

Article 33-20 is amended as follows:

ARTICLE 33-20

SOLID WASTE MANAGEMENT AND LAND PROTECTION

Chapter

33-20-01	General Provisions [Repealed 12/1/92]
33-20-01.1	General Provisions
33-20-02	Storage [Repealed 12/1/92]
33-20-02.1	Permit Provisions and Procedures
33-20-03	Collection and Transportation [Repealed 12/1/92]
33-20-03.1	Permit Application Provisions
33-20-04	Resource Recovery [Repealed 12/1/92]
33-20-04.1	General Performance Standards
33-20-05	Standards of Performance for Disposal Operations [Repealed 12/1/92]
33-20-05.1	Inert Waste Landfills
33-20-06	Permit to Construct [Repealed 12/1/92]
33-20-06.1	Municipal Waste Landfills
33-20-07	Permit to Operate [Repealed 12/1/92]
33-20-07.1	Small Volume Industrial Waste Landfills and Special Waste Landfills
33-20-08	Common Provisions Applicable to Both a Permit to Construct and Permit to Operate [Repealed 12/1/92]
33-20-08.1	Surface Impoundment Provisions
33-20-09	Land Treatment Provisions
33-20-10	Large Volume Industrial Waste and MSW Ash Landfills
33-20-11	<u>[Reserved] Landfill Disposal of Technologically Enhanced Naturally Occurring Radioactive Material Waste</u>
33-20-12	Regulated Infectious Waste
33-20-13	Water Protection Provisions
33-20-14	Financial Assurance Requirements
33-20-15	Solid Waste Management Fees
33-20-16	Certification of Operators
33-20-17	Solid Waste Management Planning
33-20-18	Solid Waste Management Fund
33-20-19	Municipal Waste Landfill Release Compensation Fund

**CHAPTER 33-20-01.1
GENERAL PROVISIONS**

Section	
33-20-01.1-01	Purpose
33-20-01.1-02	Applicability
33-20-01.1-03	Definitions
33-20-01.1-04	Care and Disposal of Solid Waste
33-20-01.1-04.1	Storage Containers and Areas
33-20-01.1-05	Collection and Transportation Vehicles
33-20-01.1-06	Hazardous Waste
33-20-01.1-07	Pesticide Waste
33-20-01.1-08	Asbestos Waste
33-20-01.1-09	Radioactive Waste
33-20-01.1-10	Variances [Repealed]
33-20-01.1-11	Industrial Waste and Special Waste
33-20-01.1-12	Waste Treatment
33-20-01.1-13	Certified Laboratory
33-20-01.1-14	Variances

Section 33-20-01.1-03 is amended as follows:

33-20-01.1-03. Definitions. The terms used throughout this title have the same meaning as in North Dakota Century Code chapter 23-29, except:

...

51. "Technologically enhanced naturally occurring radioactive material (TENORM)" means naturally occurring radioactive material whose radionuclide concentrations are increased by or as a result of past or present human practices. TENORM does not include background radiation or the natural radioactivity of rocks or soils. TENORM does not include "source material" and "byproduct material" as both are defined in the Atomic Energy Act of 1954, as amended [42 U.S.C. 2011 et seq.] and relevant regulations implemented by the United States nuclear regulatory commission.
- ~~51.~~52. "Transfer station" means a site or building used to transfer solid waste from a vehicle or a container, such as a rolloff box, into another vehicle or container for transport to another facility.
- ~~52.~~53. "Treatment" means a method or process designed to change the physical, chemical, or biological character or composition of a solid waste or leachate so as to neutralize the waste or leachate or so as to render the waste or leachate safer for public health or environmental resources during transport, storage, or disposal. The term does not include resource recovery.
- ~~53.~~54. "Used oil" means any oil that has been refined from crude oil, or any synthetic oil, that has been used and as a result of such use is contaminated by physical or chemical impurities.

~~54.55.~~ "Waste pile or pile" means any noncontainerized accumulation of nonflowing solid waste.

History: Effective December 1, 1992; amended effective August 1, 1993; October 1, 1994; May 1, 1999; _____, 2015.

General Authority: NDCC 23-29-04, 61-28-04

Law Implemented: NDCC 23-29-04, 61-28-04

Section 33-20-01.1-09 is amended as follows:

33-20-01.1-09. Radioactive waste. Every person who handles and disposes of radioactive waste shall comply with article 33-10. Every person who handles and disposes of TENORM shall also comply with the applicable requirements of this article.

History: Effective December 1, 1992; amended effective _____, 2015.

