Immediately give the rail or water (bulk shipment) transporter at least one copy of the manifest or shipping paper.
  - d. Within thirty days after the delivery, send a copy of the manifest to the generator; however, if the manifest has not been received within thirty days after delivery, the owner or operator, or the owner's or operator's agent, must sign and date the shipping paper and return it to the generator.

- e. Retain at the facility a copy of each shipping paper and manifest for at least three years from the date of delivery.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

### 33-24-05-39. Manifest discrepancies.

1. Manifest discrepancies are differences between the quantity or type of hazardous waste designated on the manifest or shipping paper, and the quantity or type of hazardous waste a facility actually receives. Significant discrepancies in type are obvious differences which can be discovered by inspection or waste analysis, such as waste solvents substituted for waste acid, or toxic constituents not reported on the manifest or shipping paper. Significant discrepancies in quantity are:
  - a. For bulk wastes, variations greater than ten percent in weight.
  - b. For batch wastes, any variation in piece count, such as a discrepancy of one drum in a truckload.
2. Upon discovering a significant discrepancy, the owner or operator shall attempt to reconcile the discrepancy with the waste generator or transporter, e.g., with telephone conversations. If the discrepancy is not resolved within fifteen days after receiving the waste, the owner or operator shall immediately submit to the department a letter describing the discrepancy and attempts to reconcile it, and a copy of the manifest or shipping paper at issue.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

### 33-24-05-40. Operating record.

1. The owner or operator shall keep a written operating record at the facility.
2. The following information must be recorded, as it becomes available, and maintained in the operating record until closure of the facility:
  - a. A description and quantity of each hazardous waste received and the methods and dates of its treatment, storage, or disposal at the facility as required by Appendix 1.

- b. The location of each hazardous waste within the facility and the quantity at each location. For disposal facilities, the location and quantity of each hazardous waste must be recorded on a map or diagram of each cell or disposal area. For all facilities, this information must include cross-reference to specific manifest document numbers, if the waste was accompanied by a manifest.
- c. Records and results of waste analysis and trial tests performed as specified in sections 33-24-05-04, 33-24-05-08, and 33-24-05-145.
- d. Summary reports and details of all incidents that require implementing the contingency plan as specified in subsection 10 of section 33-24-05-31.
- e. Records and results of inspections as required by subsection 4 of section 33-24-05-06 (except these data need to be kept only three years).
- f. Monitoring, testing, or analytical data where required by sections 33-24-05-47 through 33-24-05-58 and sections 33-24-05-117, 33-24-05-132, 33-24-05-150, 33-24-05-164, 33-24-05-165, 33-24-05-167, 33-24-05-178, and 33-24-05-180.
- g. For offsite facilities, notices to generators as specified in subsection 2 of section 33-24-05-03.
- h. All closure and postclosure cost estimates under section 33-24-05-76.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-41. Availability, retention, and disposition of records.**

1. All records, including plans, required under this chapter must be furnished upon request, and made available at all reasonable times for inspection, by a duly designated officer, employee, or representative of the department.
2. The retention period for all records is extended automatically during the course of any unresolved enforcement action regarding the facility or as requested by the department.

3. A copy of records of waste disposal locations and quantities under subdivision b of subsection 2 of section 33-24-05-40 must be submitted to the department and local land authority upon closure of the facility.

**History:** Effective January 1, 1984.

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

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

**33-24-05-42. Annual report.** The owner or operator shall prepare and submit a single copy of an annual report to the department by March first of each year. The report form and instructions can be obtained from the department's division of environmental waste management and research. The annual report must cover facility activities during the previous calendar year and must include the following information:

1. The identification number, name, and address of the facility.
2. The calendar year covered by the report.
3. For offsite facilities, identification number of each hazardous waste generator from which the facility received a hazardous waste during the year; for imported shipments, the report must give the name and address of the foreign generator.
4. A description and quantity of each hazardous waste the facility received during the year. For offsite facilities, this information must be listed by identification number of each generator.
5. The method of treatment, storage, or disposal for each hazardous waste.
6. Any ground water monitoring data which the owner or operator is required to collect under section 33-24-05-55, 33-24-05-56, or 33-24-05-57, and which the owner or operator has not otherwise submitted to the department under those sections.
7. The most recent closure and postclosure cost estimate under section 33-24-05-76.
8. The certification signed by the owner or operator of the facility or the owner's or operator's authorized representative.

**History:** Effective January 1, 1984.

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

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

**33-24-05-43. Unmanifested waste report.** If a facility accepts for treatment, storage, or disposal any hazardous waste from an offsite source without an accompanying manifest, or without an accompanying shipping paper as described in subdivision b of subsection 5 of section 33-24-04-04 and if the waste is not excluded from the manifest requirement by section 33-24-02-05, then the owner or operator shall prepare and submit a single copy of a report to the department within fifteen days after receiving the waste. The report must be designated "Unmanifested Waste Report" and must include the following information:

1. The identification number, name, and address of the facility.
2. The date the facility received the waste.
3. The identification number, name, and address of the generator and the transporter, if available.
4. A description and the quantity of each unmanifested hazardous waste the facility received.
5. The method of treatment, storage, or disposal for each hazardous waste.
6. The certification signed by the owner or operator of the facility or the owner's or operator's authorized representative.
7. A brief explanation of why the waste was unmanifested, if known.

**History:** Effective January 1, 1984.

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

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

**33-24-05-44. Additional reports.** In addition to submitting the annual reports and unmanifested waste reports described in sections 33-24-05-42 and 33-24-05-43, the owner or operator shall also report to the department:

1. Releases, fires, and explosions as specified in subsection 10 of section 33-24-05-31.
2. Facility closures specified in section 33-24-05-64.
3. As otherwise required by sections 33-24-05-47 through 33-24-05-58, 33-24-05-115 through 33-24-05-143, and 33-24-05-160 through 33-24-05-200.

**History:** Effective January 1, 1984.

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

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

33-24-05-45. [Reserved]

33-24-05-46. [Reserved]

33-24-05-47. Applicability of ground water protection requirements.

1. Except as provided in subsection 2, sections 33-24-05-47 through 33-24-05-58 (hereinafter referred to as the "ground water protection requirements") apply to owners and operators of facilities that treat, store, or dispose of hazardous waste in surface impoundments, waste piles, land treatment units, or landfills. The owner or operator shall satisfy the ground water protection requirements for all waste (or constituents thereof) contained in any such waste management unit at the facility that receives hazardous waste after January 1, 1984 (hereinafter referred to as a "regulated unit"). Any waste or waste constituent migrating beyond the waste management area under subsection 2 of section 33-24-05-52 is assumed to originate from a regulated unit, unless the department finds that such waste or waste constituent originated from another source.
2. The owner or operator is not subject to regulation under this chapter if:
  - a. The owner or operator is exempted under section 33-24-05-01;
  - b. The department finds, pursuant to subsection 4 of section 33-24-05-167, that the treatment zone of a land treatment unit does not contain levels of hazardous constituents that are above background levels of those constituents by an amount that is statistically significant, and if an unsaturated zone monitoring program meeting the requirements of section 33-24-05-165 has not shown a statistically significant increase in hazardous constituents below the treatment zone during the operating life of the unit. An exemption under this subdivision can only relieve an owner or operator of responsibility to meet the ground water protection requirements of this chapter during the postclosure care period; or
  - c. The department finds that there is no potential for migration of liquid from a regulated unit to the uppermost aquifer during the active life of the regulated unit (including the closure period) and the postclosure care period specified under section 33-24-05-65. This demonstration must be certified by a qualified geologist or geotechnical engineer. In order to provide an adequate margin of safety in the prediction of potential migration of liquid, the owner or operator shall base any

predictions made under this subdivision on assumptions that maximize the rate of liquid migration.

3. The ground water protection requirements apply during the active life of the regulated unit (including the closure period). After closure of the regulated unit, the ground water protection requirements:
  - a. Do not apply if all waste, waste residues, contaminated containment system components, and contaminated subsoils are removed or decontaminated at closure;
  - b. Apply during the postclosure care period under section 33-24-05-65 if the owner or operator is conducting a detection monitoring program under section 33-24-05-55; or
  - c. Apply during the compliance period under section 33-24-05-53 if the owner or operator is conducting a compliance monitoring program under section 33-24-05-56 or a corrective action program under section 33-24-05-57.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

#### 33-24-05-48. Required programs.

1. Owners and operators subject to the ground water protection requirements shall conduct a monitoring and response program as follows:
  - a. Whenever hazardous constituents under section 33-24-05-50 from a regulated unit are detected at the compliance point under section 33-24-05-52, the owner or operator shall institute a compliance monitoring program under section 33-24-05-56;
  - b. Whenever the ground water protection standard under section 33-24-05-49 is exceeded, the owner or operator shall institute a corrective action program under section 33-24-05-57;
  - c. Whenever hazardous constituents under section 33-24-05-50 from a regulated unit exceed concentration limits under section 33-24-05-51 in ground water between the compliance point under section 33-24-05-52 and the downgradient facility boundary property, the owner or operator shall institute a corrective action program under section 33-24-04-57; or
  - d. In all other cases, the owner or operator shall institute a detection monitoring program under section 33-24-05-55.

2. The department will specify in the facility permit the specific elements of the monitoring and response program. The department may include one or more of the programs identified in subsection 1 in the facility permit as may be necessary to protect human health and the environment and will specify the circumstances under which each of the programs will be required. In deciding whether to require the owner or operator to be prepared to institute a particular program, the department will consider the potential adverse effects on human health and the environment that might occur before final administrative action on a permit modification application to incorporate such a program could be taken.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

33-24-05-49. Ground water protection standard. The owner or operator shall comply with conditions specified in the facility permit that are designed to ensure that hazardous constituents under section 33-24-05-50 entering the ground water from a regulated unit do not exceed the concentration limits under section 33-24-05-51 in the uppermost aquifer underlying the waste management area beyond the point of compliance under section 33-24-05-52 during the compliance period under section 33-24-05-53. The department will establish this ground water protection standard in the facility permit when hazardous constituents have entered the ground water from a regulated unit.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

33-24-05-50. Hazardous constituents.

1. The department will specify in the facility permit the hazardous constituents to which the ground water protection standard of section 33-24-05-49 applies. Hazardous constituents are constituents identified in Appendix V of chapter 33-24-02 that have been detected in ground water in the uppermost aquifer underlying a regulated unit and that are reasonably expected to be in or derived from waste contained in a regulated unit, unless the department has excluded them under subsection 2.
2. The department will exclude an Appendix V (of chapter 33-24-02) constituent from the list of hazardous constituents specified in the facility permit if it finds that the constituent is not capable of posing a substantial present or potential hazard to human health or the environment. In deciding whether to grant an exemption, the department will consider the following:

- a. Potential adverse effects on ground water quality, considering:
- (1) The physical and chemical characteristics of the waste in the regulated units, including its potential for migration.
  - (2) The hydrogeological characteristics of the facility and surrounding land.
  - (3) The quantity of ground water and the direction of ground water flow.
  - (4) The proximity and withdrawal rates of ground water users.
  - (5) The current and future uses of ground water in the area.
  - (6) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground water quality.
  - (7) The potential for health risks caused by human exposure to waste constituents.
  - (8) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.
  - (9) The persistence and permanence of the potential adverse effect.
- b. Potential adverse effects on hydraulically connected surface water quality, considering:
- (1) The volume and physical and chemical characteristics of the waste in the regulated unit.
  - (2) The hydrogeological characteristics of the facility and surrounding land.
  - (3) The quantity and quality of ground water, and the direction of ground water flow.
  - (4) The patterns of rainfall in the region.
  - (5) The proximity of the regulated unit to surface water.
  - (6) The current and future uses of surface water in the area and any water quality standards established for those surface waters.

- (7) The existing quality of surface water, including other sources of contamination and the cumulative impact on surface water quality.
  - (8) The potential for health risks caused by human exposure to waste constituents.
  - (9) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.
  - (10) The persistence and permanence of the potential adverse effects.
3. In making any determination under subsection 2 about the use of ground water in the area around the facility, the department will consider any identification of underground sources of drinking water and exempted aquifers made under provisions of the Safe Drinking Water Act and 40 CFR 122.35.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

#### 33-24-05-51. Concentration limits.

1. The department will specify in the facility permit concentration limits in the ground water for hazardous constituents established under section 33-24-05-50. The concentration of a hazardous constituent:
  - a. May not exceed the background level of that constituent in the ground water at the time that limit is specified in the permit;
  - b. For any of the constituents listed in Table 1, may not exceed the respective value given in that table if the background level of the constituent is below the value given in Table 1; or
  - c. May not exceed an alternate limit established by the department under subsection 2.

TABLE 1

MAXIMUM CONCENTRATION OF CONSTITUENTS FOR  
GROUND WATER PROTECTION

Constituent	Maximum Concentration, mg/l
Arsenic	0.05
Barium	1.0
Cadmium	0.01
Chromium	0.05
Lead	0.05
Mercury	0.002
Selenium	0.01
Silver	0.05
Endrin (1, 2, 3, 4, 10, 10-hexachloro-1, 7-epoxy - 1, 4, 4a, 5, 6, 7, 8, 9a - octahydro-1, 4-endo, endo-5, 8- dimethano naphthalene)	0.0002
Lindane (1, 2, 3, 4, 5, 6-hexachlorocyclohexane, gamma isomer)	0.004
Methoxychlor (1, 1, 1 - trichloro - 2, 2 - bis [p - methoxyphenyl] ethane)	0.1
Toxaphene (C <sub>10</sub> H <sub>10</sub> Cl <sub>8</sub> technical chlorinated camphene, 67-69% chlorine)	0.005
2,4-D (2,4-dichlorophenoxyacetic acid)	0.1
2,4,5 - TP silvex (2,4,5-trichlorophenoxypropionic acid)	0.01

2. The department will establish an alternate concentration limit for a hazardous constituent if it finds that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the alternate concentration limit is not exceeded. In establishing alternate concentration limits, the department will consider the following factors:

- a. Potential adverse effects on ground water quality, considering:
  - (1) The physical and chemical characteristics of the waste in the regulated unit, including the potential for migration.
  - (2) The hydrogeological characteristics of the facility and surrounding land.
  - (3) The quantity of ground water and direction of ground water flow.
  - (4) The proximity and withdrawal rates of ground water users.

- (5) Current and future uses of ground water in the area.
  - (6) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground water quality.
  - (7) The potential for health risks caused by human exposure to waste constituents.
  - (8) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.
  - (9) The persistence and permanence of potential adverse effects.
- b. Potential adverse effects on hydraulically connected surface water quality, considering:
- (1) The volume and physical and chemical characteristics of the waste in the regulated unit.
  - (2) The hydrogeological characteristics of the facility and surrounding land.
  - (3) The quantity and quality of ground water, and the direction of ground water flow.
  - (4) The patterns of rainfall in the region.
  - (5) The proximity of the regulated unit to surface waters.
  - (6) The current and future uses of surface waters in the area and any water quality standards established for those surface waters.
  - (7) Existing quality of surface water, including other sources of contamination and the cumulative impact on surface water quality.
  - (8) The potential for health risks caused by human exposure to waste constituents.
  - (9) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.
  - (10) The persistence and permanence of the potential adverse effects.
3. In making any determination under subsection 2 about the use of ground water in the area around the facility the department

will consider any identification of underground sources of drinking water and exempted aquifers made under provisions of the Safe Drinking Water Act and 40 CFR 122.35.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-52. Point of compliance.**

1. The department will specify in the facility permit the point of compliance at which the ground water protection standard of section 33-24-05-49 applies and at which monitoring must be conducted. The point of compliance is a vertical surface located at the hydraulically downgradient limit of the waste management area that extends down into the uppermost aquifer underlying the regulated units.
2. The waste management area is the limit projected in the horizontal plane of the area on which waste will be placed during the active life of a regulated unit.
  - a. The waste management area includes horizontal space taken up by any liner, dike, or other barrier designed to contain waste in a regulated unit.
  - b. If the facility contains more than one regulated unit, the waste management area is described by an imaginary line circumscribing the several regulated units.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-53. Compliance period.**

1. The department will specify in the facility permit the compliance period during which the ground water protection standard of section 33-24-05-49 applies. The compliance period is the number of years equal to the active life of the waste management area (including any waste management activity prior to permitting, and the closure period).
2. The compliance period begins when the owner or operator initiates a compliance monitoring program meeting the requirements of section 33-24-05-56.
3. If the owner or operator is engaged in a corrective action program at the end of the compliance period specified in subsection 1, the compliance period is extended until the owner or operator can demonstrate that the ground water

protection standard of section 33-24-05-49 has not been exceeded for a period of three consecutive years.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-54. General ground water monitoring requirements.** The owner or operator shall comply with the following requirements for any ground water monitoring program developed to satisfy section 33-24-05-55, 33-24-05-56, or 33-24-05-57:

1. The ground water monitoring system must consist of a sufficient number of wells, installed at appropriate locations and depth to yield ground water samples from the uppermost aquifer that:
  - a. Represent the quality of background water that has not been affected by leakage from a regulated unit; and
  - b. Represent the quality of ground water passing the point of compliance.
2. If a facility contains more than one regulated unit, separate ground water monitoring systems are not required for each regulated unit provided that provisions for sampling the ground water in the uppermost aquifer will enable detection and measurement at the compliance point of hazardous constituents from the regulated units that have entered the ground water in the uppermost aquifer.
3. All monitoring wells must be cased in a manner that maintains the integrity of the monitoring well borehole. This casing must be screened or perforated and packed with gravel or sand, where necessary, to enable collection of ground water samples. The annular space, i.e., the space between the borehole and well casing, above the sampling depth must be sealed to prevent contamination of samples and the ground water.
4. The ground water monitoring program must include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide a reliable indication of ground water quality below the waste management area. At a minimum, the program must include procedures and techniques for:
  - a. Sample collection.
  - b. Sample preservation and shipment.
  - c. Analytical procedures.

- d. Chain of custody control.
5. The ground water monitoring program must include sampling and analytical methods that are appropriate for ground water sampling and that accurately measure hazardous constituents in ground water samples.
6. The ground water monitoring program must include a determination of the ground water surface elevation each time ground water is sampled.
7. Where appropriate the ground water monitoring program must establish background ground water quality for each of the hazardous constituents or monitoring parameters or constituents specified in the permit.
  - a. In the detection monitoring program in section 33-24-05-55, background ground water quality for a monitoring parameter or constituent must be based on data from quarterly sampling of wells upgradient from the waste management area for one year.
  - b. In the compliance monitoring program under section 33-24-05-56, background ground water quality for a hazardous constituent must be based on data from upgradient wells that:
    - (1) Is available before the permit is issued.
    - (2) Accounts for measurement errors in sampling and analysis.
    - (3) Accounts to the extent feasible, for seasonal fluctuation in background ground water quality if such fluctuations are expected to affect the concentration of the hazardous constituents.
  - c. Background quality may be based on sampling of wells that are not upgradient from the waste management area where:
    - (1) Hydrogeologic conditions do not allow the owner or operator to determine what wells are upgradient; or
    - (2) Sampling at other wells will provide an indication of background ground water quality that is as representative or more representative than that provided by the upgradient wells.
  - d. In developing the data base used to determine a background value for each parameter or constituent, the owner or operator shall take the minimum of one sample from each well and a minimum of four samples from an entire system

used to determine background ground water quality, each time the system is sampled.

8. The owner or operator shall use the following statistical procedures in determining whether background values or concentration limits have been exceeded:
  - a. If, in a detection monitoring program, the level of a constituent at the compliance point is to be compared to the constituent's background values and that background value has a sample coefficient of variation less than 1.00:
    - (1) The owner or operator shall take at least four portions from a sample at each well at the compliance point and determine whether the difference between the mean of the constituent at each well (using all portions taken) and the background value for the constituent is significant at the 0.05 level using the Cochran's Approximation to the Behrens-Fisher Student's t-test as described in Appendix II of this chapter. If the test indicates that the difference is significant, the owner or operator shall repeat the same procedure (with at least the same number of portions as used in the first test) with a fresh sample from the monitoring well. If this second round of analysis indicates that the difference is significant, the owner or operator shall conclude that a statistically significant change has occurred; or
    - (2) The owner or operator may use an equivalent statistical procedure for determining whether a statistically significant change has occurred. The department will specify such a procedure in the facility permit if it finds that the alternative procedure reasonably balances the probability of falsely identifying a noncontaminating regulating unit and the probability of failing to identify a contaminating regulating unit in a manner that is comparable to that of the statistical procedure described in paragraph 1.
  - b. In all other situations in a detection monitoring program and in a compliance monitoring program, the owner or operator shall use a statistical procedure providing reasonable confidence that the migration of hazardous constituents in a regulated unit into and through the aquifer will be indicated. The department will specify a statistical procedure in the facility permit that it finds:

- (1) Is appropriate for the distribution of the data used to establish background values for concentration limits; and
- (2) Provides a reasonable balance between the probability of falsely identifying a noncontaminating regulated unit and the probability of failing to identify a contaminating regulated unit.

