DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

N603469691

FACILITY: WOOD ISLAND WASTE MANAGEMENT		**SRN / ID:** N6034
LOCATION: EAST 10081 STATE HIGHWAY M-28 EAST, WETMORE		**DISTRICT:** Marquette
CITY: WETMORE		**COUNTY:** ALGER
CONTACT: Adam Thompson , Operator/Manager		**ACTIVITY DATE:** 10/16/2023
STAFF: Lauren Luce	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Targeted Inspection FY24		
RESOLVED COMPLAINTS:		

Facility: Wood Island Sanitary Landfill (SRN: N6034)

Location: East 10081 State Highway M-28 East, Wetmore, Alger County, MI, 49896

Contact(s): Adam Thompson, Operations Manager

Regulatory Authority

Under the Authority of Section 5526 of Part 55 of NREPA, the Department of Environment, Great Lakes, and Energy may upon the presentation of their card, and stating the authority and purpose of the investigation, enter and inspect any property at reasonable times for the purpose of investigating either an actual or suspected source of air pollution or ascertaining compliance or noncompliance with NREPA, Rules promulgated thereunder, and the federal Clean Air Act.

Facility Description

Wood Island Sanitary Landfill (Wood Island) is located on State Highway M-28 nearest the community of Wetmore, Alger County, approximately 3.2 miles southeast of the City of Munising and 3.5 miles south of Pictured Rocks National Lakeshore southern boundary. There is a campground, a hotel, and a handful of small commercial businesses directly to the north on M-28 and a log home manufacturer directly to the west, sharing a property line with the landfill. The area with the highest concentration of residential dwellings is located one mile directly to the west of the landfill in Wetmore.

Wood Island is a Type II Municipal Solid Waste (MSW) landfill that has been actively accepting waste since 1992. The landfill accepts sludge, asbestos containing material (ACM) waste, fly ash, industrial waste, miscellaneous solids and municipal household waste.

Process Description

A landfill consists of an area of land or an excavation in which wastes are placed for permanent disposal. The process begins with collected waste being transported to the landfill where it is dumped into an area (cell). A synthetic liner, such as high-density polyethylene, is used at the bottom to prevent contamination of leachate and landfill gas with ground water and soil. Heavy equipment then spreads the waste, compacts it, covers the waste with soil or alternate daily cover materials (ADCM), and further compacts it on a daily basis. When a cell is full, it is covered permanently with a liner cap and compacted soil.

Emissions

Landfill gas is generated through bacterial decomposition of organic materials contained in solid waste. Initially, decomposition is aerobic until the oxygen supply is exhausted. With the solid waste being insulated from the atmosphere, decomposition then occurs anaerobically producing most of the landfill gas. Landfill gas (LFG) consists of 50% methane, 50% carbon dioxide, and less than 1% non-methane organic compounds (NMOC). The NMOC fraction consists of various organic hazardous air pollutants (HAP), greenhouse gases, and volatile organic compounds (VOC).

LFG can be collected through one of two methods: active and passive gas collection systems. Wood Island Sanitary Landfill utilizes a passive system that relies on the pressure gradient created by the generation of LFG in the cells. Pipes in the cells collect the gas and move it from an area of high pressure to low pressure where it is emitted to the atmosphere through vents. There is no purification of LFG at this source.

Emissions Reporting

Wood Island Sanitary Landfill is required to report is annual emissions to Michigan Air Emissions Reporting System (MAERS). The following table lists the source total emissions for the reporting year 2022.

Pollutant	Emissions (TPY)
CO	3.99
PM 10 FLTRBL	1.98
PM 2.5 FLTRBL	<1
NMOC	4.25
VOC	<1
SO2	<1
NOX	1.16

Regulatory Analysis

The facility was permit-exempt until expansion in 2016 when it became subject to 40 CFR Part 60 Subparts A and XXX (landfill expansion exceeded design capacity greater than 2.5 million megagrams/2.5 million cubic meters with NMOC emissions of less than 34 megagrams per year). Wood Island was issued its initial ROP on September 4, 2018. The facility is currently subject to

MI-ROP-N6034-2023. The facility continues to accept ACM waste and is subject to 40 CFR Part 61, Subpart M. The facility previously operated a seasonal biomass boiler that was subject to 40 CFR Part 63, Subpart JJJJJJ. However, the facility submitted a permit modification in September 2023 to remove the wood boiler from the ROP as it has been dismantled and removed from the site.

