

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

N240738512

FACILITY: Forest Lawn Landfill		SRN / ID: N2407
LOCATION: 8230 W Forest Lawn Road, THREE OAKS		DISTRICT: Kalamazoo
CITY: THREE OAKS		COUNTY: BERRIEN
CONTACT: DEREK MAUNTEL, Engineer		ACTIVITY DATE: 02/01/2017
STAFF: Matthew Deskins	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Unannounced Scheduled Inspection		
RESOLVED COMPLAINTS:		

On February 1, 2017 AQD staff (Matt Deskins) went to conduct a scheduled unannounced inspection of the Forest Lawn Landfill (FLL) located in Three Oaks, Berrien County. Forest Lawn Landfill is a licensed Type II municipal solid waste landfill and is subject to the federal New Source Performance Standard (NSPS), 40 CFR Part 60 Subpart WWW, and the National Emission Standard for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63. The purpose of the inspection was to determine both entities compliance with the preceding federal air regulations as well as state air regulations that are contained within the facilities Renewable Operating Permit (ROP No. MI-ROP-N2407-2016). The ROP contains two sections with one pertaining to the landfill operations and section 2 to CBI who owns and operates the leachate evaporator.

Staff arrived at the FLL at approximately 12:40 p.m. after conducting another inspection and having lunch. Prior to entering the landfill, staff drove around the perimeter to see if any odors could be detected and none were noted. Staff then proceeded to the office but noticed that all gates were locked. Staff was aware that the landfill was going to be closing on January 31st in regards to accepting waste but figured there would still be employees there for a while doing closure activities. Staff noted that there were vehicles parked by the office and tried honking to see if anyone would come out but no one did. Staff then called a co-worker who might have Derek Mauntel's (Engineer) phone number. He did and said he would text it to staff. Just when staff was about to call Derek a maintenance door opened and an employee on a fork truck came out. Staff honked at him to get his attention. He came over to the gate and staff introduced them self. He let staff in and staff was directed toward Scott Heagle (Maintenance Manager). Staff introduced them self to Scott, gave him a business card, and stated the purpose of the visit. Scott mentioned that he's not familiar with what staff needs to do but would do his best. He mentioned that Derek had just been there the previous day. He said that him and 3 others were there are tasked with getting the interim cover in preparation for final closure. Staff mentioned that they knew where records were kept due to previous inspections and if he didn't mind, staff would start with those. Scott said that was fine as well as staff being able to use the conference room. ~~Derek~~ ^{Scott} then tried calling Derek to let him know staff was there but only got his voicemail. Staff mentioned that if there was anything in the permit that staff needed more information on, staff would get with Derek later on it. Scott then departed to do things that he needed to get done. Staff then proceeded to go through the ROP and its conditions. The following is a summary of the ROP emission units for the landfill, the things staff noted, and the landfill's compliance status with them.

EULANDFILL: Appears to be in COMPLIANCE.

The facility has an approved active gas collection system as well as associated control systems (Open Flare). The leachate evaporator that is owned and operated by CBI also utilizes the landfill gas. The facility has been conducting quarterly surface emissions monitoring and appears to be keeping the appropriate records as required. The facility (SCS Consultants) uses a SEM 500 to do the monitoring. The records reviewed included instrument calibration data, a map showing the route traversed while doing the monitoring, weather conditions, etc. and the monitoring data for the past year. Staff did not note any issues with their monitoring. The facility has a program implemented to monitor cover integrity on a monthly basis although the facility does it even more frequently. The facility maintains records of the current amount of waste in place as well as the year by year acceptance rate. The

facility has a Startup, Shutdown, and Malfunction Plan (SSM) on site as required. The facility has been submitting the required semi-annual ROP Certification and SSM reports to the district office on time which included any deviations and/or operational issues as required. Since the landfill has ceased waste acceptance as of January 31, 2017, there will be a closure report that will have to be submitted to the AQD.

EUACTIVECOLL: Appears to be in COMPLIANCE.

The facility has an approved active gas collection system that is constructed out of appropriate materials (either HDPE or PVC). Staff had been previously told by Derek that prior to final closure, they are planning on replacing quite a few wells with stainless steel cased ones during the construction season of 2017. These wells have an approved higher operating temperature which could impact the integrity of the HDPE long term. The facility also maintains an up to date As-Built drawings showing the locations of all piping and wells in the system. They currently have 172 wells that are monitored. The wells in the collection system are equipped with sampling ports and temperature gauges as required. Their consultant (SCS) uses a GEM 5000 to conduct the monitoring and it is done at least monthly and they are recording static pressure (vacuum), oxygen, and temperature as required. If any of these required parameters exceed the NSPS permitted limits during monitoring, the timeframe for corrective actions appears to be being adhered to. If corrective actions cannot be completed in the timeframes allowed, alternate operating scenarios and/or compliance timelines for compliance are being requested. Since 2010 there have been concerns regarding a number of wells that have had elevated temperatures that are well above NSPS requirements (as mentioned earlier under this emission unit). After initial internal discussions between AQD, WMRPD, and the EPA, followed by a meeting with landfill personnel and their consultant, we approved them to operate the wells at the higher temperatures but they had to develop an enhanced monitoring program for them. It has been updated to include additional wells as necessary. These reports are submitted quarterly to us. Getting back to the requirements of the ROP, all collected landfill gas is being routed to a control system which includes an open flare and the leachate evaporator. A site map and spreadsheet are being maintained indicating the location and depth of asbestos as required. The required semi-annual reports are being submitted.

