DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

N571930818

FACILITY: ORCHARD HILL SANITARY LANDFILL		SRN / ID: N5719
LOCATION: 3290 HENNESEY RD, WATERVLIET		DISTRICT: Kalamazoo
CITY: WATERVLIET		COUNTY: BERRIEN
CONTACT: Chip Shaw ,		ACTIVITY DATE: 08/14/2015
STAFF: Matthew Deskins	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Unannounced Scheduled Inspection. Chip Shaw was the contact for Section 1 (OHSL) and Tim (TJ) Robertson and Dan Zimmerman were my contacts for Section 2 (Granger Electric).		
RESOLVED COMPLAINTS:		

Orchard Hill Sanitary Landfill (Section 1)

On August 14, 2015 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 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 Granger Electric for the construction of a landfill gas to energy facility. Granger 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 from them are above major source individual HAP thresholds and thus made the landfill subject to the NESHAP. The Granger Electric Plant engines 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-N5719-2011a. The purpose of the inspection was to determine OHSL's and Granger Electric's compliance status with their pertinent sections of the ROP and any other state and/or federal air regulations. Staff departed for the facility at approximately 9:45 a.m.

Staff arrived in the vicinity of OHSL at approximately 10:50 a.m. Staff took some time to monitor for potential odors and made a couple of circuits around the perimeter roads surrounding the landfill. Winds were out of the SW and staff did not detect any odors. Staff then proceeded to the offices of OHSL and once there they asked Cindy Foerster (office employee) if Chip Shaw was available. She said Chip was out on site and that she would contact him to let him know staff was there. Chip showed up a few minutes later. Chip greeted staff and asked the purpose of the visit. Staff then informed him that OHSL was on their list for inspection this year and we then proceeded into Chip's office. Prior to any discussions, staff asked Chip if he would like a copy of the DEQ's Brochure on Environmental Inspections. Chip said no because he already has copies of it. The following is a summary of staff's discussion with Chip which will be followed by their ROP's emission units and OHSL's compliance status with them.

According to Chip, there was some restructuring at the landfill and he is now the Site Manager and Chris Phillips is the Compliance Manager. He said that Ralph Balkema (former Site Manager?) is still at the facility and works closely with Chip, but he mainly just deals with the leachate treatment system ((2) Reverse Osmosis Systems (R.O.)) and other water related issues. Staff then asked about some of the recent odor complaints that were received by the DEQ's OWMRP Division. He said that the Granger Electric plant has had a couple issues lately, one being a blown head on an engine and another one being that their compressor went down. Chip said he's trying to be aggressive in dealing with potential odors and the gas collection system. He said that is why Granger recently submitted an NSR Permit Application to increase the amount of landfill gas that can be combusted by the flare at the plant. He also said that they are hoping to have a permanent gas well pumping system installed shortly instead of pumping any flooded in wells manually (Chip later showed staff the compressor shed). Chip then mentioned that the ROP Renewal Application was in the works and that he was hoping that Granger would look into possibly adding a 3rd engine to their plant. He said if they will, he would like to add that into the ROP application. Staff mentioned that we can't permit equipment through the ROP Renewal Application process and that a new engine would have to go through NSR. Staff mentioned that depending on

the timing of any permit applications, both the NSR and ROP can be done concurrently. If the NSR can be issued fairly quickly, staff could include it into the ROP renewal without them having to modify the ROP later for it.

Staff then asked about the amount of waste that they are taking in and Chip said that they are averaging about a 1,000 tons per day. Staff then asked since they now have 2 R.O.s if they have to haul any leachate off site. He said that they still haul a couple of loads off site here and there but the majority of it is treated through the R.O.s. Staff then asked if they recirculate any leachate and Chip said that they don't do it anymore although the residual/concentrate from the R.O. systems is taken back up to the landfill. Staff then began to look over the requirements of their ROP and the following is a summary of the facilities emission groups, flexible groups, the inspection staff conducted, and the facilities compliance status.

EULANDFILL: Appears to be in COMPLIANCE

The facility has an approved active gas collection system and it 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 Granger Electric 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 a couple of quarters of 2015. 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. 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 Granger Electric 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. They also submit 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. Staff mentioned to Chip that they may want to document this and any of their findings and corrections made if needed. They have records of the amount of solid waste in place as well as the year by year acceptance rates.

EUACTIVECOLL: 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 212 landfill gas monitoring points for NSPS purposes. Some wells have Landtec wellheads but the majority were fabricated by OHSL. OHSL (Josh) does their own monthly or more frequent wellhead sampling using an Elkins gas analyzer (they use to use a GEM 2000). Chip said that Josh is strictly monitoring the gas collection system now where he used to do both that and water. 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 a couple of months of wellfield data and did not note any issues. Some gas wells have been in quite long time 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: 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 Granger Electric 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 Granger Electric 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 Granger Energy Plant is running, the flare wasn't in operation.

