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

N571958625

FACILITY: Orchard Hill Sanitary Landfill		SRN / ID: N5719
LOCATION: 3290 HENNESEY RD, WATERVLIET		DISTRICT: Kalamazoo
CITY: WATERVLIET		COUNTY: BERRIEN
CONTACT: Chip Shaw ,		ACTIVITY DATE: 06/17/2021
STAFF: Matthew Deskins	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Announced Scheduled Inspection Due to Current COVI-19 Protocols.		
RESOLVED COMPLAINTS:		

On June 17, 2021 AQD staff (Matt Deskins) went to conduct a scheduled / announced inspection of the Orchard Hill Sanitary Landfill (OHSL) located in Watervliet, Berrien County. The inspection was scheduled due to current COVID-19 Protocols that are in place. OHSL is a licensed Type II municipal solid waste (MSW) landfill and became 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). These and other applicable requirements are contained in OHSL's Renewable Operating Permit (ROP) No. MI-ROP-N5719 -2016. In 2018, EDL submitted a permit application to install another engine (Caterpillar 3516) that was issued on August 21, 2018 as PTI No. 25-18. They later submitted an ROP Permit Modification application to roll that permit into the ROP which has been completed. 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). Lastly, the EPA drafted new Emission Guidelines (40 CFR Part 62 Subpart OOO) that will ultimately be replacing 40 CFR Part 60 Subpart WWW for existing landfills as defined by the regulation. They have also updated 40 CFR Part 63 Subpart AAAA. Subpart OOO has an effective date of June 21, 2021 and Subpart AAAA of September 27, 2021 and OHSL will be subject to both of them. The purpose of the inspection was to determine OHSL's and EDL's compliance status with their pertinent sections of their current ROP No. MI-ROP-N5719-2016a and any other state and/or federal air regulations. Staff had scheduled the inspection for 10:30 a.m. so they departed for the facility at approximately 9:30 a.m.

NOTE: Both OHSL and EDL have submitted PTI Applications to modify/increase the SO2 limits of the landfill gas, but those Applications are still being processed by AQD Permit Staff and no permits have been issued yet.

Orchard Hill Sanitary Landfill (Section 1)

Staff arrived in the vicinity of OHSL at approximately 10:20 a.m. Staff then proceeded into the office of OHSL and once there they asked Cyndi Morlock (office employee) if Chip Shaw (Site Manager) was available. She said that he was somewhere around and called him on his phone. A few minutes later, Chip arrived to greet staff and we then headed to a conference room. Once at the conference room, Chip and I were also joined by Jonathan Majuer

(pronounced MEAR) who is the new Compliance Manager. Chris Phillips had been in this position but Chip said he is doing other work for the hauling company now(?). Staff then went on to explain to Jonathan how they typically conduct the inspection and what records staff normally reviews. The following is a summary of staff's discussion with Chip and Jonathan which will be followed by their ROP's emission units and OHSL's compliance status with them.

Staff asked Chip and Jonathan if they have received any odor complaints as of late. Chip said "knock on wood" but they haven't been. Staff then mentioned that they haven't heard of any complaints this year but that we did receive a couple the previous spring / summer that ended up being referred to MMD. Staff mentioned that never received and follow-up information from MMD about them so they figured they had been resolved. Chip then stated that they would be drilling approximately 29 wells (19 re-drills and 10 new wells) starting next week just in case we should receive any odor complaints during that time. Staff then asked about the amount of waste that they are taking in per day. After doing some calculations, Jonathan mentioned they average about 2,700 yards or 800 tons per day. said that they still average about 700 to 1,000 tons per day. Staff then asked about the gas well pump system and if it was operational. Chip said that they still have a dedicated pump house with a compressor, but they haven't had to run it this year because it's been so dry. 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 typically they haven't had to haul any off site, although they have had a couple of loads trucked out this year. 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 were still using the Caisson Type Gas Wells and Chip said that they were. He went on to state that they are pretty expensive though so what they are doing now is using them in areas around active filling and then using the standard 6" well in areas that are up to grade and/or where they won't be filling for awhile. 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.

<u>EULANDFILL-S1:</u> 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 currently only used as a back-up control device should the EDL plant go down. Chip said that they do operate in a couple of times a year for maintenance checks. 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 6 quarters (All of 2020 and first two quarters of 2021). 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. As mentioned in the opening paragraph, OHSL became subject to the NESHAP 40 CFR Part 63 Subpart AAAA for MSW Landfills when the EDL Plant was constructed. That required them to develop a Start-Up, Shutdown, and Malfunction (SSM) Plan which they have. The facility has been submitting the SSM Reports as well as the required semi-annual and annual ROP Certifications to the district office on time. In the past they had submitted an annual NMOC generation report although that isn't required now that they are subject to the NSPS and the NESHAP. 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.