**History:** Effective January 1, 1984.

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

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

**33-24-05-55. Detection monitoring program.** An owner or operator required to establish a detection monitoring program shall, at a minimum, discharge the following responsibilities:

1. The owner or operator shall monitor for indicator parameters (e.g., specific conductance, total organic carbon, or total organic halogen), waste constituents, or reaction products that provide a reliable indication of the presence of hazardous constituents in ground water. The department will specify the parameters or constituents to be monitored in the facility permit, after considering the following factors:
  - a. The types, quantities, and concentrations of constituents in wastes managed at the regulated unit.
  - b. The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the waste management area.
  - c. The detectability of indicator parameters, waste constituents, and reaction products in ground water.
  - d. The concentrations or values and coefficients of variation of proposed monitoring parameters or constituents in the ground water background.
2. The owner or operator shall install a ground water monitoring system at the compliance point under section 33-24-05-52 which complies with subdivision b of subsection 1, and subsections 2 and 3, of section 33-24-05-54.
3. The owner or operator shall establish a background value for each monitoring parameter or constituent specified in the permit pursuant to subsection 1. The permit will specify the background values for each parameter or specify the procedures to be used to calculate the background values.

- a. The owner or operator shall comply with subsection 7 of section 33-24-05-54 in developing the data base used to determine background values.
  - b. The owner or operator shall express background values in a form necessary for the determination of statistically significant increases under subsection 8 of section 33-24-05-54.
  - c. In taking samples used in the determination of background values, the owner or operator shall use a ground water monitoring system that complies with subdivision a of subsection 1, and subsections 2 and 3, of section 33-24-05-54.
4. The owner or operator shall determine ground water quality at each monitoring well at the compliance point at least semiannually during the active life of a regulated unit (including the closure period) and the postclosure care period. The owner or operator shall express the ground water quality at each monitoring well in a form necessary for the determination of statistically significant increases under subsection 8 of section 33-24-05-54.
  5. The owner or operator shall determine the ground water flow rate and direction in the uppermost aquifer at least annually.
  6. The owner or operator shall use procedures and methods for sampling and analysis that meet the requirements of subsections 4 and 5 of section 33-24-05-54.
  7. The owner or operator shall determine whether there is a statistically significant increase over background values for any parameter or constituent specified in the permit pursuant to subsection 1 each time the owner or operator determines ground water quality at the compliance point under subsection 4.
    - a. In determining whether a statistically significant increase has occurred, the owner or operator shall compare the ground water quality at each monitoring well at the compliance point for each parameter or constituent to the background value for that parameter or constituent, according to the statistical procedure specified in the permit under subsection 8 of section 33-24-05-54.
    - b. The owner or operator shall determine whether there has been a statistically significant increase at each monitoring well at the compliance point within a reasonable time period after completion of sampling. The department will specify that time period in the facility permit, after considering the complexity of the

statistical test and availability of laboratory facilities to perform the analysis of ground water samples.

8. If the owner or operator determines, pursuant to subsection 7, that there is a statistically significant increase for parameters or constituents specified pursuant to subsection 1 at any monitoring well at the compliance point, the owner or operator shall:
  - a. Notify the department of this finding in writing within seven days. The notification must indicate what parameters or constituents have shown statistically significant increases.
  - b. Immediately sample the ground water in all monitoring wells and determine the concentration of all constituents identified in Appendix V of chapter 33-24-02 that are present in ground water.
  - c. Establish a background value for each Appendix V constituent that has been found at the compliance point under subdivision b, as follows:
    - (1) The owner or operator shall comply with subsection 7 of section 33-24-05-54 in developing the data base used to determine background values.
    - (2) The owner or operator must express background values in a form necessary for the determination of statistically significant increases under subsection 8 of section 33-24-05-54.
    - (3) In taking samples used in the determination of background values, the owner or operator must use a ground water monitoring system that complies with subdivision a of subsection 1, and subsections 2 and 3, of section 33-24-05-54.
  - d. Within ninety days submit to the department an application for a permit modification to establish a compliance monitoring program meeting the requirements of section 33-24-05-56. The application must include the following information:
    - (1) An identification of the concentration of any Appendix V constituents found in the ground water at each monitoring well at the compliance point.
    - (2) Any proposed changes to the ground water monitoring system at the facility necessary to meet the requirements of section 33-24-05-56.

- (3) Any proposed changes to the monitoring frequency, sampling and analysis procedures or methods or statistical procedures used at the facility necessary to meet the requirements of section 33-24-05-56.
  - (4) For each hazardous constituent found at the compliance point, a proposed concentration limit under subdivision a or b of subsection 1 of section 33-24-05-51, or a notice of intent to seek a variance under subsection 2 of section 33-24-05-51.
- e. Within one hundred eighty days, submit to the department:
- (1) All data necessary to justify any variance sought under subsection 2 of section 33-24-05-51.
  - (2) An engineering feasibility plan for a corrective action program necessary to meet the requirements of section 33-24-05-57, unless:
    - (a) All hazardous constituents identified under subdivision b of subsection 8 of this section are listed in Table 1 of section 33-24-05-51 and their concentrations do not exceed the respective values given in that table; or
    - (b) The owner or operator has sought a variance under subsection 2 of section 33-24-05-51 for every hazardous constituent identified under subdivision b.
9. If the owner or operator determines, pursuant to subsection 7, that there is a statistically significant increase of parameters or constituents specified pursuant to subsection 1 at any monitoring well at the compliance point, the owner or operator may demonstrate that a source other than a regulated unit caused the increase or that the increase resulted from error in sampling, analysis, or evaluation. While the owner or operator may make such a demonstration in addition to, or in lieu of, submitting a permit modification application under subdivision d of subsection 8, the owner or operator must still submit a permit modification application within the time specified in subdivision d of subsection 8 should the demonstration be unsuccessful. In making a demonstration under this subsection, the owner or operator shall:
- a. Notify the department in writing within seven days of determining a statistically significant increase at the compliance point that the owner or operator intends to make a demonstration under this subsection.
  - b. Within ninety days submit a report to the department which demonstrates that a source other than a regulated unit

caused the increase, or that the increase resulted from error in sampling, analysis, or evaluation.

- c. Within ninety days, submit to the department an application for a permit modification to make any appropriate changes to the detection monitoring program at the facility.
  - d. Continue to monitor in accordance with the detection monitoring program established under this section.
10. If the owner or operator determines that the detection monitoring program no longer satisfies the requirements of this section, the owner or operator shall, within ninety days, submit an application for a permit modification to make any appropriate changes to the program.
  11. The owner or operator must assure that monitoring and corrective action measures necessary to achieve compliance with the ground water protection standard under section 33-24-05-49 are taken during the term of the permit.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-56. Compliance monitoring program.** An owner or operator who is required to establish a compliance monitoring program under this chapter shall, at a minimum, discharge the following responsibilities:

1. The owner or operator shall monitor the ground water to determine whether regulated units are in compliance with the ground water protection standard under section 33-24-05-49. The department will specify the ground water protection standard in the facility permit, including:
  - a. A list of the hazardous constituents identified under section 33-24-05-50.
  - b. Concentration limits under section 33-24-05-51 for each of those hazardous constituents.
  - c. The compliance point under section 33-24-05-52.
  - d. The compliance period under section 33-24-05-53.
2. The owner or operator shall install a ground water monitoring system at the compliance point as specified under section 33-24-05-52. The ground water monitoring system must comply with subdivision b of subsection 1, and subsections 2 and 3, of section 33-24-05-54.

3. Where a concentration limit established under subdivision b of subsection 1 is based on background ground water quality, the department will specify the concentration limit in the permit as follows:
  - a. If there is a high temporal correlation between upgradient and compliance point concentrations of the hazardous constituents, the owner or operator may establish the concentration limit through sampling at upgradient wells each time ground water is sampled at the compliance point. The department will specify the procedures used for determining the concentration limit in this manner in the permit. In all other cases, the concentration limit will be the mean of the pooled data on the concentration of the hazardous constituent.
  - b. If a hazardous constituent is identified on Table 1 under section 33-24-05-51 and the difference between the respective concentration limit in Table 1 and the background value of that constituent under subsection 7 of section 33-24-05-54 is not statistically significant, the owner or operator shall use the background value of the constituent as the concentration limit. In determining whether this difference is statistically significant, the owner or operator shall use a statistical procedure providing reasonable confidence that a real difference will be indicated. The statistical procedure must:
    - (1) Be appropriate for the distribution of the data used to establish background values; and
    - (2) Provide a reasonable balance between the probability of falsely identifying a significant difference and the probability of failing to identify a significant difference.
  - c. The owner or operator shall:
    - (1) Comply with subsection 7 of section 33-24-05-54 in developing data base used to determine background values.
    - (2) Express background values in a form necessary for the determination of statistically significant increases under subsection 8 of section 33-24-05-54.
    - (3) Use a ground water monitoring system that complies with subdivision a of subsection 1, and subsections 2 and 3, of section 33-24-05-54.
4. The owner or operator shall determine the concentration of hazardous constituents in ground water at each monitoring well at the compliance point at least quarterly during the

compliance period. The owner or operator shall express the concentration at each monitoring well in a form necessary for the determination of statistically significant increases under subsection 8 of section 33-24-05-54.

5. The owner or operator shall determine the ground water flow rate and direction in the uppermost aquifer at least annually.
6. The owner or operator shall analyze samples from all monitoring wells at the compliance point for all constituents contained in Appendix V of chapter 33-24-02 at least annually to determine whether additional hazardous constituents are present in the uppermost aquifer. If the owner or operator finds Appendix V constituents in the ground water that are not identified in the permit as hazardous constituents, the owner or operator shall report the concentrations of these additional constituents to the department within seven days after completion of the analysis.
7. The owner or operator shall use procedures and methods of sampling and analysis that meet the requirements of subsections 4 and 5 of section 33-24-05-54.
8. The owner or operator shall determine whether there is a statistically significant increase over the concentration limits for any hazardous constituents specified in the permit pursuant to subsection 1 each time the owner or operator determines the concentration of hazardous constituents in ground water at the compliance point.
  - a. In determining whether a statistically significant increase has occurred, the owner or operator shall compare the ground water quality at each monitoring well at the compliance point for each hazardous constituent to the concentration limit for that constituent according to the statistical procedures specified in the permit under subsection 8 of section 33-24-05-54.
  - b. The owner or operator shall determine whether there has been a statistically significant increase at each monitoring well at the compliance point, within a reasonable time period after completion of sampling. The department will specify that time period in the facility permit, after considering the complexity of the statistical test and availability of laboratory facilities to perform the analysis of ground water samples.
9. If the owner or operator determines, pursuant to subsection 8, that the ground water protection standard is being exceeded at any monitoring well at the point of compliance, the owner or operator shall:

- a. Notify the department of this finding in writing within seven days. The notification must indicate what concentration limits have been exceeded.
  - b. Submit to the department an application for a permit modification to establish a corrective action program meeting the requirements of section 33-24-05-57 within one hundred eighty days, or within ninety days if an engineering feasibility study has been previously submitted to the department under subdivision e of subsection 8 of section 33-24-05-55. The application must at a minimum include the following information:
    - (1) A detailed description of corrective actions that will achieve compliance within the ground water protection standard specified in the permit under subsection 1.
    - (2) A plan for a ground water monitoring program that will demonstrate the effectiveness of the corrective action. Such a ground water monitoring program may be based on a compliance monitoring program developed to meet the requirements of this section.
10. If the owner or operator determines, pursuant to subsection 8 that the ground water protection standard is being exceeded at any monitoring well at the point of compliance, the owner or operator may demonstrate that a source other than a regulated unit caused the increase or that the increase resulted from an error in sampling, analysis, or evaluation. While the owner or operator may make such a demonstration in addition to, or in lieu of, submitting a permit modification application under subdivision b of subsection 9, the owner or operator shall still submit a permit modification application within the time specified in subdivision b of subsection 9 should the demonstration be unsuccessful. In making a demonstration under this subsection, the owner or operator shall:
- a. Notify the department in writing within seven days that the owner or operator intends to make a demonstration under this subsection.
  - b. Within ninety days, submit a report to the department which demonstrates that a source other than a regulated unit caused the standard to be exceeded or that the apparent noncompliance with the standards resulted from error in sampling, analysis, or evaluation.
  - c. Within ninety days, submit to the department an application for a permit modification to make any appropriate changes to the compliance monitoring program at the facility.

- d. Continue to monitor in accordance with the compliance monitoring program established under this section.
11. If the owner or operator determines that the compliance monitoring program no longer satisfies the requirements of this section, the owner or operator shall, within ninety days, submit an application for a permit modification to make any appropriate changes to the program.
12. The owner or operator shall assure that monitoring and corrective action measures necessary to achieve compliance with the ground water protection standard under section 33-24-05-49 are taken during the term of this permit.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-57. Corrective action program.** An owner or operator required to establish a corrective action program shall, at a minimum, discharge the following responsibilities:

1. The owner or operator shall take corrective action to ensure that regulated units are in compliance with the ground water protection standard under section 33-24-05-49. The department will specify the ground water protection standard in the facility permit including:
  - a. A list of the hazardous constituents identified under section 33-24-05-50.
  - b. Concentration limits under section 33-24-05-51 for each of those hazardous constituents.
  - c. The compliance point under section 33-24-05-52.
  - d. The compliance period under section 33-24-05-53.
2. The owner or operator shall implement a corrective action program that prevents hazardous constituents from exceeding their respective concentration limits at the compliance point by removing the hazardous waste constituents or treating them in place. The permit will specify the specific measures that will be taken.
3. The owner or operator shall begin corrective action within a reasonable time period after the ground water protection standard is exceeded. The department will specify that time period in the facility permit. If a facility permit includes a corrective action program in addition to a compliance monitoring program, the permit will specify when the corrective action will begin and such a requirement will

operate in lieu of subdivision b of subsection 9 of section 33-24-05-56.

4. In conjunction with a corrective action program, the owner or operator shall establish and implement a ground water monitoring program to demonstrate the effectiveness of the corrective action program. Such a monitoring program may be based on the requirements for a compliance monitoring program under section 33-24-05-56 and must be as effective as that program in determining compliance with the ground water protection standard under section 33-24-05-49 and in determining the success of a corrective action program under subsection 5 where appropriate.
5. In addition to the other requirements of this section, the owner or operator shall conduct a corrective action program to remove or treat in place any hazardous constituents under section 33-24-05-50 that exceeds concentration limits under section 33-24-05-51 in ground water between the compliance point under section 33-24-05-52 and the downgradient facility property boundary. The permit will specify the measures to be taken.
  - a. Corrective action measures under this subsection must be initiated and completed within a reasonable length of time considering the extent of contamination.
  - b. Corrective action measures under this subsection may be terminated once the concentration of hazardous constituents under section 33-24-05-50 is reduced to levels below their respective concentration levels under section 33-24-05-51.
6. The owner or operator shall continue corrective action measures during the compliance period to the extent necessary to ensure that the ground water protection standard is not exceeded. If the owner or operator is conducting corrective action at the end of the compliance period the owner or operator shall continue that corrective action for as long as necessary to achieve compliance with the ground water protection standard. The owner or operator may terminate corrective action measures taken beyond the period equal to the active life of the waste management area (including the closure period) if the owner or operator can demonstrate, based on data from the ground water monitoring program under subsection 4 that the ground water protection standard of section 33-24-05-49 has not been exceeded for a period of three consecutive years.
7. The owner or operator shall report in writing to the department on the effectiveness of the corrective action program. The owner or operator shall submit these reports semiannually.

8. If the owner or operator determines that the corrective action program no longer satisfies the requirements of this section, the owner or operator shall, within ninety days, submit an application for a permit modification to make any appropriate changes to the program.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-58. [Reserved]**

**33-24-05-59. Applicability of closure and postclosure requirements.** Except as section 33-24-05-01 provides otherwise:

1. Sections 33-24-05-60 through 33-24-05-64 (which concern closure) apply to the owners and operators of all hazardous waste management facilities.
2. Sections 33-24-05-65 through 33-24-05-68 (which concern postclosure care) apply to the owners and operators of:
  - a. All hazardous waste disposal facilities; and
  - b. Piles and surface impoundments from which the owner or operator intends to remove the wastes at closure, to the extent that these sections are made applicable to such facilities in sections 33-24-05-119 and 33-24-05-135.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-60. Closure performance standard.** The owner or operator shall close the facility in a manner that:

1. Minimizes the need for further maintenance; and
2. Controls, minimizes, or eliminates, to the extent necessary to protect human health and the environment, postclosure escape of hazardous waste, hazardous waste constituents, leachate, contaminated rainfall, or waste decomposition products to the ground water or surface waters, or to the atmosphere.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

33-24-05-61. Closure plan - Amendment of plan.

1. The owner or operator of a hazardous waste management facility shall have a written closure plan. The plan must be submitted with the permit application, in accordance with subdivision m of subsection 2 of section 33-24-06-17, and approved by the department as part of the permit issuance proceeding under chapter 33-24-07. In accordance with section 33-24-06-05, the approved closure plan will become a condition of the hazardous waste permit. The department's decision must assure that the approved closure plan is consistent with sections 33-24-05-60, 33-24-05-62, 33-24-05-63, 33-24-05-64, and the applicable requirements of sections 33-24-05-97, 33-24-05-107, 33-24-05-119, 33-24-05-135, 33-24-05-151, 33-24-05-167, and 33-24-05-180. A copy of the approved plan and all revisions to the plan must be kept at the facility until closure is completed and certified in accordance with section 33-24-05-64. The plan must identify steps necessary to completely or partially close the facility at any point during its intended operating life and to completely close the facility at the end of its intended operating life. The closure plan must include, at least:
  - a. A description of how and when the facility will be partially closed, if applicable, and finally closed. The description must identify the maximum extent of the operation which will be unclosed during the life of the facility, and how the requirements of sections 33-24-05-60, 33-24-05-62, 33-24-05-63, 33-24-05-64, and the applicable closure requirements of sections 33-24-05-97, 33-24-05-107, 33-24-05-119, 33-24-05-135, 33-24-05-151, 33-24-05-167, and 33-24-05-180 will be met.
  - b. An estimate of the maximum inventory of wastes in storage and in treatment at any time during the life of the facility. (Any change in this estimate is a minor modification under section 33-24-06-14.)
  - c. A description of the steps needed to decontaminate facility equipment during closure.
  - d. An estimate of the expected year of closure and a schedule for final closure. The schedule must include, at a minimum, the total time required to close the facility and the time required for intervening closure activities which will allow tracking of the progress of closure. (For example, in the case of a landfill, estimates of the time required to treat and dispose of all waste inventory and of the time required to place a final cover must be included.)
2. The owner or operator may amend the closure plan at any time during the active life of the facility. (The active life of

the facility is that period during which wastes are periodically received.) The owner or operator shall amend the plan whenever changes in operating plans or facility design affect the closure plan, or whenever there is a change in the expected year of closure. When the owner or operator requests a permit modification to authorize a change in operating plans or facility design, the owner or operator shall request a modification of the closure plan at the same time. If a permit modification is not needed to authorize the change in operating plans or facility design, the request for modification of the closure plan must be made within sixty days after the change in plans or design occurs.

3. The owner or operator shall notify the department at least one hundred eighty days prior to the date the owner or operator expects to begin closure.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

#### 33-24-05-62. Closure - Time allowed for closure.

1. Within ninety days after receiving the final volume of hazardous wastes, the owner or operator shall treat, remove from the site, or dispose of onsite, all hazardous wastes in accordance with the approved closure plan. The department may approve a longer period if the owner or operator demonstrates that:
  - a. One or both of the following paragraphs apply:
    - (1) The activities required to comply with this paragraph will, of necessity, take longer than ninety days to complete.
    - (2) All of the following subparagraphs apply.
      - (a) The facility has the capacity to receive additional wastes.
      - (b) There is a reasonable likelihood that a person other than the owner or operator will recommence operation of the site.
      - (c) Closure of the facility would be incompatible with continued operation of the site.
  - b. The owner or operator has taken and will continue to take all steps to prevent threats to human health and the environment.

2. The owner or operator shall complete closure activities in accordance with the approved closure plan and within one hundred eighty days after receiving the final volume of wastes. The department may approve a longer closure period if the owner or operator demonstrates that:
  - a. One or both of the following paragraphs apply:
    - (1) The closure activities will, of necessity, take longer than one hundred eighty days to complete.
    - (2) All of the following subparagraphs apply.
      - (a) The facility has the capacity to receive additional wastes.
      - (b) There is reasonable likelihood that a person other than the owner or operator will recommence operation of the site.
      - (c) Closure of the facility would be incompatible with continued operation of the site.
  - b. The owner or operator has taken and will continue to take all steps to prevent threats to human health and the environment from the unclosed but inactive facility.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

33-24-05-63. Disposal or decontamination of equipment. When closure is completed, all facility equipment and structures must have been properly disposed of or decontaminated by removing all hazardous waste and residue.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

33-24-05-64. Certification of closure. When closure is completed, the owner or operator shall submit to the department certification both by the owner or operator and by an independent registered professional engineer that the facility has been closed in accordance with specifications in the approved closure plan.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

33-24-05-65. Postclosure care and use of property.

1. Postclosure care requirements.

a. Postclosure care must continue for thirty years after the date of completing closure and must consist of at least the following:

(1) Ground water monitoring and reporting in accordance with this chapter.

(2) Maintenance and monitoring of waste containment systems in accordance with this chapter.

b. Postclosure care considerations.

