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DEPARTMENT OF ENVIRONMENTAL QUALITY
 AIR QUALITY DIVISION

FCE Summary Report

Facility : Westside Recycling and Disposal Facility	SRN : N1216
Location : 14094 W. M-60 P.O. Box 392	District : Kalamazoo
	County : SAINT JOSEPH
City : THREE RIVERS State: MI Zip Code : 49093	Compliance Status : Compliance
Source Class : MAJOR	Staff : Matthew Deskins
FCE Begin Date : 8/14/2018	FCE Completion Date : 8/14/2019
Comments :	

List of Partial Compliance Evaluations :

Activity Date	Activity Type	Compliance Status	Comments
08/14/2019	Scheduled Inspection	Compliance	Unannounced Scheduled Inspection
05/17/2019	MAERS	Compliance	
03/28/2019	ROP SEMI 2 CERT	Compliance	The facility certified that no deviations occurred during the reporting period. However, they did include a deviation report noting that they flare temperature wasn't recorded on one occasion due to a power outage. However; the flare wasn't operational at this time so it wouldn't be deviation.
03/28/2019	NSPS (Part 60)	Compliance	Please see the semi-annual/annual ROP certifications for comments as well as that file for a copy of the report.
03/28/2019	MACT (Part 63)	Compliance	This is the landfills semi-annual Start-Up, Shutdown, and Malfunction (SSM) Report. They stated that 52 start-ups, 52 shutdowns, and 0 malfunctions occurred during the reporting period. They further stated that corrective action taken to address them were consistent with the procedures outlined in their SSM Plan. They only have to report the events if their SSM wasn't followed in addressing them and/or an exceedance of an applicable emission limit had occurred.

Activity Date	Activity Type	Compliance Status	Comments
03/28/2019	NSPS (Part 60)	Compliance	EUKRYSOLPROCESS Report - This is basically the Semi-Annual NSPS/Landfill Gas Treatment Report and is included as part of their semi-annual and/or annual ROP certification and relates to operation of their treatment system. This report has a few things that need to be reported if necessary but it typically just lists the downtimes of the control system greater than one hour. None of the things reported indicate that any violations occurred. Please see the ROP Certification Folder for a copy of the report.
03/28/2019	MACT (Part 63)	Compliance	This is the semi-annual SSM Report for DTE. The facility certified that they had 0 malfunctions occur during the reporting period. They also state that the actions taken to address any start-ups and shutdowns were consistent with the procedures contained in their SSM Plan. They only have to report the events if their SSM wasn't followed in addressing them and/or an exceedance of an applicable emission limit had occurred.
03/28/2019	ROP SEMI 2 CERT	Compliance	The facility certified that no deviations occurred during the reporting period.
03/28/2019	ROP Annual Cert	Compliance	The facility certified that no deviations occurred during the reporting period.
03/28/2019	ROP Annual Cert	Compliance	The facility certified that no deviations occurred during the reporting period.
09/21/2018	ROP Semi 1 Cert	Compliance	The facility certified that no deviations occurred during the reporting period.

Activity Date	Activity Type	Compliance Status	Comments
09/21/2018	MACT (Part 63)	Compliance	This is the gas plants semi-annual Start-Up, Shutdown, and Malfunction (SSM) Report. They reported that 0 malfunctions occurred during the reporting period. They further stated that corrective action taken to address any start-ups or shutdowns that occurred were consistent with the procedures outlined in their SSM Plan. No SSMs have to be reported unless an exceedance occurred or may have occurred of any applicable emission limit.
09/21/2018	ROP Semi 1 Cert	Compliance	The facility certified that no deviations occurred during the reporting period.
09/21/2018	NSPS (Part 60)	Compliance	Semi-Annual NSPS Report. See comments made under ROP Semi-Annual and/or Annual Certification. Also, See the ROP Certification Folder for a copy of the report if needed.
09/21/2018	MACT (Part 63)	Compliance	This is the landfills semi-annual Start-Up, Shutdown, and Malfunction (SSM) Report. They reported that 25 start-ups, 24 shutdowns, and 1 malfunction occurred during the reporting period but none caused any exceedance of any applicable emission limit. They further stated that corrective action taken to address them were consistent with the procedures outlined in their SSM Plan.
09/21/2018	NSPS (Part 60)	Compliance	Although not specifically stated, the NSPS report is included as part of their semi-annual and annual ROP certification and relates to operation of their treatment system. This report has a few things that need to be reported if necessary but it typically just lists the downtimes of the control system greater than one hour. None of the things reported indicate any violations occurred.