Compliance History

The source received a consent order, AQD No. 2018-14, in 2018 for violations of the asbestos NESHAP.

Wood Island was required to pay a stipulated fine. All conditions of the consent order were followed and the order was terminated on August 18, 2022. The facility was last inspected in February 2022 and was found to be in compliance with all applicable air quality rules and federal regulations at that time.

Inspection

On October 16, 2023, AQD Staff (Lauren Luce) conducted an unannounced inspection of Wood Island Sanitary Landfill. AQD Staff arrived at the office building and met with Operations Manager, Adam Thompson. It was explained that the purpose of the inspection was to ensure compliance with MI-ROP-N6034-2023 and all other applicable air pollution control rules and federal regulations. The inspection began discussing records and operations. Some records were provided on-site and additional records were requested via email after the inspection. A tour of the landfill was also provided. The landfill is currently operating in cell 12. Cell 11 is not capped. There are 8 solar flares and 5 gas monitoring wells on the site. Cell 13 will be constructed in Spring 2024.

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Wood Island Sanitary Landfill is required to conduct Tier 2 or Tier 3 testing for NMOC emissions. This testing is to be performed every five years. The source performs Tier 2 testing and conducted the most recent test in March 2022. The average value of the converted laboratory measured site -specific NMOC concentration in the LFG is 257.07 ppmv as hexane and is used to calculate the NMOC emission rate for the Wood Island Landfill. The modeled NMOC generation for calendar year 2022 emission rate is 12.10 Mg/yr. With Wood Island Sanitary Landfill having an annual NMOC emission rate of less than 50 Mg/year, the source is not subject to the National Emission Standards for Hazardous Air Pollutants for Municipal Solid Waste Landfills promulgated in 40 CFR Part 63, Subparts A and AAAA, and is not required to install a landfill gas collection/control system.

As required under Special Condition VI.1, Wood Island Sanitary Landfill keeps records of the design capacity for the facility. A 2017 report was provided. The total maximum design capacity of cells 1-15, which includes future cells, is 3,261,525 cubic meters. Wood Island Sanitary Landfill is also required to monitor and record the amount of waste brought in on a year-by-year basis. For 2022, the facility received 48,606 tons and the total amount of waste in place in 2022 was 1,705,242 tons.

The facility has been prompt in submitting a complete annual NMOC emission report with their annual certification of compliance for MI-ROP-N6034-2023. A liquids addition report was

submitted in March 2023 stating that 0 gallons of leachate was recirculated from March 5, 2022-March 3, 2023.

EUASBESTOS

During the tour of the landfill, asbestos warning signs were observed. Additional signs are being ordered to be added to the perimeter of the landfill. An updated Asbestos Disposal Locations map that provides information on each asbestos shipment received with the point number, date, and elevation of where that shipment is deposited in the landfill was reviewed. Before a shipment is received, the facility requires a minimum 24-hour notice that asbestos material will be incoming. All ACM is covered with a minimum of 24 inches of MSW on the same date of receipt.

Wood Island keeps records of the name, address, and phone number of the waste generator and transporter for each shipment received on the *Waste Shipment Record/Uniform Hazardous Waste Manifest* reports. The quantity of the asbestos-containing waste material is also recorded. A receipt is provided to the generator of the waste. Also provided on the record sheet, is the latitude, longitude, and elevation of the disposal site for asbestos material. There have been no records of request to disturb placed asbestos waste.

FGCOLDCLEANERS

There is one cold cleaner at the facility that uses a low VOC solvent. The solvent does not contain any of the halogenated compounds listed in the permit. At the time of the inspection, the cold cleaner was not being used and the cover was closed. Instructions for the cold cleaner were on the interior cover and wall behind the cleaner. While parts are being cleaned, emissions from the solvent being used are released to the general in-plant environment.

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This emission unit is a Central Boiler, Model CL6048, and is a wood-fired boiler and is classified as a 'seasonal biomass' heat source, generating a maximum heat input of 1.25 MMBtu/hr. The wood boiler was dismantled and removed from the facility in August 2023.

<u>Compliance</u>

Based on this inspection, Wood Island Sanitary Landfill appears to be in compliance with MI-ROP-N6034-2023 and all other applicable regulations.

Image 1: asbestos warning sign

NAME _____ DATE 10-26-23 SUPERVISOR _____