(1) During the one hundred eighty-day period preceding closure (see subsection 3 of section 33-24-05-61) or at any time thereafter, the department may reduce the postclosure care period to less than thirty years if it finds that the reduced period is sufficient to protect human health and the environment (e.g., leachate or ground water monitoring results, characteristics of the waste, application of advanced technology, or alternative disposal, treatment, or reuse techniques indicate that the facility is secure).

(2) Prior to the time that the postclosure care period is due to expire, the department may extend the postclosure care period if it finds that the extended period is necessary to protect human health and the environment (e.g., leachate or ground water monitoring results indicate a potential for migration of waste at levels which may be harmful to human health or the environment).

2. The department may require, at closure, continuation of any of the security requirements of section 33-24-05-05 during part or all of the postclosure period after the date of completing closure when:

a. Wastes may remain exposed after completion of closure; or

b. Access by the public or domestic livestock may pose a hazard to human health.

3. Postclosure use of property on or in which hazardous wastes remain after closure must never be allowed to disturb the integrity of the final cover, liners, or any other components of any containment system, or the function of the facility's monitoring systems, unless the department finds that the disturbance:

- a. Is necessary to the proposed use of the property, and will not increase the potential hazard to human health or the environment; or
  - b. Is necessary to reduce a threat to human health or the environment.
4. All postclosure care activities must be in accordance with the provisions of the approved postclosure plan as specified in section 33-24-05-66.

**History:** Effective January 1, 1984.

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

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

#### 33-24-05-66. Postclosure plan - Amendment of plan.

1. The owner or operator of a disposal facility shall have a written postclosure plan. In addition, certain piles and certain surface impoundments from which the owner or operator intends to remove the wastes at closure are required by sections 33-24-05-119 and 33-24-05-135 to have postclosure plans. The plan must be submitted with a permit application, in accordance with subdivision m of subsection 2 of section 33-24-06-17 and approved by the department as part of the permit issuance proceeding under chapter 33-24-07. In accordance with section 33-24-06-05, the approved postclosure plan will become a condition of any permit issued. A copy of the approved plan and all revisions to the plan must be kept at the facility until the postclosure care period begins. This plan must identify the activities which will be carried on after closure and the frequency of these activities, and include at least the following:
  - a. A description of the planned monitoring activities and the frequencies at which they will be performed to comply with sections 33-24-05-47 through 33-24-05-58, 33-24-05-115 through 33-24-05-143, and 33-24-05-160 through 33-24-05-200 during the postclosure period.
  - b. A description of the planned maintenance activities and frequencies at which they will be performed to ensure:
    - (1) The integrity of the cap and final cover or other containment systems in accordance with the requirements of sections 33-24-05-115 through 33-24-05-143, and 33-24-05-160 through 33-24-05-200.
    - (2) The function of the facility monitoring equipment; in accordance with the requirements of sections 33-24-05-47 through 33-24-05-58, 33-24-05-115 through 33-24-05-143, and 33-24-05-160 through 33-24-05-200.

- c. The name, address, and phone number of the person or office to contact about the disposal facility during the postclosure period. This person or office shall keep an updated postclosure plan during the postclosure period.
2. The owner or operator may amend the postclosure plan at any time during the active life of the disposal facility or during the postclosure care period. The owner or operator shall amend the plan whenever changes in operating plans or facility design, or events which occur during the active life of the facility or during the postclosure period, affect the postclosure plan. The owner or operator shall also amend the plan whenever there is a change in the expected year of closure.
3. When a permit modification is requested during the active life of the facility to authorize a change in operating plans or facility design, modification of the postclosure plan must be requested at the same time. In all other cases the request for modification of the postclosure plan must be made within sixty days after the change in operating plans or facility design or the events which affect the postclosure plan occur.

**History:** Effective January 1, 1984.

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

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

**33-24-05-67. Notice to local land authority.** Within ninety days after closure is completed, the owner or operator of a disposal facility shall submit to the local zoning authority, or the authority with jurisdiction over local land use and to the department a survey plat indicating the location and dimensions of landfill cells or other disposal areas with respect to permanently surveyed bench marks. This plat must be prepared and certified by a professional land surveyor. The plat filed with the local zoning authority, or the authority with jurisdiction over local land use, must contain a note, prominently displayed, which states the owner's or operator's obligation to restrict disturbance of the site as specified in subsection 3 of section 33-24-05-65. In addition, the owner or operator shall submit to the department and to the local zoning authority or the authority with jurisdiction over local land use, a record of the type, location, and quantity of hazardous wastes disposed of within each cell or area of the facility. For wastes disposed of before this article was adopted, the owner or operator shall identify the type, location, and quantity of the wastes to the best of the owner's or operator's knowledge and in accordance with any records the owner or operator has kept. Any changes in the type, location, or quantity of hazardous wastes disposed of within each cell or area of the facility that occur after the survey plat and record of wastes have been filed must be reported to the local

zoning authority or the authority with jurisdiction over local land use and to the department.

**History:** Effective January 1, 1984.

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

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

**33-24-05-68. Notice in deed to property.**

1. The owner of the property on which a disposal facility is located shall record, in accordance with state law, a notation on the deed to the facility property - or on some other instrument which is normally examined during title search - that will in perpetuity notify any potential purchaser of the property that:
  - a. The land has been used to manage hazardous wastes.
  - b. Its use is restricted under subsection 3 of section 33-24-05-65.
  - c. The survey plat and record of the type, location, and quantity of hazardous waste disposed of within each cell or area of the facility required in section 33-24-05-67 have been filed with the local zoning authority or the authority with jurisdiction over local land use and with the department.
2. If at any time the owner or operator or any subsequent owner of the land upon which a hazardous waste facility was located removes the waste and waste residues, the liner, if any, and all contaminated underlying and surrounding soil, the owner or operator may remove the notation on the deed to the facility property or other instrument normally examined during title search, or the owner or operator may add a notation to the deed or instrument indicating the removal of the waste.

**History:** Effective January 1, 1984.

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

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

33-24-05-69. [Reserved]

33-24-05-70. [Reserved]

33-24-05-71. [Reserved]

33-24-05-72. [Reserved]

33-24-05-73. [Reserved]

**33-24-05-74. Applicability of financial requirements.**

1. Except as provided in section 33-24-05-01, the requirements of sections 33-24-05-74 through 33-24-05-88 (hereinafter known as "financial requirements"), apply as follows:
  - a. Owners and operators of all facilities that treat, store, or dispose of hazardous waste shall have a cost estimate for closure, financial assurance for closure, and liability coverage in accordance with the financial requirements.
  - b. Owners and operators of disposal facilities that must have cost estimates for closure and postclosure care, financial assurance for closure and postclosure care, and liability coverage, in accordance with the financial requirements.
  - c. Piles and surface impoundments from which the owner or operator intends to remove the wastes at closure must have cost estimates for closure and postclosure care and financial assurance for closure and postclosure care, in accordance with the financial requirements to the extent that these additional requirements are made applicable to such facilities in sections 33-24-05-119 and 33-24-05-135.
  - d. Federal agencies and agencies of the government of the state of North Dakota are exempt from the financial requirements.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-75. Definitions of terms used in chapter.**

1. "Closure plan" means the plan for closure prepared in accordance with the requirements of section 33-24-05-61.
2. "Current closure cost estimate" means the most recent of the closure cost estimates prepared in accordance with subsections 1, 2, and 3 of section 33-24-05-76.
3. "Current postclosure cost estimate" means the most recent of the postclosure cost estimates prepared in accordance with subsections 1, 2, and 3 of section 33-24-05-76.
4. "Parent corporation" means a corporation which directly owns at least fifty percent of the voting stock of the corporation which is the facility owner or operator; the latter corporation is deemed a "subsidiary" of the parent corporation.

5. "Postclosure plan" means the plan for postclosure care prepared in accordance with the requirements of sections 33-24-05-65 through 33-24-05-68.
6. The following terms are used in the specifications for the financial tests for closure, postclosure care and liability coverage. The definitions are intended to assist in the understanding of this chapter and are not intended to limit the meanings of terms in a way that conflicts with generally accepted accounting practices.

"Assets" means all existing and all probable future economic benefits obtained or controlled by a particular entity.

"Current assets" means cash or other assets or resources commonly identified as those which are reasonably expected to be realized in cash or sold or consumed during the normal operating cycle of the business.

"Current liability" means obligations whose liquidation is reasonably expected to require the use of existing resources properly classifiable as current assets or the creation of other current liabilities.

"Independently audited" refers to an audit performed by an independent certified public accountant in accordance with generally accepted auditing standards.

"Liabilities" means probable future sacrifices of economic benefits arising from present obligations to transfer assets or provide services to other entities in the future as a result of past transactions or events.

"Net working capital" means current assets minus current liabilities.

"Net worth" means total assets minus total liabilities and is equivalent to owners equity.

"Tangible net worth" means the tangible assets that remain after deducting liabilities; such assets would not include intangibles such as goodwill and rights to patents or royalties.

7. In the liability insurance requirements the terms "bodily injury" and "property damage" have the meanings given these terms by applicable state law. However, these terms do not include those liabilities which, consistent with standard industry practices are excluded from coverage and liability policies for bodily injury and property damage. The department intends the meanings of other terms used in the liability insurance requirements to be consistent with their common meanings within the insurance industry. The

definitions given below of several of the terms are intended to assist in the understanding of these regulations and are not intended to limit their meanings in any way that conflicts with general insurance industry usage.

"Accidental occurrence" means an accident, including continuous or repeated exposure to conditions, which results in bodily injury or property damage, neither expected nor intended from the standpoint of the insured.

"Legal defense costs" means any expenses that an insurer incurs in defending against claims of third parties brought under the terms and conditions of an insurance policy.

"Nonsudden accidental occurrence" means an occurrence which takes place over time and involves continuous or repeated exposure.

"Sudden accidental occurrence" means an occurrence which is not continuous or repeated in nature.

**History:** Effective January 1, 1984.

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

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

**33-24-05-76. Cost estimates for closure and postclosure care.**

1. The owner or operator shall have a written estimate in current dollars of the cost of closing the facility in accordance with the requirements in sections 33-24-05-60 through 33-24-05-64, and applicable closure requirements in sections 33-24-05-97, 33-24-05-107, 33-24-05-119, 33-24-05-135, 33-24-05-151, 33-24-05-167, and 33-24-05-180. The estimate must equal the cost of closure at the point in the facility's operating life when the extent and manner of its operation would make closure the most expensive, as indicated by its closure plan.
2. As required by section 33-24-05-74 of the financial requirements, the owner or operator of a facility subject to postclosure monitoring or maintenance requirements shall have a written estimate in current dollars of the annual cost of postclosure monitoring and maintenance of the facility in accordance with the applicable postclosure rules in sections 33-24-05-65 through 33-24-05-68, 33-24-05-119, 33-24-05-135, 33-24-05-167, and 33-24-05-180. The postclosure cost estimate is calculated by multiplying the annual postclosure cost estimate by the number of years of postclosure care.
3. The owner or operator shall adjust the closure and postclosure cost estimates for inflation within thirty days after each anniversary of the date on which the first closure and postclosure cost estimates were prepared. The adjustments

must be made as specified in subdivisions a and b using an inflation factor derived from the annual implicit price deflator for gross national product as published by the United States department of commerce in its survey of current business. The inflation factor is the result of dividing the latest published annual deflator by the deflator for the previous year.

- a. The first adjustment is made by multiplying the closure and postclosure cost estimates by the inflation factor. The result is the adjusted closure and postclosure cost estimates.
  - b. Subsequent adjustments are made by multiplying the latest adjusted closure and postclosure cost estimates by the latest inflation factor.
4. The owner or operator shall revise the closure and postclosure cost estimates whenever a change in the closure and postclosure plans increase the costs of closure and postclosure. The revised closure and postclosure cost estimates must be adjusted for inflation as specified in subsection 3.
  5. The owner or operator shall keep the following at the facility during the operating life of the facility: The latest closure and postclosure cost estimates prepared in accordance with this section and, when these estimates have been adjusted, the latest adjusted closure and postclosure cost estimates.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-77. Financial assurance for closure and postclosure care.** In accordance with section 33-24-05-74 an owner or operator of each facility shall establish financial assurance for closure and postclosure of the facility. The owner or operator shall choose from the options as specified in subsections 1 through 5 of this section.

**1. Closure and postclosure trust fund.**

- a. An owner or operator may satisfy the requirements of this section by establishing a closure and postclosure trust fund which conforms to the requirements of this subsection and submitting an originally signed duplicate of the trust agreement to the department. An owner or operator of the new facility shall submit the originally signed duplicate of the trust agreement to the department at least sixty days before the day on which hazardous waste is first received for treatment, storage, or disposal. The trustee must be an entity which has the authority to act as a

trustee in this state and whose trust operations are regulated and examined by a federal agency or by the state department of banking and financial institutions.

- b. The wording of the trust agreement must be identical to the wording specified in subdivision a of subsection 1 of section 33-24-05-81 and the trust agreement must be accompanied by a formal certification of acknowledgement (for example see subdivision b of subsection 1 of section 33-24-05-81). Schedule A of the trust agreement must be updated within sixty days after a change in the amount of the current closure and postclosure cost estimate covered by the agreement.
- c. Payments into the trust fund must be made annually by the owner or operator over the term of the initial hazardous waste permit or over the remaining operating life of the facility as estimated in the closure plan, whichever period is shorter; this period is hereinafter referred to as the "pay-in period". The payments into the trust fund must be made as follows:

- (1) For a new facility the first payment must be made before the initial receipt of hazardous waste for treatment, storage, or disposal. A receipt from the trustee for this payment must be submitted by the owner or operator to the department before the initial receipt of hazardous waste. The first payment must be at least equal to the current closure and postclosure cost estimate, except as provided in subsection 7, divided by the number of years in the pay-in period. Subsequent payments must be made no later than thirty days after each anniversary date of the first payment. The amount of each subsequent payment must be determined by this formula:

$$\text{Next Payment} = \frac{\text{CE}-\text{CV}}{\text{Y}}$$

Where CE is the current closure and postclosure cost estimate, CV is the current value of the trust fund and Y is the number of years remaining in the pay-in period.

- (2) If an owner or operator establishes a trust fund as specified in 40 CFR Part 265.143(a) or 265.145(a) of the federal hazardous waste regulations and the value of that trust fund is less than the current closure and postclosure cost estimate when a permit is awarded to the facility, the amount of the current closure and postclosure cost estimate still to be paid into the trust fund must be paid in over the pay-in period as defined in subdivision c. Payments

must continue to be made no later than thirty days after each anniversary date of the first payment made pursuant to 40 CFR Part 265. The amount of each payment must be determined by this formula.

$$\text{Next Payment} = \frac{\text{CE}-\text{CV}}{\text{Y}}$$

Where CE is the current closure and postclosure cost estimate CV is the current value of the trust fund and Y is the number of years remaining in the pay-in period.

- d. The owner or operator may accelerate payments into the trust fund or the owner or operator may deposit the full amount of the current closure and postclosure cost estimate at the time the fund is established. However, the owner or operator shall maintain the value of the fund at no less than the value that the fund would have if annual payments were made as specified in subdivision c.
- e. If the owner or operator establishes a closure and postclosure trust fund after having used one or more alternate mechanisms specified in this section (or in 40 CFR Part 265.143 or 265.145), the first payment must be in at least the amount that the fund would contain if the trust fund were established initially and annual payments were made according to the specifications of this subsection.
- f. After the pay-in period is completed, whenever the current closure and postclosure cost estimate changes, the owner or operator shall compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new estimate, the owner or operator within sixty days after the change in the cost estimate shall either deposit an amount into the fund so that its value after the deposit at least equals the amount of the current closure and postclosure cost estimate or obtain other financial assurance as specified in this section to cover the difference.
- g. If the value of the trust fund is greater than the total amount of the current closure and postclosure cost estimate the owner or operator may submit a written request to the department for release of the amount in excess of the current closure and postclosure cost estimate.
- h. If an owner or operator substitutes other financial assurance as specified in this section for all or part of the trust fund, the owner or operator may submit a written

request to the department for release of the amount in excess of the current closure and postclosure cost estimate covered by the trust fund.

- i. Within sixty days after receiving a request from the owner or operator for release of funds as specified in subdivision g or h, the department will instruct the trustee to release to the owner or operator such funds as the department specifies in writing.
  - j. During the period of postclosure care the department may approve a release of funds if the owner or operator demonstrates to the department that the value of the trust fund exceeds the remaining cost of the postclosure care.
  - k. After beginning final closure or during the postclosure care period, or both, an owner or operator or any other person authorized to perform closure or postclosure activities may request reimbursement for expenditures incurred during these activities by submitting itemized bills to the department. Within sixty days after receiving bills for closure or postclosure activities, the department will determine whether the expenditures are in accordance with the closure or postclosure plans or otherwise justified and if so, it will instruct the trustee to make reimbursement in such amounts as the department specifies in writing. If the department has reason to believe that the cost of closure will be significantly greater than the value of the trust fund it may withhold reimbursement of such amounts as it deems prudent until it determines in accordance with subsection 9 that the owner or operator is no longer required to maintain financial assurance for closure.
1. The department will agree to termination of the trust when:
    - (1) An owner or operator substitutes alternate financial assurance as specified in this section; or
    - (2) The department releases the owner or operator from the requirements of this section in accordance with subsection 9.
  2. Surety bond guaranteeing payment into a closure and postclosure trust fund.
    - a. An owner or operator may satisfy the requirements of this section by obtaining a surety bond which conforms to the requirements of this subsection and submitting the bond to the department. An owner or operator of a new facility must submit the bond to the department at least sixty days before the date on which hazardous waste is first received

for treatment, storage, or disposal. The bond must be effective before this initial receipt of hazardous waste. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on federal bonds in Circular 570 of the United States department of treasury and be authorized to do business within this state. If the surety is using reinsurance, a treasury reinsurance form must be submitted with the bond or within forty-five days thereafter. If cosureties are being used, the original bond must reflect that fact.

- b. The wording of the surety bond must be identical to the wording specified in subsection 2 of section 33-24-05-81.
- c. The owner or operator who uses a surety bond to satisfy the requirements of this section shall also establish a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the department. This standby trust fund must meet the requirements specified in subsection 1 except that:
  - (1) An originally signed duplicate of the trust agreement must be submitted to the department with the surety bond; and
  - (2) Until the standby trust fund is funded pursuant to the requirements of this section, the following are not required by this chapter:
    - (a) Payments into the trust fund as specified in subsection 1.
    - (b) Updating of Schedule A of the trust agreement to show current closure and postclosure cost estimates.
    - (c) Annual evaluations as required by the trust agreement.
    - (d) Notices of nonpayment as required by the trust agreement.
- d. The bond must guarantee that the owner or operator will:
  - (1) Fund the standby trust fund in an amount equal to the penal sum of the bond before the beginning of final closure of the facility;
  - (2) Fund the standby trust fund in an amount equal to the penal sum within fifteen days after an order to begin closure is issued by the department or a United

States district court or other court of competent jurisdiction; or

- (3) Provide alternate financial assurance as specified in this section and obtain the department's written approval of the assurance provided within ninety days after receipt by both the owner or operator of a notice of cancellation of the bond from the surety.
  - e. Under the terms of the bond the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.
  - f. The penal sum of the bond must be in an amount at least equal to the current closure and postclosure cost estimate, except as provided in subsection 7.
  - g. Whenever the current closure and postclosure cost estimate increases to an amount greater than the penal sum the owner or operator within sixty days after the increase must either cause the penal sum to be increased to an amount at least equal to the current closure and postclosure cost estimate and submit evidence of such increase to the department or obtain other financial assurance as specified in this section to cover the increase. Whenever the current closure and postclosure cost estimate decreases, the penal sum may be reduced to the amount of the current closure and postclosure cost estimate following written approval by the department.
  - h. Under the terms of the bond the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the department. Cancellation may not occur, however, during the one hundred twenty days beginning on the date of receipt of cancellation by both the owner or operator and the department as evidenced by the return receipts.
  - i. The owner or operator may cancel the bond if the department has given prior written consent based on its receipt of evidence of alternate financial assurance as specified in this section.
3. **Surety bond guaranteeing performance of closure and postclosure care.**
    - a. An owner or operator may satisfy the requirements of this section by obtaining a surety bond which conforms to the requirements of this subsection and submitting the bond to the department. An owner or operator of a new facility shall submit the bond to the department at least sixty days before the date on which hazardous waste is first received for treatment, storage, or disposal. The bond

must be effective before this initial receipt of hazardous waste. The surety company issuing the bond must, at a minimum, be among those acceptable sureties on federal bonds in Circular 570 of the United States department of treasury and be authorized to do business within the state of North Dakota. If the surety is using reinsurance a treasury reinsurance form must be submitted with the bond or within forty-five days thereafter. If cosureties are being used the original bond must reflect that fact.