Name: Matt DL

Date: 8-19-19

Supervisor: RIL 8/21/19

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

N121649944

FACILITY: Westside Recycling and Disposal Facility		SRN / ID: N1216
LOCATION: 14094 W. M-60, THREE RIVERS		DISTRICT: Kalamazoo
CITY: THREE RIVERS		COUNTY: SAINT JOSEPH
CONTACT: Jim Mohnney, Site Manager - Section 1 of ROP		ACTIVITY DATE: 08/14/2019
STAFF: Matthew Deskins	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Unannounced Scheduled Inspection		
RESOLVED COMPLAINTS:		

On August 14, 2019 AQD staff (Matt Deskins and Chance Collins) went to conduct a scheduled unannounced inspection of the Westside Recycling and Disposal Facility (WRDF) located in Three Rivers. WRDF is owned by Waste Management, Inc. and is a licensed Type II Municipal Solid Waste (MSW) landfill which is subject to the federal New Source Performance Standard (NSPS), 40 CFR 60 Subpart WWW, and the National Emission Standard for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63 Subpart AAAA for MSW landfills. Since they also accept Asbestos containing waste, they are also subject to the NESHAP 40 CFR Part 61 Subpart M for Asbestos. As had been mentioned in the previous inspection report, upon the most recent renewal of their Renewable Operating Permit (ROP), the EPA commented that Westside Gas Producers (WGP) should be included as Section 2 of the ROP and the AQD agreed. WGP is owned by DTE and their facility located adjacent to WRDF takes the landfill gas generated by WRDF and processes it into pipeline quality natural gas. When WRDF and DTE were notified about this decision, they were both in agreement as well so WGP was rolled into the ROP and the permit was issued on March 24, 2017. The purpose of the inspection was to determine both facilities compliance with the conditions contained in their ROP No. MI-ROP-N1216-2017 and any other state and/or federal air regulations. Staff departed for the facility at approximately 9:00 a.m.

Section 1 - WRDF

Staff arrived at WRDF at approximately 9:50 a.m. Prior to entering the landfill, staff drove the perimeter roads to see if any odors could be detected and none were noted. Staff then proceeded back to the office and went inside. Staff introduced them self to office personnel (Theda), stated the purpose of the visit, and asked if Jim Mohnney or Eric Shafer was available. Jim is the Operations Manager and Eric the District Manager/Engineer. Theda told staff that they both were present and Jim came to greet staff just a few seconds later. Staff greeted Jim, introduced Chance, and stated that we were there for an inspection. Jim then led us into the office area and then down to a conference room.

Prior to looking at any records required to be kept by the ROP, staff asked Jim some general questions about facility operations and about the landfill gas processing plant next door owned by DTE. According to Jim, Waste Management still owns 13 active landfills in the lower peninsula of Michigan and they still don't have any international operations outside of Canada. He mentioned that Waste Management recently bought/out merged with another waste company called Advanced Waste. He said that currently they are still operating as separate entities and that it will take a while for things to shake out. Eric came in later during the conversation and also mentioned the merger and that they may have to divest some assets to prevent a monopoly situation. WRDF currently takes in about 1,500 to 2,000 tons of waste per day and they are currently open from 7:00 a.m. until 4:30 p.m. Monday thru Friday and from 7:30 a.m. until noon on Saturday. Jim said that the amount of waste received has gone up along with the economy being good. He said that on real busy days they have received upwards of 3,000 tons of waste. Jim said that they don't have a parts cleaner (cold cleaner) anymore but there is an aqueous (soap and water) based one in the maintenance garage now. He had mentioned previously that they got rid of the solvent based one since personnel wouldn't keep the lid closed and they weren't using it much anyway.

