

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

N603461813

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: 02/03/2022
STAFF: Lauren Luce	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Unannounced inspection to determine compliance with MI-ROP-N6034-2018 and ACO 2018-14		
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 Waste Management 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 its annual emissions to Michigan Air Emissions Reporting System (MAERS). The following table lists the source total emissions for the reporting year 2020.

Pollutant	Emissions (TPY)
CO	6.7
PM 10 FLTRBL	<1
PM 2.5 FLTRBL	<1
NMOC	<1
VOC	<1

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 continues to accept ACM waste and is subject to 40 CFR Part 61, Subpart M. Wood Island is routinely inspected by the District's asbestos inspector. The facility operates a seasonal biomass boiler subject to 40 CFR Part 63, Subpart JJJJJ.

Compliance History

The facility received a consent order in 2018 for asbestos related violations. The facility was last inspected in December 2019 and was found to be in compliance with all applicable air quality rules and federal regulations at that time.

Inspection

On February 3, 2022, I conducted an unannounced inspection of Wood Island Sanitary Landfill with AQD asbestos inspector Joe Scanlan. We arrived at the office building and met with Operations Manager, Adam Thompson. It was explained to Mr. Thompson that the purpose of the inspection was to ensure compliance with MI-ROP-N6034-2018 and all other applicable air pollution control rules and federal regulations. The inspection began by Mr. Thompson providing an overview of the landfill, detailing maps, and providing the status of the current cells. Next, records were provided for boiler and asbestos information. Mr. Thompson then provided us a tour of the landfill.

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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 May 2017. A five year test is planned to be completed in March 2022. The average value of the converted laboratory measured site-specific NMOC concentration in the LFG is 76 ppmv as hexane and is used to calculate the NMOC emission rate for the Wood Island Landfill. The modeled NMOC generation for calendar year 2017 emission rate is 3.5 Mg/yr. The projected annual NMOC emission rate was calculated as 3.8 Mg/year in the year 2020, assuming an annual average waste acceptance rate remains relatively constant. 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 2021, the facility received 61,188.86 tons.

The facility has been prompt in submitting a complete annual NMOC emission report with their annual certification of compliance for MI-ROP-N6034-2018. For 2020, the NMOC emission rate from the landfill was 0.86 Mg/yr.

EUASBESTOS

During the tour of the landfill, signs were observed that state "asbestos disposal site" and warnings related to asbestos. The signs were faded and that was brought to the attention of Mr. Thompson who stated that he had already ordered new signs. Mr. Thompson showed 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.

Before a shipment is received, a minimum 24-hour notice is provided that asbestos material will be incoming.

Wood Island Sanitary Landfill 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.

EU-WOOD BOILER

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. Per 40 CFR Part 63, Subpart JJJJJ, a tune-up is required every 5 years. A performance tune-up was completed on December 12, 2019, by Snowbelt Stoves where the stack was cleaned, fluid level checked, the inside of unit was inspected and cleaned, and all wires/power supply was inspected. The log provided by Mr. Thompson states the boiler was cleaned on May 17, 2021.

The facility is required to document seasonal use of the wood boiler and that the unit is shut down for 7 continuous months each calendar year. The boiler typically shuts down in mid-April and re-commences operation in late November or early December. For 2021 the unit shut down March 14 and began operation on December 1, within the allowable time-frame for use. Additionally, as this boiler is to be fueled by biomass only, a large wood pile was noted near the boiler.

Miscellaneous

At the time of the inspection, no fugitive dust emissions were observed due to winter conditions. Wood Island Sanitary Landfill is currently operating in cell 12. Cell 11 is not capped.

Compliance

Based on this inspection, Wood Island Sanitary Landfill is in compliance with MI-ROP-N6034-2018 and all other applicable regulations.



Image (1): Asbestos map information.

NAME Kevin Lee

DATE 3/9/22

SUPERVISOR ECH