- b. The wording of the surety bond must be identical to the wording specified in subsection 3 of section 33-24-05-81.
- c. The owner or operator who uses a surety bond to satisfy the requirements of this section shall also establish a standby trust fund. Under the terms of the bond all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the department. This standby trust fund must meet the requirements specified in subsection 1 except that:
  - (1) An originally signed duplicate of the trust agreement must be submitted to the department with the surety bond; and
  - (2) Until the standby trust fund is funded pursuant to the requirements of this section the following are not required by this chapter:
    - (a) Payments into the trust fund as specified in subsection 1.
    - (b) Updating of Schedule A of the trust agreement to show current closure and postclosure cost estimates.
    - (c) Annual valuations as required by the trust agreement.
    - (d) Notices of nonpayment as required by the trust agreement.
- d. The bond must guarantee that the owner or operator will:
  - (1) Perform postclosure care and final closure in accordance with the postclosure and closure plan and other requirements of the permit for the facility when required to do so; or
  - (2) Provide alternate financial assurance as specified in this section and obtain the department's written approval of the assurance provided within ninety days

after receipt by both the owner or operator and the department of a notice of cancellation of the bond from the surety.

- e. Under the terms of the bond the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond. Following a determination by the department that the owner or operator has failed to perform postclosure care or final closure in accordance with the closure or postclosure plan and other permit requirements when required to do so, under the terms of the bond the surety will perform the postclosure care or final closure as guaranteed by the bond or will deposit the amount of the penal sum into the standby trust fund.
- f. The penal sum of the bond must be in an amount at least equal to the current closure or postclosure cost estimate, or both.
- g. Whenever the current closure or postclosure cost estimate, or both, increases to an amount greater than the penal sum, the owner or operator within sixty days after the increase must either cause the penal sum to be increased to an amount at least equal to the current closure or postclosure cost estimate, or both, and submit evidence of such increase to the department or obtain other financial assurance as specified in this section. Whenever the current closure or postclosure cost estimate, or both, decreases the penal sum may be reduced to the amount of the current closure or postclosure cost estimate, or both, following written approval by the department.
- h. During the period of postclosure care the department may approve a decrease in the penal sum if the owner or operator demonstrates to the department that the amount exceeds the remaining cost of postclosure care.
- i. Under the terms of the bond the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the department. Cancellation may not occur, however, during the one hundred twenty days beginning on the date of receipt of this notice of cancellation by both the owner or operator and the department as evidenced by the return receipts.
- j. The owner or operator may cancel the bond if the department has given prior written consent. The department will provide such written consent when:
  - (1) An owner or operator substitutes alternate financial assurance as specified in this section; or

(2) The department releases the owner or operator from the requirements of this section in accordance with subsection 9.

k. The surety will not be liable for deficiencies in the performance of closure or postclosure care by the owner or operator after the department releases the owner or operator from the requirements of this section in accordance with subsection 9.

#### 4. Closure and postclosure letter of credit.

a. An owner or operator may satisfy the requirements of this section by obtaining an irrevocable standby letter of credit which conforms to the requirements of this subsection and submitting the letter to the department. An owner or operator of a new facility must submit the letter of credit to the department at least sixty days before the date on which hazardous waste is first received for disposal. The letter of credit must be effective before this initial receipt of hazardous waste. The issuing institution must be an entity which has the authority to issue letters of credit in this state and whose letters of credit operations are regulated and examined by a federal agency or by the state department of banking and financial institutions.

b. The wording of the letter of credit must be identical to the wording specified in subsection 4 of section 33-24-05-81.

c. An owner or operator who uses a letter of credit to satisfy the requirements of this section shall also establish a standby trust fund. Under the terms of the letter of credit all amounts paid pursuant to a draft by the department will be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the department. This standby trust fund must meet the requirements of the trust fund specified in subsection 1 except that:

(1) An originally signed duplicate of the trust agreement must be submitted to the department with the letter of credit.

(2) Unless the standby trust fund is funded pursuant to the requirements of this section the following are not required by this chapter:

(a) Payments into the trust fund as specified in subsection 1.

- (b) Updating of Schedule A of the trust agreement to show current or postclosure, or both, cost estimates.
  - (c) Annual valuations as required by the trust agreement; and
  - (d) Notices of nonpayment as required by the trust agreement.
- d. The letter of credit must be accompanied by a letter from the owner or operator referring to the letter of credit by number, issuing institution and date and providing the following information: The identification number, name, and address of the facility and the amount of funds assured for closure and postclosure care of the facility by the letter of credit.
  - e. The letter of credit must be irrevocable and issued for a period of at least one year. The letter of credit must provide that the expiration date will be automatically extended for a period of at least one year unless at least one hundred twenty days before the current expiration date, the issuing institution notifies both the owner or operator and the department by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit the one hundred twenty days will begin on the date when both the owner or operator and the department have received notice as evidenced by the return receipts.
  - f. The letter of credit must be issued in an amount at least equal to the current closure or postclosure, or both, cost estimate, except as provided in subsection 7.
  - g. Whenever the current closure or postclosure, or both, cost estimate increases to an amount greater than the amount of the letter of credit during the operating life of the facility, the owner or operator within sixty days after the increase shall either cause the amount of the letter of credit to be increased so that it at least equals the current closure or postclosure, or both, cost estimate and submit evidence of such increase to the department, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current closure or postclosure, or both, cost estimate decreases, the amount of the credit may be reduced to the amount of the current estimate following written approval by the department.
  - h. During the period of postclosure care, the department may approve a decrease in the amount of the letter of credit if the owner or operator demonstrates to the department

that the amount exceeds the remaining cost of postclosure care.

- i. Following a determination by the department that the owner or operator has failed to perform closure or postclosure care in accordance with the closure or postclosure plan or other permit requirements, the department may draw on the letter of credit.
- j. If the owner or operator does not establish alternate financial assurance as specified in this section and obtain written approval of such alternate assurance from the department within ninety days after receipt by both the owner or operator and the department of a notice from the issuing institution that it has decided not to extend the letter of credit beyond the current expiration date, the department will draw on the letter of credit. The department may delay the drawing if the issuing institution grants an extension of the term of the credit. During the last thirty days of any such extension the department will draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in this section and obtain written approval of such assurance from the department.
- k. The department will return the letter of credit to the issuing institution when:
  - (1) An owner or operator substitutes alternate financial assurance as specified in this section; or
  - (2) The department releases the owner or operator from requirements of this section in accordance with subsection 9.

5. Closure and postclosure insurance.

- a. An owner or operator may satisfy the requirements of this section by obtaining closure and postclosure insurance which conforms to the requirements of this subsection and submitting a certificate of such insurance to the department. An owner or operator of a new facility must submit the certificate of insurance to the department at least sixty days before the date on which hazardous waste is first received for treatment, storage, or disposal. The insurance must be effective before this initial receipt of hazardous waste. At a minimum, the insurer must be licensed to transact the business of insurance in this state or eligible to provide insurance as an excess or surplus lines insurer in one or more states.

- b. The wording of the certificate of insurance must be identical to the wording specified in subsection 5 of section 33-24-05-81.
- c. The closure and postclosure insurance policy must be issued for a face amount of at least equal to the current closure or postclosure, or both, cost estimate, except as provided in subsection 7. The term "face amount" means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer will not change the face amount, although the insurer's future liability will be lowered by the amount of the payments.
- d. The closure and postclosure insurance policy must guarantee that funds will be available to close the facility or perform postclosure final care, or both, whenever final closure or the postclosure period begins. The policy must also guarantee that once final closure or postclosure begins the insurer will be responsible for paying out funds up to an amount equal to the face amount of the policy upon the direction of the department to such party or parties as the department specifies.
- e. After beginning final closure or during the postclosure period, or both, an owner or operator or any other person authorized to perform closure or postclosure may request reimbursement for closure or postclosure expenditures by submitting itemized bills to the department. Within sixty days after receiving bills for closure or postclosure activities, the department will determine whether the expenditures are in accordance with the closure or postclosure plan or otherwise justified and if so, it will instruct the insurer to make reimbursement in such amounts as the department specifies in writing. If the department has reason to believe that the cost of closure will be significantly greater than the face amount of the policy it may withhold reimbursement of such amounts as it deems prudent until it determines, in accordance with subsection 9, that the owner or operator is no longer required to maintain financial assurance for closure of the facility.
- f. The owner or operator shall maintain the policy in full force and effect until the department consents to termination of the policy by the owner or operator as specified in subdivision k. Failure to pay the premium without substitution of alternate financial assurance, as specified in this section, will constitute a significant violation of this chapter warranting such remedy as the department deems necessary. Such violation will be deemed to begin upon receipt by the department of a notice of future cancellation, termination, or failure to renew due

to nonpayment of the premium, rather than upon the date of expiration.

- g. Each policy must contain a provision allowing assignment of the policy to a successor, owner, or operator. Such assignment may be conditional upon consent of the insurer, provided such consent is not unreasonably refused.
- h. The policy must provide that the insurer may not cancel, terminate, or fail to renew the policy, except for failure to pay the premium. The automatic renewal of the policy must, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the owner or operator and the department. Cancellation, termination, or failure to renew may not occur, however, during the one hundred twenty days beginning with the date of receipt of a notice by the department and the owner or operator as evidenced by the return receipts. Cancellation, termination, or failure to renew may not occur and the policy will remain in full force and effect in the event that on or before the date of expiration:
  - (1) The department deems the facility abandoned;
  - (2) The permit is terminated or revoked or a new permit is denied;
  - (3) Closure is ordered by the department or a state court or other court of competent jurisdiction;
  - (4) The owner or operator is named as debtor in a voluntary or involuntary proceeding under United States Code Title 11 (bankruptcy); or
  - (5) The premium due is paid.
- i. Whenever the current closure or postclosure, or both, cost estimate increases to an amount greater than the face amount of the policy the owner or operator within sixty days after the increase must either cause the face amount to be increased to an amount at least equal to the current closure or postclosure, or both, cost estimate and submit evidence of such increase to the department, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current closure or postclosure, or both, cost estimate decreases, the face amount may be reduced to the amount of the current closure or postclosure, or both, cost estimate following a written approval by the department.

- j. For postclosure insurance only, commencing on the date that liability to make payments pursuant to a postclosure policy accrues, the insurer will thereafter annually increase the face amount of the policy. Such increase must be equivalent to the face amount of the policy less any payments made, multiplied by an amount equivalent to eighty-five percent of the most recent investment rate or of the equivalent coupon-issue yield announced by the United States treasury for twenty-six-week treasury securities.
  - k. The department will give written consent to the owner or operator that it may terminate the insurance policy when:
    - (1) An owner or operator substitutes alternate financial assurance as specified in this section; or
    - (2) The department releases the owner or operator from the requirements of this section in accordance with subsection 9.
6. **Financial test and corporate guarantee for closure and postclosure care.** An owner or operator may satisfy the requirements of this section by demonstrating to the department that the owner or operator meets the financial test or corporate guarantee, or both, as specified in 40 CFR Part 264.143 of the federal hazardous waste regulations and submitting a copy of all documents required under that section to the department. Companies not required to submit an audited financial statement to the United States securities and exchange commission must have an auditor's opinion prepared by an auditor licensed in the state of North Dakota.
7. **The use of multiple financial mechanisms.** An owner or operator may satisfy the requirements of this section by establishing more than one financial mechanism per facility. These mechanisms are limited to trust funds, surety bonds guaranteeing payment into a trust fund, letters of credit, and insurance. The mechanisms must be as specified in this section, except that it is the combination of mechanisms, rather than the single mechanism which must provide financial assurance for an amount at least equal to the current closure or postclosure, or both, cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or a letter of credit, the owner or operator may use the trust fund as the standby trust fund for the other mechanisms. A single standby trust fund may be established for two or more mechanisms. The department may use any or all of the mechanisms to provide for closure or postclosure, or both, care of the facility.
8. **Use of a financial mechanism for multiple facilities.** An owner or operator may use a financial assurance mechanism specified

in this section to meet the requirements of this section for more than one facility. Evidence of financial assurance submitted to the department must include a list showing for each facility the identification number, name, address, and the amount of funds for closure or postclosure, or both, care assured by the mechanism. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility. In directing funds available through the mechanism for closure or postclosure care of any of the facilities covered by the mechanism, the department may direct only the amount of funds designated for that facility unless the owner or operator agrees to the use of additional funds available under the mechanism.

9. **Release of the owner or operator from the requirements of this section.** When an owner or operator has completed to the satisfaction of the department all closure or postclosure, or both, care requirements in accordance with the closure or postclosure plans, the department will at the request of the owner or operator, notify the owner or operator in writing that the owner or operator is no longer required by this section to maintain financial assurance for closure or postclosure care of that particular facility.

**History:** Effective January 1, 1984.

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

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

**33-24-05-78. Use of a financial mechanism for both closure and postclosure care.** An owner or operator may satisfy the requirements for financial assurance for both closure and postclosure care for one or more facilities by using a trust fund, surety bond, letter of credit, insurance, financial test, or corporate guarantee that meets the specifications for the mechanism in section 33-24-05-77. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for financial assurance of closure and of postclosure care.

**History:** Effective January 1, 1984.

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

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

**33-24-05-79. Liability requirements.**

1. **Coverage for sudden accidental occurrences.** An owner or operator of a hazardous waste treatment, storage, or disposal facility or a group of such facilities shall demonstrate financial responsibility for bodily injury and property damage

to third parties caused by sudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator shall have and maintain liability coverage for sudden accidental occurrences in the amount of at least one million dollars per occurrence with an annual aggregate of at least two million dollars, exclusive of legal defense costs. This liability coverage may be demonstrated in one of three ways as specified in subdivisions a, b, and c as follows:

- a. An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in this subdivision.
  - (1) Each insurance policy must be amended by attachment of the hazardous waste facility liability endorsement or evidenced by a certificate of liability insurance. The wording of the endorsement must be identical to the wording specified in subsection 9 of section 33-24-05-81. The wording of the certificate of insurance must be identical to the wording specified in subsection 10 of section 33-24-05-81. The owner or operator shall submit a signed duplicate original of the endorsement or the certificate of insurance to the department. If requested by the department the owner or operator shall provide a signed duplicate original of the insurance policy. An owner or operator of a new facility shall submit the signed duplicate original of the hazardous waste facility liability endorsement or the certificate of liability insurance to the department at least sixty days before the day on which hazardous waste is first received for treatment, storage, or disposal. The insurance must be effective before this initial receipt of hazardous waste.
  - (2) Each insurance policy must be issued by an insurer which, at a minimum, is licensed to transact the business of insurance in this state or eligible to provide insurance as an excess or surplus lines insurer in one or more states.
- b. An owner or operator may meet the requirements of this section by passing a financial test for liability coverage as specified in subsection 6.
- c. An owner or operator may demonstrate the required liability coverage through use of both the financial test and insurance as these mechanisms are specified in this section. The amount of coverage demonstrated must total at least the minimum amounts required by this subsection.

2. **Coverage for nonsudden accidental occurrences.** An owner or operator of a surface impoundment landfill or land treatment facility which is used to manage hazardous waste, or a group of such facilities, shall demonstrate financial responsibility for bodily injury and property damage to third parties caused by nonsudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator shall have and maintain liability coverage for nonsudden accidental occurrences in the amount of at least three million dollars per occurrence with an annual aggregate of at least six million dollars, exclusive of legal defense costs. This liability coverage may be demonstrated one of three ways as specified in subdivisions a, b, and c as follows:

a. An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in this subdivision.

(1) Each insurance policy must be amended by attachment of the hazardous waste facility liability endorsement or evidenced by certificate of liability insurance. The wording of the endorsement must be identical to the wording specified in subsection 9 of section 33-24-05-81. The wording of the certificate of insurance must be identical to the wording specified in subsection 10 of section 33-24-05-81. The owner or operator shall submit a signed duplicate original of the endorsement or the certificate of insurance to the department. If requested by the department, the owner or operator shall provide a signed duplicate original of the insurance policy. An owner or operator of a new facility shall submit the signed duplicate original of the hazardous waste facility liability endorsement or the certificate of liability insurance to the department at least sixty days before the date on which hazardous waste is first received for treatment, storage, or disposal. The insurance must be effective before this initial receipt of hazardous waste.

(2) Each insurance policy must be issued by an insurer which, at a minimum, is licensed to transact the business of insurance in this state or eligible to provide insurance as an excess or surplus lines insurer in one or more states.

b. An owner or operator may meet the requirements of this section by passing a financial test for liability coverage as specified in subsection 6.

c. An owner or operator may demonstrate the required liability coverage through use of both the financial test and insurance as these mechanisms are specified in this

section. The amounts of coverage must total at least the minimum amounts required by this subsection.

3. **Request for variance.** If an owner or operator can demonstrate to the satisfaction of the department that the levels of responsibility required by subsection 1 or 2 are not consistent with the degree and duration of risk associated with treatment, storage, or disposal at the facility or group of facilities, the owner or operator may obtain a variance from the department. The request for a variance must be submitted to the department as part of the permit application under chapter 33-24-06 for a facility that does not have a permit or pursuant to the procedures for permit modification under chapter 33-24-07 for a facility that has a permit. If granted, the variance will take the form of an adjusted level of required liability coverage, such level to be based on the department's assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. The department may require an owner or operator who requests a variance to provide such technical and engineering information as is deemed necessary by the department to determine a level of financial responsibility other than that required by subsection 1 or 2. Any request for a variance for a permitted facility will be treated as a request for permit modification under chapters 33-24-06 and 33-24-07.
4. **Adjustments by the department.** If the department determines that the levels of financial responsibility required by subsection 1 or 2 are not consistent with the degree and duration of risk associated with treatment, storage, or disposal at the facility or group of facilities, the department may adjust the level of financial responsibility required under subsection 1 or 2 as may be necessary to protect human health and the environment. This adjusted level will be based on the department's assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. In addition, if the department determines that there is a significant risk to human health and the environment from nonsudden accidental occurrences resulting from the operation of a facility that is not a surface impoundment, landfill, or land treatment facility, it may require that an owner or operator of the facility comply with subsection 2. An owner or operator shall furnish to the department within a reasonable time any information which the department requests to determine whether cause exists for such adjustments of level or type of coverage. Any adjustment of the level or type of coverage for a type of facility that has a permit will be treated as a permit modification under chapters 33-24-06 and 33-24-07.
5. **Period of coverage.** An owner or operator shall continuously provide liability coverage for a facility as required by this

section until certifications of closure of the facility as specified in section 33-24-05-64 are received by the department.

6. **Financial tests for liability coverage.** An owner or operator may satisfy the requirements of this section by demonstrating that the owner or operator meets the financial test for liability as specified in 40 CFR 264.147 of the federal hazardous waste regulations and submitting a copy of all documents required by that section to the department. Companies not required to submit audited financial statements to the United States securities and exchange commission must have the auditor's opinion prepared by an auditor licensed in this state.

**History:** Effective January 1, 1984.

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

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

**33-24-05-80. Incapacity of owners or operators, guarantors, or financial institutions.**

1. An owner or operator must notify the department by certified mail of the commencement of a voluntary or involuntary proceeding under United States Code Title 11 (bankruptcy), naming the owner or operator as debtor within ten days after commencement of the proceeding. A guarantor of a corporate guarantee as specified in subsection 6 of section 33-24-05-77 must make such notification if the guarantor is named as debtor as required under the terms of the corporate guarantee.
2. An owner or operator who fulfills the requirements of section 33-24-05-77 or 33-24-05-79 by obtaining a trust fund, surety bond, letter of credit, or insurance policy will be deemed to be without the required financial assurance or liability coverage in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as a trustee, or of the institution issuing the surety bond, letter of credit, or insurance policy to issue such instruments. The owner or operator shall establish other financial assurance or liability coverage within sixty days after such an event.

**History:** Effective January 1, 1984.

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

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

**33-24-05-81. Wording of the instruments.**

1. Trust agreement and certification of acknowledgement.

- a. A trust agreement for a trust fund as specified in section 33-24-05-77 must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

TRUST AGREEMENT, the "AGREEMENT" entered into as of [date] by and between [name of the owner or operator] a [name of state] [insert "corporation" "partnership," "association" or "proprietorship"], the "GRANTOR," and [name of corporate trustee], [insert "incorporated in the state of \_\_\_\_\_" or "a national bank"], the "TRUSTEE".

Whereas, the North Dakota State Department of Health, "DEPARTMENT" a regulatory agency of the state of North Dakota, has established certain regulations applicable to the GRANTOR requiring that an owner or operator of a hazardous waste management facility shall provide assurance that funds will be available when needed for closure or postclosure, or both, care of the facility,

Whereas, the GRANTOR has elected to establish a trust to provide all or part of such financial assurance for the facilities identified herein,

Whereas, the GRANTOR acting through its duly authorized officers has selected the TRUSTEE to be the trustee under this agreement and the TRUSTEE is willing to act as trustee,

Now, therefore, the GRANTOR and the TRUSTEE agree as follows:

**Section 1. Definitions.** As used in this AGREEMENT:

- (a) The term GRANTOR means the owner or operator who enters into this AGREEMENT and any successors or assigns of the GRANTOR.
- (b) The term TRUSTEE means the TRUSTEE who enters into this AGREEMENT and any successor TRUSTEE.

**Section 2. Identification of Facilities and Cost Estimate.**

This AGREEMENT pertains to the facilities and cost estimates identified on attached Schedule A [on Schedule A for each facility list the identification number, name, and the current closure or postclosure, or both, cost estimates or portions thereof for which financial assurance is demonstrated by this AGREEMENT].