Staff then asked if they had added any additional wells this year. Jim said that they added three horizontal wells with three vertical wells tied into each one. Jim also mentioned that 100 of the gas wells were now equipped with a pilot system being tested called LOCI. It is a joint venture between Waste Management and DTE. The LOCI system is computerized and monitors the various gases coming out of the well and these wells can be automatically adjusted remotely to ensure the best quality of gas is going to the gas plant. Staff then asked about leachate recirculation and if they still weren't doing any. Jim said that they still aren't recirculating any leachate because of wastewater sludge they take in. Jim had mentioned during a previous inspection that the sludge creates issues with wells flooding out and leachate outbreaks. Staff asked how much sludge they currently receive. Jim mentioned that they get about 20 loads from the Kalamazoo WWTP and get smaller loads brought in from local municipalities such as Three Rivers and Marcellus. He said that those loads aren't nearly as frequent compared to Kalamazoo. Staff then asked about the DTE plant next door and how it has been running. Jim said that it had been running good but recently DTE has been up and down due to compressor engine issues. After the general discussion, staff began to review records. The following are the emissions units contained in the ROP and staff's comments regarding them.

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. As mentioned earlier, WRDF sells the landfill gas to WGP which is owned by DTE. WGP basically scrubs the landfill gas to make it meet the specifications for pipeline quality natural gas (A more detailed description of that process will follow in the Section 2 part of this inspection write up). WRDF has a back-up control device (open flare) that is used when the WGP plant is shutdown. Also, WRDF had installed a smaller open flare under the AQD Rule 285(aa) permit exemption which came from another facility in February of 2010. This flare was installed to take care of the landfill gas generated from the 2 closed hills of the landfill. They had to do this because the landfill gas quality is declining in these areas and would be contributing to non-compliant gas being sent to WGP under their contract with them. As mentioned in some of staff's previous inspection reports, because of the declining methane gas situation and certain contract language between WRDF and WGP, WGP personnel sample the gas wells at the landfill instead of a WRDF employee and/or a consultant. The two open flares owned by WRDF are skid mounted units and were manufactured by LFG Specialties, Inc. The flare at WGP was not operating during staff's inspection because the plant was on-line but the one serving the two closed hills was.

The facility has been conducting quarterly surface emissions monitoring and it appears that the appropriate records are being kept. Staff reviewed the records for the previous four quarters of monitoring. The records reviewed included instrument calibration data, a map showing the route traversed while doing the monitoring, meteorological data, etc. Air Quality Specialists, Inc. (AQSI) does the monitoring and reporting for WRDF and they use a flame ionization detector (TVA 1000 FID) to do the monitoring. Staff noted that they had documented 6 exceedences over 500 ppm during the 3rd quarter 2019, 3 during the 2nd quarter 2019, no exceedences in the 1st quarter 2019, and 3 exceedences in the 4th quarter 2018. However, corrective actions were taken and follow-up monitoring was conducted in the appropriate timeframes to show that these areas were back under 500 ppm. The facility has a Start-Up, Shutdown, and Malfunction (SSM) Plan on site as required. The facility has been submitting the required semi-annual and/or annual SSM reports and ROP Certifications to the district office on time. These reports have included any deviations and/or operational issues as required. The facility is maintaining an NMOC generation report that is updated annually and also has a landfill design and capacity report. The DTE Gas Technician that does the monthly well field monitoring also conducts the monthly cover integrity checks. Any issues observed are reported to Jim who then addresses any potential issues. They have records of the

amount of solid waste in place as well as the year by year acceptance rates.

EUACTIVCOLL: Appears to be in COMPLIANCE

The facility is conducting monthly wellhead sampling and recording the operating parameters as required. As mentioned under EULANDFILL, WGP conducts the sampling and they use a GEM 5000. Staff then reviewed the past six months of well data and it appears that the wells are being operated within the required NSPS parameters for oxygen, static pressure (vacuum), and temperature unless an alternate operating scenario was approved for the well by the AQD. The facility has an as-built map showing the location of the gas wells and other collection components. The facility had a binder that it keeps all the gas well logs in. These logs show location, depth, installation date, etc. of the wells. Jim had mentioned in our earlier discussions that they currently have 189 gas collectors with 186 of them being NSPS subject. The 3 that are not subject are in waste that hasn't met the age requirements to be NSPS subject. The gas wells at the landfill are made out of either PVC or HDPE and they are equipped with sample ports and some with permanent temperature gauges. The GEM 5000 is also equipped with a temperature probe for getting a temperature reading on any wells that aren't equipped with a temperature gauge. As was also previously mentioned under EULANDFILL, except for landfill gas from the north and middle hills that is now controlled by an open flare, the landfill gas is piped to WGP who then treats it to make pipeline quality natural gas. They can also divert it to the open flare when WGP isn't operating. As mentioned under EULANDFILL, the facility has been submitting the required semi-annual and/or annual SSM reports and ROP Certifications to the district office on time.