NOTE: The 40 CFR Part 63 Subpart AAAA revisions appear to do away with SSM Reporting.

EUACTIVECOLL-S1: 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. The landfill currently has 264 landfill gas monitoring points for NSPS purposes. As mentioned earlier, they are tentatively planning on drilling 10 new gas wells and re-drilling 19 gas well starting June 21. 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. If any of these parameters exceed NSPS standards, the facility appears to be taking corrective actions in the required time frames or asking for alternate compliance timelines and/or alternate operating scenarios. 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: 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. Near the open flare skid are bypass valves so they can route the gas to the EDL facility, but if the open flare is in use and should shutdown, a pneumatic valve (operated by a nitrogen tank) automatically closes preventing emissions from venting to the atmosphere. Since the EDL Plant is running, the flare wasn't in operation.

EUGENERATOR-S1: 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-S1 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

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-S1 during emergency situations. **(40 CFR 60.4243(d)(1))**

AQD Comment: Appears to be in Compliance.

2. The permittee shall not operate EUGENERATOR-S1 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. The engine has operated 3.2 hours since January 1, 2021. They operate it weekly for 10 minutes for readiness testing.

3. EUGENERATOR-S1 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-S1 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-S1 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-S1 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-S1 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-S1 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-S1 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-S1. **(40 CFR 60.4243(a)(1))**

AQD Comment: Appears to be in Compliance.

3. If EUGENERATOR-S1 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-S1. (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-S1: 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-S1: 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-N5719-2016a at the present time. After looking over the records staff went on a landfill tour with both Chip and Jonathan. Afterwards, Staff thanked them both for their time and departed to go over to the EDL Plant the at approximately 12:30 p.m.

EDL (Section 2)

Staff arrived at the EDL Plant at approximately 12:35 p.m. Staff proceeded to enter the office area where they were greeted by Scott Eastman (Plant Operator). Staff had met with Scott on a previous inspection 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 supplies the vacuum to OHLF's 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 run all three engines but that they don't have enough gas yet to run them at full load so they are derated. He said that the Engine #1 and #2 are set at approximately 1.4 MW each and #3 at 0.5 MW. 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 all the information needed while at the plant except for the 12-month rolling landfill gas amount consumed by all the engines and hours of operation, and the SO2 emission information for Engine #3. Staff had to follow up with Dan Zimmerman of EDL regarding those.

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUICEENGINE1-S2	Internal combustion engine (Caterpillar G3520C) for combusting treated landfill gas to produce electricity.	2012	FGICEENGINES-S2
EUICEENGINE2-S2	Internal combustion engine (Caterpillar G3520C) for combusting treated landfill gas to produce electricity.	2012	FGICEENGINES-S2
EUICEENGINE3-S2	One (1) 1,148 BHP internal combustion engine (CAT 3516) manufactured before 2006, for combusting treated landfill gas to produce electricity.	6/1/2019	FG-RICEMACT
EUTREATMENTSYS-S2	This emission unit treats landfill gas before its subsequent use or sale. The treatment system removes particulate to at least the 10 micron level, compresses the landfill gas, and removes enough moisture to ensure good combustion of gas for subsequent use; therefore, guaranteeing that the intent of the destruction of the NMOC will be maintained.	2012	NA
EUOPENFLARE-GE-S2	Open flare is an open combustor without enclosure or shroud. The design capacity of the flare is 1,350 standard cubic feet per minute	09-12 09-15	NA

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
	(scfm). Landfill gas that is not combusted in FGICEENGINES -S2 is destroyed by this flare.		

EUICEENGINE3-S2

EMISSION UNIT CONDITIONS

DESCRIPTION

One (1) 1,148 BHP internal combustion engine (CAT 3516) manufactured before 2006, for combusting treated landfill gas to produce electricity.

Flexible Group ID: FG-RICEMACT

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Formaldehyde	0.75 pph[2]	Hourly	EUICEENGINE3 -S2	SC V.1	R 336.1225(2)
2. SO_2	22 tpy[2]	12-month rolling time period as determined at the end of each calendar month	EUICEENGINE3 -S2	SC V.2, SC VI.5	R 336.1205(1)(a)&(3), R 336.1225

AQD Comment: Appears to be in COMPLIANCE. The engine was tested in October 2019 and met the Formaldehyde emission limit (Results were 0.56 pph) and the most recent 12-Month Rolling Emissions ending May of 2021 for SO2 was 17.10 tons.

