

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

N598569641

FACILITY: Whitefeather Landfill		SRN / ID: N5985
LOCATION: 2401 E. Whitefeather Road, PINCONNING		DISTRICT: Bay City
CITY: PINCONNING		COUNTY: BAY
CONTACT: Robb Moore , Environmental Manager (Sec 1)		ACTIVITY DATE: 10/04/2023
STAFF: Gina McCann	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Inspection of ROP-MI-N5985-2019		
RESOLVED COMPLAINTS:		

I (glm) conducted a scheduled site inspection at the Whitefeather Landfill. Whitefeather Landfill is an existing Type II solid waste disposal facility owned and operated by Republic Services of Michigan with a gas to energy plant owned and operated by Energy Developments Pinconning (EDL), formerly Granger Energy Services. At the time of the inspection the facility was found to be in compliance with the ROP MI-ROP-N5985-2019 and the applicable air quality regulations.

I then met with Mr. Rob Stewart from EDL first and then I met with Republic Services of Michigan representative Mr. Robb Moore, Environmental Manager at Whitefeather and Amy Moralis the Landfill Supervisor. I viewed the engine room and then toured the landfill and reviewed on site records required by MI-ROP-N5985-2019. I reviewed some records on-site, while others I viewed off-site. All required information was available, and no violations were found during the inspection.

The landfill gas is collected at the Whitefeather facility, which is a Type II, active municipal solid waste landfill (MSW). An active gas collection system removes landfill gas (LFG) by vacuum applied to the wells from a blower. The LFG is then routed to the gas to energy (GTE), EDL facility, for generation of electricity. Any excess LFG or when the EDL facility is down, the gas is routed to the open flare owned and operated by Whitefeather Landfill. The landfill recently replaced the 1,000 cubic feet per minute (cfm) open flare with a 2,100 cfm open flare under exemption R 336.1285(aa). The exemption demonstration was received December 23, 2021. Whitefeather Landfill periodically modifies the gas well collection system and/or collection piping as needed when sections of the landfill begin to produce significant gas quantities.

The site was issued an ROP in February 2019 and the renewal is currently in public comment. The ROP is sectioned, Whitefeather Landfill in section 1 and EDL in section 2. The source is subject to the landfill federal plan, Part 62 Subpart OOO, for a municipal solid waste landfill that commenced construction, reconstruction, or modification on or before July 17, 2014 and the landfill NESHAP, Part 63 Subpart AAAA. The MSW landfill has a design capacity greater than 2.5 million megagrams (Mg), but actual NMOC emissions based upon an established Tier 2 value in the landfill calculation are less than 34 Mg per year. Michigan does not currently have delegation of the federal plan, nor do we have an approved state plan. In the interim, Michigan

will gain delegation of the federal plan through our approved delegation of Part 70. Once the federal plan is in the active ROP, Michigan can perform enforcement and compliance work of it. Currently, the site still has requirements for the NSPS Part 60 Subpart WWW in the ROP. Even though obsolete, this inspection was performed based on the requirements in the ROP. Although not ideal, there are duplicative requirements between the WWW and OOO regulations that Whitefeather is familiar with.

The ROP renewal is adding requirements for the above ground gasoline tank used for fueling on-site service vehicles. During the landfill tour we visited the location of the tank. The tank has a flow meter and the site records gallons pumped to each vehicle. Compliance with this standard was not evaluated during this inspection, but it appears recordkeeping requirements are already in place to ensure future compliance.

The following emissions were reported to the Michigan Air Emissions Reporting System in the 2022 submittal:

Pollutant	Emissions (tons)
CO	87.69
NO _x	21.81
PM10	10.20
SO ₂	8.92
VOC	16.89
NMOC	3.45
Formaldehyde	6.52

Section 1-EULANDFILL <50: Compliant

The landfill began operation in 1991 and currently accepts municipal solid waste, non-hazardous special waste, regulated asbestos containing materials, and construction and demolition debris. The facility has a gas collection and control system installed that is not required by regulation. As they build the waste cells they continue to expand and upgrade the site's GCCS. On October 7, 2008 Republic was granted a

construction expansion permit. The site now has 21.00 acres in final closure and approximately 1.5 acres left to build. The last construction permit issued from the Materials Management Division was October 7, 2008. The design capacity report was updated in March 2009 to include cells 7-9. A new construction permit will be sought in the next few years with issuance sometime near 2030. At that time the site will be subject to the NSPS XXX.

The Maximum Design Capacity is 4,561,753 megagrams per their March 2009 modified design capacity report. There were no LFG odors during the tour of the landfill. Mr. Moore said that it is Republic's internal policy to operate all GCCS as if they were subject to the gas collection requirements. The facility does perform monthly GCCS monitoring and tuning to optimize gas collection to the GTE.

Each truck is weighed, material type recorded, and the information is entered in the facility's "TRUCK" database. The database provides the value for the annual volume of waste accepted which is used to calculate annual emissions that are reported to the AQD. The total in-place waste was 5,434,573 yd³ with a maximum design capacity of 4,561,753 megagrams. Fly over surveys are done annually to determine waste in place.

The facility is permitted to recirculate leachate though it rarely does and last recirculated in 2018. The facility submits a liquids addition report pursuant to Part 62 Subpart OOO.

