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

N571966875

FACILITY: ORCHARD HILL SANITARY LANDFILL		**SRN / ID:** N5719
LOCATION: 3290 HENNESEY RD, WATERVLIET		**DISTRICT:** Kalamazoo
CITY: WATERVLIET		**COUNTY:** BERRIEN
CONTACT: Chip Shaw ,		**ACTIVITY DATE:** 03/28/2023
STAFF: Matthew Deskins	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Unannounced Scheduled Inspection		
RESOLVED COMPLAINTS:		

On March 28, 2023 AQD staff (Matt Deskins) went to conduct a scheduled unannounced inspection of the Orchard Hill Sanitary Landfill (OHSL) located in Watervliet, Berrien County. OHSL is a licensed Type II municipal solid waste (MSW) landfill and had become subject to the federal New Source Performance Standard (NSPS), 40 CFR Part 60 Subpart WWW, on November 8, 2010 due to a previous agreement with AQD (See previous inspection reports and correspondence for information related to this). They previously were not subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63 Subpart AAAA for MSW Landfills because they had been doing Tier 2 testing (done every 5 years) prior to the promulgation of this regulation showing that their NMOC emissions were below 50 Mg/yr. However, in 2012, OHSL signed an agreement to lease a certain portion of their property to EDL (formerly Granger Electric) for the construction of a landfill gas to energy facility. EDL was issued a permit (PTI No. 98-12) to install two Caterpillar Model G3520C stationary reciprocating internal combustion engines (RICE) and an open flare that was later rolled into OHSL's ROP as Section 2. The installation of the engines and the emissions of Formaldehyde emitted from them are above major source individual HAP thresholds and thus made the landfill subject to the NESHAP. Engines #1 and #2 at the EDL plant are also subject to the NSPS JJJJ and NESHAP ZZZZ (RICE MACT). In June of 2021 and September of 2021 new MSW Landfill Regulations came into effect. The one is June was the Federal Emission Guidelines 40 CFR Part 62 Subpart OOO and the one in September was a revised MACT 40 CFR Part 63 Subpart AAAA. These and other applicable requirements are now contained in OHSL's Renewable Operating Permit (ROP) No. MI-ROP-N5719-2023 and they basically replaced the NSPS WWW and old MACT AAAA for all intents and purposes. Back in 2018, EDL also had submitted a permit application to install another engine (Caterpillar 3516) that was issued on August 21, 2018 as PTI No. 25-18 which has since been incorporated into the ROP as well. This 3rd engine (Engine #3) is also subject to NESHAP ZZZZ but not to the NSPS JJJJ due to the date of manufacture of the engine (before 2006). The purpose of the inspection was to determine OHSL's and EDL's compliance status with their applicable sections of ROP No. MI-ROP-N5719-2023 and any other state and/or federal air regulations. Staff departed for the facility at approximately 9:10 a.m.

NOTE: Another item to mention was that both OHSL and EDL had submitted PTI Applications in 2021 to modify/increase the SO2 limits of the landfill gas. Those permits were issued in 2022 and have also been incorporated into the ROP.

Orchard Hill Sanitary Landfill (Section 1)

Staff arrived at OHSL at approximately 12:15 p.m. after first conducting the inspection of the EDL Gas to Energy facility (Section 2). Staff then proceeded into the office of OHSL and asked an employee if Chip Shaw (Site Manager) was available. She said that he was and told staff to proceed to the second office door which was a conference room. Once in the conference room, staff met with Chip and Paul Sgriccia. Paul is a consultant who has just started doing some part time work for Orchard Hill. After some small talk, staff went on to explain what the inspection would entail and what records staff would like to review. The

following is a summary of staff's discussion with Chip and Paul which will be followed by their ROP's emission units and OHSL's compliance status with them.

Staff asked Chip if they have received any odor complaints as of late and he said that he hasn't. Staff then mentioned that they haven't heard from him again either. Staff then asked about the amount of waste that they are taking in per day and Chip said that they still average about 700 to 1,000 tons per day. Staff then asked about the two Reverse Osmosis Systems (R.O) for treating their leachate if they have to haul any leachate off site. Chip said that still are using the system and it's still been working well. Staff then asked if they recirculate any leachate and Chip said that they don't although the residual/concentrate from the R.O. systems is still taken back up to the landfill. Staff then asked if they had any wellfield work scheduled for the upcoming construction season and Chip said that they did, but what they plan on doing hasn't been set in stone yet per se. Staff then asked some other questions regarding emission units contained in the ROP. The responses to those questions will be summarized in the Emission Units listed below as well as the Compliance Status of each.