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. Chip said that they don't take in much asbestos.

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 was being used quite a bit that day by the maintenance employees working on equipment. Staff noted that operational instructions were posted on it. Staff had looked at the MSDS sheet during previous inspections and the solvent used does not contain and 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-N5719-2011a at the present time. Staff thanked Chip for his time and departed the facility at approximately 12:50 p.m.

Granger Electric (Section 2)

After departing OHSL, staff went down and across the street to the Granger Electric Plant and arrived at approximately 12:55 p.m. The building was locked and no one was around so staff decided to go to lunch and come back afterward. Staff stopped by again at around 1:45 p.m. but still no one was there. Chip had mentioned during the OHSL inspection that the Granger plant operator sometimes has to cover the Byron Center Plant as well. Staff departed and will follow up with Granger to conduct the inspection.

Staff later e-mailed Dan Zimmerman (Director of Operations for Granger) and mentioned that staff needed to do an on-site inspection and when would someone be available there. He put staff in contact with Tim (TJ) Robertson who is the plant operator. Staff made plans to do the on-site inspection on August 21, 2015.

On August 21, 2015 staff departed the district office at approximately 9:35 a.m. and arrived at the Granger facility at approximately 10:45 a.m. Staff observed TJ outside the building talking on the phone. Once done with his phone call, staff introduced them self to TJ. TJ mentioned that he was on the phone with other Granger staff because Engine #1 just went down before staff arrived. He said he thinks it is one of the sensors. Staff then proceeded into the plant with TJ and went to his office. Once there, staff gave him a business card and the DEQ's Environmental Inspections Brochure. Staff mentioned stopping by the previous week but no one was around. TJ said his normal work schedule at the plant is 6:00 a.m. until 2:00 p.m. but he is also on-call for the Byron Center plant as well. Staff then proceeded to ask TJ about plant operations and went on a tour of it.

According to TJ, Granger still has the (2) Caterpillar 3520 internal combustion engines and that a compressor system supplies the vacuum to OHLF's wellfield to provide the landfill gas. He says that they would like to add a 3rd engine within the next 12 to 18 months. Staff noted that the vacuum was currently at -21.5 inches but that was because only Engine #2 and the flare were operational. TJ said that normally it is at -34 inches when both engines and the flare are running. Staff then noted that the flow to Engine #2 was approximately 590 scfm and flow to the flare was 580 scfm. TJ said the 590 scfm is pretty standard to each engine even when both are running. With just Engine #2 running, the plant was putting out approximately 1400 kW. Staff also noted that the flare temperature was 1008 degrees F and the landfill gas quality was 48.7% methane (CH4) and 0.70% Oxygen (O2). During the tour staff observed both 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 then proceeded back to TJ's office to look at records and then followed up with Dan Zimmerman later on a few items. The following are the Special Conditions contained in Section 2 of the ROP and will be followed by their compliance status with them.

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.	EUICEENGINE1-S2, EUICEENGINE2-S2

FGICENGINES-S2
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

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

Emission Units: EUICEENGINE1-S2, EUICEENGINE2-S2

POLLUTION CONTROL EQUIPMENT

NA

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) & (d)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
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. Records reviewed showed that the facility hasn't gone over the above 12-month rolling limit (See Attached).

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) & (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) & (d))**

AQD Comment: Appears to be in Compliance. The engines automatically adjust this air/fuel ratio depending on landfill gas quality to ensure maximum kW output. Staff noted during the tour this ratio was 8.

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 20,835 hours and Engine #2 20,897 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 testing has been completed as noted in the condition itself.

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 (See Attached).

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 (See Attached).

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

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

AQD Comment: Appears to be in Compliance with items 1 through 3 above. The facility is doing the reporting as required.

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) & (d)
2. SVICEENGINE2-S2	14.0[2]	65.0[2]	R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (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 engines located at a Major Source >500 hp, non-emergency firing landfill/digester gas. Commenced construction or reconstruction on or after December 19, 2002. Compliance date is upon start-up.

Emission Unit: FGICEENGINES-S2

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

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.

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.

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. The engines have separate fuel meters and they only combust landfill gas.

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

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.[2] **(40 CFR 63.6650(g), 40 CFR 63.6650(b)(5))** The following information shall be included in this annual report:
   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

AQD Comment: Appears to be in Compliance with #1 through #4 above. They are submitting the required semi-annual/annual ROP Reports and SSM Reports. The requirements of #4 are met by submittal of the annual MAERs Report and the ROP Certification/Deviation Reports.

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
NA	NA	NA	NA

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).

Granger Inspection Conclusion: The facility appears to be in COMPLIANCE with Section 2 of ROP No. MI-ROP-N5719-2011a at the present time. Staff thanked TJ for his time and departed the facility at approximately 12:10 p.m.

NAME Matt Dahl DATE 8-26-15 SUPERVISOR MD 8/28/2015