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**INTRADEPARTMENTAL MEMORANDUM**

FILE: Grand Forks Inert Landfill (0202)

TO: Charles R. Hyatt, Director CRH
Division of Waste Management

FROM: Diana A. Trussell, Manager DAT
Solid Waste Program
Division of Waste Management

SUBJECT: Permit Application Review

DATE: March 18, 2025

## Introduction

The North Dakota Department of Environmental Quality (Department) received a permit application for a modification and renewal of the Grand Forks Inert Waste Landfill.

The City of Grand Forks currently owns and operates an inert landfill on approximately 73 acres located in the NE1/4 of Section 35, Township 152 North, and Range 51 West in Grand Forks County, North Dakota. The city is proposing to renew and modify their permit to increase the final cover crown elevation by 20 feet. This vertical expansion will extend the life of the existing facility and delay the need to either expand horizontally or site a new landfill. The facility was first permitted in 2002.

## Design

After construction of the facility in March 2002, the Department received a completed permit application from the city for an inert waste landfill. The site is located east of the city's closed permitted municipal waste landfill (Permit 0069). This facility would be used to divert inert waste from the existing site, thereby increasing the useful life of the city's municipal solid waste landfill. The facility accepts inert wastes wood, metal, bricks, masonry, concrete and asphalt pavement, yard wastes, coal ash/fines and tires from Grand Forks and the surrounding area. Inert waste is non-water-soluble solid waste that will not in any way form a contaminated leachate.

The City of Grand Forks is requesting to increase the height of the landfill. This would mean increasing the final cover crown elevation up by 20 feet. The proposed vertical expansion will increase the life of operation for the inert landfill to 25 years.

## Operation

Access to the facility is through a gate. The gate is closed and locked during non-operating hours. Waste is deposited in the active disposal area, compacted, covered, and sequentially closed. Inert waste is covered at least twice per year. The facility is authorized to accept major appliances and scrap metal if it is segregated for recycling. The facility also undertakes a program to educate waste generators and haulers on appropriate measures to reduce reuse and recycle wood materials and other waste. Operations of the working area is limited in size to as small of an area as practical. All earthen material is maintained on-site for construction, cover, and closure. The facility conducts routine inspections and completes monthly inspection checklists.

## Closure

Closure of the facility will take place sequentially as areas of disposal are brought to final grade, with a minimum of 12 inches of compacted, clay-rich earthen material, 6 inches of uncompacted earthen material, and 6 inches of suitable plant growth material. The local Soil Conservation Service recommended a seed mix consisting of 60 percent Tall Wheat grass, 20 percent Western Wheat grass, and 20 percent Slender Wheat grass. The facility will maintain post closure for a period of five years and conduct monthly inspections for potential erosion, failing slopes, and inadequate vegetative cover.

## Compliance History

No items of noncompliance have been noted and no formal notices of violations have been issued to the facility.

## Solid Waste Management Rules (NDAC Article 33.1-20)

### NDAC Section 33.1-20-02.1-05. Record of notice.

A record of notice was provided with the permit application. The record of notice was filed with the Grand Forks County Recorder's Office on March 1, 2024.

### NDAC Section 33.1-20-02.1-06. Property rights.

The permit application included a Warranty Deed that shows the City of Grand Forks owns the property.

### NDAC Section 33.1-20-03.1-01. Preapplication procedures.

A preapplication is not required for an inert waste landfill.

### NDAC Section 33.1-20-03.1-02. Permit application procedures.

### NDAC Subsections 33.1-20-03.1-02(1) – (3)

Two copies of the permit application and supporting documents were received, a paper copy and an electronic copy. These were submitted to the Department on March 15, 2024.

**NDAC Subsection 33.1-20-03.1-02(4)**

A public notice was published twice in the Grand Forks Herald, the official county newspaper, on September 11, 2024 and September 18, 2024. An affidavit of publication was provided with the permit application.

**NDAC Subsection 33.1-20-03.1-02(5)**

Notification to the North Dakota Public Service Commission is not required as the facility is not proposing to dispose of coal processing wastes in a mining permit area.

**NDAC Subsection 33.1-20-03.1-02(6)**

**Applications for a solid waste management unit or facility permit must include the following information where applicable:**

a. **A completed application form, subsection 1;**

   Two copies of the permit application and supporting documents were received, a paper copy and an electronic copy.

b. **A description of the anticipated physical and chemical characteristics, estimated amounts, and sources of solid waste to be accepted, including the demonstration required by North Dakota Century Code section 23.1-08-14;**

   The inert landfill is a regional facility that accepts waste from northeast North Dakota and northwest Minnesota. The facility currently accepts an average of 31,202 tons per year of inert waste.