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. This information is being kept on a continual basis and Jim said that he updates the map at least annually. The facility is submitting semi-annual and/or ROP certifications as required.

FGOPENFLARES: Appears to be in COMPLIANCE

As mentioned previously, one open flare is used as a back-up control device should the WGP facility shut down and the other controls the landfill gas generated from the north and middle hills. The facility has on site the data from the original performance testing that was conducted on the flares and also the vendor information. Both of the open flares are equipped with heat sensing devices (UV flame detector) and thermocouples that monitor for the continuous presence of a flame. If the UV sensor doesn't indicate the presence of a flame, the flares will shut down automatically and a pneumatically operated valve will close so that landfill gas cannot be emitted directly to the atmosphere. As mentioned under EULANDFILL, the facility has been submitting the required semi-annual and/or annual SSM reports and ROP Certifications to the district office on time.

FGCOLDCLEANERS: Appears to be in COMPLIANCE

As mentioned earlier, WRDF had removed their solvent based parts washer/cold cleaner. The one in the maintenance garage is now aqueous based. The facility is submitting semi-annual and/or ROP certifications as required.

FGRULE290: COMPLIANCE

The facility currently doesn't have any emission units that fall under the Rule 290 permit exemption regulation

After reviewing records, staff went on a tour of the landfill with Jim. As mentioned earlier, the DTE plant was running and that the back-up flare that is used when the plant is down was not operational. We also stopped and checked out some of the gas wells that had the LOCI system installed on them as Jim had mentioned earlier. We then stopped on top of one of the landfill hills that overlooks the active face (current filling area) and observed operations for a few minutes. We then proceeded around the perimeter of the landfill and staff noted that WRDF still has the small open flare that is located between the north and middle hills. Jim said that it has typically been operating with a gas flow rate of around 125-150 scfm. Staff asked if they had ever looked into doing the calculation to see if those two hills contribute less than 1% of the NMOC generated at the site. Jim said that he thinks Eric did the calculation and it was still more than 1%. (Note: Areas can be exempted from NSPS monitoring requirements if they are shown to contribute less than 1% of the total NMOC generated at the facility.) We then checked out a couple of leachate risers and control panels which Jim explained their purpose. After that, we proceeded back to the office area where staff thanked Jim for his time and departed for lunch at approximately 1:00 p.m.

INSPECTION CONCLUSION:

At the present time, the facility appears to be in COMPLIANCE with both federal and state air regulations that are contained in Section 1 of ROP No. MI-ROP-N1216-2017.

Section 2 – WGP

Staff arrived at the WGP facility at approximately 1:55 p.m. after having lunch and we proceeded to the office area. Once in the office, staff introduced them self to Bill Varner (Facility Tech / Plant Operator), gave him a business card, and stated the purpose of the visit. Prior to any further discussions, Bill said he had to go over all the safety rules regarding the plant with staff which he did and then we signed off on them. Staff then asked about hours of operation and how many people were employed there. Bill stated that the plant still runs 24/7 and there is usually someone on site Monday through Friday from 6:30 a.m. to 5:00 p.m. Staff asked if the plant is still automated and if things can still be fixed remotely. Bill said that they were but that they still have to come on site for some issues. He said that they now have 5 full time employees with one being a manager, three being plant operators, and one being the landfill technician who samples the well field amongst other things. Bill said the new employee is another plant operator but he is usually only at the site about half the time. He said that management has been sending the new operator to Wisconsin and Texas quite a bit to work at plants there. Staff then asked if the Kryosol Process that the plant uses to convert the landfill gas received from WRDF to make it into pipeline quality natural gas was still the same. Bill said that it was and used the process flow diagram that they use to monitor operations on the computer to show staff the entire process. The following is an overview of the process.

NOTE: Since the process was still the same, staff just used the process information that was given during the previous inspection instead of writing everything down again.