**Section 3. Establishment of Fund.** The GRANTOR and the TRUSTEE hereby establish a trust fund, the FUND, for the benefit of the department. The GRANTOR and the

TRUSTEE intend that no third party have access to the FUND, except as herein provided. The FUND is established initially as consisting of the property which is acceptable to the TRUSTEE and described in Schedule B attached hereto. Such property and any other property subsequently transferred to the TRUSTEE is referred to as the FUND, together with all earnings and profits thereon, less any payments or distributions made by the TRUSTEE pursuant to this AGREEMENT. The FUND must be held by the TRUSTEE, IN TRUST, as herein provided. The TRUSTEE is not responsible, nor may it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the GRANTOR any payments necessary to discharge any liabilities of the GRANTOR established by the DEPARTMENT.

**Section 4. Payment for Closure and Postclosure Care.**

The TRUSTEE shall make payments from the FUND as the DEPARTMENT shall direct, in writing, to provide for the payment of the cost of closure, and or postclosure care of the facilities covered by this AGREEMENT. The TRUSTEE shall reimburse the GRANTOR or other persons as specified by the DEPARTMENT from the FUND for closure and postclosure expenditures in such amounts as the DEPARTMENT shall direct in writing. In addition, the TRUSTEE shall refund to the GRANTOR such amounts as the DEPARTMENT specifies in writing. Upon refund such funds no longer constitute part of the FUND as defined herein.

**Section 5. Payments Comprising the FUND.** Payments made to the TRUSTEE for the FUND must consist of cash or securities acceptable to the TRUSTEE.

**Section 6. TRUSTEE Management.** The TRUSTEE shall invest and reinvest the principle and interest of the FUND and keep the FUND invested as a single FUND without distinction between principle and income in accordance with general investment policies and guidelines which the GRANTOR may communicate in writing to the TRUSTEE from time to time, subject however to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the FUND, the TRUSTEE shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

- (a) Securities or other obligations of the GRANTOR or any other owner or operator of the facilities or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2(a), may not be required or held unless they are securities or other obligations of a federal or state government;
- (b) The TRUSTEE is authorized to invest the FUND in time or demand deposits of the TRUSTEE, to the extent insured by an agency of the federal or state government; and
- (c) The TRUSTEE is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

**Section 7. Commingling and Investment.** The TRUSTEE is expressly authorized in its discretion:

- (a) To transfer from time to time any or all of the assets of the FUND to any common, commingled, or collective trust fund collected by the TRUSTEE in which the FUND is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the TRUSTEE. The TRUSTEE may vote such shares in its discretion.

**Section 8. Express Powers of TRUSTEE.** Without, in any way, eliminating the powers and discretions conferred upon the TRUSTEE by the other provisions of this AGREEMENT or by law, the TRUSTEE is expressly authorized and empowered:

- (a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the TRUSTEE is bound to see the application of the purchase money or to inquire into the validity or expediency of any such sale or disposition;
- (b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and

any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

- (c) To register any securities held in the FUND in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the TRUSTEE in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a federal reserve bank, but the books and records of the TRUSTEE must at all times show that all such securities are part of the FUND;
- (d) To deposit any cash in the FUND in interest bearing accounts maintained or savings certificates issued by the TRUSTEE, in its separate capacity, or in any other banking institution affiliated with the TRUSTEE to the extent insured by an agency of the federal or state government; and
- (e) To comprise or otherwise adjust all claims in favor of or against the FUND.

**Section 9. Taxes and Expenses.** All taxes of any kind that may be assessed or levied against or in respect of the FUND and all brokerage commissions incurred by the FUND shall be paid from the FUND. All other expenses incurred by the TRUSTEE in connection with the administration of this TRUST, including fees for legal services rendered to the TRUSTEE, the compensation of the TRUSTEE to the extent not paid directly by the GRANTOR, and all other proper charges and disbursements of the TRUSTEE, must be paid from the FUND.

**Section 10. Annual Valuation.** The TRUSTEE shall annually, at least thirty days prior to the anniversary date of establishment of the FUND, furnish to the GRANTOR and to the DEPARTMENT a statement confirming the value of the TRUST. Any securities in the FUND must be valued at market value

as of no more than sixty days prior to the anniversary date of establishment of the FUND. The failure of the GRANTOR to object in writing to the TRUSTEE within ninety days after the statement has been furnished to the GRANTOR and the DEPARTMENT, constitutes a conclusively binding assent by the GRANTOR barring the GRANTOR from asserting any claim or liability against the TRUSTEE with respect to matters disclosed in the statement.

**Section 11. Advice of Counsel.** The TRUSTEE may from time to time consult with counsel, who may be counsel to the GRANTOR, with respect to any question arising as to construction of this AGREEMENT or any action to be taken hereunder. The TRUSTEE shall be fully protected to the extent permitted by law in acting upon the advice of counsel.

**Section 12. TRUSTEE Compensation.** The TRUSTEE is entitled to reasonable compensation for its services as agreed upon in writing from time to time with the GRANTOR.

**Section 13. Successor TRUSTEE.** The TRUSTEE may resign or the GRANTOR may replace the TRUSTEE, but such resignation or replacement is not effective until the GRANTOR has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the TRUSTEE hereunder. Upon the successful trustee's acceptance of the appointment, the TRUSTEE shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the FUND. If for any reason, the GRANTOR cannot or does not act in the event of the resignation of the TRUSTEE, the TRUSTEE may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the day on which it assumes administration of the TRUST in a writing sent to the GRANTOR, the DEPARTMENT, and the present TRUSTEE by certified mail ten days before such change becomes effective. Any expenses incurred by the TRUSTEE as a result of any of the acts contemplated by this section must be paid as provided in section 9.

**Section 14. Instructions to the TRUSTEE.** All orders, requests, and instructions by the GRANTOR to the TRUSTEE must be in writing, signed by such persons as are designated in the attached Exhibit A, or such other designees as the GRANTOR may designate by amendment to Exhibit A. The TRUSTEE shall be fully

protected in acting without inquiry in accordance with the GRANTOR's orders, requests, and instructions. All orders, requests, and instructions by the DEPARTMENT to the TRUSTEE must be in writing, signed by an authorized DEPARTMENT representative and the TRUSTEE shall act and be fully protected in acting in accordance with such orders, requests, and instructions. The TRUSTEE shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the GRANTOR or the DEPARTMENT hereunder has occurred. The TRUSTEE shall have no duty to act in the absence of such orders, requests, and instructions from the GRANTOR or the DEPARTMENT, or both, except as provided for herein.

**Section 15. Notice of Nonpayment.** The TRUSTEE shall notify the GRANTOR and the DEPARTMENT by certified mail within ten days following the expiration of the thirty-day period after the anniversary of the establishment of the TRUST if no payment is received from the GRANTOR during that period. After the pay-in period is completed, the TRUSTEE is not required to send a notice of nonpayment.

**Section 16. Amendment of AGREEMENT.** This AGREEMENT may be amended by an instrument in writing executed by the GRANTOR, the TRUSTEE and the DEPARTMENT, or by the TRUSTEE and the DEPARTMENT, if the GRANTOR ceases to exist.

**Section 17. Irrevocability and Termination.** Subject to the right of the parties to amend this AGREEMENT as provided in section 16, this TRUST is irrevocable and continues until terminated at the written agreement of the GRANTOR, the TRUSTEE, and the DEPARTMENT, or by the TRUSTEE and the DEPARTMENT, if the GRANTOR ceases to exist. Upon termination of the TRUST, all remaining trust property, less final trust administration expenses, must be delivered to the GRANTOR.

**Section 18. Immunity and Indemnification.** The TRUSTEE may not incur personal liability of any nature in connection with any act or commission made in good faith in the administration of this TRUST or in carrying out any directions by the GRANTOR or the DEPARTMENT issued in accordance with this AGREEMENT. The TRUSTEE must be indemnified and saved harmless by the GRANTOR or from the TRUST FUND, or both, from and against any personal liability to which the TRUSTEE may be subjected by reason of any act or conduct in

its official capacity, including all expenses reasonably incurred in its defense in the event the GRANTOR fails to provide such defense.

**Section 19. Choice of Law.** This AGREEMENT must be administered, construed, and enforced according to the laws of the state of [North Dakota].

**Section 20. Interpretation.** As used in this AGREEMENT, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this AGREEMENT do not affect the interpretation or the legal efficacy of this AGREEMENT.

In Witness Whereof the parties have caused this AGREEMENT to be executed by their respective officers duly authorized and their corporate seals to be hereunto fixed and attested as of the date first above written: The parties below certify that the wording of this AGREEMENT is identical to the wording specified in subdivision a of subsection 1 of North Dakota Administrative Code section 33-24-05-81 as such regulation was constituted on the date first above written.

[Signature of GRANTOR]

[Title]

[Attest:]

[Title]

[Seal]

[Signature of TRUSTEE]

[Attest:]

[Title]

[Seal]

- b. The following is an example of the certification of acknowledgement which must accompany the trust agreement for a trust fund as specified in subsection 1 of section 33-24-05-77.

State of \_\_\_\_\_

County of \_\_\_\_\_

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that she/he signed her/his name thereto by like order.

[Signature of notary public]

2. A surety bond guaranteeing payment into a trust fund as specified in subsection 2 of section 33-24-05-77 must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

FINANCIAL GUARANTEE BOND

Date bond executed: \_\_\_\_\_

Effective date: \_\_\_\_\_

Principal: [legal name and business address of owner or operator]

Type of organization: [insert "individual", "joint venture", "partnership" or "corporation"]

State of incorporation: \_\_\_\_\_

Surety(ies): [name(s) and business address(es)]

Identification number, name, address, and closure or postclosure, or both, amount for each facility guaranteed by this bond [indicate closure and postclosure amounts separately]: \_\_\_\_\_

Total penal sum of bond: \$ \_\_\_\_\_

Surety's bond number: \_\_\_\_\_

Know all persons by these presents that we the PRINCIPAL and SURETY(IES) hereto are firmly bound to the North Dakota State Department of Health (hereinafter called the department) in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors and assignors jointly and severally: provided that where the SURETY(IES) are corporations acting as cosureties, we, the SURETIES, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions

against any or all of us, and for all other purposes each SURETY by itself, jointly and severally with the PRINCIPAL, for the payment of such sum only as is set forth opposite the name of such SURETY, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said PRINCIPAL is required under North Dakota Century Code chapter 23-20.3 to have a permit in order to own or operate each hazardous waste management facility identified above, and

Whereas said PRINCIPAL is required to provide financial assurance for closure or closure and postclosure care as a condition of the permit, and

Whereas said PRINCIPAL shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, Therefore, the conditions of the obligation are such that if the PRINCIPAL shall faithfully, before the beginning of final closure of each facility identified above, fund the standby trust fund in the amounts identified above for the facility,

Or, if the PRINCIPAL shall fund the standby trust fund in such amounts within fifteen days after an order to begin closure is issued by the DEPARTMENT or a state or other court of competent jurisdiction,

Or, if the PRINCIPAL shall provide alternate financial assurance as specified in North Dakota Administrative Code chapter 33-24-05, as applicable, and obtain the DEPARTMENT'S written approval of such assurance within ninety days after the date of notice of cancellation is received by both the PRINCIPAL and the DEPARTMENT from the SURETY(IES), then this obligation shall be null and void, otherwise it is to remain in full force and effect.

The SURETY(IES) shall become liable on this bond obligation only when the PRINCIPAL has failed to fulfill the conditions described above. Upon notification by the DEPARTMENT that the PRINCIPAL has failed to perform as guaranteed by this bond, the SURETY(IES) shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund as directed by the DEPARTMENT.

The liability of the SURETY(IES) shall not be discharged by any payment or any succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall

the obligation of the SURETY(IES) hereunder exceed the amount of said penal sum.

The SURETY(IES) may cancel the bond by sending notice of cancellation by certified mail to the PRINCIPAL and to the DEPARTMENT, provided, however, that cancellation shall not occur during the one hundred twenty days beginning on the date of receipt of the notice of cancellation by both the PRINCIPAL and the DEPARTMENT as evidenced by the return receipts.

The PRINCIPAL may terminate this bond by sending written notice to the SURETY(IES) provided, however, that no such notice shall become effective until the SURETY(IES) receive(s) written authorization for termination of the bond by the DEPARTMENT.

[The following paragraph is an optional rider that may be included, but is not required]

The PRINCIPAL and SURETY(IES) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new closure or postclosure, or both, amount, provided that the penal sum does not increase by more than twenty percent in any one year, and no decrease in the penal sum takes place without the written permission of the DEPARTMENT.

In witness whereof, the PRINCIPAL and SURETY(IES) have executed this financial guarantee bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the PRINCIPAL and SURETY(IES) and that the wording of this surety bond is identical to the wording specified in subsection 2 of North Dakota Administrative Code section 33-24-05-81 as such rule was constituted on the date this bond was executed.

PRINCIPAL  
[Signature(s)]  
[Name(s)]  
[Title(s)]  
[Corporate seal]

CORPORATE SURETY(IES)  
[Name and address]  
State of Incorporation: \_\_\_\_\_  
Liability limit: \$ \_\_\_\_\_  
[Signature(s)]  
[Name(s) and Title(s)]  
[Corporate seal]  
[For every cosurety, provide signature(s), corporate seal, and other information in the same manner as for surety above.]

Bond premium: \$ \_\_\_\_\_

3. A surety bond guaranteeing performance of closure or postclosure care as specified in subsection 3 of section 33-24-05-77 must be worded as follows, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted:

PERFORMANCE BOND

Date bond executed: \_\_\_\_\_

Effective Date: \_\_\_\_\_

PRINCIPAL: [Legal name and business address of owner or operator]

Type of organization: [Insert "Individual," "joint venture," "partnership," or "corporation"]

State of incorporation: \_\_\_\_\_

SURETY(IES): [Name(s) and business address(es)]

\_\_\_\_\_  
Identification number, name, address and closure or postclosure, or both, amount(s) for each facility guaranteed by this bond.

[Indicate closure and postclosure amount separately]:

\_\_\_\_\_  
Total penal sum of bond: \_\_\_\_\_

Surety's bond number: \_\_\_\_\_

Know all persons by these presents, that we the PRINCIPAL and SURETY(IES) hereto are firmly bound to the North Dakota State Department of Health (hereinafter called the DEPARTMENT), in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors and assigns jointly and severally: Provided that, where the SURETY(IES) are corporations acting as cosureties, we the SURETIES bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us and for all other purposes each SURETY binds itself jointly and severally with the PRINCIPAL for the payment of such sum only as is set forth opposite the name of each SURETY, but if no limit of liability is

indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said PRINCIPAL is required under North Dakota Century Code chapter 23-20.3 to have a permit to own or operator each hazardous waste management facility identified above, and

Whereas said PRINCIPAL is required to provide financial assurance for closure, or closure and postclosure care as a condition of the permit, and

Whereas said PRINCIPAL shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, Therefore, the conditions of this obligation are that if the PRINCIPAL shall faithfully perform closure, whenever required to do so, of each facility for which this bond guarantees closure, in accordance with the closure plan and other requirements of the permit as such plan and permit may be amended pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules, and regulations may be amended.

And if the PRINCIPAL shall faithfully perform postclosure care of each facility for which this bond guarantees postclosure care, in accordance with the postclosure plan and other requirements of the permit as such plan and permit may be amended pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules, and regulations may be amended,

Or, if the PRINCIPAL shall provide alternate financial assurance as specified in North Dakota Administrative Code chapter 33-24-05 and obtain the DEPARTMENT'S written approval of such assurance within ninety days after the date notice of cancellation is received by both the PRINCIPAL and the DEPARTMENT from the SURETY(IES) then this obligation shall be null and void, otherwise it is to remain in full force and effect.

The SURETY(IES) shall become liable on this bond obligation only when the PRINCIPAL has failed to fulfill the conditions described above.

Upon notification by the DEPARTMENT that the PRINCIPAL has been found in violation of the closure requirements of North Dakota Administrative Code chapter 33-24-05 for a facility for which this bond guarantees performance of closure, the SURETY(IES) shall either perform closure in accordance with the closure plan and other permit requirements or place the closure amount guaranteed for the facility into the standby trust fund as directed by the DEPARTMENT.

Upon notification by the DEPARTMENT that the PRINCIPAL has been found in violation of the postclosure requirements of North Dakota Administrative Code chapter 33-24-05 for a facility for which this bond guarantees performance of postclosure care, the SURETY(IES) shall either perform postclosure care in accordance with the postclosure plan and other permit requirements or place the postclosure amount guaranteed for the facility into a standby trust fund as directed by the DEPARTMENT.

Upon notification by the DEPARTMENT that the PRINCIPAL has failed to provide alternate financial assurance as specified in North Dakota Administrative Code chapter 33-24-05 and obtain written approval of such assurance from the DEPARTMENT during the ninety days following receipt by both the PRINCIPAL and the DEPARTMENT of a notice of cancellation of the bond, the SURETY(IES) shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund as directed by the DEPARTMENT.

The SURETY(IES) hereby waive(s) notification of amendments to closure plans, permits, applicable laws, statutes, rules, and regulations and agree(s) that no such amendment shall in any way alleviate its (their) obligation on this bond.

The liability of the SURETY(IES) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the SURETY(IES) hereunder exceed the amount of said penal sum.

The SURETY(IES) may cancel the bond by sending the notice of cancellation by certified mail to the PRINCIPAL and to the DEPARTMENT, provided, however, that cancellation shall not occur during the one hundred twenty days beginning on the date of receipt of the notice of cancellation by both the PRINCIPAL and the DEPARTMENT as evidenced by the return receipts.

The PRINCIPAL may terminate this bond by sending written notice to the SURETY(IES) provided, however, that no such notice shall become effective until the SURETY(IES) receive(s) written authorization for termination of the bond by the DEPARTMENT.

[The following paragraph is an optional rider that may be included, but is not required].

PRINCIPAL and SURETY(IES) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new closure or postclosure, or both, amount, provided that the penal sum does not increase by more than twenty percent in any one year, and

no decrease in the penal sum takes place without the written permission of the DEPARTMENT.

In Witness Whereof, the PRINCIPAL and SURETY(IES) have executed this performance bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the PRINCIPAL and the SURETY(IES) and that the wording of this surety bond is identical to the wording specified in subsection 3 of North Dakota Administrative Code section 33-24-05-81 as such rule was constituted on the date this bond was executed.

Principal

[Signature(s)]

[Name(s)]

[Title(s)]

[Corporate Seal]

[Corporate Surety(ies)]

[Name and Address]

State of Incorporation: \_\_\_\_\_

Liability Limit: \$ \_\_\_\_\_

[Signature(s)]

[Name(s) and Title(s)]

Corporate Seal:

[For every cosurety, provide signature(s), corporate seal, and other information in the same manner as for surety above].

Bond Premium: \$ \_\_\_\_\_

4. A letter of credit as specified in subsection 4 of section 33-24-05-77 must be worded as follows except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

IRREVOCABLE STANDBY LETTER OF CREDIT

Chief, Environmental Health Section North Dakota State  
Department of Health

Dear Sir or Madam:

We hereby establish our Irrevocable Standby Letter of Credit Number \_\_\_\_\_ in your favor, at the request and for the account of [owner's or operator's name and address] up to the aggregate amount of [in words] United States Dollars \$ \_\_\_\_\_, available upon presentation by you of

- (1) You sight draft bearing reference to this letter of credit number \_\_\_\_\_, and
- (2) Your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under authority of North Dakota Century Code chapter 23-20.3".

This letter of credit is effective as of [date] and shall expire on [date] at least one year later, but such expiration date shall be automatically extended for a period of [at least one year] on [date] and on each successive expiration date, unless, at least one hundred twenty days before the current expiration date, we notify both you and [owner's or operator's name] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event you are so notified, any unused portion of the credit shall be available upon presentative of your sight draft for one hundred twenty days after the date of receipt by both you and [owner's or operator's name], as shown on the signed return receipts.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of [owner's or operator's name] in accordance with your instructions.

We certify that the wording of this letter of credit is identical to the wording specified in subsection d of North Dakota Administrative Code section 33-24-05-81 as such rule was constituted on the date shown immediately below.

[Signature(s) and Title(s) of Official(s) of issuing institution] [Date]

This credit is subject to ["the most recent edition of the Uniform Customs and Practice for Documentary Credits, published by the International Chamber of Commerce", or "the Uniform Commercial Code"]

5. A certificate of insurance as specified in subsection 5 of section 33-24-05-77 must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

CERTIFICATE OF INSURANCE FOR CLOSURE OR POSTCLOSURE CARE

Name and address of insurer (hereinafter called the "INSURER"): \_\_\_\_\_

Name and address of Insured (hereinafter called the "INSURED"): \_\_\_\_\_

Facilities covered: [List for each facility: the identification number, name, address and amount of insurance for closure or the amount for postclosure care, or both. (These amounts for all facilities covered must cover the face amount shown below.)]

Face amount: \_\_\_\_\_

Policy Number: \_\_\_\_\_

Effective Date: \_\_\_\_\_

The INSURER hereby certifies that it has issued to the INSURED the policy of insurance identified above to provide financial assurance for [insert "closure" or "closure and postclosure care" or "postclosure care"] for the facilities identified above. The INSURER further warrants that such policy conforms in all respects with the requirements of subsection 5 of North Dakota Administrative Code section 33-24-05-77, as applicable and as such regulations were constituted on the date shown immediately below. It is agreed that any provision of the policy inconsistent with such rules is hereby amended to eliminate such inconsistency.