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall only burn treated landfill gas in EUICEENGINE3-S2 except during times of start-up, shut-down or malfunction or during times of maintenance on the gas treatment system.[2] (R 336.1225, 40 CFR 60.752(b)(2)(iii)(c))

AQD Comment: Appears to be in COMPLIANCE. The engine only burns treated landfill gas.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EUICEENGINE3-S2 unless an air-to-fuel ratio controller is installed, maintained and operated in a satisfactory manner.[2] (R 336.1702(a), R 336.1910)

AQD Comment: Appears to be in COMPLIANCE. The engine is equipped with this and staff will assume that it was installed and is being maintained and operated properly.

2. The design capacity of EUICEENGINE3-S2 shall not exceed 1,148 bhp as specified by the equipment manufacturer.[2] (R 336.1205(1)(a), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))

AQD Comment: Appears to be in COMPLIANCE.

3. The permittee shall equip and maintain EUICEENGINE3-S2 with non-resettable hours meters to track the operating hours.[2] (40 CFR 60.4243)

AQD Comment: Appears to be in Compliance.

V. TESTING/SAMPLING

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

1. Within 5 years from the date of completion of the most recent stack test, the permittee shall verify formaldehyde emission rates from EUICEENGINE3-S2 by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.[2] (R 336.1225, R 336.2001, R 336.2003, R 336.2004)

AQD Comment: Appears to be in COMPLIANCE. The most recent test was in October 2019 so they have several years yet before they have to test again.

2. The permittee shall verify the hydrogen sulfide (H_2S) or total reduced sulfur (TRS) content of the treated landfill gas burned in EUICEENGINE3-S2 on a monthly basis by gas testing (e.g. Draeger Tubes, Tedlar Sampling Bags, etc) and semi-annually by gas sampling using an EPA approved method and laboratory analysis, at the owner's expense, in accordance with Department requirements. No less than 30 days prior to the initial test, the permittee shall submit a complete test plan to the AQD District Office. The AQD must approve the final plan prior to the first test. Thereafter, the permittee shall submit a test plan upon the request of the AQD District Supervisor. If, after a year, each of the monthly concentrations of the hydrogen sulfide or total reduced sulfur concentration of the landfill gas are below 1413 ppm (TRS equivalent), the permittee may petition the AQD District Supervisor to reduce the frequency of gas sampling and recording the hydrogen sulfide / total reduced sulfur concentration of the treated landfill gas to quarterly. If at any time the H_2S (TRS equivalent) concentration of the landfill gas sample exceeds 1,414 ppm, the permittee shall conduct sampling and recording on a weekly basis and shall review all operating and maintenance activities for the landfill gas collection and treatment system along with keeping records of corrective actions taken. Once the concentration determined from the weekly readings are maintained below 1,414 ppm of H_2S (TRS equivalent) concentration in the landfill gas for one month after an exceedance, the permittee may resume monthly monitoring and recordkeeping. The permittee shall keep all records on file at the facility and make them available to the

Department upon request.[2] (R 336.1205(3), 40 CFR 52.21 (c) & (d), R 336.2001, R 336.2003, R 336.2004)

AQD Comment: Appears to be in COMPLIANCE. They are doing these weekly currently because they have exceeded 1414 ppm. The most recent draegar tube readings have been between 1000 and 1300 ppm. They have also been doing the semi-annual lab analysis.

3. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are conducted. (R 336.1213(3))

AQD Comment: Appears to be in COMPLIANCE.

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 complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] (R 336.1205, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))

AQD Comment: Appears to be in COMPLIANCE.

2. The permittee shall keep, in a satisfactory manner, records of the landfill gas usage for the engines in EUICEENGINE3-S2 on a monthly and 12-month rolling time period basis as determined at the end of each calendar month, as required by SC VI.1. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.[2] (R 336.1205(3), R 336.1225, R 336.1702, R 336.1910, 40 CFR 52.21(c) & (d))

AQD Comment: Appears to be in COMPLIANCE. The facility is tracking monthly landfill gas usage and 12-Month Rolling Records ending May of 2021 indicate landfill gas usage was 122.75 MMscfm.

3. The permittee shall keep, in a satisfactory manner, records of the hours of operation from each engine in EUICEENGINE3-S2, on a monthly and 12-month rolling time period basis as determined at the end of each calendar month, as required by SC VI.1. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.[2] (R 336.1225, R 336.1702, R 336.1910, 40 CFR 52.21(c) & (d), 40 CFR 60.4243)

AQD Comment: Appears to be in COMPLIANCE. The facility is tracking monthly hours and the 12-Month Rolling Records ending May of 2021 indicate 8482.30 hours of operation.

4. The permittee shall keep, in a satisfactory manner, records of the H_2S (TRS equivalent) concentration sampling results of the treated landfill, on a monthly basis. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.[2] (R 336.1225, R 336.1702, R 336.1910, 40 CFR 52.21(c) & (d), 40 CFR 60.4243)

AQD Comment: Appears to be in COMPLIANCE.