The landfill gas is received from WRDF under vacuum (by use of a compressor) and it is wet with a Methane (CH₄) concentration of around 57%, Carbon Dioxide (CO₂) around 43%, and Nitrogen (N₂) has to be less than 1.5%. The BTU rating of the landfill gas is around 560. The compressor has 4 stages and is powered by a Waukesha 12-cylinder engine. The engine now runs on purchased natural gas where it use to run on treated landfill gas. Bill said that the decision was made to send all treated gas into the pipeline instead of consuming it on site. The compressor is capable of pulling 60" of vacuum on the landfill and it can compress the

landfill gas up to 1,000 lbs of pressure at the final stage of the process. After the gas is first pulled in it is directed to the Refrigeration Unit which chills the process Methanol to -18 degrees F and the landfill gas to -23 degrees F which removes all the moisture. At this point the landfill gas concentrations are still the same but it is discharged from this stage as a dry gas at 400 lbs of pressure. The gas then goes to Purification (start of the “Kryosol Process”) which separates the CH₄ from the CO₂ using Methanol to strip the CO₂. The coldest operating temperature of the Kryosol Process is -50 degrees F. From here the CO₂ and waste gases are discharged to the Thermal Oxidizer under 1 lb of pressure. The Thermal Oxidizer operates up to 1545 degrees F and has a destruction efficiency greater than 98%. The non-CO₂ and non-waste gas is now 98% CH₄ and a 2% combination of CO₂, O₂, and N₂. The gas now has a BTU rating of 967 and it is discharge from the Purification stage to the Deoxygenation stage at 400 lbs of pressure. Oxygen is removed from the gas during this stage but it produces water and the gas is now wet again. The gas is now 98% CH₄ with less than 2% CO₂ and N₂ and it discharged to the Dehydration stage at 400 lbs of pressure. During this step the water is stripped out of the gas using Tri-ethylene Glycol. The gas is now considered dry (< 7 lbs of H₂O) and “Pipeline Quality”. The gas is then discharged into Consumers Pipeline with a pressure of up to 1,000 lbs.

After Bill explained all the steps in the Kryosol Process, he and staff went out to view all the equipment used in the processes mentioned above. During the walk around Bill mentioned that Ethylene Glycol is still used to cool just about all the equipment at the facility. Staff had asked earlier how often they have to get Methanol delivered and Bill mentioned that it still about twice a year. Staff had also noted earlier that the Thermal Oxidizer was in use and was operating at 1490 degrees F. Bill then pointed out the tank that stores the Hydrocarbon waste that has been separated by the distillers and separator tank. Staff has also asked Bill earlier if they still generate about 300 gallons of waste a month and if it was still hauled off by Stericycle to which Bill said that it was. After looking at all equipment, staff and Bill proceeded back to the office where staff reviewed the records contained in Section 2 of the ROP. The following are the conditions as listed along with staff’s comments regarding them.

Note: Staff deleted anything that was N/A.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUKRYOSOLPROCESS-S2	The EUKRYOSOLPROCESS-S2 consists of the following landfill gas processing equipment: flash separators, flash tanks, absorber column, and a 5 MM/btu per hour thermal oxidizer controlling atmospheric vents. The EUKRYOSOLPROCESS-S2 treats landfill gas before its subsequent use or sale and would meet the definition of a treatment system in that it removes particulate to at least the 10 micron level, compresses the landfill gas, and removes enough moisture for subsequent use; therefore, guaranteeing that the intent of	1998	NA

	the destruction of the NMOC will be maintained.		
EUICENGINE-S2	Internal combustion engine driving a compressor.	1998	NA
EUOPENFLARE-S2	Open flare is an open combustor without enclosure or shroud.	1998	NA

**EUKRYOSOLPROCESS-S2
EMISSION UNIT CONDITIONS**

DESCRIPTION

The EUKRYOSOLPROCESS-S2 consists of the following landfill gas processing equipment: flash separators, flash tanks, absorber column, and a 5 MM/btu per hour thermal oxidizer controlling atmospheric vents. The EUKRYOSOLPROCESS-S2 treats landfill gas before its subsequent use or sale and would meet the definition of a treatment system in that it removes particulate to at least the 10 micron level, compresses the landfill gas, and removes enough moisture for subsequent use; therefore, guaranteeing that the intent of the destruction of the NMOC will be maintained.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Thermal Oxidizer

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

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate the EUKRYOSOLPROCESS-S2 at all times when the collected gas is routed it. (40 CFR 60.753(f)), 40 CFR 63.1955(a))

AQD Comment: Appears to be in Compliance.

2. The permittee shall operate the EUKRYOSOLPROCESS-S2 so that any emissions from any atmospheric vents or stacks associated with the EUKRYOSOLPROCESS-S2 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.