Whenever requested by the North Dakota State Department of Health (DEPARTMENT) the INSURER agrees to furnish to the DEPARTMENT a duplicate original of the policy listed above, including all endorsements thereon.

I hereby certify that the wording of this certificate is identical to the wording specified in subsection 5 of North Dakota Administrative Code section 33-24-05-81 as such rule was constituted on the date shown immediately below.

[Authorized signature for INSURER]

[Name of person signing]

[Title of person signing]

Signature of witness or notary: \_\_\_\_\_

[Date]

6. A hazardous waste facility liability endorsement as required in section 33-24-05-79 must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

#### HAZARDOUS WASTE FACILITY LIABILITY ENDORSEMENT

1. This endorsement certifies that the policy to which the endorsement is attached provides liability insurance covering bodily injury and property damage in connection with the Insured's obligation to demonstrate financial responsibility under North Dakota Administrative Code section 33-24-05-79. The coverage applies at [list identification number, name and address for each facility] for ["sudden accidental occurrences", "nonsudden accidental occurrences," or "sudden and nonsudden accidental occurrences"; if coverage is for multiple facilities and the coverage is different for different facilities, indicate which facilities are insured for sudden accidental occurrences, which are insured for nonsudden accidental occurrences and which are insured for both]. The limits of liability are [insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurer's liability] exclusive of legal defense costs.
2. The insurance afforded with respect to such occurrences is subject to all of the terms and conditions of the policy; provided, however, that any provisions of the policy inconsistent with subsections (a) through (e) of this Paragraph 2 are hereby amended to conform with subsections (a) through (e):
  - (a) Bankruptcy or insolvency of the Insured shall not relieve the Insurer of its obligations under the policy to which this endorsement is attached.
  - (b) The Insurer is liable for the payment of amounts within any deductible applicable to this policy with a right of reimbursement by the Insured for any such payment made by the Insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in subsection 6 of North Dakota Administrative Code section 33-24-05-79.
  - (c) Whenever requested by the North Dakota State Department of Health (Department), the Insurer agrees

to furnish to the Department a signed duplicate original of the policy and all endorsements.

- (d) Cancellation of this endorsement, whether by the Insurer or the Insured, will be effective only upon written notice and only after the expiration of sixty days after a copy of such written notice is received by the Department, as evidenced by the return receipt.
- (e) Any other termination of this endorsement will be effective only upon written notice, and only after the expiration of thirty days after a copy of such written notice is received by the Department, as evidenced by the return receipt.

Attached to and forming part of policy number \_\_\_\_\_ issued by [name of Insurer] herein called the Insurer of [address of Insurer] to [name of Insured] of [address] this \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_\_. The effective date of said policy is \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_.

I hereby certify that the wording of this endorsement is identical to the wording specified in subsection 6 of North Dakota Administrative Code section 33-24-05-81, as such rule was constituted on the date first above written, and that the Insurer is licensed to transact the business of insurance in the State of North Dakota or eligible to provide insurance as an excess or surplus lines insurer in one or more states.

[Signature of authorized representative of Insurer]

[Type Name]

[Title], Authorized Representative of [name of Insurer]

[Address of representative]

- 7. A certificate of liability insurance as required in section 33-24-05-79 must be worded as follows, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted:

#### HAZARDOUS WASTE FACILITY CERTIFICATE OF LIABILITY INSURANCE

- 1. [Name of Insurer, (the "Insurer")] of [address of Insurer] hereby certifies that it has issued liability insurance covering bodily injury and property damage to [name of Insured], (the "Insured"), of [address of Insured] in

connection with the Insured's obligation to demonstrate financial responsibility under North Dakota Administrative Code section 33-24-05-79. The coverage applies at [list identification number, name and address for each facility] for [insert "sudden accidental occurrences," "nonsudden accidental occurrences" or "sudden and nonsudden accidental occurrences"; if coverage is for multiple facilities and the coverage is different for different facilities, indicate which facilities are insured for sudden accidental occurrences, which are insured for nonsudden accidental occurrences and which are insured for both]. The limits of liability are [insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurer's liability], exclusive of legal defense costs. The coverage is provided under policy number \_\_\_\_\_, issued on [date] the effective date of said policy is [date].

2. The Insurer further certifies the following with respect to the insurance described in Paragraph 1:
  - (a) Bankruptcy or insolvency of the Insured shall not relieve the Insurer of its obligations under the policy.
  - (b) The Insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the Insured for any such payment made by the Insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in subsection 6 of North Dakota Administrative Code section 33-24-05-79.
  - (c) Whenever requested by the North Dakota State Department of Health (Department), the Insurer agrees to furnish to the Department a signed duplicate original of the policy and all endorsements.
  - (d) Cancellation of the insurance, whether by the Insured or the Insurer, will be effective only upon written notice, and only after expiration of sixty days after a copy of such written notice is received by the Department, as evidenced by the return receipt.
  - (e) Any other termination of the insurance will be effective only upon written notice, and only after the expiration of thirty days after a copy of such written notice is received by the Department, as evidence by the return receipt.

I hereby certify that the wording of this instrument is identical to the wording specified in subsection 7

of North Dakota Administrative Code section 33-24-05-81, as such regulation was constituted on the date first above written, and that the Insurer is licensed to transact the business of insurance, in the State of North Dakota or eligible to provide insurance as an excess or surplus lines insurer in one or more states.

[Signature of authorized representative of Insurer]

[Type name]

[Title], Authorized Representative of [name of Insurer]

[Address of representative]

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

33-24-05-82. [Reserved]

33-24-05-83. [Reserved]

33-24-05-84. [Reserved]

33-24-05-85. [Reserved]

33-24-05-86. [Reserved]

33-24-05-87. [Reserved]

33-24-05-88. [Reserved]

33-24-05-89. Applicability of requirements for use and management of containers. Sections 33-24-05-89 through 33-24-05-102 apply to owners and operators of all hazardous waste facilities that store containers of hazardous waste, except as section 33-24-05-01 provides otherwise.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

33-24-05-90. Condition of containers. If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the owner or operator shall transfer the hazardous waste from this container to a container that is

in good condition or manage the waste in some other way that complies with the requirements of this chapter.

**History:** Effective January 1, 1984.

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

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

**33-24-05-91. Compatibility of waste with containers.** The owner or operator shall use a container made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.

**History:** Effective January 1, 1984.

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

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

**33-24-05-92. Management of containers.**

1. A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste.
2. A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.

**History:** Effective January 1, 1984.

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

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

**33-24-05-93. Inspections.** At least weekly, the owner or operator shall inspect areas where containers are stored, looking for leaking containers and for deterioration of containers and the containment system caused by corrosion or other factors.

**History:** Effective January 1, 1984.

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

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

**33-24-05-94. Containment.**

1. Container storage areas must have a containment system that is designed and operated in accordance with subsection 2, except as provided otherwise in subsection 3.
2. The containment system must be designed and operated as follows:

- a. A base must underlie the containers which is free of cracks or gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed.
  - b. The base must be sloped or the containment system must be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or are otherwise protected from contact with accumulated liquids.
  - c. The containment system must have sufficient capacity to contain ten percent of the volume of containers or the volume of the largest container, whichever is greater. Containers that do not contain free liquid need not be considered in this determination.
  - d. Run-on into the containment system must be prevented, unless the collection system has sufficient excess capacity in addition to that required in subdivision c to contain any run-on which might enter the system.
  - e. Spilled or leaked waste and accumulated precipitation must be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system.
3. Storage areas that store containers holding only wastes that do not contain free liquids need not have a containment system defined by subsection 2 provided that:
    - a. The storage area is sloped or is otherwise designed and operated to drain and remove liquid resulting from precipitation; or
    - b. The containers are elevated or are otherwise protected from contact with accumulated liquid.

**History:** Effective January 1, 1984.

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

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

**33-24-05-95. Special requirements for ignitable or reactive wastes.** Containers holding ignitable or reactive waste must be located at least fifteen meters [50 feet] from the facility's property line.

**History:** Effective January 1, 1984.

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

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

**33-24-05-96. Special requirements for incompatible wastes.**

1. Incompatible wastes, or incompatible wastes and materials may not be placed in the same container, unless subsection 2 of section 33-24-05-08 is complied with.
2. Hazardous waste must not be placed in an unwashed container that previously held an incompatible waste or material.
3. A storage container holding a hazardous waste that is incompatible with any waste or other material stored nearby in other containers, piles, open tanks, or surface impoundments must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.

**History:** Effective January 1, 1984.

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

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

**33-24-05-97. Closure.** At closure, all hazardous waste and hazardous waste residues must be removed from the containment system. Remaining containers, liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues must be decontaminated or removed.

**History:** Effective January 1, 1984.

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

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

**33-24-05-98. [Reserved]**

**33-24-05-99. [Reserved]**

**33-24-05-100. [Reserved]**

**33-24-05-101. [Reserved]**

**33-24-05-102. [Reserved]**

**33-24-05-103. Applicability of tank requirements.**

1. Sections 33-24-05-103 through 33-24-05-114 apply to owners and operators of facilities that use tanks to treat or store hazardous waste, except as section 33-24-05-01 and subsection 2 of this section provide otherwise.

2. These sections do not apply to facilities that treat or store hazardous waste in covered underground tanks that cannot be entered for inspection.

**History:** Effective January 1, 1984.

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

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

**33-24-05-104. Design of tanks.** Tanks must have sufficient shell strength and, for closed tanks, pressure controls, e.g., vents, to assure that they do not collapse or rupture. The department will review the design of the tanks, including the foundation, structural support, seams and pressure controls. The department shall require that a minimum shell thickness be maintained at all times to ensure sufficient shell strength. Factors to be considered in establishing minimum thickness include the width, height, and materials of construction of the tank, and the specific gravity of the waste which will be placed in the tank. In reviewing the design of the tank and establishing a minimum thickness, the department shall rely upon appropriate industrial design standards and other available information.

**History:** Effective January 1, 1984.

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

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

**33-24-05-105. General operating requirements.**

1. Wastes and other materials, e.g., treatment reagents, which are incompatible with the material of construction of the tank may not be placed in the tank unless the tank is protected from accelerated corrosion, erosion, or abrasion through the use of:
  - a. An inner liner or coating which is compatible with the wastes or materials and which is free of leaks, cracks, holes, or other deterioration; or
  - b. Alternative means of protection, e.g., cathodic protection or corrosion inhibitors.
2. The owner or operator shall use appropriate controls and practices to prevent overfilling. These must include:
  - a. Controls to prevent overfilling, e.g., waste feed cutoff system or bypass system to a standby tank.

- b. For uncovered tanks, maintenance of sufficient freeboard to prevent overtopping by wave or wind action or by precipitation.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

### 33-24-05-106. Inspections.

1. The owner or operator shall inspect:
  - a. Overfilling control equipment, e.g., waste feed cutoff systems and bypass systems, at least once each operating day to ensure that it is in good working order.
  - b. Data gathered from monitoring equipment (e.g., pressure and temperature gauges) where present, at least once each operating day to ensure that the tank is being operated according to its design.
  - c. For uncovered tanks, the level of waste in the tank, at least once each operating day, to ensure compliance with subdivision b of subsection 2 of section 33-24-05-105.
  - d. The construction materials of the aboveground portions of the tank, at least weekly to detect corrosion or erosion and leaking of fixtures and seams.
  - e. The area immediately surrounding the tank, at least weekly, to detect obvious signs of leakage, e.g., wet spots or dead vegetation.
2. As part of the inspection schedule required in subsection 2 of section 33-24-05-06 and in addition to the specific requirements of subsection 1 of this section, the owner or operator shall develop a schedule and procedure for assessing the condition of the tank. The schedule and procedure must be adequate to detect cracks, leaks, corrosion, or erosion which may lead to cracks or leaks, or wall thinning to less than the thickness required under section 33-24-05-104. Procedures for emptying a tank to allow entry and inspection of the interior must be established when necessary to detect corrosion or erosion of the tank sides and bottom. The frequency of these assessments must be based on the material of construction of the tank, type of corrosion or erosion protection used, rate of corrosion or erosion observed during previous inspections, and the characteristics of the waste being treated or stored.
3. As part of the contingency plan required under chapter 33-24-05, the owner or operator shall specify the procedures the owner or operator intends to use to respond to tank spills

or leakage; including procedures and timing for expeditious removal of leaked or spilled waste and repair of the tank.

History: Effective January 1, 1984.  
General Authority: NDCC 23-20.3-03  
Law Implemented: NDCC 23-20.3-03, 23-20.3-04

**33-24-05-107. Closure.** At closure, all hazardous waste and hazardous waste residue must be removed from tanks, discharge control equipment, and discharge confinement structures.

History: Effective January 1, 1984.  
General Authority: NDCC 23-20.3-03  
Law Implemented: NDCC 23-20.3-03, 23-20.3-04

**33-24-05-108. Special requirements for ignitable or reactive wastes.**

1. Ignitable or reactive waste may not be placed in a tank unless:
  - a. The waste is treated, rendered, or mixed before or immediately after placement in the tank so that:
    - (1) The resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive wastes under section 33-24-02-11 or 33-24-02-13;
    - (2) Subsection 2 of section 33-24-05-08 is complied with;  
or
  - b. The waste is stored or treated in such a way that it is protected from any material or conditions which may cause the waste to ignite or react; or
  - c. The tank is used solely for emergencies.
2. The owner or operator of a facility which treats or stores ignitable or reactive waste in covered tanks shall comply with the national fire protection association's buffer zone requirements for tanks, contained in Tables 2-1 through 2-6 of the "Flammable and Combustible Liquids Code" (1977 or 1981), (incorporated by reference, see section 33-24-01-05).

History: Effective January 1, 1984.  
General Authority: NDCC 23-20.3-03  
Law Implemented: NDCC 23-20.3-03, 23-20.3-04

**33-24-05-109. Special requirements for incompatible wastes.**

1. Incompatible wastes, or incompatible wastes and materials, may not be placed in the same tank, unless subsection 2 of section 33-24-05-08 is complied with.
2. Hazardous waste may not be placed in an unwashed tank which previously held an incompatible waste or material, unless subsection 2 of section 33-24-05-08 is complied with.

**History:** Effective January 1, 1984.

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

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

33-24-05-110. [Reserved]

33-24-05-111. [Reserved]

33-24-05-112. [Reserved]

33-24-05-113. [Reserved]

33-24-05-114. [Reserved]

**33-24-05-115. Applicability of surface impoundment requirements.**

Sections 33-24-05-115 through 33-24-05-129 apply to owners and operators at facilities that use surface impoundments to treat, store, or dispose of hazardous waste, except as section 33-24-05-01 provides otherwise.

**History:** Effective January 1, 1984.

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

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

**33-24-05-116. Design and operating requirements.**

1. A surface impoundment (except for an existing portion of a surface impoundment which qualifies for an exemption in accordance with subsection 3) must be designed, constructed, and installed to prevent any migration of wastes out of the impoundment to the adjacent subsurface soil or ground water or surface water at any time during the active life (including the closure period) of the impoundment. At a minimum:
  - a. The impoundment (including its underlying liners) must be located entirely above the seasonal high water table.
  - b. The impoundment must be underlain by two liners which are designed and constructed in a manner that prevents the migration of liquids into or out of the space between the liners. Each liner must meet all specifications of subdivision d.

- c. A leak detection system must be designed, constructed, maintained, and operated between the liners to detect any migration of liquids into the space between the liners.
  - d. The liners may be constructed of materials that may allow waste to migrate into the liner (but not into the adjacent subsurface soil or ground water or surface water) during the active life of the facility; provided, that the impoundment is closed in accordance with subdivision a of subsection 1 of section 33-24-05-119. For impoundments that will be closed in accordance with subdivision b of subsection 1 of section 33-24-05-119 the liner must be constructed of materials that can prevent wastes from migrating into the liner during the active life of the facility. The liners must be:
    - (1) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation.
    - (2) Placed upon a foundation or base capable of providing support to the liners and resistance to pressure gradients above and below the liners to prevent failure of the liners due to settlement, compression, or uplift.
    - (3) Installed to cover all surrounding earth likely to be in contact with the waste or leachate.
  - e. If liquid leaks into the leak detection system, the owner or operator shall:
    - (1) Notify the department of the leak in writing within seven days after detecting the leak.
    - (2) Within a period of time specified in the permit, remove accumulated liquid, repair or replace the liner which is leaking to prevent the migration of liquids through the liner, and obtain a certification from a qualified engineer that to the best of the engineer's knowledge and opinion, the leak has been stopped.
2. The owner or operator will be exempted from the requirements of subsection 1 if the department finds, based on a demonstration by the owner or operator that alternate design or operating practices, together with location characteristics will prevent the migration of any hazardous constituents (see

section 33-24-05-50) into the ground water or surface water at any future time. In deciding whether to grant an exemption, the department will consider:

- a. The nature and quantity of the waste;
  - b. The proposed alternate design and operation;
  - c. The hydrogeologic setting of the facility, including the attenuative capacity and thickness of the liners and soils present between the impoundment and ground water or surface water; and
  - d. All other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to ground water or surface water.
3. The department, on a case-by-case basis, may exempt an existing portion of a hazardous waste surface impoundment from subsection 1 if the owner or operator demonstrates that the owner's or operator's existing design and operating practices, together with the location of his facility, will prevent migration of any hazardous constituents into the ground water or surface water:
- a. During the active life of the facility (including the closure period), if the owner or operator closes the existing surface impoundment in accordance with subdivision a of subsection 1 of section 33-24-05-119.
  - b. During the active life (including the closure period) and the postclosure care period, if the owner or operator closes the existing surface impoundment in accordance with subdivision b of subsection 1 of section 33-24-05-119.
4. A surface impoundment must be designed, constructed, maintained, and operated to prevent overtopping resulting from normal or abnormal operations; overfilling; wind and wave action; rainfall; run-on; malfunctions of level controllers; alarms and other equipment; and human error.
5. A surface impoundment must have dikes that are designed, constructed, and maintained with sufficient structural integrity to prevent massive failure of the dikes. In ensuring structural integrity, it must not be presumed that the liner system will function without leakage during the active life of the unit.

6. The department will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this section are satisfied.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

### 33-24-05-117. Monitoring and inspection.

1. During construction and installation, liners (except in the case of existing portions of surface impoundments exempt from subsection 1 of section 33-24-05-116) and cover systems (e.g., membranes, sheets, or coatings) must be inspected for uniformity, damage, and imperfections, e.g., holes, cracks, thin spots, or foreign materials. Immediately after construction or installation:
  - a. Synthetic liners and covers must be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters; and
  - b. Soil-based and admixed liners and covers must be inspected for imperfections including lenses, cracks, channels, root holes, or other structural or other nonuniformities that may cause an increase in the permeability of the liner or cover.

These inspections must be conducted by an independent, qualified professional.

2. While a surface impoundment is in operation, it must be inspected weekly and after storms to detect evidence of any of the following:
  - a. Deterioration, malfunctions, or improper operation of overtopping control systems.
  - b. Sudden drops in the level of the impoundments contents.
  - c. The presence of liquids in leak detection systems.
  - d. Severe erosion or other signs of deterioration in dikes or other containment devices.
3. Prior to the issuance of a permit, and after any period of time greater than six months during which the impoundment was not in service, the owner or operator shall obtain a certification from a qualified engineer that the impoundment's dike, including that portion of any dike which provides freeboard, has structural integrity. The certification must establish, in particular, that the dike:

- a. Will withstand the stress of the pressure exerted by the types and amounts of waste to be placed in the impoundment.
- b. Will not fail due to scouring and piping, without dependence on any liner system included in the surface impoundment construction.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

### 33-24-05-118. Emergency repairs - Contingency plans.

1. A surface impoundment must be removed from service in accordance with subsection 2 when:
  - a. The level of liquids in the impoundment suddenly drops and the drop is not known to be caused by changes in the flows into or out of the impoundment; or
  - b. The dike leaks.
2. When a surface impoundment must be removed from service as required by subsection 1, the owner or operator shall:
  - a. Immediately shut off the flow or stop the addition of wastes into the impoundment.
  - b. Immediately contain any surface leakage which has occurred or is occurring.
  - c. Immediately stop the leak.
  - d. Take any other necessary steps to stop or prevent catastrophic failure.
  - e. If a leak cannot be stopped by any other means, empty the impoundment.
  - f. Notify the department of the problem in writing within seven days after detecting the problem.
3. As part of the contingency plan required in sections 33-24-05-26 through 33-24-05-36, the owner or operator shall specify a procedure for complying with the requirements of subsection 2.
4. No surface impoundment that has been removed from service in accordance with the requirements of this section may be restored to service unless the portion of the impoundment

which was failing is repaired and the following steps are taken:

- a. If the impoundment was removed from service as the result of actual or imminent dike failure, the dikes structural integrity must be recertified in accordance with subsection 3 of section 33-24-05-117.
  - b. If the impoundment was removed from service as the result of a sudden drop in the liquid level, then:
    - (1) For any existing portion of the impoundment which is not equipped with a liner system, a liner must be installed in compliance with subsection 1 of section 33-24-05-116; and
    - (2) For any other portion of the impoundment, the repaired liner system must be certified by a qualified engineer as meeting the design specifications approved in the permit.
5. A surface impoundment that has been removed from service in accordance with the requirements of this section and that is not being repaired must be closed in accordance with the provisions of section 33-24-05-119.