Section 1-TIER 2 Testing: Compliant

The facility is required to conduct an NMOC emission test a minimum of once every five years. The last NMOC test was conducted on August 17, 2020. The NMOC concentration was found to be 25.05 Mg/yr, which is below the 50 Mg/yr required in the MACT AAAA and below the 34 Mg/yr required in the federal plan, which requires the facility to install and maintain a GCCS. Mr. Moore said they report all waste accepted to MAERS and use only MSW accepted to calculate gas generation for the Tier II report. I reviewed the Tier 2 test results from 2020 and 2015. I compared actual waste acceptance rates submitted to the Waste Data System (WDS) with those estimated in the Tier 2 tests. Whitefeather uses an estimated 180,000 tons of waste accepted as an estimate for the five-year period. Reviewing WDS, the waste accepted minus C&D waste reported does not exceed 180,000 tons for the past five years. Input parameters in LandGem were consistent with regulatory requirements. Blower vacuum and flow during the Tier 2 test appeared representative of day-to-day operations as observed during the inspection. Therefore, the estimated Tier 2, NMOC emissions, should be accurate.

Section 1-MAP/Odor Abatement: Compliant

On site Republic staff conducts routine weekly surveys. No off-site odors were verified during their investigations for the current month of October. If an odor is detected staff works to determine the source to alleviate the odor. The last odor complaint was received in December of 2020. The site had accepted some oil well spoils that were extremely stinky. Prior to that the most recent odor complaint was in November 2019. The facility had received the same type of waste prior to that complaint as well.

Section 1-EUOPENFLARE: Compliant

The facility has one open flare rated at approximately 2,100 cfm. On November 19, 2021, Whitefeather Landfill submitted an exemption demonstration to install a replacement utility flare under R336.1285(aa). Potential emissions will be below significance levels. They have an enclosed flare rated at approximately 400 scfm onsite, however it is disconnected from the GCCS and cannot be operated. Start-up of this flare is unlikely due to age and time off-line it would take significant efforts.

The site maintains the open flare in a ready state. The flare is only used when engine maintenance is performed or during an unexpected shutdown. The GCCS has alarms if the engines are not available and auto start for the flares. The alarm is sent to an EDL employee who would investigate any alarm and then the landfill manager so that they may verify flare operation. At the time of the inspection the flare was in operation due to testing of the installation.

EUOPENFLARE is not in the ROP, because control is not required on a landfill with NMOC concentration less than or equal to 34 NMOC Mg/yr. Whitefeather Landfill performs Tier 2 testing every 5 years to verify that their emissions are less than 34 NMOC Mg/yr.

Section 1- EUASBESTOS: Compliant

I reviewed asbestos records and asbestos placement tracking. The facility maintains an asbestos placement log with generator and delivery information for asbestos containing waste accepted. The site uses a database program "TRUCKS" to record information as each load enters the landfill. A form is completed by on hill staff with the latitude, longitude, and depth of asbestos containing waste recorded. The asbestos placement form is kept with the manifest for the load. Copies of completed "RACM Load Inspection Form" are attached. Asbestos notifications for possible disturbance are sent appropriately to the district office.

Section 1- EUCOLDCLEANER: Compliant

The facility has required instructions posted. Safety Kleen owns and manages the solvents and waste stream. Based on site records and annual certification report the cold cleaner is in compliance.

Section 2-FGICENGINES

The GTE plant operates two CAT G3520C internal combustion engines. The original engines were installed on May 8, 2009. In 2016 both engines were swapped out for like replacements under PTI exemption R285(2)(a)(vi). The plate IDs for Engine 1 and Engine 2 are GZJ00277 and GZJ0340 respectively.

NSPS JJJ stack testing was performed on February 23, 2022 and at that time the facility was in compliance with the applicable emission standards in their ROP. Results of that test are in the table 2.1 and 2.2, screenshots, below.

Pollutant	Limit	EUICEENGINE1	EUICEENGINE2
CO	16.23 pph	11.78 pph	11.79 pph
	3.3 g/bhp-hr	2.4 g/bhp-hr	2.4 g/bhp-hr
NOx	4.92 pph	2.55 pph	2.50 pph
	1.0 g/bhp-hr	0.52 g/bhp-hr	0.50 g/bhp-hr
VOC	1.0 g/bhp-hr	0.12 g/bhp-hr	0.13 g/bhp-hr
	Formaldehyde	2.10 pph	NA

EDL is also required to test formaldehyde emissions once every five years from the date of the last test. Formaldehyde emissions were required before March 1, 2023. The deadline was missed and a violation notice was sent. The facility completed the required testing April 26, 2023

At the time of my inspection the engines were not operating.

Material limits are compared to a 12-month rolling time period as determined at the end of each calendar month. Special condition (SC) II.1 limits the use of landfill gas to 565.88 MMscf per year based on a 12-month rolling time period as determined at the end of each calendar month. Landfill gas usage for the engines is recorded on a monthly and 12-month rolling time period basis as determined at the end of each calendar month. Landfill gas usage for the 12-month rolling time period ending September 2023 was 378.19 MMscf.

NAME



DATE 10/27/2023

SUPERVISOR

