Introduction

On August 8, 2019, the North Dakota Department of Environmental Quality (Department) received a permit application for a renewal of the City of Stanley’s inert waste landfill facility.

The City of Stanley currently owns and operates an inert waste landfill, regulated under Permit 0126, located in the NE1/4 of the NW1/4 of Section 27, Township 156 North, Range 91 West in Mountrail County, ND. The City of Stanley is proposing to renew their permit. The Inert Waste Landfill facility was first permitted in 1991.

The facility operates an existing inert waste landfill area, a yard waste composting area, a recyclable metals pile (including white goods), a concrete and asphalt concrete pile for reuse or disposal, a wood storage area for conducting open burning and soil stockpiles for future covering operations. According to the application, waste will be accepted from residents within the City of Stanley and residents from Mountrail County that are generally located within 20 miles of Stanley.

Design

The existing forty-acre facility, most of which has been closed, is surrounded by a fence. There is an appropriate inert waste landfill sign at the gate which is located at the northwest corner of the facility. Closed sanitary (approximately 23.81 acres), and inert waste landfill areas are appropriately capped, sloped and vegetated. New disposal trenches are excavated within areas of the facility where previous landfill activities have not occurred. Disposal trenches are typically ten to fifteen feet deep, with a sloped base to a sump, and twenty to thirty feet across. The newer inert waste disposal trenches are filled with inert waste to near original topography and
then covered with two feet of cover soil with at least six inches of suitable plant growth material or topsoil and vegetated.

**Operation**

The site includes a former sanitary landfill area that was closed in 1991; closed inert waste landfill areas, an existing inert waste landfill area, a yard waste composting area, a recyclable metals pile (including white goods), a concrete and asphalt concrete pile for reuse or disposal, a wood storage area for conducting open burning and soil stockpiles for future covering operations. According to the application, waste will be accepted from residents within the City of Stanley and residents from Mountrail County that are generally located within 20 miles of Stanley.

Based on landfill inspections, the facility appears to be accepting far less than 40 tons of waste per day, and waste types observed appear to be limited to wood, yard waste, concrete and asphalt concrete. The application indicates approximately 9 to 11 years of disposal capacity remain at the site.

**Closure**

As the inert waste disposal trenches are filled to grade, they are capped with two feet of final cover material. The top six inches of the final cover consists of suitable plant growth material. Historically, new trenches are excavated once the active trench has been filled. Final closed areas at the facility have been appropriately vegetated.

**Compliance History**

According to the Department's records and the application, no noncompliance or violation issues have been noted at this facility.

**Solid Waste Management Rules (NDAC 33.1-20)**

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

A Plat or Record of Notice for the Stanley Landfill was filed on October 29, 1992 with the Office of the Register of Deeds for Mountrail County. A copy of the Plat was received by the Department on November 12, 1992.

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

The property where the facility is located is owned by the City of Stanley.

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

A preapplication is not required for an inert waste landfill.

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

NDAC 33.1-20-03.1-02(1) – (3)
Brosz Engineering, Inc., submitted a signed application to the Department on August 8, 2019, on behalf of the City of Stanley. The application was prepared by Brosz Engineering, Inc., for the City of Stanley and signed by the appropriate parties involved. The application was received via email by the Department.

NDAC 33.1-20-03.1(4)

A public notice is not required for a permit renewal and no major modifications are being proposed.

NDAC 33.1-20-03.1(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 33.1-20-03.1(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;

An application form was submitted with supporting documents to the Department on August 8, 2019.

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;

Inert wastes including, but not limited to, concrete, asphalt concrete, demolition materials, and wood will be landfilled according to the application. Concrete and asphalt concrete may also be stockpiled for reuse. The facility will also operate a yard waste composting area, a recyclable metals pile (including white goods), and a wood storage area for conducting open burning. According to the application, waste will be accepted from residents within the City of Stanley and residents from Mountrail County that are generally located within 20 miles of Stanley.

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 Department reviewed historical records which indicate that the area was deemed suitable for the operation of an inert waste landfill.

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

There are stockpiles of suitable plant growth material at the facility.

e. Demonstrations of capability to fulfill the general facility standards of section 33.1-20-04.1-02;
The training requirements have been addressed, because City of Stanley personnel have attended the Department's Landfill Operator Certification Course.