**History:** Effective January 1, 1984.

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

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

#### **33-24-05-119. Closure and postclosure care.**

1. At closure, the owner or operator shall:
  - a. Remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless subsection 4 of section 33-24-02-03 applies; or
  - b. Comply with the following:
    - (1) Eliminate free liquids by removing liquid wastes or solidifying the remaining wastes and waste residues.
    - (2) Stabilize remaining wastes to a bearing capacity sufficient to support final cover.
    - (3) Cover the surface impoundment with a final cover designed and constructed to:

- (a) Provide long-term minimization of the migration of liquids through the closed impoundment.
  - (b) Function with minimum maintenance.
  - (c) Promote drainage and minimize erosion or abrasion of the final cover.
  - (d) Accommodate settling and subsidence so that the cover's integrity is maintained.
  - (e) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.
2. If some waste residues or contaminated materials are left in place at final closure, the owner or operator shall comply with all postclosure requirements contained in sections 33-24-05-65 through 33-24-05-68, including maintenance and monitoring throughout the postclosure care period (specified in the permit under section 33-24-05-65). The owner or operator shall:
- a. Maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, or other events.
  - b. Maintain and monitor the leak detection system in accordance with section 33-24-05-116.
  - c. Maintain and monitor the ground water monitoring system and comply with all other applicable requirements of sections 33-24-05-47 through 33-24-05-58.
  - d. Prevent run-on and runoff from eroding or otherwise damaging the final cover.
3. The owner or operator shall also meet the following requirements:
- a. If an owner or operator plans to close a surface impoundment in accordance with subdivision a of subsection 1, and the impoundment does not comply with the liner requirements of subsection 1 of section 33-24-05-116 and is not exempt from them in accordance with subsection 2 of that section, then:
    - (1) The closure plan for the impoundment under section 33-24-05-61 must include both a plan for complying with subdivision a of subsection 1 of this section and a contingent plan for complying with subdivision b of subsection 1 of this section in case

not all contaminated subsoils can be practicably removed at closure.

(2) The owner or operator shall prepare a contingent postclosure plan under section 33-24-05-66 for complying with subsection 2 of this section in case not all contaminated subsoils can be practicably removed at closure.

b. The cost estimates calculated under section 33-24-05-76 for closure and postclosure care of an impoundment subject to this section must include the cost of complying with the contingent closure plan and the contingent postclosure plan in addition to the cost of expected closure under subdivision a of subsection 1 of this section.

4. During the postclosure care period, if liquids leak into a leak detection system, the owner or operator shall notify the department of the leak in writing within seven days after detecting the leak.

**History:** Effective January 1, 1984.

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

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

**33-24-05-120. Special requirements for ignitable or reactive waste.** Ignitable or reactive waste may not be placed in a surface impoundment, unless:

1. The waste is treated, rendered, or mixed before or immediately after placement in the impoundment so that:
  - a. The resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive wastes under section 33-24-02-11 or 33-24-02-13; and
  - b. Subsection 2 of section 33-24-05-08 is complied with; or
2. The waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react; or
3. The surface impoundment is used solely for emergencies.

**History:** Effective January 1, 1984.

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

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

**33-24-05-121. Special requirements for incompatible wastes.** Incompatible wastes, or incompatible wastes and materials, may not be

placed in the same surface impoundment, unless the owner or operator complies with subsection 2 of section 33-24-05-08.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

33-24-05-122. [Reserved]

33-24-05-123. [Reserved]

33-24-05-124. [Reserved]

33-24-05-125. [Reserved]

33-24-05-126. [Reserved]

33-24-05-127. [Reserved]

33-24-05-128. [Reserved]

33-24-05-129. [Reserved]

33-24-05-130. Applicability of waste pile requirements.

1. Sections 33-24-05-130 through 33-24-05-143 apply to owners or operators of facilities that store or treat hazardous waste in piles, except as section 33-24-05-01 provides otherwise.
2. Sections 33-24-05-130 through 33-24-05-143 do not apply to owners or operators of waste piles that are closed with wastes left in place. Such waste piles are subject to regulation under sections 33-24-05-176 through 33-24-05-200.
3. The owner or operator of any waste pile that is inside or under a structure that provides protection from precipitation so that neither runoff nor leachate is generated is not subject to regulation under section 33-24-05-131 or under sections 33-24-05-47 through 33-24-05-58, provided that:
  - a. Liquids or materials containing free liquids are not placed in the pile.
  - b. The pile is protected from surface water run-on by the structure or in some other manner.
  - c. The pile is designed and operated to control dispersal of the waste by wind, where necessary, by means other than wetting.

- d. The pile will not generate leachate through decomposition or other reactions.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

### 33-24-05-131. Design and operating requirements.

1. A waste pile (except for an existing portion of a waste pile which qualifies for an exemption in accordance with subsection 6) must be designed, constructed, and installed to prevent any migration of wastes out of the pile into the adjacent subsurface soil or ground water or surface water at any time during the active life (including the closure period) of the waste pile. At a minimum the owner or operator must comply with subdivision a or b:

- a. The following conditions must be met:

- (1) The pile (including its underlying liners) must be located entirely above the seasonal high water table.
- (2) The pile must be underlain by two liners which are designed and constructed in a manner that prevents the migration of liquids into or out of the space between the liners. Both liners must meet all of the specifications of subsection 2.
- (3) A leak detection system must be designed, constructed, maintained, and operated between the liners to detect any migration of liquids into the space between the liners.
- (4) The pile must have a leachate collection and removal system above the top liner that is designed, constructed, maintained, and operated in accordance with subsection 3.

- b. The following conditions must be met:

- (1) The pile (including its underlying liner) must be located entirely above the seasonal high water table.
- (2) The pile must be underlain by a liner (base) that meets all the specifications of subsection 2.
- (3) The wastes in the pile must be removed periodically and the liner must be inspected for deterioration, cracks, or other conditions that may result in leaks. The frequency of inspection will be specified in the inspection plan required in section 33-24-05-06 and

must be based on the potential for the liner (base) to crack or otherwise deteriorate under the conditions of operation, e.g., waste type, rainfall, loading rates, and subsurface stability.

- (4) The liner must be of sufficient strength and thickness to prevent failure due to puncture, cracking, tearing, or other physical damage from equipment used to place waste in or on the pile or to clean and expose the liner surface for inspection.
  - (5) The pile must have a leachate collection and removal system above the liner that is designed, constructed, maintained, and operated in accordance with subsection 3.
2. The liner may be constructed of materials that may allow waste to migrate into the liner itself (but not into the adjacent subsurface soil or ground water or surface water) during the active life of the facility. The liner must be:
    - a. Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation.
    - b. Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift.
    - c. Installed to cover all surrounding earth likely to be in contact with the waste or leachate.
  3. A leachate collection and removal system immediately above the liner must be designed, constructed, maintained, and operated to collect and remove leachate from the pile. The department will specify design and operating conditions in the permit to ensure the leachate depth over the liner does not exceed thirty centimeters [one foot]. The leachate collection and disposal system must be:
    - a. Constructed of materials that are:
      - (1) Chemically resistant to the waste managed in the pile and the leachate expected to be generated.
      - (2) Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlain

wastes, waste cover materials, and by any equipment used at the pile.

- b. Designed and operated to function without clogging through the scheduled closure of the waste pile.
4. If liquid leaks into the leak detection system, the owner or operator shall:
  - a. Notify the department of the leak in writing within seven days after detecting the leak.
  - b. Within a period of time specified in the permit remove accumulated liquid, repair or replace the liner which is leaking to prevent the migration of liquids through the liner, and obtain a certification from a qualified engineer that to the best of the engineer's knowledge and opinion, the leak has been stopped.
5. The owner or operator will be exempted from the requirements of subsection 1 if the department finds based on a demonstration by the owner or operator that alternate design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents (see section 33-24-05-50) into the ground water or surface water at any future time. In deciding whether to grant an exemption the department will consider:
  - a. The nature and quantity of the wastes.
  - b. The proposed alternate design and operation.
  - c. The hydrogeologic setting of the facility, including attenuative capacity and thickness of the liners and soils present between the pile and ground water or surface water.
  - d. All other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to ground water or surface water.
6. The department, on a case-by-case basis, may exempt an existing portion of a hazardous waste pile from subsection 1 if the owner or operator demonstrates that the owner's or operator's existing design and operating practices, together with the location of the facility, will prevent migration of any hazardous constituents into the ground water or surface water during the active life of the facility (including the closure period).
7. The owner or operator shall design, construct, operate, and maintain a run-on control system capable of preventing flow

onto the active portion of the pile during peak discharge from at least a twenty-five-year storm.

8. The owner or operator shall design, construct, operate, and maintain a runoff management system to collect and control at least the water volume resulting from a twenty-four-hour, twenty-five-year storm.
9. Collection and holding basins, e.g., tanks or basins, associated with run-on and runoff control systems must be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system.
10. If the pile contains any particulate matter which may be subject to wind dispersal, the owner or operator shall cover or otherwise manage the pile to control wind dispersal.
11. The department will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this section are satisfied.

**History:** Effective January 1, 1984.

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

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

#### **33-24-05-132. Monitoring and inspection.**

1. During construction or installation, liners (except in the case of existing portions of piles exempt from subsection 1 of section 33-24-05-131) and cover systems (e.g., membranes, sheets, or coatings) must be inspected for uniformity, damage, and imperfections, e.g., holes, cracks, thin spots or foreign materials. Immediately after construction or installation:
  - a. Synthetic liners and covers must be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters.
  - b. Soil-based and admixed liners and covers must be inspected for imperfections including lenses, cracks, channels, root holes, or other structural nonuniformities that may cause an increase in the permeability of the liner or cover.These inspections must be conducted by an independent, qualified professional.
2. While a waste pile is in operation it must be inspected weekly and after storms to detect evidence of any of the following:
  - a. Deterioration, malfunctions, or improper operation of run-on and runoff control systems.

- b. The presence of liquids in leak detection systems where installed.
  - c. Proper functioning of wind dispersal control systems where present.
  - d. The presence of leachate in and proper functioning of leachate collection and removal systems where present.
3. If, during the periodic removal of wastes from the pile and inspection of the underlying liner in accordance with subdivision b of subsection 1 of section 33-24-05-131, any deterioration, crack, or other condition is identified that is causing or could cause a leak, the owner or operator shall:
- a. Notify the department of the condition in writing within seven days after detecting the condition.
  - b. Repair or replace the liner (base) and obtain a certification from a qualified engineer that to the best of his knowledge and opinion the liner (base) has been repaired and leakage will not occur.

**History:** Effective January 1, 1984.

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

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

**33-24-05-133. Special requirements for ignitable or reactive waste.** Ignitable or reactive waste may not be placed in a waste pile unless:

- 1. The waste is treated, rendered, or mixed before or immediately after placement in the pile so that:
  - a. The resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under section 33-24-02-11 or 33-24-02-13; and
  - b. Subsection 2 of section 33-24-05-08 is complied with; or
- 2. The waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react.

**History:** Effective January 1, 1984.

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

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

**33-24-05-134. Special requirements for incompatible wastes.**

1. Incompatible wastes, or incompatible wastes and materials may not be placed in the same pile unless subsection 2 of section 33-24-05-08 is complied with.
2. A pile of hazardous waste that is incompatible with any waste or other material stored nearby in containers, other piles, open tanks, or surface impoundments must be separated from the other material, or protected from them by means of a dike, berm, wall, or other device.
3. Hazardous waste must not be piled on the same base where incompatible wastes or materials were previously piled, unless the base has been decontaminated sufficiently to ensure compliance with subsection 2 of section 33-24-05-08.

**History:** Effective January 1, 1984.

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

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

**33-24-05-135. Closure and postclosure care.**

1. At closure, the owner or operator must remove or decontaminate all waste residue, contaminated containment system components (liners etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless subsection 4 of section 33-24-02-03 applies.
2. If, after removing or decontaminating all residues and making all reasonable efforts to affect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in subsection 1, the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, the owner or operator shall close the facility and perform postclosure care in accordance with the closure and postclosure care requirements that apply to landfills (section 33-24-05-180).
3. In addition:
  - a. The owner or operator of a waste pile that does not comply with the liner requirements of subsection 2 of section 33-24-05-131 and is not exempt from them in accordance with subsection 3 of section 33-24-05-130 or subsection 5 of section 33-24-05-131, shall:
    - (1) Include in the closure plan for the pile under section 33-24-05-61 both a plan for complying with subsection 1 and a contingent plan for complying with

subsection 2 in case not all contaminated subsoil can be practicably removed at closure.

- (2) Prepare a contingent postclosure plan under section 33-24-05-66 for complying with subsection 2 in case not all contaminated subsoil can be practicably removed at closure.
- b. The cost estimates calculated under section 33-24-05-76 for closure and postclosure care of a pile subject to this subsection must include the cost of complying with the contingent closure plan and the contingent postclosure plan in addition to the cost of expected closure under subsection 1.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

33-24-05-136. [Reserved]

33-24-05-137. [Reserved]

33-24-05-138. [Reserved]

33-24-05-139. [Reserved]

33-24-05-140. [Reserved]

33-24-05-141. [Reserved]

33-24-05-142. [Reserved]

33-24-05-143. [Reserved]

33-24-05-144. Applicability of incinerator requirements.

1. Sections 33-24-05-144 through 33-24-05-159 apply to owners and operators of facilities that incinerate hazardous waste, except as section 33-24-05-01 provides otherwise.
2. After consideration of the waste analysis included with the permit application, and unless the department finds that the waste will pose a threat to human health or the environment when burned in an incinerator, the department may on a case-by-case basis exempt the applicant from some or all of the requirements of sections 33-24-05-144 through 33-24-05-159, except 33-24-05-145 and 33-24-05-151 if:
  - a. The waste to be burned is hazardous (either listed in or fails the characteristic tests in chapter 33-24-02) solely because it is:

- (1) Ignitable, or corrosive, or both; or
  - (2) Reactive for characteristic other than those in subdivisions d and e of subsection 1 of section 33-24-02-13, and will not be burned when other hazardous wastes are present in the combustion zone; and
- b. The waste contains insignificant concentrations of the hazardous constituents listed in Appendix V of chapter 33-24-02.
3. The owner or operator of an incinerator may conduct trial burns subject only to the requirements of subsection 2 of section 33-24-06-19.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

#### 33-24-05-145. Waste analysis.

1. As a portion of the trial burn plan or with the permit application, the owner or operator shall have included an analysis of the waste feed sufficient to provide all information required by subdivision b of subsection 2 of section 33-24-06-19 or subdivision w of subsection 2 of section 33-24-06-17. Owners and operators of new hazardous waste incinerators shall provide the information required by subdivision c of subsection 2 of section 33-24-06-19 or subdivision w of subsection 2 of section 33-24-06-17 to the greatest extent possible.
2. Throughout normal operation the owner or operator shall conduct sufficient waste analysis to verify that waste feed to the incinerator is within the physical and chemical composition limit specified in the permit (under subsection 2 of section 33-24-05-149).

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

#### 33-24-05-146. Designation of principle organic hazardous constituents.

1. Principle organic hazardous constituents in the waste feed must be treated to the extent required by the performance standard specified in section 33-24-05-147.
2. Designation of principle organic hazardous constituents.

- a. For each waste feed to be burned, one or more principle organic hazardous constituents will be specified in the facility's permit from among those constituents listed in chapter 33-24-02, Appendix V. This specification will be based on the degree of difficulty of incineration of the organic constituents in the waste and on their concentration or mass in the waste feed, considering the results of waste analysis and trial burns or alternative data submitted with the facility's permit application. Organic constituents which represent the greatest degree of difficulty of incineration will be those most likely to be designated as principle organic hazardous constituents. Constituents are more likely to be designated as principle organic hazardous constituents if they are present in large quantities or concentrations in the waste.
- b. Trial principle organic hazardous constituents will be designated for performance of trial burns in accordance with the procedure for obtaining trial burn permits in subsection 2 of section 33-24-06-19.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-147. Performance standards.** An incinerator burning hazardous waste must be designed, constructed, and maintained so that when operated in accordance with operating requirements specified under section 33-24-05-149 it will meet the following performance standards:

1. An incinerator burning hazardous waste must achieve a destruction and removal efficiency of ninety-nine and ninety-nine one hundredths percent for each principle organic hazardous constituent designated under section 33-24-05-146 in its permit for each waste feed. The destruction and removal efficiency is determined for each principle organic hazardous constituent from the following equation:

$$DRE = \frac{W_{IN} - W_{OUT}}{W_{IN}} \times 100\%$$

Where:

$W_{IN}$  = mass feed rate of one principle organic constituent in the waste stream feeding the incinerator, and

$W_{OUT}$  = mass emission rate of the same principle organic hazardous constituent present in exhaust emissions prior to release to the atmosphere.

2. An incinerator burning hazardous waste and producing stack emissions of more than one and eight-tenths kilograms per hour [4 pounds per hour] of hydrogen chloride must control hydrogen chloride emissions such that the rate of emission is no greater than the larger of either one and eight-tenths kilograms per hour or one percent of the hydrogen chloride in the stack gas prior to entering any pollution control equipment.
3. An incinerator burning hazardous waste must not emit particulate matter in excess of one hundred eighty milligrams per dry standard cubic meter [0.08 grains per dry standard cubic foot] when corrected for the amount of oxygen in the stacks according to the formula:

$$P_c = P_M \times \frac{14}{21-Y}$$

Where:

$P_c$  = the corrected concentration of particulate matter

$P_M$  = the measured concentration of particulate matter, and

$Y$  = the measured concentration of oxygen in the stack gas using the Orsat method for oxygen analysis of dry flue gas presented in 40 CFR, Part 60, Appendix A (method 3) of the federal air pollution control regulations. This correction procedure is to be used by all hazardous waste incinerators except those operating under conditions of oxygen enrichment. For these facilities the department will select an appropriate correction procedure to be specified in the facility permit.

4. For purposes of permit enforcement, compliance with the operating requirements specified in the permit under section 33-24-05-149 will be regarded as compliance with this section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the performance requirements of this section may be "information" justifying modification, revocation, or reissuance of a permit under section 33-24-06-12.

**History:** Effective January 1, 1984.

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

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

#### **33-24-05-148. Hazardous waste incinerator permits.**

1. The owner or operator of a hazardous waste incinerator may burn only waste specified in the permit and only under

operating conditions specified for those wastes under section 33-24-05-149, except:

- a. In approved trial burns under subsection 2 of section 33-24-06-19; or
  - b. Under exemptions created by section 33-24-05-144.
2. Other hazardous wastes may be burned only after operating conditions have been specified in a new permit or a permit modification as applicable. Operating requirements for new wastes may be based on either trial burn results or alternative data included with the permit application under subdivision w of subsection 2 of section 33-24-06-17.
3. The permit for a new hazardous waste incinerator must establish appropriate conditions for each of the applicable requirements of sections 33-24-05-144 through 33-24-05-159, including but not limited to allowable waste feeds in operating conditions necessary to meet the requirements of section 33-24-05-149, sufficient to comply with the following standards:
- a. For the period beginning with initial introduction of hazardous waste to the incinerator and ending with initiation of the trial burn, and only for the minimum time required to establish operating conditions required in subdivision b of this subsection, not to exceed a duration of seven hundred twenty hours operating time for treatment of hazardous waste, the operating requirements must be those most likely to ensure compliance with the performance standards of section 33-24-05-147, based on the department's engineering judgment. The department may extend the duration of this period once for up to seven hundred twenty additional hours when good cause for the extension is demonstrated by the applicant.
  - b. For the duration of the trial burn the operating requirements must be sufficient to demonstrate compliance with the performance standards of section 33-24-05-147 and must be in accordance with the approved trial burn plan.
  - c. For the period immediately following completion of the trial burn and only for the minimum period sufficient to allow sample analysis, data computation, and submission of the trial burn results by the applicant, and review of the trial burn results and modification of the facility permit by the department, the operating requirements must be those most likely to ensure compliance with performance standards of section 33-24-05-147 based on the department's engineering judgment.

- d. For the remaining duration of the permit the operating requirements must be those demonstrated in a trial burn or by alternative data specified in paragraph 3 of subdivision w of subsection 2 of section 33-24-06-17 as sufficient to ensure compliance with the performance standards of section 33-24-05-147.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

#### 33-24-05-149. Operating requirements.

1. An incinerator must be operated in accordance with operating requirements specified in the permit. These will be specified on a case-by-case basis as those demonstrated (in a trial burn or in alternative data as specified in subsection 2 of section 33-24-05-148 and included with a facility's permit application) to be sufficient to comply with the performance standards of section 33-24-05-147.
2. Each set of operating requirements will specify the composition of the waste feed (including acceptable variations in the physical or chemical properties of the waste feed which will not affect compliance with the performance requirement of section 33-24-05-147) to which the operating requirements apply. For each such waste feed, the permit will specify acceptable operating limits including the following conditions:
  - a. Carbon monoxide level in the stack exhaust gas.
  - b. Waste feed rate.
  - c. Combustion temperature.
  - d. An appropriate indicator of combustion gas velocity.
  - e. Allowable variation in incinerator system design or operating procedures.
  - f. Such operating requirements as are necessary to ensure that the performance standards of section 33-24-05-147 are met.
3. During startup and shutdown of an incinerator, hazardous waste (except waste exempted in accordance with section 33-24-05-144) may not be fed into the incinerator unless the incinerator is operating within the conditions of operation, (temperature, air feed rate, etc.) specified in the permit.