5. The permittee shall calculate and record the monthly and 12-month SO_2 emission rate from EUICEENGIEN3 using the equation in Appendix 7, or other method as approved by the AQD District Supervisor. The calculations shall utilize the actual gas usage, actual hours of operation, and the sulfur concentration from the most recent gas sampling data

unless otherwise requested by the AQD. All records shall be kept on file at the facility and make them available to the Department upon request.[2] (R 336.1205(3)), R 336.2803, R 336.2804)

AQD Comment: Appears to be in COMPLIANCE.

See Appendix 7-S2

VII. REPORTING

AQD Comment: Appears to be in COMPLIANCE with #1 through #5 Below.

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))

4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

5. In accordance with R 336.1285(2)(a)(vi), engine replacements can only be done under a normal maintenance program. If EUICEENGINE3-S2 is replaced with an equivalent-emitting or lower-emitting engine, the permittee shall notify the AQD District Supervisor of such change-out and submit a description of the engine and acceptable emissions data to show that the alternate engine is equivalent-emitting or lower-emitting. The data shall be submitted within 30-days of the engine change out.[2] **(R 336.1205, R 336.1702(a), R 336.1911, 40 CFR 52.21 (c) & (d))**

See Appendix 8-S2

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVICEENGINE3	14.0[2]	65.0[2]	R 336.1225, 40 CFR 52.21(c) &(d)

AQD Comment: Appears to be in COMPLIANCE with the above dimensions.

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subparts A and ZZZZ, as they apply to EUICEENGINE3-S2.[2] (40 CFR Part 63 Subparts A & ZZZZ)

AQD Comment: Appears to be in COMPLIANCE.

Footnotes:

[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EUOPENFLARE-GE-S2

EMISSION UNIT CONDITIONS

DESCRIPTION

Open flare is an open combustor without enclosure or shroud. The design capacity of the flare is 1,350 standard cubic feet per minute (scfm). Landfill gas that is not combusted in FGICEENGINES-S2 is destroyed by this flare.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The design capacity of EUOPENFLARE-GE-S2 shall not exceed 1,350 scfm.[2] (R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))

AQD Comment: Appears to be in COMPLIANCE.

VII. REPORTING

AQD Comment: Appears to be in COMPLIANCE with #1 through #3 Below.

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))

See Appendix 8-S2

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVOPENFLARE-GE-S2	8[2]	28[2]	R 336.1225 R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d)

AQD Comment: Appears to be in COMPLIANCE with the above dimensions.

Footnotes:

[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EUTREATMENTSYS-S2

EMISSION UNIT CONDITIONS

DESCRIPTION

This emission unit treats landfill gas before its subsequent use or sale. The treatment system removes particulate to at least the 10 micron level, compresses the landfill gas, and removes enough moisture to ensure good combustion of gas for subsequent use; therefore, guaranteeing that the intent of the destruction of the NMOC will be maintained.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Any emissions from any atmospheric vents or stacks associated with the treatments system shall be subject to §60.752(b)(2)(iii)(A) or (B).

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate the treatment system at all times when the collected gas is routed to the treatment system. **(40 CFR 60.753(f))**

AQD Comment: Appears to be in COMPLIANCE. The facility operates the system whenever landfill gas is routed to it.

2. The permittee shall operate the treatment system so that any emissions from any atmospheric vents or stacks associated with the treatment system shall be subject to §60.752(b)(2)(iii)(A) or (B). **(40 CFR 60.752(b)(2)(iii)(C), 40 CFR 63.1955(a))**

AQD Comment: Appears to be in COMPLIANCE. There are no stacks or vents associated with the treatment system.

3. The permittee shall operate the treatment system to comply with the provisions of 60.753(e) and (f), and 60.756(d). **(40 CFR 60.752(b)(2)(iv), 40 CFR 63.1955(a))**

AQD Comment: Appears to be in COMPLIANCE. The system appears to comply with the requirements of Part 60 Subpart WWW.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The treatment system shall be designed as approved by AQD. **(40 CFR 60.752(b)(2)(iii)(C), 40 CFR 60.752(b)(2)(i)(D), 40 CFR 63.1955(a))**

AQD Comment: Appears to be in COMPLIANCE. The AQD uses the EPA guidance on the design of the system which it appears to meet.

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of 5 years. (R 336.1213(3)(b)(ii))

1. The permittee shall keep up-to-date, readily accessible records of all control or treatment system exceedances of the operational standards in §60.753(e) and (f). **(40 CFR 60.758(e), 40 CFR 63.1955(a))**

AQD Comment: Appears to be in COMPLIANCE. There have been no exceedences to date with the system to staff's knowledge.

2. The permittee shall keep records of all preventative maintenance performed in accordance with the preventative maintenance plan (PMP) prepared pursuant to condition **IX.3.** of this permit. **(40 CFR 60.756(d), R 336.1213(3))**

AQD Comment: Appears to be in COMPLIANCE. The facility has a PMP and documents all maintenance done on equipment.

