

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

N121666896

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: 03/30/2023
STAFF: Matthew Deskins	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Unannounced Scheduled Inspection		
RESOLVED COMPLAINTS:		

On March 30, 2023 AQD staff (Matt Deskins) 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. The landfill is currently subject to the following Federal Regulations:

1. Federal Plan Requirements for MSW Landfills promulgated under 40 CFR Part 62 Subpart OOO. The Federal Plan will apply until a State Plan is Approved or the AQD receives delegation for the Federal Plan. Subpart OOO took effect on June 21, 2021 and will be replacing the former NSPS Subpart WWW MSW Landfill requirements.
2. National Emission Standard for Hazardous Air Pollutants (NESHAP) for MSW Landfills promulgated under 40 CFR Part 63 Subparts A and AAAA. Also referred to as Maximum Achievable Control Technology (MACT). NOTE: There was an updated version of this regulation that took effect on September 27, 2021 and is now applicable
3. NESHAP for Asbestos promulgated under 40 CFR Part 61 Subparts A and M.

As had been mentioned in previous inspection reports, upon renewal of the Renewable Operating Permit (ROP) for WRDF back in 2017, 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. WRDF and WGP submitted their ROP Renewal Application on-time and it's currently being processed (It's in the 45 Day EPA Comment Period). The purpose of the inspection was to determine both facilities compliance with the new federal regulations and with the current ROP (MI-ROP-N1216-2017) where applicable. NOTE: The current ROP contain outdated NSPS WWW and MACT AAAA conditions and/or UARS that will be updated with the renewal. Staff departed for the facility at approximately 9:15 a.m.

Section 1 - WRDF

Staff arrived at WRDF at approximately 9:15 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 to the lobby. Staff began signing in and while doing so, Mike O'Rourke (District Manager) and Jim Mohnney (formerly Operations Manager and now Area Gas Manager(?)) came out to greet staff. After introductions were over, staff proceeded with Jim and Mike back to the conference room where staff exchanged business cards with Mike. After some small talk, staff explained what the inspection would entail along with the records they would like to review. Prior to looking at those records, staff asked Jim and Mike some general questions about facility operations and about the landfill gas processing plant next door owned by DTE. According to Jim and/or Mike, 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. They both verified that Waste Management completed the merger with Advanced Disposal several years ago. According to Mike, the merger mainly led to Waste Management acquiring more transfer stations and hauling companies from around Indianapolis and that there were no landfills obtained. After the merger was complete the only landfill in Michigan that they had to divest to prevent a monopoly situation was Arbor Hills Landfill that had been partly owned by Advanced Disposal. Staff then asked about the amount of waste taken in and they said that it's still about 1,600 tons of waste per day. Staff then asked if the hours of operation had changed at all and they said that it hadn't. They said that 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.

Staff then asked if they had plans to expand the gas system at all this year. They mentioned that they did but the exact number of wells and expansion were not currently set yet. Staff then asked about leachate recirculation and if they still weren't doing any. Mike said that is still the case and that it's a corporate wide policy now, especially if they take in wastewater sludge. Staff then asked how much sludge they currently receive. They mentioned that they still take about 1 load a day now and that the sludge and it's mainly from the Kalamazoo WWTP. They said that they still get some smaller loads brought in here and there from the local municipalities such as Three Rivers and Marcellus though. Staff then asked if a lot of the sludge is diverted to Woodland Meadows over in the Detroit area still. Mike said that it was but that contract will be up in June of this year. He said that they will be looking to possibly send it to Autumn Hills up in Coopersville and used in their solidification process. He said that Waste Management has a company policy that no more than 10% of the waste received at their landfills can be sludge so that they can mix the other waste in with it so it's not so wet. Staff then asked about the DTE plant next door and how it has been running. They said that it had been running pretty consistently now with downtimes usually only due to routine maintenance.

After the general discussion, staff went on a tour of the landfill with Chad prior to reviewing records so that Mike could get back to other things. During the tour, staff noted that the DTE plant was running and that the back-up flare that is used when the plant is down was not operational. We then proceeded around the perimeter of the landfill and staff confirmed that WRDF still has the small open flare that is located between the north and middle hills. Jim said that it typically operates with a LFG gas flow rate of around 125-135 scfm still.

