

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

N121659410

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 Mohney, Site Manager - Section 1 of ROP		ACTIVITY DATE: 08/18/2021
STAFF: Matthew Deskins	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Unannounced Scheduled Inspection. Jim Mohney wasn't available the day of the inspection so the inspection was conducted with Chad Dammen (LFG Regional Operations Manager).		
RESOLVED COMPLAINTS:		

On August 18, 2021 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. New Source Performance Standard (NSPS) for Municipal Solid Waste (MSW) Landfills promulgated under 40 CFR Part 60 Subparts A and WWW. See "NOTE" under #3 below regarding applicability of WWW moving forward.
2. 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 Subpart WWW requirements. Upon renewal of the ROP (Application is due by September 24, 2021), the Federal Plan Requirements may be rolled into it.
3. 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: An updated version of this regulation takes effect on September 27, 2021. However, the current AAAA still references WWW so technically the WWW requirements still apply until the September 27, 2021 date.
4. NESHAP for Asbestos promulgated under 40 CFR Part 61 Subparts A and M.

As had been mentioned in previous inspection reports, upon renewal of their Renewable Operating Permit (ROP) 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. 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 9:25 a.m.

Section 1 - WRDF

Staff arrived at WRDF at approximately 10:10 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 (Ed), stated the purpose of the visit, and asked if Jim Mohney was available. Jim is the Operations Manager for the landfill. Ed mentioned that Jim was currently at one of their landfills down in Elkhart, Indiana and phoned him. While on the phone with Jim, he mentioned that he wouldn't be able to assist staff with the inspection and asked if Chad Dammen (Landfill Gas Operations Manager), who happened to be at the landfill that day,

could assist staff. Staff mentioned that would be fine and should there be any questions that Chad couldn't answer, staff would follow up with him later. Jim thanked staff for that and said he would contact Chad and let him know that staff was down at the office. Chad came into the office to greet staff several minutes later. Staff greeted Chad and stated the purpose of the visit. Chad then led us down to their conference room.

Prior to looking at any records required to be kept by the ROP, staff asked Chad some general questions about facility operations and about the landfill gas processing plant next door owned by DTE. According to Chad, 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. Chad mentioned that Waste Management did complete the merger with another waste company called Advanced Disposal a couple of years ago. 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. WRDF currently takes in about 1,600 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. Chad also confirmed that they still don't have a parts cleaner (cold cleaner) anymore out in the trucking maintenance garage and that it had been replaced by an aqueous (soap and water). Jim had mentioned to staff during a previous inspection 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. Chad said that they are currently adding 11 wells consisting of 9 re-drills and 2 new ones. He said their contractor would be drilling today but the drill rig broke down on them. He also mentioned that all newly drilled wells will also get de-watering pumps installed in them during installation. Staff then asked Chad if some of the gas wells were still equipped with the system called LOCI. During the previous inspection in 2019, Jim had mentioned that 100 of their gas wells had been equipped with a pilot system being tested called LOCI. It was a joint venture between Waste Management and DTE. The system was computerized and would monitor 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. Chad said that they discontinued the LOCI system because it wasn't financially viable. He said that they had been getting charged quite a lot of money per well each month for the system. Staff then asked about leachate recirculation and if they still weren't doing any. Chad said that is still the case and it's pretty much a corporate wide policy now, especially if they take in wastewater sludge. Staff then mentioned that Jim had told them during a previous inspection that the sludge creates issues with wells flooding out and leachate outbreaks. Staff then asked how much sludge they currently receive. Chad mentioned that he wasn't totally sure but thought it was only about 1 load a day now. He then confirmed that the sludge that they receive is still from the Kalamazoo WWTP with smaller loads brought in from local municipalities such as Three Rivers and Marcellus. He also confirmed that loads from the municipalities still aren't nearly as frequent compared to Kalamazoo. He went on to say that a lot of the sludge is diverted now to Woodland Meadows over in the Detroit area. 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. Chad said that it had been running pretty consistently now with downtimes usually only due to routine maintenance. He mentioned that the plant had been down for 3 days recently in July due to a transformer fire.

After the general discussion, staff went on a tour of the landfill with Chad prior to reviewing records. 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 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 also went up to where they were supposed to be drilling some of the new wells if the drill rig hadn't broken down. 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. Chad said that it typically still operates with a LFG gas flow rate of around 125-135 scfm. Chad earlier had asked staff 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 told Chad that they had mentioned this to Jim during their previous inspection and Jim had said that he thought Eric Shafer (Former General Manager / District Engineer now Retired) had done some preliminary calculations and thought that it was still more than 1%.

After taking the tour, staff mentioned to Chad that everything looked pretty good but there did appear to be quite a bit of dust being generated from site roads and asked if they had a water truck available. Chad said that they did have one and would contact Mike O'Rourke (New General Manager) about the issue. We then 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

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 0 exceedences over 500 ppm during the 3rd quarter 2020, 2 during the 4th quarter of 2020, no exceedences in the 1st quarter 2021, and 3 exceedences in the 2nd quarter of 2021. 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 use to also conduct the monthly cover integrity checks. However, Waste Management hired a "Pump Technician" who now does this as well. 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.

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. Chad had mentioned in our earlier discussions that they currently have 190 gas collectors with 183 of them being NSPS subject. The 7 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

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. Staff departed at approximately 12:45 p.m. to go to lunch.

Section 2 – WGP

Staff arrived at the WGP facility at approximately 1:10 p.m. after having lunch and I proceeded to the office area. Staff knocked on the door and Bill Varner (Facility Tech / Plant Operator) came out 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 Bill couldn't remember staff being there previously. Prior to any further discussions, Bill said he would have to go over COVID safety protocols (including wearing a mask) along with all the safety rules regarding the plant with staff, which he did, and then I signed off on everything regarding them. Staff was then asked to move their vehicle out to the parking area outside of the fenced in area of facility area which they did. Once back in the office, staff asked Bill about their 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. He said that previously during the earlier COVID outbreak that they were each working a weekly 10 hour a day shift, which included weekends, to limit contact between employees. 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 still 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. 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 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.

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
EUICENGINE-S2	Internal combustion engine driving a compressor.	1998	NA
EUOPENFLARE-S2	Open flare is an open combustor without enclosure or shroud.	1998	NA

<p>EUKRYOSOLPROCESS-S2</p> <p>EMISSION UNIT CONDITIONS</p>
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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 exceedences 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 EUICENGINE-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)

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 EMISSION UNIT CONDITIONS</p>
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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 2021 indicated use of 281 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	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 EUIENGINE-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. 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 (~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 1472 degrees F. Staff had also asked earlier about the Hydrocarbon waste that has been separated by the distillers and separator tank. Bill 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 Stericycle still hauls off the waste and it is generally about 900 gallons per load. After looking at all the equipment, staff thanked Bill for his time and departed at approximately 1:55 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.

NAME Matt Decker

DATE 8-25-21

SUPERVISOR RIL 8/30/21