The facility's landfill areas are not located within a one hundred-year floodplain, not within an aquifer, not within a public water supply designated wellhead protection area, not where geologic or manmade features, including underground mines, may result in differential settlement and failure of a structure or other improvement on the facility, not on the edge of or within channels, ravines, or steep topography whose slope is unstable due to erosion or mass movement, and not within woody draws. Given the facility's hydrogeologic characteristics, and the facility's application proposing to landfill only inert waste, the facility should be able to in comply with the water protection provisions of NDAC Chapter 33.1-20-13.

Given the type of waste (inert in nature) being proposed for disposal at this facility, and the relatively gentle slopes at the facility, the facility should be able to comply with NDAC Chapter 33.1-16-01.

Given the type of waste (inert in nature) proposed to be managed at this facility, the facility should be able to comply with the ambient air quality standards, and odor rules. The inert waste landfill facility has been in operation for nearly thirty years, and no odor complaints have been received for this facility by the Department.

Dust issues historically have not been an issue at this facility, and given the small volume of waste proposed to be managed at this facility, dust issues should not create a nuisance issue at this facility in the future.

The facility is proposing to open burn clean wood with an approved variance for open burning clean wood at this facility.

An appropriate landfill sign has been located near the entrance to the facility during historical landfill inspections.

Historical inspections have not noted unauthorized wastes disposed of at this facility.

Windblown trash issues have not been noted historically at this facility.

The facility should be able to meet the general facility standards.

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. The City of Stanley operates a transfer station at another location in Stanley, and it is covered under Permit 0011.

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

The City of Stanley has successfully operated a yard waste composting operation at this facility for many years. Waste piles likely to produce significant amounts of leachate are not proposed within the application. The facility has been and is proposing to continue to be used for storing a recyclable metals pile (including white goods), a concrete and asphalt concrete pile for reuse or disposal, a wood storage area for conducting open burning and soil stockpiles for future covering operations.

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, sections 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) **Surface impoundments, sections 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.**

Refer to Section 7) for information on wastes proposed for disposal.

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

The application indicates the facility shall comply with the performance (spreading, compacting, and semi-annual covering waste) and design criteria (two or four feet cover system) for an inert waste landfill. The application indicates the disposal of the following solid waste into inert waste landfills is prohibited: agricultural waste, asbestos waste, municipal waste, commercial waste, industrial waste, special waste, regulated infectious waste, liquid solid waste, hazardous waste, and radioactive waste.

The application addresses the inert waste landfill disposal requirements adequately.
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) 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.

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

   The applicant did not submit a stand-alone plan of operation with the application; however, the administrative codes applicable to inert waste landfills were copied and presented within the application. The City of Stanley has agreed to follow the applicable administrative codes and has been operating an inert waste landfill facility for nearly thirty without any major violations.

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 Stanley's City Hall.

j. Demonstration of capability to fulfill the groundwater monitoring, section 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;
    This is not required for small volume inert waste landfill facilities because they are not required to have liners.

l. Demonstrations of capability to fulfill the closure standards, section 33.1-20.1-04.1-05 and otherwise provided by this article;
   The application indicates:
"Closure of an existing unit must be completed as outlined in sections 33.1-20-04.1-05 and 33.1-20-04.1-09. All existing units must be covered with two feet [61.0 centimeters] or more of earthen material, the lower twelve inches [30.5 centimeters] of which must be compacted clay-rich earthen material, free from cracks and extrusions of solid waste. If a cover of four feet [1.2 meters] or more of clay-rich earthen material is achieved, compaction is not required. At least six inches [15.2 centimeters] of suitable plant growth material must be placed over the covered landfill and planted with adapted grasses."

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

The application states that annual postclosure inspections will be conducted for a period of five years after closure.

The application demonstrates that the City of Stanley will appropriately conduct postclosure care of the facility.

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 January 23, 2020.

Conclusion

Based on the submitted application and items discussed above, it appears the City of Stanley has submitted an appropriate renewal application for the Stanley Inert Waste Landfill that meets the requirements of the North Dakota Solid Waste Management Rules.

Based on the submitted application and items discussed above, it appears the City of Stanley has shown that the renewal meets the requirements of the North Dakota Solid Waste Management Rules. It is proposed that the Department grant the City of Stanley a permit with the conditions listed in Permit 0126 for a period of 10 years.