During previous inspections, staff had been asked if anyone had ever approached them about omitting the north and middle hills from having to meet NSPS monitoring requirements. (NOTE: If site specific testing can prove an area of the landfill contributes less than 1% to the overall site emissions of NMOC, then it could be omitted.) Staff had been told that Eric Shafer (Former General Manager / District Engineer and now Retired) had done some preliminary calculations and thought that it was still more than 1%. We then drove up on top where we could observe the active face (current filling area) and observed operations for a few minutes. After taking a tour of the landfill we proceeded back to the office area where staff looked at records. The following are the emissions units contained in Section 1 of the ROP and staff's comments regarding them.

EULANDFILL: Appears to be in COMPLIANCE (In the ROP Renewal this EU will be covered by the Flexible Groups FGLANDFILL-OOO AND FGLANDFILL-AAAA)

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. As mentioned at that time, they had to do this because the landfill gas quality is declining in the two closed hills and was contributing to non-compliant gas being sent to WGP under their contract with them. As mentioned in previous inspection reports, because of the declining methane gas situation and certain contract language between WRDF and WGP, WGP personnel still sample the gas wells at the landfill instead of a WRDF employee and/or a consultant. However, Waste Management is responsible for maintaining the de-watering pumps and raising of gas wells when needed. 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. Environmental Information Logistics (EIL) does the monitoring and reporting for WRDF and they use an Inficon Irwin infrared detector to do the monitoring. Staff noted that they had documented 17 exceedences over 500 ppm during the 1ST quarter 2022, 8 during the 2ND quarter of 2022, no exceedences in the 3rd quarter 2022, and 10 exceedences in the 4th quarter of 2022. 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. It appears that almost every exceedence was related to a surface penetration which is a new requirement of the federal regulations. It doesn't appear that any monitoring exceedences have led to the landfill having to do any Root Cause Analysis which can also be required by the new federal regulations. The facility has been submitting the required semi-annual and/or annual ROP Certifications to the district office on time. These reports have included any deviations and/or operational issues as required. SSM Reports are no longer required under the updated MACT AAAA regulation. 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 use to also conduct the monthly cover integrity checks. Any issues observed are reported to site management who will then addresses any potential issues. They have records of the amount of solid waste in place as well as the year-to-year acceptance rates.

EUACTIVECOLL: Appears to be in COMPLIANCE. (In the ROP Renewal this EU will be covered by the Flexible Groups FACTIVECOLL-OOO AND FACTIVECOLL-AAAA)

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 static pressure (vacuum) and temperature. The new landfill regulations require that oxygen or nitrogen still be monitored, but there is no concentration limit, and it no longer needs to be recorded.

Also, the new regulations increased the allowable gas well temperature from 131 degrees F to 145 degrees F and an Enhanced Monitoring Program has to be implemented for any above 165 degrees F. WRDF has not had any wells exceed this temperature to date. 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 197 gas collectors with 192 of them being NSPS subject. The 5 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 ROP Certifications to the district office on time. Also as mentioned earlier, SSM Reports are no longer required.

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. (In the ROP Renewal this FG will be covered by the Flexible Groups FGOPENFLARE-OOO AND FGOPENFLARE-AAAA)

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. After the ROP Renewal is issued, they will have 180 days to re-test the Open Flares for VE's, net heating value of the landfill gas, and exit velocity.

FGCOLDCLEANERS: Appears to be in COMPLIANCE

As mentioned in previous inspection reports, 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

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 along with the new federal OOO and AAAA regulations. Staff departed at approximately 1:35 p.m. to head over to WGP to conduct the inspection of Section 2.