3. The permittee shall provide information to the AQD as provided in 40 CFR 60.752(b)(2)(i)(B) describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The AQD shall review the information and either approve it, or request that additional information be submitted. The AQD may specify additional appropriate monitoring procedures. **(40 CFR 60.756(d))**

AQD Comment: Appears to be in COMPLIANCE. The facility operates the treatment system following EPA guidance for a treatment system.

VII. REPORTING

AQD Comment: Items #1 through #6 below appear to be in COMPLIANCE. The facility is and/or has submitted the below reports.

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. Report shall be postmarked or received by 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. Report shall be postmarked or received by appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. A description of the operation of the treatment system, the operating parameters that indicate proper performance, and the appropriate monitoring procedures shall be submitted the appropriate AQD District Office for review within 30 days after the issuance of this permit. **(40 CFR 60.752(b)(2)(i)(B), 40 CFR 63.1955(a))**
5. The permittee shall submit to the appropriate AQD District Office semiannual reports for the landfill gas treatment system. The report shall be received by 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. **(40 CFR 60.757(f), 40 CFR 63.1980(a), 40 CFR 63.1955(a))**

The report shall include:

   a. Value and length of time for exceedance of applicable parameters monitored under §60.756(d). **(R 336.1213(3), 40 CFR 60.757(f)(1), 40 CFR 63.1980(a), 40 CFR 63.1955(a))**
   b. Description and duration of all periods when the gas stream is diverted from the treatment system through a bypass line or the indication of bypass flow. **(R 336.1213 (3))**
   c. Description and duration of all periods when the treatment system was not operating for a period exceeding 1 hour and length of time the control device was not operating. **(40 CFR 60.757(f)(3), 40 CFR 63.1980(a), 40 CFR 63.1955(a))**
   d. Description and duration of all periods when the treatment system was not operated in accordance with the operating parameters and monitoring procedures that were part of the plan in condition number VII.4. **(R 336.1213(3))**

6. The permittee shall submit the startup, shutdown, and malfunction (SSM) report to the appropriate AQD District Office and it shall be delivered or postmarked by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(40 CFR 63.10(a)(5), 40 CFR 63.10(d)(5))**

See Appendix 8-S2

IX. OTHER REQUIREMENT(S)

1. The provisions of 40 CFR, Part 60, Subpart WWW apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 1 hour for the treatment system. **(40 CFR 60.755(e), 40 CFR 63.1955(a))**

AQD Comment: Appears to be in COMPLIANCE.

2. The permittee shall have developed and implemented a written SSM plan according to the provision in 40 CFR 63.6(e)(3) for EUTREATMENTSYS-S2. A copy of the SSM plan shall be maintained on site. **(40 CFR 63.1960, (40 CFR 63.1965(c))**

AQD Comment: Appears to be in COMPLIANCE. The facility has an SSM Plan on site that was developed according to the NESHAP.

3. The permittee shall have implemented a written preventative maintenance plan (PMP) for EUTREATMENTSYS. At a minimum, the plan shall include a schedule of maintenance activities consistent with manufacturer's recommendations, and the operating variables that will be monitored to detect a malfunction or failure. A copy of the PMP shall be maintained on site and available upon request. **(40 CFR 60.756(d), R 336.1213(3), R 336.1911)**

AQD Comment: Appears to be in COMPLIANCE. The facility has a PMP for all its equipment and Scott said that they use a database system called Pronto to schedule and track all equipment maintenance.

Footnotes:

[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGICEENGINES-S2	Two internal combustion engines (Caterpillar G3520C) for combusting treated landfill gas to produce electricity.	EUICEENGINE1-S2 EUICEENGINE2-S2
FG-RICEMACT-S2	New and reconstructed non-emergency engines greater than 500 hp firing landfill/digester gas, located at a major source of HAP. Commenced construction or reconstruction on or after December 19, 2002. Compliance date is upon start-up.	EUICEENGINE1-S2 EUICEENGINE2-S2 EUICEENGINE3-S2

FGICENGINES-S2

FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Two internal combustion engines (Caterpillar G3520C) for combusting treated landfill gas to produce electricity.