General Authority: NDCC 23-20.1-04, 23-29-04

Law Implemented: NDCC 23-20.1-03, 23-20.1-04, 23-29-04

...

**CHAPTER 33-20-07.1
SMALL VOLUME INDUSTRIAL WASTE LANDFILLS
AND SPECIAL WASTE LANDFILLS**

Section

33-20-07.1-01	Performance and Design Criteria
33-20-07.1-02	Closure Criteria

Section 33-20-07.1-01 is amended as follows:

33-20-07.1-01. Performance and design criteria. In addition to the requirements of section 33-20-01.1-08 and chapter 33-20-04.1, the owner or operator of an industrial waste landfill or a special waste landfill shall comply with the design, construction, and operating standards as follows:

1. On all areas of the landfill where final cover or additional solid waste will not be placed within six months, eight inches [20.3 centimeters] or more of compacted clay-rich soil material, similar material, or a synthetic cover must be placed to prevent ponding of surface water, to minimize infiltration of surface water, and to control windblown dust.
2. Solid waste disposal in industrial waste landfills and special waste landfills must be limited to those wastes identified in the permit application or permit. Regulated infectious waste, used oil as a free liquid, and hazardous waste, and radioactive waste may not be accepted for disposal at the landfill. TENORM waste may only be accepted under the provisions of chapter 33-20-11.
3. All solid wastes deposited at the landfill must be spread and compacted as densely as practicable to minimize waste volume and promote drainage of surface water.
4. Any new or lateral expansion of an industrial waste landfill or special waste landfill must be designed with an appropriate hydraulic barrier and leachate management system capable of collecting and removing leachate and contaminated surface water within the disposal unit.
 - a. The liner and leachate removal system must be compatible with the waste and leachate.
 - b. The liner and leachate removal system must maintain its integrity during the operating period and through the postclosure period.
 - c. The system must have a collection efficiency of ninety percent or better and must be capable of maintaining a hydraulic head of twelve inches [30.5 centimeters] or less above the liner.
 - d. For landfills that receive wastes containing water soluble constituents, the liner must consist of at least four feet [1.2 meters] of compacted natural soil having a hydraulic conductivity not to exceed 1×10^{-7} centimeters per

~~second. This requirement does not apply to landfills receiving only oil field drilling cuttings and drilling mud.~~

- e. A composite liner is required for landfills receiving TENORM waste or wastes which may contain leachable organic constituents. The liner must consist of at least three feet [91.4 centimeters] of recompacted clay with a hydraulic conductivity not to exceed 1×10^{-7} centimeters per second overlain with at least a sixty mil flexible membrane liner.
- f. The drainage layer must have a hydraulic conductivity of 1×10^{-3} centimeters per second or greater throughout. The drainage layer must have a sufficient thickness to provide a transmissivity of 3×10^{-2} centimeters squared per second or greater.
- g. The liner and leachate removal system in combination with the final cover must achieve a site efficiency of at least ninety-eight and one-half percent or better for collection or rejection of the precipitation that falls on the site.
- h. The requirements of this subsection for a liner, leachate collection system, or both liner and leachate collection system may be modified by the department if the permit applicant demonstrates that, based on factors such as geology and hydrology of the site, characteristics of the waste, and engineering design, any leachate migration can be prevented or controlled.

History: Effective December 1, 1992; amended effective August 1, 1993, October 1, 1994; 2015.

General Authority: NDCC 23-20.1-04, 23-29-04

Law Implemented: NDCC 23-20.1-03, 23-20.1-04, 23-29-04, 23-29-07

CHAPTER 33-20-10
LARGE VOLUME INDUSTRIAL WASTE AND MSW ASH LANDFILLS

Section

33-20-10-01	Applicability
33-20-10-02	MSW Ash Treatment
33-20-10-03	Waste Disposal
33-20-10-04	Landfill Cover and Closure
33-20-10-05	Facility Inspector

Section 33-20-10-03 is amended as follows:

33-20-10-03. Waste disposal. In addition to the requirements of section 33-20-01.1-08 and chapter 33-20-04.1, the owner or operator of a landfill shall comply with the performance and design criteria as follows:

1. Any new or lateral expansion of a landfill must be designed with a hydraulic barrier and leachate management system.
 - a. Synthetic liners, leachate detection systems, and leachate removal systems must be compatible with solid waste disposed and the waste=
leachate.
 - b. Leachate removal and management systems must be capable of collecting and removing leachate and contaminated surface water.
 - c. Synthetic liners and leachate removal systems must withstand all physical and chemical stresses during the operating period and through the postclosure period.
 - d. The synthetic liners and leachate removal systems must have a collection efficiency of ninety-seven percent or better of precipitation falling on the fill area before closure and must be capable of removing leachate to limit the hydraulic head above the upper liner, exclusive of collection sumps, to twelve inches [30.5 centimeters] or less within thirty-six hours of a precipitation event.
 - e. A composite liner is required which includes at a minimum from bottom to top:
 - (1) At least three feet [91.4 centimeters] of recompact clay with a hydraulic conductivity not to exceed 1×10^{-7} centimeters per second;
 - (2) A synthetic flexible membrane liner at least sixty mil thick;
 - (3) A secondary drainage layer with a hydraulic conductivity of 1×10^{-3} centimeters per second or greater throughout and with sufficient thickness to provide a transmissivity of 3×10^{-2} centimeters squared per second or greater;

- (4) A synthetic flexible membrane liner at least eighty mil thick; and
 - (5) A drainage layer with a hydraulic conductivity of 1×10^{-3} centimeters per second or greater and with sufficient thickness to provide a transmissivity of 3×10^{-2} centimeters squared per second or greater.
 - f. No composite liner may be exposed to freezing more than one winter season. At least three feet of solid waste or other material approved by the department must be placed above the upper drainage layer on all lined areas by December first. No disposal may take place after December first in areas which have not met this requirement without first testing the composite liner's integrity and receiving approval from the department.
2. The facility must include a leachate detection and removal system and an onsite leachate management system or offsite leachate management.
 - a. The amount of leachate collected for onsite or offsite management must be measured and recorded.
 - b. The quality of the leachate must be periodically evaluated on a schedule proposed by the facility owner and approved by the department.
 - c. The department may require the construction of onsite surface impoundments to achieve the equivalent or better design standards of onsite landfills, based on site specific factors such as hydrogeological characteristics, anticipated leachate quality, anticipated static head or expected duration of use.
 - d. The department may require an owner or operator to control wildlife access to onsite surface impoundments based upon leachate quality and site circumstances.
3. Runoff must be contained, collected, and transferred to an onsite surface impoundment, unless another management method is approved by the department.
4. Solid waste disposal in landfills must be limited to those wastes identified in the permit application, waste acceptance plan, or permit. Regulated infectious waste, used oil as a free liquid which can be recovered or recycled, and hazardous waste, and radioactive waste may not be accepted for disposal at the landfill. TENORM waste may only be accepted under the provisions of chapter 33-20-11.
5. All solid wastes deposited at the landfill must be placed, spread or compacted to minimize or prevent settlement and to promote drainage of surface water. The

sequence and direction of below-grade operations must be conducted to prevent surface water from entering the active fill area.

6. On all areas of the landfill where final cover or additional solid waste will not be placed within one month, eight inches [20.3 centimeters] or more of compacted clay-rich soil material, similar material, or a synthetic cover must be placed to prevent ponding of surface water, to minimize infiltration of surface water, and to control windblown dust.
7. The composite liner in combination with the final cover after closure must achieve an efficiency of at least ninety nine and nine-tenths percent or better for collection or rejection of the precipitation that falls on the landfill.

History: Effective August 1, 1993; amended effective October 1, 1994; _____, 2015.

General Authority: NDCC 23-20.1-04, 23-29-04

Law Implemented: NDCC 23-20.1-03, 23-20.1-04, 23-29-04

Chapter 33-20-11 is created as follows:

CHAPTER 33-20-11
LANDFILL DISPOSAL OF TECHNOLOGICALLY ENHANCED NATURALLY OCCURRING
RADIOACTIVE MATERIAL WASTE

Section

33-20-11-01 Radioactive Waste Disposal

33-20-11-02 Prohibition

33-20-11-03 Authorization

33-20-11-04 Monitoring

33-20-11-05 Reporting

33-20-11-06 Worker Training and Safety

33-20-11-07 Record of Notice

33-20-11-01. Radioactive waste disposal. Disposal of radioactive waste subject to regulation under chapter 33-10-23, meeting the definition of TENORM, into special waste or industrial waste landfills shall comply with the following requirements and limitations:

1. TENORM waste up to, but not exceeding 50.0 picocuries per gram of Radium-226 plus Radium-228, may be disposed in a landfill which complies with chapter 33-20-07.1 or chapter 33-20-10, except that the accumulated amount must not exceed twenty-five thousand tons [22,679.22 metric tons] per year or three thousand tons [2,721.55 metric tons] in any one month unless larger amounts in one month resulting from special cleanup projects are pre-approved by the department. Drums or shipping containers of TENORM waste which are not of uniform concentration must not exceed an average concentration of 50.0 picocuries per gram of Radium-226 plus Radium-228.
2. Equipment contaminated with TENORM which does not exceed a maximum exposure level of one hundred microrentgen per hour, including background radiation, at any accessible location may be disposed in a landfill which complies with chapter 33-20-07.1 or chapter 33-20-10.
3. TENORM waste must be covered by at least one foot of non-TENORM waste or daily cover material by the end of each operating day. For landfills that operate continuously (24 hours per day), all TENORM waste shall be covered at least once every twenty four hour period.
4. TENORM waste must be disposed at depth greater than ten feet below the surface of the final landfill cover.
5. For a landfill that is subject to chapter 33-20-07.1, if any part of the final cover has slope greater than fifteen percent, then the final cover must have an additional two feet of low permeability soil, for a total minimum cover thickness of five feet.

History:

General Authority: NDCC 23-20.1-04, 23-29-04

Law Implemented: NDCC 23-20.1-03, 23-20.1-04, 23-29-04

33-20-11-02. Prohibition. Disposal of TENORM waste subject to regulation under article 33-10 is prohibited in all municipal solid waste landfills and inert landfills. Disposal of radioactive waste subject to regulation under article 33-10, which does not meet the definition of TENORM, or TENORM waste that is greater than 50.0 picocuries per gram of Radium-226 plus Radium-228 is prohibited in all landfills. If prohibited TENORM waste is delivered to a landfill for disposal, the waste must be rejected. The owner or operator of the landfill shall note the source, amount, generator and other identifying information about the rejected waste and shall notify the department within five (5) days of the rejection of such material.

History:

General Authority: NDCC 23-20.1-04, 23-29-04

Law Implemented: NDCC 23-20.1-03, 23-20.1-04, 23-29-04

33-20-11-03. Authorization. Approval for acceptance of TENORM waste by a landfill not previously authorized to accept such waste in its permit shall follow procedures in section 33-20-02.1-06. The facility is also subject to applicable approval and licensure requirements of chapter 33-10-23.

History:

General Authority: NDCC 23-20.1-04, 23-29-04

Law Implemented: NDCC 23-20.1-03, 23-20.1-04, 23-29-04

33-20-11-04. Monitoring. The leachate collection system and groundwater monitoring network shall be analyzed for background concentration of radionuclide parameters prior to receipt of any TENORM waste. Leachate shall be analyzed for radionuclides at the same frequency as groundwater samples are collected. If radionuclides are detected in the leachate at a concentration greater than the concentrations listed below, then the groundwater monitoring network must begin analysis for radionuclide parameters.

Radon: 4,000 picocuries per liter (pCi/L).

Combined Radium-226 and Radium-228: 5 pCi/L.

Alpha particle activity (including Radium-226, excluding radon and uranium): 15 pCi/L.

Uranium: 30 micrograms per liter (ug/L).

History:

General Authority: NDCC 23-20.1-04, 23-29-04

Law Implemented: NDCC 23-20.1-03, 23-20.1-04, 23-29-04

33-20-11-05. Reporting. Landfills approved for the disposal of TENORM waste shall file with the department a quarterly summary report stating the date, type and total quantity by weight in tons, generator and final disposal facility of each TENORM transferred. Each report shall be filed within thirty days of the end of each quarter. If no transfers of TENORM have been made during the reporting period, the report must so indicate.

History:

General Authority: NDCC 23-20.1-04, 23-29-04

Law Implemented: NDCC 23-20.1-03, 23-20.1-04, 23-29-04

33-20-11-06. Worker training and safety. Landfills approved for the disposal of TENORM waste shall implement a worker training program and safety program to meet the requirements of Section 33-10-23-27, so that protection of workers complies with radiation protection standards of chapters 33-10-04.2 and 33-10-10.1. The training and safety program shall be approved by the department prior to receipt of any TENORM waste.

History:

General Authority: NDCC 23-20.1-04, 23-29-04

Law Implemented: NDCC 23-20.1-03, 23-20.1-04, 23-29-04

33-20-11-07. Record of notice. The records of notice required by section 33-20-02.1-04 shall specify that the landfill is approved to accept TENORM waste. The final record of notice shall indicate the total quantity of TENORM waste disposed in the landfill.

History:

General Authority: NDCC 23-20.1-04, 23-29-04

Law Implemented: NDCC 23-20.1-03, 23-20.1-04, 23-29-04