3. The permittee shall operate the EUKRYOSOLPROCESS-S2 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.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. Except during start-up and shut-down of EUKRYOSOLPROCESS, the permittee shall not operate EUKRYOSOLPROCESS unless all waste gases removed from the landfill gas are controlled in a thermal oxidizer that is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the thermal oxidizer includes all of the following²:
 - a. Reduction of non-methane organic compounds (NMOC) by 98 weight percent or reduction of the outlet NMOC concentration to less than 20ppm by volume, dry basis as hexane at three percent oxygen.
 - b. Average combustion temperature no less than 28°C below the temperature during which the average combustion temperature was more than 28°C below the average combustion temperature during the most recent performance test at which compliance with 40 CFR 60.752 (b)(2)(iii) was determined.

Minimum retention time of 0.5 seconds. (R 336.1702(a), 40 CFR 60.752(b)(2)(iii), 40 CFR 63.1955(a))

AQD Comment: Appears to be in Compliance. The Thermal Oxidizer had been tested after installation and met the 98% destruction efficiency.

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 EUKRYOSOLPROCESS-S2 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 and no exceedances have been reported.

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 maintains records of what work is 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 submitted this to the AQD and it is on file.

4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, devices to monitor and record the following²:
 - a. Combustion temperature in the thermal oxidizer – measured at least every 15 minutes.
 - b. Gas flow rate to the thermal oxidizer – measured at least every 15 minutes. (R 336.1702(a), 40 CFR 52.21(c) and (d), 40 CFR 60.756(b)), 40 CFR 63.1955(a))

AQD Comment: Appears to be in Compliance. This is all digitally monitored and recorded electronically and can be displayed on their computer.

5. The permittee shall keep, in a satisfactory manner, continuous records of the combustion temperature in the thermal oxidizer.² (R 336.1702(a), 40 CFR 52.21(c) and (d))

AQD Comment: Appears to be in Compliance. This is all digitally monitored and recorded electronically.

6. The permittee shall keep, in a satisfactory manner, the following up-to-date records for the thermal oxidizer²:
 - a. Combustion temperature in the thermal oxidizer - recorded continuously.
 - b. Gas flow rate to the thermal oxidizer - recorded at least every 15 minutes.
 - c. All three hour periods of operation during which the average combustion temperature was more than 28°C below the average combustion temperature during the most recent performance test that demonstrated compliance with the NMOC destruction requirement. (R 336.1702(a), 40 CFR 60.758(c)), 40 CFR 63.1955(a))

AQD Comment: Appears to be in Compliance. All this information is recorded electronically.

VII. REPORTING

AQD Comment: Appears to be in Compliance. #1, #2, #3, #5 ,and #6 below are being submitted as required. #4 below has also been submitted as required.

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 KRYOSOLPROCESS-S2, 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 EUKRYOSOLPROCESS-S2. 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 include²:

- a. All three hour periods of operation during which the average combustion temperature was more than 28°C below the average combustion temperature during the most recent performance test at which compliance with 40 CFR 60.752(b)(2)(iii) was determined.
 - b. Description and duration of all periods of thermal oxidizer bypass.
 - c. Description and duration of all periods when the thermal oxidizer was not operating for a period exceeding one hour.
 - d. Length of time the thermal oxidizer was not operating. (40 CFR 60.757(f), 40 CFR 63.1980(a), 40 CFR 63.1955(a))
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

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
SVKRYOSOLPROCESS-S2	18 ¹	40 ¹	R 336.1225

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

IX. OTHER REQUIREMENT(S)

AQD Comment: Appears to be in Compliance with #1 through #5 below.

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 EUKRYOSOLPROCESS-S2. (40 CFR 60.755(e), 40 CFR 63.1955(a))
2. The permittee shall have developed and implemented a written SSM plan according to the provision in 40 CFR 63.6(e)(3) for EUKRYOSOLPROCESS-S2. A copy of the SSM plan shall be maintained on site. (40 CFR 63.1960, (40 CFR 63.1965(c))
3. The permittee shall have implemented a written preventative maintenance plan (PMP) for EUKRYOSOLPROCESS-S2. 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)
4. The permittee shall comply with all applicable provisions of the New Source Performance Standards as specified in 40 CFR Part 60, Subpart A and Subpart WWW, as they apply to EUKRYOSOLPROCESS-S2.² (40 CFR Part 60 Subpart A and WWW)
5. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subpart A and Subpart AAAA, as they apply to EUKRYOSOLPROCESS-S2. (40 CFR Part 60 Subpart A and AAAA)

Footnotes:

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

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

EUCENGINE-S2 EMISSION UNIT CONDITIONS
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DESCRIPTION

Internal combustion engine driving a compressor

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall only burn natural gas, or pipeline quality gas concentrated from landfill gas in EUCENGINE-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 facility is only burning purchased natural gas now instead of pipeline quality gas concentrated from landfill gas.