Emission Units: EUICEENGINE1-S2, EUICEENGINE2-S2

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. CO	3.5 g/hp-hr per engine[2]	Test Protocol*	EUICEENGINE1-S2, EUICEENGINE2-S2	SC V.1	40 CFR 60.4233(e)
2. CO	17.3 pph per engine[2]	Test Protocol*	EUICEENGINE1-S2, EUICEENGINE2-S2	SC V.1 SC VI.1 SC VI.2	R 336.2804, 40 CFR 52.21 (d)
3. NOx	1.0 g/hp-hr per engine[2]	Test Protocol*	EUICEENGINE1-S2, EUICEENGINE2-S2	SC V.1	40 CFR 60.4233(e)
4. NOx	4.94 pph per engine[2]	Test Protocol*	EUICEENGINE1-S2, EUICEENGINE2-S2	SC V.1 SC VI.1 SC VI.2	R 336.2803 R 336.2804, 40 CFR 52.21 (c) and (d)
5. VOC	1.0 g/hp-hr per engine[2]	Test Protocol*	EUICEENGINE1-S2, EUICEENGINE2-S2	SC V.1	40 CFR 60.4233(e)
6. Formaldehyde	2.08 pph per engine[2]	Test Protocol*	EUICEENGINE1-S2, EUICEENGINE2-S2	SC V.2	R 336.1225(2)
*Test Protocol shall determine the averaging time.					

AQD Comment: Appears to be in COMPLIANCE. All testing to date has demonstrated compliance with the above limits.

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Landfill Gas	568.699 MMscf per year[2]	12-month rolling time period as determined at the end of each calendar month	FGICEENGINES-S2	SC VI.1	R 336.1205(3)

AQD Comment: Appears to be in COMPLIANCE. 12-Month Rolling Records Ending May of 2021 indicate LFG consumption for the two engines at 536.60 MMscf.

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall only burn treated landfill gas in FGICEENGINES-S2 except during times of start-up, shut-down or malfunction or during times of maintenance on the gas treatment system.[2] (40 CFR 60.752(b)(2)(iii)(c))

AQD Comment: Appears to be in COMPLIANCE. The plant only combusts treated landfill gas.

2. No later than 60 days after issuance of this permit, the permittee shall submit to the AQD District Supervisor, for review and approval, a malfunction abatement/preventative maintenance plan for FGICEENGINES-S2. After approval of the malfunction abatement/preventative maintenance plan by the AQD District Supervisor, the permittee shall not operate FGICEENGINES-S2 unless the malfunction abatement/preventative maintenance plan, or an alternate plan approved by the AQD District Supervisor, is implemented and maintained. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices. At a minimum the plan shall include:

a. Identification of the equipment and, if applicable, air-cleaning device, and the supervisory personnel responsible for overseeing the inspection, maintenance, and repair.
b. Description of the items or conditions to be inspected and frequency of the inspections or repairs.
c. Identification of the equipment and, if applicable, air-cleaning device, operating parameters that shall be monitored to detect a malfunction or failure, the normal operating range of these parameters and a description of the method of monitoring or surveillance procedures.
d. Identification of the major replacement parts that shall be maintained in inventory for quick replacement.
e. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If the plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction at the time the plan is initially developed, the owner or operator shall revise the plan within 45 days after such an event occurs and submit the revised plan for approval to the AQD District Supervisor. Should the AQD determine the malfunction abatement/preventative maintenance plan to be inadequate, the AQD District Supervisor may request modification of the plan to address those inadequacies.[2] (R 336.1702(a), R 336.1910, R 336.1911, R 336.1912, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d), 40 CFR 60.4243(b)(2))

AQD Comment: Appears to be in COMPLIANCE with the Above. The facility submitted a MAP and it appears no updates to it have been required.

3. Based on each engine's kilowatt output, the permittee shall adjust the engine's air/fuel ratio, as needed, to ensure that each engine in FGICEENGINES-S2 operates at its maximum design output based on the fuel available to burn.[2] (R 336.1702(a), R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))

AQD Comment: Appears to be in COMPLIANCE. The facility adjusts the air/fuel ratio depending on landfill gas quality to ensure maximum kW output.

4. The permittee shall operate and maintain each engine in FGICEENGINES-S2 such that it meets the emission limits in SC I.1, I.3, and I.5 over the entire life of the engine.[2] (40 CFR 60.4234, 40 CFR 60.4243(b))

AQD Comment: Appears to be in COMPLIANCE. The facility has standards in place when it comes to engine maintenance schedules.

5. If the permittee purchased a non-certified engine or operates a certified engine in a non-certified manner, the permittee shall keep a maintenance plan for FGICEENGINES-S2 and shall, to the extent practicable, maintain and operate each engine in a manner consistent with good air pollution control practice for minimizing emissions.[2] (40 CFR 60.4243(b))

AQD Comment: Appears to be in COMPLIANCE. The facility appears to do the above.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate any engine in FGICEENGINES-S2 unless the engines air/fuel ratio controller is installed, maintained and operated in a satisfactory manner.[2] (R 336.1702, R 336.1910)

AQD Comment: Appears to be in COMPLIANCE. The engines are equipped with this and staff assumes they are being operated and maintained properly.