FGLFGFUEL-1 (This Flexible Group contains the Emission Units EUOPENFLARE from Section 1 and EUOPENFLARE-GE, EUICENGINE1, EUICENGINE2, AND EUICENGINE3 from Section 2): Appears to be in COMPLIANCE

The facility appears to be in compliance with the 12-month rolling SO2 emission limit of 247.1 tons per year and the LFG material limit of 1165.6 MMscf per year. Records reviewed by staff ending February of 2023 indicate SO2 emissions at 64.82 tons and LFG consumption at 564.14 MMscf. They also appear to be in compliance with the weekly and/or monthly testing of the treated landfill gas (Draegar Tube is used for this) along with the semi-annual lab analysis for Hydrogen Sulfide (H2S) or Total Reduce Sulfur (TRS) content. Staff reviewed the last 4 semi-annual lab analysis reports and they indicated the content under 1600 ppm. There is a limit of 2500 ppm of H2S / Total Reduced Sulfur in the treated landfill gas and if any sampling exceeds this amount, certain corrective actions have to be taken. The facility is keeping the appropriate records and submitting the appropriate reports as required.

EULANDFILL-S1 (FGLANDFILL-OOO AND FGLANDFILL-AAAA): Appears to be in COMPLIANCE

The facility has an approved active gas collection system and the plan is on file with the AQD district office. OHSL currently has an open flare to combust landfill gas but it is currently only used as a back-up control device should the EDL plant go down. OHSL has been conducting quarterly surface emissions monitoring and it appears that the appropriate records are being kept. Staff reviewed the records for the past 4 quarters (All of 2022). The records reviewed included instrument calibration data, a map showing the route traversed while doing the monitoring, meteorological data, etc. No documented exceedences of the 500 ppm methane limit were noted. WSP (formerly Golder and Associates) does their surface emissions monitoring using a Thermo TVA-1000 gas meter. The facility has been submitting the required semi-annual and annual ROP Certifications to the district office on time. The ROP certification reports have included any deviations and/or operational issues as required. The facility regularly conducts cover integrity checks when sampling the wellfield or out doing other things. They have records of the amount of solid waste in place as well as the year-to-year acceptance rates. The facility has not had to conduct any root cause analysis for any monitoring exceedences that can potentially be required under the new landfill regulations.

NOTE: The revised 40 CFR Part 63 Subpart AAAA did away with SSM Reporting.

EUACTIVECOLL-S1 (FGACTIVECOLL-OOO AND FGLANDFILL-AAAA): Appears to be in COMPLIANCE

The facility has an approved active gas collection system as required and the materials used in the gas collection system appear to be either HDPE or PVC as required. The facility has an ASBUILT drawing showing the existing collection system and proposed expansion areas. Some wells are equipped with Landtec wellheads but the majority were fabricated in-house by OHSL. Some of the new wells being installed are the Caisson style which allows for easier extension of the well as the landfill cell gets filled. OHSL does their own monthly or more frequent wellhead sampling using an Elkins gas analyzer. They are recording static pressure (vacuum), oxygen, and temperature with the Elkins meter as required. Although the new landfill regulations still require the monitoring of oxygen or nitrogen, there are no limits for either and they don't have to be recorded. Also, the new landfill regulations increased the allowable gas well temperature from 131 degrees F to 145 degrees F. The new regulations also require the implementation of an Enhanced Monitoring Program should any well exceed 165 degrees F, but wellhead temperatures haven't been an issue to date at OHSL. Staff then looked at the most recent 6 months of wellfield data and did not note any issues. Some gas wells were installed a long time ago so information on installation is not available, but OHSL does maintain well logs for the newly installed wells along with the dates of installation. As mentioned under EULANDFILL, they have been submitting all the required reports.

