

**INTRADEPARTMENTAL MEMORANDUM**

FILE: Casselton Inert Waste Landfill (0164)

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SUBJECT: Permit Application Review

DATE: December 12, 2023

**Introduction**

On May 2, 2023, the North Dakota Department of Environmental Quality (Department) received a permit application for a renewal for the Casselton Inert Waste Landfill.

The City of Casselton currently owns and operates an inert waste landfill regulated under Permit 0164 on approximately 20.4 acres of land, of which the landfill covers approximately 19 acres in Section 36, Township 140 North, Range 52 West in Cass County. There are currently 9.51 total acres of which 5.61 acres is useable for the inert waste landfill. The City of Casselton is proposing to renew their permit to continue accepting inert waste which consists of construction and demolition materials such as wood, metal, bricks, masonry, concrete and asphalt pavement, and yard wastes. The facility was first permitted in 1995.

**Design**

The soils at the site are comprised of both Lamoure silty clay loam and Overly-Bearden silt loam. Lamoure silty clay loam soils are typically characterized by slopes of 0-1 percent and the depth to water table is typically between 0 to 18 inches. The soil profile shows silty clay loam from 0 to 34 inches, silt loam from 34 to 43 inches, loam from 43 to 52 inches and sandy loam from 52 to 60 inches in depth. Overly silt loam soils are typically characterized by slopes of 0 to 2 percent and the depth to water table is typically 36 to 60 inches. The soil profile shows silt loam from 0 to 10 inches and silty clay loam from 10 to 60 inches. Bearden silt loam soils are typically characterized by slopes of 0 to 2 percent and the depth to water table is typically 18 to 42 inches. The soil profile shows silt loam from 0 to 60 inches in depth.

A creek or drainageway bounds the west edge of the facility. The site was originally sited just south of the city's sewage lagoons. The site is also affected by construction of sewage lagoons on the east and north of the site. The facility accepts inert waste, yard waste, waste wood, metal, concrete/asphalt, white goods and scrap tires. In the current Plan of Operations, there are five cells of waste that have been closed, along with two active cells, and three future cells for waste disposal. The current estimated life of the facility is 30 more years. There are no proposed changes to the existing inert landfill.

### **Operation**

Access to the facility is through a gate on the northwest corner of the property. The gate is closed and locked during non-operating hours. The facility is only open to the residents of the City of Casselton and contractors that do work for residents. Each load is inspected by a city employee. Wood waste is stockpiled and burned once a year. Metal is stockpiled for recycling, concrete and asphalt are stockpiled for recycling, and grass clippings and leaves are composted. Inert waste is disposed of in the active cell and covered at least twice per year.

### **Closure**

Closure of the facility will take place sequentially as areas of disposal are brought to final grade, with a minimum of 18 inches of compacted soil, followed by a minimum of 12 inches of root growth and then six inches of suitable plant growth material. The closure date is estimated to be the year 2053. The facility will maintain post-closure for a period of five years.

### **Compliance History**

No items of noncompliance have been noted since 2012. 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 submitted with the renewal application.

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

Copies of documents related to the land to be used for waste management operations and containing their legal description were submitted to the Department. Those documents show that the City of Casselton has property rights.

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

A preapplication is not required for an inert waste landfill or transfer stations.

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

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

An application was received by the City of Casselton on May 2, 2023.

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

Public notice by the facility is not required for a permit renewal and no major modifications are being proposed.

**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 waste 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;**

The authorized agent for the City of Casselton submitted and signed an application for the renewal of a Solid Waste Management Facility Permit.

**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 city proposes to continue to operate the inert waste landfill. The plan of operation provides a list of acceptable waste which is comprised of inert waste, trees and branches, grass and leaves, metal, concrete/asphalt, white goods, and tires.

Annual reports submitted to the Department show that the daily intake of waste by the facility is less than 40 tons per day.

**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 site is located on a parcel sloped 0-10% with the water table typically between 0 and 60 inches. Primary land use of the surrounding vicinity is agricultural and the city lagoons.

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

Data from the Natural Resources Conservation Service Web Soil Survey shows that the soil profile is comprised of both Lamoure silty clay loam and Overly-Bearden silt loam. The depth to the water table is between 0 and 60 inches. The facility currently has approximately 600 cubic yards of mixed dirt, 6,000 cubic yards of clay, 2,700 cubic yards of topsoil, and 1,000 cubic yards of compost on site.

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

Due to the type of waste disposed of at the site, pollution of waters of the state is not expected. Odors are not expected to be a concern due to the type of waste disposed of at the site. Some odors may be emitted from the composting operation; however, this should not be a concern as the landfill is outside the city of Casselton. The entire permit area is surrounded by fencing, with a single entrance gate to restrict access. Loads are inspected by city personnel prior to dumping at the landfill.

**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.**

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

**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 City of Casselton operates at a minimum one payloaders to conduct the daily landfill operations and rents a track dozer when necessary. Currently, the quantity of soil cover is 8,700 cubic yards of fill dirt and 1,000 cubic yards of topsoil. Fill dirt and topsoil can also be obtained from the compost pile as needed for cover.

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

The following are prohibited wastes at the landfill:

- Household garbage and putrescible waste,
- Asbestos,
- Soluble wastes (fly ash, salts),
- Animal carcasses,
- Waste grains, seeds, and elevator screenings,
- Unrinsed pesticide containers,
- Lead acid batteries,
- Waste oils,
- Plastics,
- Paper,
- Cardboard,
- Vinyl siding,
- PCB wastes/oils,
- Manure,
- Infectious waste,
- Septic tank pumping,
- Freon,
- Computers, TVs, microwaves, and electronics,
- Fabric and carpet,
- Hazardous wastes (ignitable, solvents, paints, fuels), corrosive wastes (acid and alkali), reactive and listed wastes, and
- Sludges.

The plan of operation states that all waste placed within the pits will be deposited in uniform layers and covered by a minimum of six inches of cover material every six months. Daily cover material will be placed, as necessary, on days of operation to prevent blowing of debris.

**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 includes the following information:

- Waste Acceptance Plan
- Waste Handling Procedures
- Contingency Plan
- Dust Control
- Facility Sign
- Health and Safety Plan
- Facility Inspection by Owner and Operator
- Record Keeping and Reporting
- Closure Plan

**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 City of Casselton Landfill office.

**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 or transfer station and groundwater monitoring is not required.

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

The final cover will require compaction. The facility will follow the Department's "Guideline 5 Quality Assurance for Construction of Landfill and Surface Impoundment Liners, Caps, And Leachate Collection Systems".

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

The facility should implement sequential partial closure and the Department will work with the facility to ensure sequential partial closure is conducted. The closure plan and criteria were submitted with the renewal application.

**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 on May 2, 2023.

**Conclusion**

Based on the submitted application and items discussed above, the City of Casselton Inert Landfill has shown that the inert waste landfill renewal meets the requirements of the North Dakota Solid Waste Management Rules. It is proposed that the Department grant the City of Casselton Inert Landfill a permit with the conditions listed in Permit 0164. The proposed permit length is for a period of 10 years because the facility has demonstrated compliance with the North Dakota Solid Waste regulations and has an estimated life expectancy for another 30 years.

CRH:DAT:JKK  
Attachment