2. The permittee shall equip and maintain each engine in FGICEENGINES-S2 with non-resettable hours meters to track the operating hours.[2] (R 336.1225, 40 CFR 60.4243)

AQD Comment: Appears to be in COMPLIANCE. Staff noted during the inspection that Engine #1 had been operated 91,731 hours and Engine #2 21,682 hours.

V. TESTING/SAMPLING

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

1. The permittee shall conduct an initial performance test for each engine in FGICEENGINES-S2, to verify NOx, CO, and VOC emission rates. The permittee shall conduct an initial performance test within 60 days after achieving the maximum production rate but not later than 180 days after initial startup of each engine in FGENGINES-S2 and subsequent performance testing every 8760 hours of operation or three years, whichever occurs first, to demonstrate compliance. The performance tests shall be conducted according to 40 CFR 60.4244. No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD Technical Programs Unit and District Office. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.[2] (40 CFR 60.8, 40 CFR 60.4243, 40 CFR 60.4244, 40 CFR Part 60 Subpart JJJJ)

AQD Comment: Appears to be in COMPLIANCE. The facility did the initial test and has been conducting the NSPS JJJJ testing at the required intervals.

2. Once during the term of the ROP (testing was completed 07/16/2013), the permittee shall verify formaldehyde emission rates from one or more engine(s) in FGICEENGINES-S2 by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.[2] (R 336.1225, R 336.2001, R 336.2003, R 336.2004)

AQD Comment: Appears to be in COMPLIANCE. The facility tested again in February of 2021 and they met the Formaldehyde limits.

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 continuously monitor and record, in a satisfactory manner, the landfill gas usage for the engines in FGICEENGINES-S2.[2] (R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

AQD Comment: Appears to be in COMPLIANCE. The facility continuously monitors and records the landfill gas usage in both engines.

2. The permittee shall continuously monitor, in a satisfactory manner, the kilowatt output from each engine in FGICEENGINES-S2.[2] (R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

AQD Comment: Appears to be in COMPLIANCE. The facility continuously monitors and records kW output for both engines.

3. The permittee shall continuously monitor, in a satisfactory manner, the hours of operation from each engine in FGICEENGINES.[2] (40 CFR 60.4243)

AQD Comment: Appears to be in COMPLIANCE. The facility continuously monitors the hours of operation for both engines.

4. The permittee shall keep, in a satisfactory manner, records of all maintenance activities conducted according to the malfunction abatement/preventative maintenance plan (pursuant to SC III.2). The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.[2] (R 336.1702(a), R 336.1911, R 336.1912, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

AQD Comment: Appears to be in COMPLIANCE. The facility has records of maintenance.

5. The permittee shall keep, in a satisfactory manner, records of the landfill gas usage for the engines in FGICEENGINES-S2 on a monthly and 12-month rolling time period basis as determined at the end of each calendar month, as required by SC VI.1. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.[2] (R 336.1225, R 336.1702, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

AQD Comment: Appears to be in COMPLIANCE. The facility is doing the above.

6. The permittee shall record the kilowatt output from each engine in FGICEENGINES-S2, a minimum of once per day, excluding holidays and weekends when an engine operator is not scheduled, or called in, to be on site, as required by SC VI.2. A list of excluded holidays shall be maintained on site and made available to the Air Quality Division upon request. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.[2] (R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

AQD Comment: Appears to be in COMPLIANCE. The facility continuously records kW output and also records it once per day on a spreadsheet when an operator is scheduled to be there.

7. The permittee shall keep, in a satisfactory manner, records of the hours of operation from each engine in FGICEENGINES-S2, on a monthly and 12-month rolling time period basis as determined at the end of each calendar month, as required by SC VI.3. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.[2] (R 336.1225, R 336.1702, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d), 40 CFR 60.4243)

AQD Comment: Appears to be in COMPLIANCE. The facility is doing the above.

8. The permittee shall keep records of the following information for each engine included in FGICEENGINES-S2:

a. All notifications submitted to comply with 40 CFR Part 60 Subpart JJJJ and all documentation supporting any notification.

b. Maintenance conducted on any engine in FGICEENGINES-S2.

c. If any engine in FGICEENGINES-S2 is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR Parts 90, 1048, 1054, and 1060, as applicable.

d. If any engine in FGICEENGINES-S2 is not a certified engine or is a certified engine operating in a non-certified manner and subject to 40 CFR 60.4243(a)(2), documentation that any engine in FGICEENGINES-S2 meets the emission standards.[2] (40 CFR 60.4245(a))

AQD Comment: Appears to be in COMPLIANCE with items a) through b) above. The engines are non-certified and NSPS JJJJ testing has been demonstrating compliance.

VII. REPORTING

AQD Comment: Appears to be in COMPLIANCE with #1 through #3 Below.