EUOPENFLARE-S1 (FGOPENFLARE-OOO-1 AND FGOPENFLARE-AAAA-2): Appears to be in COMPLIANCE

As mentioned under EULANDFILL, the facility has an open flare but is now a back-up control device for times when the EDL Plant totally shuts down. The flare is equipped with digital instrumentation (data logger) that records operating parameters and is equipped with a thermocouple to monitor the continuous presence of a flame. Records of its operation can be pulled up on the computer. Should the open flare be in use and happen to shutdown, a pneumatic valve (operated by a nitrogen tank) automatically closes preventing emissions from venting to the atmosphere. Neither the landfill or EDL has a means to bypass any of the control devices, so there is nothing to secure with any type of locking device nor are monthly visual inspections required (this was documented in the staff report for the 2023 ROP Renewal). Since the EDL Plant is running, the flare wasn't in operation during staff's inspection. The ROP Renewal was re-issued on 3-8-2023 so the landfill will have to re-test the open flare for visible emissions, the net heating value, and exit velocity within 180 days of that date (basically by 9-8-2023). They also developed and submitted for approval a PM/MAP for the open flare and they have been submitting all the required reports.

EUGENERATOR: Appears to be in COMPLIANCE

OHSL operates a 27-kW natural gas emergency backup generator as needed that is subject to the NSPS JJJJ. The generator is programed to exercise on a weekly basis for 10 minutes for the purpose of readiness testing. The following are the Special Conditions for the generator and staff's comments to them.

EUGENERATOR

EMISSION UNIT CONDITIONS

DESCRIPTION

One 27-kW natural gas fired engine driving an emergency generator.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx + HC	**Less than or equal to 10g/hp-hr**	**Life of Equipment**	**EUGENERATOR -S1**	**SC V.1, V.2**	**40 CFR Part 60 Subpart JJJJ, Table 1, 40 CFR 60.4243(e)**
2. CO	**Less than or equal to 387 g/hp-hr**	**Life of Equipment**	**EUGENERATOR -S1**	**SC V.1, V.2**	**40 CFR Part 60 Subpart JJJJ, Table 1, 40 CFR 60.4243(e)**

AQD Comment: Appears to be in Compliance with the above limits. The engine is certified and they have never had to fire Propane in it.

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. There is no time limit on the use of EUGENERATOR during emergency situations. **(40 CFR 60.4243(d)(1))**

AQD Comment: Appears to be in Compliance.

2. The permittee shall not operate EUGENERATOR for more than 100 hours per year for purposes of maintenance checks and readiness testing or for emergency demand response as allowed in the 40 CFR 60.4243(d). **(40 CFR 60.4243(d)(2))**

AQD Comment: Appears to be in Compliance. Records reviewed by staff indicate the emergency generator operated 15.75 hours total in 2021 and 10.75 in 2022. The reasons of operation are either readiness checks or office power outages.

3. EUGENERATOR may be operated for up to 50 hours per calendar year in non-emergency situations as described in 40 CFR 60.4243(d)(3). These hours will count against the 100 hours per year for the purposes of maintenance checks and readiness testing or for emergency demand response provided in 40 CFR 60.4243(d)(2) except as provided in 40 CFR 60.4243(d)(3)(i). **(40 CFR 60.4243(d)(3))**

AQD Comment: Appears to be in Compliance.

4. EUGENERATOR may operate up to 100 hours per year on propane as an alternative fuel solely during emergency operations. **(40 CFR 60.4243(e))**

AQD Comment: Appears to be in Compliance. Propane hasn't needed to be used.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip EUGENERATOR with a non-resettable hour meter. **(40 CFR 60.4237(c))**

AQD Comment: Appears to be in Compliance. The hours are recorded on a factory installed control panel with a non-resettable hour meter.

2. The permittee shall operate and maintain EUGENERATOR according to manufacturer's written instructions. **(40 CFR 60.4243(a)(1))**

AQD Comment: Appears to be in Compliance. Staff will assume that the facility is doing this.

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Performance testing is not required on EUGENERATOR as long as the permittee keeps a copy of the manufacturer's certification on file that documents the engine complies with the emission limits. **(40 CFR 60.4245(a)(3))**

AQD Comment: Appears to be in Compliance.