   The solid waste disposed of is generally described as non-putrescible waste which will not contaminate water, form a contaminated leachate, or serve as a food for vectors.

c. **The site characterization of section 33.1-20-13-01 and a demonstration that the site fulfills the location standards of section 33.1-20-04.1-01;**

   The soils are deposits from glacial Lake Agassiz as the facility is in the floor of glacial Lake Agassiz. Surface deposits consist of offshore lake deposits (mainly clay and silt). Approximately 1 foot of fat clay topsoil covers a layer of silt above the lean clays.

   The area surrounding the facility has a very shallow water table. This results in surface ponding during spring snowmelt and periods of above-normal precipitation. The groundwater near the facility is influenced by upward movement of groundwater from the Dakota and Red River Formations. The groundwater flow direction seems to radiate to the southwest, south, and southeast beneath the City of Grand Fork's closed municipal solid waste landfill (Permit 0069) which is located directly west of the inert landfill.

**d. Soil survey and segregation of suitable plant growth material;**

The permit application included historical soil borings which showed the site is underlain by mostly fat clays, and some lean clays and silt. A soil balance was also included which shows the facility will need approximately 45,330 cubic yards of suitable plant growth material or topsoil for closure. The facility will get this material from other projects in the area and by enhancing their soils with the compost materials.

**e. Demonstrations of capability to fulfill the general facility standards of section 33.1-20-04.1-02;**

Due to the type of wastes (i.e. inert waste) disposed of at the site, pollution of waters of the state are not expected. Odors are not expected to be a concern as the facility only accepts inert waste for disposal. The entire permit area is surrounded by fencing, with a single entrance gate to restrict access. Loads are inspected by the facility.

**f. Facility engineering specifications adequate to demonstrate the capability to fulfill performance, design, and construction criteria provided by this article and enumerated in this subdivision.**

**1) Transfer stations and drop box facilities, section 33.1-20-04.1-06.**

The requirements of this section are not applicable as the facility is not proposing a transfer station or a drop box facility.

**2) Waste piles, section 33.1-20-04.1-07.**

Yard waste will be accepted for recycling in a designated area at the facility. Waste loads consisting of compostable yard waste will be disposed of at the composting site. Finished compost material may be used as topsoil amendment for future closure projects.

Trees and brush will be accepted for recycling. Trees and brush will be temporarily stockpiled and periodically processed into wood chips for beneficial use.

Scrap metal and appliances will be accepted and segregated and temporarily stored before recycling.

**3) Resource recovery, section 33.1-20-04.1-08.**

The requirements of this section are not applicable as the facility is not proposing any resource recovery activities.

4) **Land treatment, section 33.1-20-04.1-09 and chapter 33.1-20-09.**

The requirements of this section are not applicable as the facility is not proposing a land treatment facility.

5) **Non-CCR surface impoundments, section 33.1-20-04.1-09 and chapter 33.1-20-08.1.**

The requirements of this section are not applicable as the facility is not proposing any surface impoundments.

6) **Any disposal, section 33.1-20-04.1-09.**

The facility will perform sequential partial closure of the landfill. When final waste grades are reached, the landfill will be closed in a manner that minimizes the need for further maintenance and controls any escape of solid waste decomposition products.

At closure, the permitted final cover (from bottom to top) will consist of the following:

- 12 inches of compacted clay-rich earthen material free from cracks and extrusions of solid waste
- 6 inches of clay-rich soil (Soil Plant Growth Material (SPGM) subsoil) suitable for serving as a plant root zone.
- 6 inches of SPGM topsoil; and
- Adapted vegetation.

The facility has the equipment and labor resources available to construct the final cover. The maximum grade of the final cover shall not exceed a 4:1 or 25% slope. The permit application included the universal soil loss equation results which showed that the calculated soil loss for the first year is 1.50 tons per acre and 0.27 tons per acre per year thereafter. This meets the requirements and provides the justification for the 25% slopes on the final cover. The permit drawings show that the side slope terraces have an outside slope of 4:1 which meets the requirements.

A minimum of an annual routine inspection of the site will be performed by the facility. The inspection will include an evaluation of soil erosion, settlement, vegetative cover maintenance, groundwater monitoring wells, and site security.

These inspections will continue for a period of five years after certification of final closure.