4. Fugitive emissions from the combustion zone must be controlled by:
  - a. Keeping the combustion zone totally sealed against fugitive emissions;
  - b. Maintaining a combustion zone pressure lower than atmospheric pressure; or
  - c. An alternate means of control demonstrated (with the permit application) to provide fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure.
5. An incinerator must be operated with a functioning system to automatically cut off waste feed to the incinerator when operating conditions deviate from limits established under subsection 1.
6. An incinerator must cease operation when changes in waste feed, incinerator design, or operating conditions exceed limits designated in its permit.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

#### 33-24-05-150. Monitoring and inspections.

1. The owner or operator shall conduct, at a minimum, the following monitoring while incinerating hazardous waste:
  - a. Combustion temperature, waste feed rate, and the indicator of combustion gas velocity specified in the permit must be monitored on a continuous basis.
  - b. Carbon monoxide must be monitored on a continuous basis at a point in the incinerator downstream of the combustion zone and prior to release to the atmosphere.
  - c. Upon request by the department, sampling and analysis of the waste and exhaust emissions must be conducted to verify that the operating requirements established in the permit achieve the performance standards of section 33-24-05-147.
2. The incinerator and associated equipment (pumps, valves, conveyors, pipes, etc.) must be completely inspected at least daily for leaks, spills, fugitive emissions, and signs of tampering.

3. The emergency waste feed cutoff system and associated alarms must be tested at least weekly to verify operability, unless the applicant demonstrates to the department that weekly inspections will unduly restrict or upset operations and that less frequent inspection will be adequate. At a minimum, operational testing must be conducted monthly.
4. This monitoring and inspection data must be recorded and the records must be placed in the operating log required by section 33-24-05-40.

History: Effective January 1, 1984.  
General Authority: NDCC 23-20.3-03  
Law Implemented: NDCC 23-20.3-03, 23-20.3-04

33-24-05-151. **Closure.** At closure the owner or operator shall remove all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) from the incinerator site.

History: Effective January 1, 1984.  
General Authority: NDCC 23-20.3-03  
Law Implemented: NDCC 23-20.3-03, 23-20.3-04

- 33-24-05-152. [Reserved]
- 33-24-05-153. [Reserved]
- 33-24-05-154. [Reserved]
- 33-24-05-155. [Reserved]
- 33-24-05-156. [Reserved]
- 33-24-05-157. [Reserved]
- 33-24-05-158. [Reserved]
- 33-24-05-159. [Reserved]

33-24-05-160. **Applicability of land treatment requirements.** Sections 33-24-05-160 through 33-24-05-175 apply to owners and operators of facilities that treat or dispose of hazardous waste in land treatment units, except as section 33-24-05-01 provides otherwise.

History: Effective January 1, 1984.  
General Authority: NDCC 23-20.3-03  
Law Implemented: NDCC 23-20.3-03, 23-20.3-04

**33-24-05-161. Treatment program.**

1. An owner or operator subject to sections 33-24-05-160 through 33-24-05-175 shall establish a land treatment program that is designed to ensure that hazardous constituents placed in or on the treatment zone are degraded, transformed, or immobilized within the treatment zone. The department will specify in the facility permit the elements of the treatment program, including:
  - a. The wastes that are capable of being treated at the unit based on a demonstration under section 33-24-05-162.
  - b. Design measures and operating practices necessary to maximize the success of degradation, transformation, and the immobilization processes in the treatment zone in accordance with subsection 1 of section 33-24-05-163.
  - c. Unsaturated zone monitoring provisions meeting the requirements of section 33-24-05-165.
2. The department will specify in the facility permit the hazardous constituents that must be degraded, transformed, or immobilized under this chapter. Hazardous constituents are constituents identified in Appendix V of chapter 33-24-02 that are reasonably expected to be in or derived from waste placed in or on the treatment zone.
3. The department will specify the vertical and horizontal dimensions of the treatment zone in the facility permit. The treatment zone is the portion of the unsaturated zone below and including the land surface in which the owner or operator intends to maintain the conditions necessary for effective degradation, transformation, or immobilization of hazardous constituents. The maximum depth of the treatment zone must be:
  - a. No more than one and five-tenths meters [5 feet] from the initial soil surface; and
  - b. More than one meter [3 feet] above the seasonal high water table.

**History:** Effective January 1, 1984.

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

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

**33-24-05-162. Treatment demonstration.**

1. For each waste that will be applied to the treatment zone the owner or operator shall demonstrate prior to application of the waste that hazardous constituents in the waste can be

completely degraded, transformed, or immobilized in the treatment zone.

2. In making this demonstration the owner or operator may use field tests, laboratory analyses, available data, or, in the case of existing units, operating data. If the owner or operator intends to conduct field tests or laboratory analyses in order to make the demonstration required under subsection 1 of this section the owner or operator shall obtain a treatment or disposal permit under subsection 3 of section 33-24-06-19. The department will specify in this permit the testing, analytical, design, and operating requirements (including the duration of the tests and analyses, and, in the case of field tests, the horizontal and vertical dimensions of the treatment zone, monitoring procedures, closure and cleanup activities) necessary to meet the requirements in subsection 3.
3. Any field test or laboratory analysis conducted in order to make a demonstration under subsection 1 must:
  - a. Accurately simulate the characteristics and operating conditions for the proposed land treatment unit including:
    - (1) The characteristics of the waste (including the presence of constituents in Appendix V of chapter 33-24-02.
    - (2) The climate of the area.
    - (3) The topography of the surrounding area.
    - (4) The characteristics of the soil in the treatment zone (including depth).
    - (5) The operating practices to be used at the unit.
  - b. Be likely to show that hazardous constituents in the waste to be tested will be completely degraded, transformed, or immobilized in the treatment zone of the proposed land treatment unit.
  - c. Be conducted in a manner that protects human health and the environment considering:
    - (1) The characteristics of the waste to be tested.
    - (2) The operating and monitoring measures to be taken during the course of the test.
    - (3) The duration of the tests.
    - (4) The volume of waste used in the test.

- (5) In the case of field tests, the potential for the migration of hazardous constituents to ground water or surface water.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-163. Design and operating requirements.** The department will specify in the facility permit how the owner or operator will design, construct, operate, and maintain the land treatment unit in compliance with this section.

1. The owner or operator shall design, construct, and maintain the unit to maximize the degradation, transformation, and immobilization of hazardous constituents in the treatment zone. The owner or operator shall design, construct, operate, and maintain the unit in accord with all design and operating conditions that were used in the treatment demonstration under section 33-24-05-162. At a minimum, the department will specify the following in the facility permit:
  - a. The rate and method of waste application to the treatment zone.
  - b. Measures to control soil pH.
  - c. Measures to enhance microbial or chemical reaction, e.g., fertilization, tilling.
  - d. Measures to control the moisture content of the treatment zone.
2. The owner or operator shall design, construct, operate, and maintain the treatment zone to minimize runoff from hazardous constituents during the active life of the land treatment unit.
3. The owner or operator shall design, construct, operate, and maintain a run-on control system capable of preventing flow onto the treatment zone during peak discharge from at least a twenty-five-year storm.
4. The owner or operator shall design, construct, operate, and maintain a runoff management system to collect and control at least the water volume resulting from a twenty-four-hour, twenty-five-year storm.
5. Collection and holding facilities, e.g., tanks or basins, associated with the run-on and runoff control systems must be emptied or otherwise managed expeditiously after storms to maintain the design capacity of the system.

6. If the treatment zone contains particulate matter which may be subject to wind dispersal, the owner or operator shall manage the unit to control wind dispersal.
7. The owner or operator shall inspect the unit weekly and after storms to detect evidence of:
  - a. Deterioration, malfunctions, or improper operation of run-on or runoff control systems.
  - b. Improper functioning of wind dispersal control measures.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

33-24-05-164. Food chain crops. The department may allow the growth of food chain crops in or on the treatment zone only if the owner or operator satisfies the conditions of this section. The department will specify in the facility permit the specific food chain crops which may be grown.

1. The owner or operator shall demonstrate that there is no substantial risk to human health caused by the growth of such crops in or on the treatment zone by demonstrating, prior to the planting of such crops, that hazardous constituents other than cadmium:
  - a. Will not be transferred to the food or feed portions of the crop by plant uptake or direct contact and will not otherwise be ingested by food chain animals, e.g., by grazing; or
  - b. Will not occur in greater concentrations in or on the food or feed portions of crops grown on the treatment zone than in or on identical portions of the same crops grown on untreated soils under similar conditions in the same region.
2. The owner or operator shall make the demonstration required by subsection 1 prior to the planting of crops at the facility for all constituents identified in Appendix V of chapter 33-24-02 that are reasonably expected to be in or derived from waste placed in or on the treatment zone.
3. In making a demonstration under subsection 1, the owner or operator may use field tests, greenhouse studies, available data, or in the case of existing units, operating data, and shall:
  - a. Base the demonstration on conditions similar to those present in the treatment zone, including soil

characteristics (e.g., pH, cation exchange capacity), specific wastes, application rates, application methods, and crops to be grown.

- b. Describe the procedures used in conducting any tests, including the sample collection criteria, sample size, analytical methods, and statistical procedures.
4. If the owner or operator intends to conduct field tests or greenhouse studies in order to make the demonstration required under subsection 1, the owner or operator shall obtain a permit for conducting such activities.
  5. The owner or operator shall comply with the conditions of either subdivision a or b if cadmium is contained in wastes applied to the treatment zone:
    - a. The following condition must be met:
      - (1) The pH of the waste and soil mixture must be 6.5 or greater at the time of each waste application, except for wastes containing cadmium in concentrations of two milligrams per kilogram (dry weight) or less;
      - (2) The annual application of cadmium from waste must not exceed five-tenths kilogram per hectare on land used for production of tobacco, leafy vegetables, or root crops grown for human consumption. For other food chain crops the annual cadmium rate may not exceed:
        - (a) Two kilograms per hectare through June 30, 1984.
        - (b) One and twenty-five-hundredths kilograms per hectare during the period from July 1, 1984, through December 31, 1986.
        - (c) Five-tenths kilogram per hectare on and after January 1, 1987:
      - (3) The cumulative application rate of cadmium from waste must not exceed five kilograms per hectare if the waste and soil mixture has a pH of less than 6.5; and
      - (4) If the waste and soil mixture has a pH of 6.5 or greater and is maintained at a pH of 6.5 or greater during crop growth, the cumulative application of cadmium from waste must not exceed: Five kilograms per hectare if soil cation exchange capacity is less than five milliequivalents per one hundred grams; ten kilograms per hectare if soil cation exchange capacity is five to fifteen milliequivalents per one hundred grams; and twenty kilograms per hectare if

soil cation exchange capacity is greater than fifteen milliequivalents per one hundred grams.

b. The following conditions must be met:

- (1) Animal feed must be the only food chain crop produced.
- (2) The pH of the waste and soil mixture must be 6.5 or greater at the time of waste application or at the time the crop is planted, whichever occurs later, and this pH level must be maintained whenever food chain crops are grown.
- (3) There must be an operating plan which demonstrates how the animal feed will be distributed to preclude ingestion by humans. The operating plan must describe the measures to be taken to safeguard against the possible health hazards from cadmium entering the food chain which may result from alternative land uses.
- (4) Future property owners must be notified by stipulation in the land record or property deed which states that the property has received waste at high cadmium application rates and that food chain crops must not be grown, except in compliance with subdivision b.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

33-24-05-165. **Unsaturated zone monitoring.** An owner or operator subject to the land treatment requirements shall establish an unsaturated zone monitoring program to discharge the following responsibilities:

1. The owner or operator shall monitor the soil and soil-pore liquid to determine whether hazardous constituents migrate out of the treatment zone.
  - a. The department will specify the hazardous constituents to be monitored in the facility permit. The hazardous constituents to be monitored are those specified under subsection 2 of section 33-24-05-161.
  - b. The department may require monitoring for principle hazardous constituents in lieu of the constituents specified under subsection 2 of section 33-24-05-161. Principle hazardous constituents are hazardous constituents contained in the waste to be applied at the

unit that are the most difficult to treat, considering the combined effects of degradation, transformation, and immobilization. The department will establish principle hazardous constituents if it finds, based on waste analyses, treatment demonstrations, or other data that effective degradation, transformation, or immobilization of the principle hazardous constituents will assure treatment of at least equivalent levels for the other hazardous constituents in the wastes.

2. The owner or operator must install an unsaturated zone monitoring system that includes soil monitoring using soil cores, and soil-pore liquid monitoring using devices such as lysimeters. The unsaturated zone monitoring system must consist of a sufficient number of sampling points at appropriate locations and depths to yield samples that:
  - a. Represent the quality of background soil-pore liquid quality and the chemical makeup of soil that has not been affected by leakage from the treatment zone.
  - b. Indicate the quality of soil-pore liquid in the chemical makeup of the soil below the treatment zone.
3. The owner or operator shall establish a background value for each hazardous constituent to be monitored under subsection 1. The permit will specify the background values for each constituent or specify the procedures to be used to calculate the background values.
  - a. Background soil values may be based on a one-time sampling at a background plot having characteristics similar to that of the treatment zone.
  - b. Background soil-pore liquid values must be based on at least quarterly sampling for one year at a background plot having characteristics similar to those of the treatment zone.
  - c. The owner or operator shall express all background values in a form necessary for the determination of statistically significant increases under subsection 6.
  - d. In taking samples used in the determination of all background values, the owner or operator shall use an unsaturated zone monitoring system that complies with subdivision a of subsection 2.
4. The owner or operator shall conduct soil monitoring and soil-pore liquid monitoring immediately below the treatment zone. The department will specify the frequency and timing of soil and soil-pore liquid monitoring in the facility permit after considering the frequency, timing, and rate of waste

application and the soil permeability. The owner or operator shall express the results of the soil and soil-pore liquid monitoring in a form necessary for the determination of statistically significant increases under subsection 6.

5. The owner or operator shall use consistent sampling and analysis procedures that are designed to ensure sampling results that provide a reliable indication of soil-pore liquid quality in the chemical makeup in the soil below the treatment zone. At a minimum, the owner or operator shall implement procedures and techniques for:
  - a. Sample collection.
  - b. Sample preservation and shipment.
  - c. Analytical procedures.
  - d. Chain of custody control.
  
6. The owner or operator shall determine whether there is a statistically significant change over background values for any hazardous constituent to be monitored under subsection 1 below the treatment zone each time the owner or operator conducts soil monitoring and soil-pore liquid monitoring under subsection 4.
  - a. In determining whether a statistically significant increase has occurred, the owner or operator shall compare the value of each constituent as determined under subsection 4 to the background value for that constituent according to the statistical procedures specified in the facility permit under this subsection.
  - b. The owner or operator shall determine whether there has been a statistically significant increase below the treatment zone within a reasonable time period after completion of sampling. The department will specify that time period in the facility permit after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of the soil and soil-pore liquid samples.
  - c. The owner or operator shall determine whether there is a statistically significant increase below the treatment zone using a statistical procedure that provides reasonable confidence that migration from the treatment zone will be identified. The department will specify a statistical procedure in the facility permit that it finds:
    - (1) Is appropriate for the distribution of data used to establish background values; and

- (2) Provides a reasonable balance between the probability of falsely identifying migration from the treatment zone and the probability of failing to identify real migration from the treatment zone.
7. If the owner or operator determines pursuant to subsection 6 that there is a statistically significant increase of hazardous constituents below the treatment zone the owner or operator shall:
- a. Notify the department of this finding in writing within seven days. The notification must indicate what constituents have shown statistically significant increases.
  - b. Within ninety days submit to the department an application for a permit modification to modify the operating practices at the facility in order to maximize the success of degradation, transformation, or immobilization processes in the treatment zone.
8. If the owner or operator determines pursuant to subsection 6 that there is a statistically significant increase of hazardous constituents below the treatment zone, the owner or operator may demonstrate that a source other than regulated units caused the increase or that the increase resulted from an error in sampling, analysis, or evaluation. While the owner or operator may make this demonstration in addition to, or in lieu of, submitting a permit modification application under subdivision b of subsection 7, the owner or operator is still required to submit a permit modification within the time specified in subdivision b of subsection 7 should the demonstration be unsuccessful. In making this demonstration the owner or operator shall:
- a. Notify the department in writing within seven days of determining a statistically significant increase below the treatment zone that the owner or operator intends to make a determination under this subsection.
  - b. Within ninety days submit a report to the department demonstrating that a source other than the regulated units caused the increase or that the increase resulted in error in sampling analysis or evaluation.
  - c. Within ninety days submit to the department an application for permit modification to make any appropriate changes to the unsaturated zone monitoring program at the facility.

- d. Continue to monitor in accordance with the unsaturated zone monitoring program established under this section.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-166. Recordkeeping.** The owner or operator shall include hazardous waste application dates and rates in the operating record required under section 33-24-05-40.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-167. Closure and postclosure care.**

1. During the closure period the owner or operator shall:
  - a. Continue all operations (including pH control) necessary to maximize degradation, transformation, or immobilization of hazardous constituents within the treatment zone as required under subsection 1 of section 33-24-05-163, except to the extent such measures are inconsistent with subdivision h of this subsection.
  - b. Continue all operations in the treatment zone to minimize runoff of hazardous constituents as required under subsection 2 of section 33-24-05-163.
  - c. Maintain the run-on control system required under subsection 3 of section 33-24-05-163.
  - d. Maintain the runoff management system required under subsection 4 of section 33-24-05-163.
  - e. Control wind dispersal of hazardous waste if required under subsection 6 of section 33-24-05-163.
  - f. Continue to comply with any prohibitions or conditions concerning growth of food chain crops under section 33-24-05-164.
  - g. Continue unsaturated zone monitoring in compliance with section 33-24-05-165, except that soil-pore liquid monitoring may be terminated one year after the last application of waste to the treatment zone if during that year, the soil-pore liquid monitoring shows that no hazardous constituents are leaching from the treatment zone in the soil-pore water.



this subsection. The owner or operator may submit such a demonstration to the department at any time during the closure or postclosure care periods. For purposes of this subsection:

- a. The owner or operator shall establish background soil values and determine whether there is a statistically significant increase over those values for all hazardous constituents specified in the facility permit under subsection 2 of section 33-24-05-161.
  - (1) Background soil values may be based on a one-time sampling of the background plot having characteristics similar to those of the treatment zone.
  - (2) The owner or operator shall express background values and values for hazardous constituents in the treatment zone in a form necessary for the determination of statistically significant increases under subdivision c.
- b. In taking samples used in the determination of background and treatment zone values the owner or operator shall take samples at a sufficient number of sampling points and at appropriate locations and depths to yield samples that represent the chemical makeup of soil that has not been affected by leakage from the treatment zone and the soil within the treatment zone, respectively.
- c. In determining whether a statistically significant increase has occurred, the owner or operator shall compare the value of each constituent in the treatment zone to the background value of that constituent using a statistical procedure that provides reasonable confidence that constituent presence in the treatment zone will be identified. The owner or operator shall use a statistical procedure that:
  - (1) Is appropriate for the distribution of the data used to establish background values.
  - (2) Provides a reasonable balance between the probability of falsely identifying hazardous constituent presence in the treatment zone and the probability of failing to identify a real presence in the treatment zone.
5. During closure or postclosure, or both, care, the owner or operator is not subject to regulation under sections 33-24-05-47 through 33-24-05-58 if the department finds that the owner or operator satisfies subsection 4 of this section and if unsaturated zone monitoring under section 33-24-05-165 indicates that hazardous constituents have not migrated beyond

the treatment zone during the active life of the land treatment unit.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-168. Special requirements for ignitable or reactive waste.** The owner or operator may not apply ignitable or reactive waste to the treatment zone unless:

1. The waste is immediately incorporated into the soil so that:
  - a. The resulting waste mixture or dissolution of material no longer meets the definition of ignitable or reactive waste under section 33-24-02-11 or 33-24-02-13; and
  - b. Subsection 2 of section 33-24-05-08 is complied with; or
2. The waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

**33-24-05-169. Special requirements for incompatible wastes.** The owner or operator may not place incompatible wastes or incompatible wastes and materials in or on the same treatment zone unless subsection 2 of section 33-24-05-08 is complied with.

History: Effective January 1, 1984.

General Authority: NDCC 23-20.3-03

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

33-24-05-170. [Reserved]

33-24-05-171. [Reserved]

33-24-05-172. [Reserved]

33-24-05-173. [Reserved]

33-24-05-174. [Reserved]

33-24-05-175. [Reserved]

**33-24-05-176. Applicability of landfill requirements.** Sections 33-24-05-176 through 33-24-05-200 apply to owners and operators of