2. If EUGENERATOR is ever fueled by propane for more than 100 hours per year and it is not certified to the emission standards while using propane, the permittee is required to conduct a performance test to demonstrate compliance with the emissions standards in 40 CFR 60.4233. **(40 CFR 60.4243(e))**

AQD Comment: Appears to be in Compliance. Propane has not been used.

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall record the hours of operation of EUGENERATOR for each time it operates along with what classified the event as an emergency and how many hours are spent for non-emergency operation. **(40 CFR 60.4245(b))**

AQD Comment: Appears to be in Compliance. The facility is tracking this.

2. The permittee shall maintain records of all maintenance conducted on EUGENERATOR. **(40 CFR 60.4243(a)(1))**

AQD Comment: Appears to be in Compliance.

3. If EUGENERATOR is ever fueled by propane, the permittee shall record all hours of such use. **(40 CFR 60.4243(e))**

AQD Comment: Appears to be in Compliance. Propane has not been used.

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

AQD Comment: Appears to be in Compliance with #1 through #3 above. The facility has been submitting the above reports.

See Appendix 8

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all the provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR, Part 63, Subpart A and Subpart JJJJ, as they apply to EUGENERATOR. (40 CFR Part 63, Subparts A and JJJJ)

AQD Comment: Appears to be in Compliance. The facility appears to meeting the requirements of the NSPS JJJJ.

EUASBESTOS: Appears to be in COMPLIANCE

The facility has warning signs, fencing, and/or natural features surrounding the property which should adequately deter access by the general public as required. The facility is keeping all the required records pertaining to asbestos which include the shipping records (waste manifests) of the generator, transporter, and quantity of asbestos accepted. The facility also is maintaining a map that shows the depth and location of the buried asbestos as required.

FGCOLDCLEANERS: Appears to be in COMPLIANCE

The facility still uses Safety Kleen to service the cold cleaner and it is located in their maintenance garage and is not a heated unit. It has operational instructions posted on it. Staff had looked at the MSDS sheet during previous inspections and the solvent used does not contain any of the compounds listed under the material limits above 5%.

OHSL INSPECTION CONCLUSION: **The facility appears to be in COMPLIANCE with Section 1 of ROP No. MI-ROP-N5719-2023 at the present time. After looking over the records staff went on a landfill tour with both Chip and Paul. Afterwards, Staff thanked them both for their time and departed at approximately 3:15 p.m.**

EDL (Section 2)

Staff arrived at the EDL Plant at approximately 10:30 a.m. Staff conducted the inspection of this Section first since their contact for the landfill (Chip Shaw) wasn't currently available. Ralph Balkema of OHSL was in the process of tracking Chip down for staff so staff decided to inspect EDL first. Staff proceeded to enter the office area where they were greeted by Scott Eastman (Plant Operator). Staff had met with Scott on previous inspections of the facility and we proceeded to the conference room. Staff then asked him about current plant operations and for records pertaining to the various conditions contained in Section 2 of the ROP. The following is a summary of staff's conversation with Scott which will be followed by the permit conditions pertaining to them along with staff's comments regarding them.

According to Scott, EDL still has the (2) Caterpillar 3520 internal combustion engines as well as (1) 3516. A compressor system still applies the vacuum to the wellfield to provide the landfill gas that is combusted by the three engines. Staff then asked if they had enough gas to operate all three engines at full load. He said that they don't and that currently they run the two 3520's at 1.3 to 1.4 MW (Both are rated for 1.6 MW) and that the 3516 isn't operated very often. Staff then asked if they have to run the flare at all and he said that only if an engine is down for maintenance. Staff then went over the conditions of their Section of the ROP. The following are the Special Conditions contained in Section 2 of the ROP and they will be followed by the compliance status with them. Staff deleted all conditions that were

N/A to save some space. Also, Staff was able to get most of the information needed while at the plant except that they had to follow up with Elizabeth Park for their 12-month rolling records and a couple of other items.

EUICEENGINE3: Appears to be in COMPLIANCE

Emission Limits: Stack testing has shown compliance with the Formaldehyde and SO2 Emission Limits.

Material Limits: NA

Process/Operational Restrictions: The facility only burns treated landfill gas in the engine.