**7) Inert waste landfill, chapter 33.1-20-05.1.**

The Inert Landfill Permit 0202 plan of operation outlines the waste acceptance procedures. The following wastes are not accepted at the Inert Landfill:

- Agricultural waste
- Asbestos waste
- Municipal waste
- Commercial waste
- Industrial waste
- Special waste
- Regulated infectious waste
- Liquid solid waste
- Hazardous waste
- Radioactive waste

If prohibited wastes are found at the Inert Landfill, the waste material will be rejected and returned to the generator or waste hauler if known. If the waste generator or hauler is unknown, the material will be segregated until adequate information can be obtained to accurately identify the waste and determine an appropriate management method. The Department will be notified and consulted regarding the prohibited wasted.

The following are typically accepted at the Inert Landfill.

- Construction and demolition material
- Wood
- Bricks
- Masonry
- Cement concrete
- Asphalt
- Metal
- Tree branches
- Yard waste

The waste handling procedures for inert waste, yard wastes, brush and trees and appliances are addressed in the Plan of Operation that was submitted with the permit application.

**8) Municipal waste landfill, chapter 33.1-20-06.1.**

The requirements of this section are not applicable as the facility is not proposing a municipal waste landfill.

9) **Industrial waste landfill, chapters 33.1-20-07.1 or 33.1-20-10.**

The requirements of this section are not applicable as the facility is not proposing an industrial waste landfill.

10) **TENORM waste landfill, chapters 33.1-20-07.1 or 33.1-20-10 and 33.1-20-11**

The requirements of this section are not applicable as the facility is not proposing a TENORM waste landfill.

11) **Special waste landfill, chapter 33.1-20-07.1;**

The requirements of this section are not applicable as the facility is not proposing a special waste landfill.

12) **CCR unit, chapter 33.1-20-08;**

The requirements of this section are not applicable as the facility is not proposing a CCR unit.

13) **Municipal solid waste ash landfills, chapter 33.1-20-10;**

The requirements of this section are not applicable as the facility is not proposing a municipal solid waste ash landfill.

14) **Regulated infectious waste unit, chapter 33.1-20-12;**

The requirements of this section are not applicable as the facility is not proposing a regulated infectious waste unit.

**g. The plan of operation of section 33.1-20-04.1-03;**

A Plan of Operation was included with the permit application. The Plan of Operation includes the following information:

- Waste Acceptance procedures
- Waste Handling procedures
- Contingency Actions
- Safety Procedures
- Sequential Partial Closure
- Recordkeeping and Reporting

**h. Demonstration of the treatment technology of section 33.1-20-01.1-12;**

The requirements of this section are not applicable as the facility is not proposing to treat waste.

**i. The place where the operating record is or will be kept, section 33.1-20-04.1-04;**

The operating record is kept at the Grand Forks Public Works Facility.

**j. Demonstration of capability to fulfill the groundwater monitoring, sections 33.1-20-08-06 or 33.1-20-13-02;**

The requirements of this section are not applicable as the facility is an inert waste landfill and groundwater monitoring is not required.

**k. Construction quality assurance and quality control;**

The permit application included information on construction quality assurance and quality control. The facility will have plans and specification prepared for the final cover construction. The plans and specifications will be submitted to the Department for review and approval.

The compacted clay layer will meet compaction standards of the surrounding native soils. The material will be obtained from stockpiles from other city projects, imported from adjacent city properties, and/or imported from nearby private sources. The final cover will have a minimum 5% slope and a maximum 25% slope.

Once the construction of the final cover has been completed, a report will be submitted to the Department for review and approval.

**l. Demonstrations of capability to fulfill the closure standards, section 33.1-20.1-04.1-05 and otherwise provided by this article;**

The city conducts sequential partial closure of the facility. At final closure, the permitted final cover will consist of:

- 12 inches of compacted clay-rich earthen material free from cracks and extrusions of solid waste.
- 6 inches of clay-rich soil a (soil plant growth material (SPGM) subsoil) suitable for serving as a plant root zone.
- 6 inches of SPGM topsoil.
- Adapted vegetation.

**m. Demonstrations of capability to fulfill the postclosure standards, section 33.1-20-04.1-09 and otherwise provided by this article; and**

The plan of operation states that the facility will conduct inspections for a period of five years after closure to address the integrity of the final cover and repair areas, if necessary.

n. **A disclosure statement as required by North Dakota Century Code section 23.1-08-17.**

A disclosure statement that meets the requirements of this section was submitted to the Department.

**Conclusion**

Based on the submitted application and items discussed above, the City of Grand Forks Inert Landfill has shown that the major modification meets the requirements of the North Dakota Solid Waste Management Rules. It is proposed that the Department grant the City of Grand Forks Inert Landfill a permit with the conditions listed in Permit 0202. The proposed permit length is for through January 20, 2027, as this is for a major permit modification and not a renewal.

CRH:DAT
Attachment