VII. REPORTING

AQD Comment: Appears to be in Compliance with #1 through #3 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))

See Appendix 8

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
SVICENGINE-S2	14 ²	15 ²	40 CFR 52.21(c) and (d)

AQD Comment: Appears to be in Compliance. The stack appears to meet the dimensions above.

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the New Source Performance Standards as specified in 40 CFR Part 60, Subpart A and Subpart WWW, as they apply to EUICENGINE-S2.² (40 CFR Part 60 Subpart A and WWW)

AQD Comment: Appears to be in Compliance.

EUOPENFLARE-S2 EMISSION UNIT CONDITIONS
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DESCRIPTION

Open flare is an open combustor without enclosure or shroud.

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not control waste gases from EUKRYOSOLPROCESS-S2 in EUOPENFLARE-S2 for more than 500 hours per year based on a 12 month-rolling time period as determined at the end of each calendar month.² (R336.1702(a), 40 CFR 52.21(c) and (d))

AQD Comment: Appears to be in Compliance. The most recent 12-month rolling time period ending in July 2019 indicated use of 67.75 hours.

IV. DESIGN/EQUIPMENT PARAMETER(S)

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1. The permittee shall not control waste gases from EUKRYOSOLPROCESS-S2 in EUOPENFLARE-S2 for more than 500 hours per year based on a 12 month rolling time period as determined at the end of each calendar month.² (R 336.1702(a), 40 CFR 52.21(c) and (d))

AQD Comment: Appears to be in Compliance. Staff is not sure why this condition is listed both here and above under Process/Operational Restrictions.

2. The permittee shall equip and maintain EUOPENFLARE-S2 with the following²:
 - a. Continuously burning pilot flame.
 - b. Pilot flame detection device. (40CFR 60.752(b)(2)(iii)), 40 CFR 63.1955(a))

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 install, calibrate, maintain and operate in a satisfactory manner a gas flow rate measuring device that shall monitor and record the gas flow rate to EUOPENFLARE-S2 at least every 15 minutes.² (R 336.1702(a), 40 CFR 52.21(c) and (d), 40 CFR 60.756(b))

AQD Comment: Appears to be in Compliance. It is monitored digitally and recorded electronically.

2. The permittee shall keep, in a satisfactory manner, records of events when waste gases from EUKRYOSOLPROCESS-S2 are controlled in EUOPENFLARE-S2. The records shall include all of the following²:
 - a. Type of event (start-up/shut-down/malfunction of the thermal oxidizer).
 - b. Date of the event.
 - c. Duration of an event when waste gases from EUKRYOSOLPROCESS-S2 are controlled in EUOPENFLARE-S2.
 - d. Cause of the event.
 - e. Actions taken to prevent a reoccurrence if there is a malfunction of the thermal oxidizer.
 - f. Gas flow rate to EUOPENFLARE-S2 recorded every 15 minutes. (R 336.1702(a), 40 CFR 52.21(c) and (d), 40 CFR 60.758(c)), 40 CFR 63.1955(a))

AQD Comment: Appears to be in Compliance. They track all of this on their computer with a program they call WSD-Flare Log and Operator Log.

VII. REPORTING

AQD Comment: Appears to be in Compliance with #1 through #3 below. The required reports are being submitted.

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

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
SVOPENFLARE-S2	9 ¹	30 ¹	R 336.1225

AQD Comment: Appears to be in Compliance. The stack appears to meet the above dimensions.

IX. OTHER REQUIREMENT(S)

- The permittee shall comply with all applicable provisions of the New Source Performance Standards as specified in 40 CFR Part 60, Subpart A and Subpart WWW, as they apply to EUCENGINE-S2.² (40 CFR Part 60 Subpart A and WWW)

AQD Comment: Appears to be in Compliance.

INSPECTION CONCLUSION:

At the present time, the facility appears to be in COMPLIANCE with both federal and state air regulations that are contained in Section 2 of ROP No. MI-ROP-N1216-2017. Staff thanked Bill for his time departed the facility at approximately 3:05 p.m.

NAME Matt Deh

DATE 8-19-19

SUPERVISOR RIL 8/21/19