Design Equipment Parameters: The engine has an air-to-fuel ration controller and staff assumes it is installed, maintained, and being operated properly. The design capacity of the engine does not exceed 1,148 bhp and it is equipped with a non-resettable hours meter to track operating hours.

Testing/Sampling: The facility has tested for SO2 emissions with the last test being 9-16-2022 and will have to test again within 5 years of that date. The facility tested for Formaldehyde emissions on 10-22-2019 and will have to re-test within 5 years of that date.

Monitoring/Recordkeeping: The facility appears to keep records and calculations in an acceptable manner. They appear to be maintaining monthly and 12-month rolling records of landfill gas usage in the engine along with hours of operation. The facility has been keeping records of H2S (TRS equivalent) sampling results when conducted.

Reporting: The facility is submitting the required semi-annual and/or annual reports as required. Also, this engine has not been replaced to date as allowed under if the conditions of #5 are met.

Stack/Vent Restrictions: The stack appears to meet the diameter and height requirements. Staff confirmed the height requirement by laser rangefinder.

Other Requirements: The facility appears to be complying with the requirements of 40 CFR Part 63 Subparts A and ZZZZ (RICE MACT).

EUOPENFLARE-GE: Appears to be in COMPLIANCE

Emission Limits: Records reviewed by staff indicate that the 12-month rolling SO2 emission limit of 150.4 tons per year is being met. Records reviewed ending in February of 2023 at 0.53 tons.

Material Limits: NA

Process/Operational Restrictions: The facility submitted and the AQD approved a PM/MAP for the open flare. It has not needed to be revised to date to staff's knowledge. The flare is operated any time gas is routed to and VEs don't appear to be an issue. The flare has a heat sensing device (thermocouple) to indicate presence of flame at all times and staff assumes that it was installed and is being operated and maintained properly. The facility has 180 days from 3-8-2023 to conduct the flare testing needed to determine the exit velocity of the flare. They also have a flow meter on the unit and there is no bypass line.

Design Equipment Parameters: The flare design capacity does not exceed 1,350 scfm.

Testing/Sampling: NA

Monitoring/Recordkeeping: The facility appears to keep records and calculations in an acceptable manner. The facility appears to be continuously monitoring and recording the gas flow rate to the flare. The facility has 180 days from 3-8-2023 to conduct the flare testing needed to determine VEs, heat content, and exit velocity. No exceedences of any Process or Operational Restrictions have been reported to date. The keep all records of PM / MAP electronically for the flare. The facility has been keeping records of H2S (TRS equivalent) sampling results when conducted. They appear to be calculating monthly and 12-month rolling SO2 emissions satisfactorily and keep monthly hours of operation.

Reporting: The facility is submitting the required semi-annual and/or annual reports as required.

Stack/Vent Restrictions: The stack appears to meet the diameter and height requirements. Staff confirmed the height requirement by laser rangefinder and it was 28 feet.

Other Requirements: The facility appears to be complying with the requirements of 40 CFR Part 63 Subparts A and AAAA (MSW Landfill MACT) and 40 CFR Part 62 Subpart OOO (Federal Plan for MSW Landfills).

FGLFGFUEL-2 (This Flexible Group contains the Emission Units EUOPENFLARE from Section 1 and EUOPENFLARE-GE, EUICENGINE1, EUICENGINE2, AND EUICENGINE3 from Section 2): Appears to be in COMPLIANCE

The facility appears to be in compliance with the 12-month rolling SO2 emission limit of 247.1 tons per year and the LFG material limits of 1165.6 MMscf per year. Records reviewed by staff ending February of 2023 indicate SO2 emissions at 64.82 tons and LFG consumption at 564.14 MMscf. They also appear to be in compliance with the weekly and/or monthly testing of the treated landfill gas (Draegar Tube is Used for this) along with the semi-annual lab analysis for Hydrogen Sulfide (H2S) or Total Reduce Sulfur (TRS) content. Staff reviewed the last 4 semi-annual lab analysis reports and they were all under 1600 ppm. There is a limit of 2500 ppm of H2S / Total Reduced Sulfur in the treated landfill gas and if any sampling exceeds this amount, certain corrective actions have to be taken. The facility is keeping the appropriate records and submitting the appropriate reports as required.