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))

See Appendix 8-S2

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVICEENGINE1-S2	14.0[2]	65.0[2]	R 336.1225 R 336.2803 R 336.2804, 40 CFR 52.21 (c) and (d)
2. SVICEENGINE2-S2	14.0[2]	65.0[2]	R 336.1225 R 336.2803 R 336.2804, 40 CFR 52.21 (c) and (d)

AQD Comment: Appears to be in COMPLIANCE. The stacks appear to meet the above size and height requirements.

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subpart A and Subpart JJJJ, as they apply to each engine in FGICEENGINES-S2.[2] (40 CFR Part 60, Subpart A and JJJJ)

2. The permittee shall comply with the provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR, Part 63, Subpart A and Subpart ZZZZ, as they apply to each engine in FGICEENGINES-S2.[2] (40 CFR Part 63, Subparts A and ZZZZ)

AQD Comment: Appears to be in COMPLIANCE. The facility to date appears to be complying with federal regulations mentioned in #1 and #2 above.

Footnotes:

[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FG-RICEMACT-S2

FLEXIBLE GROUP CONDITIONS

DESCRIPTION

New and reconstructed non-emergency engines greater than 500 hp firing landfill/digester gas, located at a major source of HAP. Commenced construction or reconstruction on or after December 19, 2002. Compliance date is upon start-up.

Emission Units: EUICEENGINE-S1, EUICEENGINE2-S2, EUICEENGINE3-S2

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Each engine in FG-RICEMACT-S2 shall operate in a manner which reasonably minimizes HAP emissions.[2] (40 CFR 63.6625(c))

AQD Comment: Appears to be in COMPLIANCE. Staff has to assume that they operate the engines appropriately to minimize HAP emissions.

2. Each engine in FG-RICEMACT-S2 shall operate in a manner which minimizes time spent at idle during startup and minimize the startup time to a period needed for appropriate and safe loading of each engine, not to exceed 30 minutes.[2] (40 CFR 63.6625 (h))

AQD Comment: Appears to be in COMPLIANCE. Staff has to assume that they are doing this.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The engines in FG-RICEMACT-S2 shall equip and maintain separate fuel meters to monitor and record the daily fuel usage and volumetric flow rate of each fuel used.[2] (40 CFR 63.6625(c))

AQD Comment: Appears to be in COMPLIANCE.

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

1. Each engine in FG-RICEMACT-S2, which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, must monitor and record the daily fuel usage with separate fuel meters to measure the volumetric flow rate of each fuel.[2] (40 CFR 63.6625(c))

AQD Comment: Appears to be in COMPLIANCE. The monitor and record fuel usage and the only fuel combusted is landfill gas.

VII. REPORTING

AQD Comment: Appears to be in COMPLIANCE with #1 through #4 Below. The facility has been submitting the required reports.

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))

4. The permittee shall submit an annual report in accordance with Table 7 of 40 CFR Part 63, Subpart ZZZZ to the appropriate AQD district office by March 15th for the reporting period from January 1 to December 31. The following information shall be included in this annual report:[2] (40 CFR 63.6650(g), 40 CFR 63.6650(b)(5))

a. The fuel flow rate and the heating values that were used in the permittee's calculations to determine the gross heat input on an annual basis. Also, the permittee must demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.[2] (40 CFR 63.6650(g)(1))
b. The operating limits provided in the permittee's federally enforceable permit, and any deviations from these limits. (40 CFR 63.6650(g)(2))
c. Any problems or errors suspected from the fuel flow rate meters.[2] (40 CFR 63.6650(g)(3))

See Appendix 8-S2

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR, Part 63, Subpart A and Subpart ZZZZ, as they apply to each engine in
FG-RICEMACT-S2.[2] (40 CFR Part 63, Subparts A and ZZZZ)

AQD Comment: Appears to be in COMPLIANCE.

Footnotes:

[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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. The newer engine (#3) has a Serial Number of RC00655. Staff noted that Engine #1 was putting out 1.390 MW, Engine #2 1.443, and Engine #3 0.525. In total, the 3 engines were putting out approximately 3.4 MW and consuming approximately 1250 scfm of landfill gas. The flare wasn't operational so there was no flow or combustion temperature to possibly look at. Staff noted the landfill gas quality was 48.9% methane (CH4) and 0.53% 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 NSPS for landfills 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 to verify still met the dimension requirements. Staff the proceeded with Scott back into the plant office where they mentioned everything looked good and that staff would get with Dan for some of the records. Staff thanked Scott for his time and departed the facility at approximately 1:35 p.m.

EDL Inspection Conclusion: **The facility appears to be in COMPLIANCE with Section 2 of ROP MI-ROP-N5719-2016a at the present time.**

NAME Matt Dahn DATE 6-30-21 SUPERVISOR RIL 7/8/21