Section 2 – WGP

Staff arrived at the WGP facility at approximately 1:40 p.m. Staff knocked on the door and Al Churchill (Facility Tech / Plant Operator) came to greet staff. Staff introduced them self to Bill and stated the purpose of the visit. Staff then mentioned the inspection would be similar to the one staff conducted a couple of years ago, but Al hadn't been present for that one but remembered staff from a previous visit. Prior to any other discussions, Al had staff sign in and then went over all the safety rules regarding the plant. After that was completed, staff then I signed off where needed that they understood everything regarding them. Staff then began asking Al some general questions such as their hours of operation and how many people were employed there. Al 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. He said that shortly they will have 5 full time employees with one being a manager, two being plant operators, and two being the landfill technicians who sample the well field amongst other things. Staff asked if the plant is still automated and if things can still be fixed remotely. Al said that they were but that they still have to come on site for some issues. 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. Al said that it was and the following is an overview of the process.

NOTE: Since the process was still the same, staff will continue to use the process information that was given during previous inspections 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 still 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 because of REM(?) credits that they receive. 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.

Staff then went through the Special Conditions contained in Section 2 of the ROP and the following lists them along with staff's comments regarding them.

NOTE: Staff deleted anything that was N/A. Also, some of the conditions listed below will still be included in the ROP Renewal, however; they will have updated UARs to reflect the new landfill regulations. Some requirements will be deleted if no-longer applicable. Also SSM Reporting is no longer required under the updated MACT AAAA Regulation.

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 the destruction of the NMOC will be maintained.	1998	NA
EUCENGINE-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.
 - c. 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 to date.

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.

1. 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.

2. 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))**

1. 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))**

2. 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))**

3. 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))

1. 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))

1. 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))**

2. 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)**

3. 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)

4. 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).

<p>EUICENGINE-S2</p> <p>EMISSION UNIT CONDITIONS</p>
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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 still 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	14²	15²	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.

<p>EUOPENFLARE-S2</p> <p>EMISSION UNIT CONDITIONS</p>

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 February 2023 indicated use of 88.50 hours.

IV. DESIGN/EQUIPMENT PARAMETER(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 (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 still track all of this information 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	9¹	30¹	R 336.1225

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

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.

After reviewing records, Staff then went out to view all the equipment used in the processes mentioned above. Prior to the walk around AI mentioned that Ethylene Glycol is still used to cool just about all the equipment at the facility. Staff had also asked earlier how often they have to get Methanol delivered and AI had mentioned that it still about twice a year (~7,500 gallons per delivery for a total of ~15,000 gallons per year). Staff had also noted earlier that the Thermal Oxidizer was in use and was operating at a 24-hour average of 1475 degrees F. Staff had also asked earlier about the Hydrocarbon waste that has been separated by the distillers and separator tank. AI said that they still generate about 300 gallons of waste per-month but they have enough storage capacity for about 3 months of it. He said that Clean Earth (formerly Stericycle) still hauls off the waste and it is generally about 900 gallons per load. After looking at all the equipment, staff thanked AI for his time and departed at approximately 3:10 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 2 of ROP No. MI-ROP-N1216-2017 along with the new federal regulations that apply to the Treatment System. In theory, the entire WGP process is an LFG Treatment System and not just the three typical components that have historically made up these systems. Those three typical components are dewatering, filtering, and compression. Also, the semi-annual "Treatment System" report has been historically submitted as part of an NSPS Requirement. Staff notified the facility and made them aware that moving forward they will have to reference it as being a FGTREATMENTSYS-000 and/or FGTREATMENTSYS-AAA requirement. The following lists the requirements of those two flexible groups that will eventually be contained in the ROP Renewal and staff's comments regarding them.

FGTREATMENTSYS-000 AND FGTREATMENTSYS-AAAA (Covers the Emission Unit EUTREATMENTSYS):

Emission Limits: NA

Material Limits: NA

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

Design Equipment Parameters: Staff will assume that the treatment system is install and properly operated to meet the requirements of the MACT AAAA.

Testing/Sampling: NA

Monitoring/Recordkeeping: The facility is maintaining records of continuous flow of landfill gas. The facility maintains electronic records of maintenance on the system.

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

Stack/Vent Restrictions: NA

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

NAME Matt Deskins

DATE 4-4-2023

SUPERVISOR *RD* 4/4/23