FGICEENGINES (This Flexible Group contains the Emission Units EUICEENGINE1 and EUICEENGINE2): Appears to be in COMPLIANCE

Emission Limits: Stack testing has shown compliance with all the listed emission limits.

Material Limits: Records reviewed by staff indicate that the 12-month rolling landfill gas usage in the engines has been below the 578.16 MMscf per year. Records reviewed ending in February of 2023 indicate usage at 516.76 MMscf

Process/Operational Restrictions: The facility only burns treated landfill gas in the engines and the facility submitted and the AQD approved a PM/MAP for the engines. It has not needed to be revised to date to staff's knowledge. The engines automatically adjust the air/fuel ratio to ensure maximum design output based on fuel available to burn. Staff assumes that they are operating and maintaining the engines so it meets the applicable emission limits over their entire life. Since the engines are non-certified, staff will again assume that they are operating and maintaining them in a manner consistent with good air pollution control practice for minimizing emissions.

Design Equipment Parameters: The engines have an air-to-fuel ratio controller and staff assumes it is installed, maintained, and being operated properly. The engines are equipped with a non-resettable hour meter to track their operating hours.

Testing/Sampling: The facility tests annually for NOx, CO, and VOC emissions due to their hours of operation as required by the NSPS JJJJ. The last testing for these parameters was on was conducted on 2-7-2023 and results indicated compliance. The facility tested for Formaldehyde emissions from the engines on 2-22-21 and will have to re-test within 5 years of that date. The facility tested for SO2 emission from the engines on 2-25-2022 and will have to re-test for it within 5 years of that date.

Monitoring/Recordkeeping: The facility appears to be continuously monitoring and recording landfill gas usage for both engines along with their kilowatt output and hours of operation. The facility keeps electronic records of all maintenance done on the engines. They appear to be maintaining monthly and 12-month rolling records of landfill gas usage in the engine along with hours of operation. They've also been recording kilowatt output once per day with some exclusions listed. The facility has been keeping records of JJJJ notifications and maintenance conducted on the engines. Since the engines aren't certified, annual testing under the NSPS JJJJ is being used for compliance determination purposes.

Reporting: The facility is submitting the required semi-annual and/or annual reports as required.

Stack/Vent Restrictions: The stack appears to meet the diameter and height requirements. Staff confirmed the height requirement by laser rangefinder.

Other Requirements: The facility appears to be complying with the requirements of 40 CFR Part 60 Subpart JJJJ and 40 CFR Part 63 Subparts A and ZZZZ (RICE MACT).

FGRICEMACT (This Flexible Group contains the Emission Units EUICEENGINE1, EUICEENGINE2, and EUICEENGINE3): Appears to be in COMPLIANCE

Emission Limits: NA

Material Limits: NA

Process/Operational Restrictions: Staff will have to assume that they are operating the engines in a manner which minimizes HAP emissions along with minimizing the time spent at idle during engine start-ups, not to exceed 30 minutes getting each engine up to load.

Design Equipment Parameters: The engines only burn treated landfill gas so separate meters are not needed since no other fuel(s) are used.

Testing/Sampling: NA

Monitoring/Recordkeeping: The engines only burn treated landfill gas so separate meters are not needed since no other fuel(s) are used.

Reporting: The facility is submitting the required semi-annual and/or annual reports listed as required.

Stack/Vent Restrictions: The stack appears to meet the diameter and height requirements. Staff confirmed the height requirement by laser rangefinder.

Other Requirements: The facility appears to be complying with the requirements of 40 CFR Part 63 Subparts A and ZZZZ (RICE MACT).

FGTREATMENTSYS-OOO AND FGTREATMENTSYS-AAAA (Covers the Emission Unit EUTREATMENTSYS): Appears to be in COMPLIANCE

Emission Limits: NA

Material Limits: NA

Process/Operational Restrictions: Staff will have to assume that they are operating the treatment system at all times that landfill gas is routed to it. Staff will also assume that they are operating the treatment system so that any emissions from atmospheric stacks or vents comply with the MACT AAAA. The facility has developed a site-specific treatment system monitoring plan and includes all the required elements listed.

Design Equipment Parameters: Staff will assume that the treatment system is installed and being properly operated to meet the requirements of the MACT AAAA. There is no bypass valve in the treatment system so a lock and key to secure it is not required nor are monthly visual inspections. This was documented in the Staff Report upon the ROP Renewal that was issued in 2023.

Testing/Sampling: NA

Monitoring/Recordkeeping: The facility is maintaining records of continuous flow of landfill gas and there is no-bypass valve as was just mentioned. The facility maintains electronic records of maintenance on the system.

Reporting: The facility is submitting the required semi-annual and/or annual reports listed here as required.

Stack/Vent Restrictions: NA

Other Requirements: The facility appears to be complying with the requirements of 40 CFR Part 63 Subparts A and AAAA (MSW Landfill MACT). They have also implemented a written PMP for the treatment system.

FGOPENFLARE-OOO-2 and/or FGOPENFLARE-AAAA-2 (Covers the emission unit EUOPENFLARE-GE): Appears to be in COMPLIANCE

Emission Limits: To staff's knowledge, VEs have not been an issue.

Material Limits: NA

Process/Operational Restrictions: Staff will have to assume that they are operating the flare in accordance with 60.18 along with all times that landfill gas is routed to it. It is also staff's understanding that the flare will shutdown and the gas valve will shut automatically if a flame is not detected. Staff will have to assume that they are operating the flare in a manner which minimizes emissions along with minimizing the amount of any downtime.

Design Equipment Parameters: Staff will assume that the flare is designed and being operated in accordance with 40 CFR 63.11(b). The flare has a heat sensing device (thermocouple) to indicate presence of flame at all times and staff assumes that it was installed and is being operated and maintained properly.

Testing/Sampling: The facility has 180 days from 3-8-2023 to test the flare for visible emissions, net heating value, and exit velocity.

Monitoring/Recordkeeping: The facility is maintaining records of continuous flow of landfill gas along with flare flame monitoring and there is no-bypass valve as was mentioned previously. The facility has 180 days to test the flare so the records mentioned have not been generated to date.

Reporting: The facility is submitting the required semi-annual/annual ROP Reports and/or reports listed here as required.

Stack/Vent Restrictions: NA

Other Requirements: The facility appears to be complying with the requirements of 40 CFR Part 63 Subparts A and AAAA (MSW Landfill MACT) and 40 CFR Part 62 Subparts A and OOO (Federal Plan for MSW Landfills)

After going over all the permit conditions, Staff proceeded with Scott out into the control room to take some readings. Staff noted that the Serial Number for Engine #1 is still GZJ00388 and Engine #2 is still GZJ00549. Engine #3 still has a Serial Number of RC00655. Staff noted that Engine #1 was putting out 1.36 MW, Engine #2 1.30, and Engine #3 wasn't operating. In total, the 2 engines were putting out approximately 2.7 MW and consuming approximately 940 scfm of landfill gas. Staff noted that during the previous inspection in 2021 they were consuming about 1250 scfm. The flare wasn't operational so there was no flow or combustion temperature to possibly look at. Staff noted the landfill gas quality was 50.4% methane (CH4) and 1.1% Oxygen (O2). Staff then went on a tour of the facility where they observed the three engines, the compressor system, condensate knock out, the gas chiller unit, and the gas dryer. These last several items help make up the pre-treatment system of the landfill gas prior it's combustion in the engines. The pre-treatment system is required by the federal landfill regulations if the electric generating plants want to opt out of certain requirements. Staff also went out behind the plant to look at the open flare and as mentioned, it was not in operation. Staff also looked at the stacks for all the engines and used an AQD Rangefinder to verify they met the height requirements which they did. Staff then proceeded with Scott back into the plant office where they mentioned everything looked and that staff would get with Elizabeth for some of the records. Staff thanked Scott for his time and departed the facility at approximately 12:10 p.m.

NOTE: Staff Received the Records Requested from Megan Stackhouse of EDL on March 30th since Elizabeth happened to be out of the office.

EDL Inspection Conclusion: **The facility appears to be in COMPLIANCE with Section 2 of ROP MI-ROP-N5719-2023 at the present time.**

NAME Matt Deskins DATE 4-3-2023 SUPERVISOR RAL 4/3/23