EUAIRSTRIPPER: Appears to be in COMPLIANCE.

The facility is conducting visible emissions monitoring as required. The facility is also monitoring and recording influent and effluent water flow rates into and from the air stripper on a weekly basis. The facility is also sampling the influent and effluent in the timeframes required and keeping track of yearly VOC emissions. The facility is monitoring and recording the hours of operation on the air stripper. Data reviewed showed almost all contaminants below detection limits and a lot of this information is required by the DEQ's Water Resources Division for their Discharge Monitoring Reports (DMR).

EUOPENFLARE: Appears to be in COMPLIANCE.

The facility appears to be operating the flare properly and any time collected gas is routed to it. The flare is equipped with a ultra-violet flame sensor and is equipped with various alarms that shut down the flare depending on the conditions. If the flare does shut down, a pneumatic valve closes that prevents landfill gas from being discharged directly out the flare. The flare is equipped with a circular chart recorder that records the flow and temperature of the flare. The flare is also equipped with a digital recorder as a back-up which can record up to six months of data. Staff noted during the inspection that the flow to the open flare was approximately 2,650 scfm and the combustion temperature was 945 degrees Fahrenheit. The blower system was pulling approximately -50 inches of vacuum on the wellfield.

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. The facility appears to be keeping all the required records which include: shipping records (manifests) of the generator, transporter, and quantity of asbestos accepted. The facility keeps a map along with an associated spreadsheet that indicates the depth and location of the buried asbestos. Now that the landfill is closed, the facility will eventually have to submit a copy of a map showing asbestos locations and depths.

EUCOLDCLEANER: Appears to be in COMPLIANCE.

The facility has one coldcleaner and it is located in the maintenance garage. It had its lid closed and staff noted that operational instructions were posted. It didn't appear that it is being used very often and staff assumes it will be taken out eventually since the facility is closing.

FGRULE290: Appears to be in COMPLIANCE.

The facility currently doesn't have any emission units that fall under the states Rule 290 air regulation.

SECTION 1 INSPECTION CONCLUSION:

Overall, FLL appears to be in COMPLIANCE with both federal and state air regulations contained within ROP No. MI-ROP-N2407-2016. Scott then drove staff outback to where the leachate evaporator was located.

SECTION 2 – CHICAGO BRIDGE AND IRON

During staff's inspection of the leachate evaporator, they met with Jason of CBI. The evaporator is equipped with a monitor that continuously records the flow of leachate and totalizes it. Staff noted that the burner temperature was about 1850 degrees F and the vapor temperature was 175 degrees F. The following lists CBI's special conditions contained in Section 2 of the ROP and staff's comments regarding them.

SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EUEVAPSYS	Leachate evaporation system. This system will burn landfill gas generated by an adjacent landfill and use the heat of combustion to evaporate leachate from the landfill, thus reducing the volume of leachate that needs to be handled.	NA

The following conditions apply to: EUEVAPSYS

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NMOC	20 ppmv*	Test protocol**	EUEVAPSYS	V.1.	40 CFR 60.752 (b)(2)(iii)
*This limit applies only to the combustion of landfill gas and does not include NMOC emissions evaporated off of the leachate					
**Test protocol shall specify averaging time					

AQD Comment: Appears to be in COMPLIANCE. The facility tested the unit back in 2013 and results indicated it passed the NMOC emission limit.

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Leachate evaporated	15MM gallons	12-month rolling time period as determined at the end of each calendar month.	EUEVAPSYS	VI.1.	R 336.1803 R 336.1804 40 CFR 52.21(c) & (d)

AQD Comment: Appears to be in COMPLIANCE. Records reviewed by Staff noted that ending in December 2016 6,332,413 gallons of leachate was processed for an average of 17,352 gallons per day.

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall comply with all provisions, including recordkeeping and reporting, of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and WWW, as they apply to EUEVAPSYS as a control system for a municipal solid waste landfill.
(40 CFR Part 60 Subparts A & WWW)

AQD Comment: Appears to be in COMPLIANCE.

2. The permittee shall operate the control system such that all collected landfill gases are vented to a control system designed and operated in accordance with 60.752(b)(2)(iii). In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within one hour.

(40 CFR 60.753(e), 40 CFR 63.1955(a))

AQD Comment: Appears to be in COMPLIANCE. In the event the leachate evaporator goes down, all gas flow is diverted to the landfill's open flare.

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. **Within 180 days after commencement of initial startup, the permittee shall perform an initial performance test and verify NMOC emission rates from EUEVAPSYS by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. (40 CFR 60.752(b)(2)(iii))**

AQD Comment: Appears to be in COMPLIANCE. The evaporator was tested in the required time frames and passed.

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. **The permittee shall monitor and record, in a satisfactory manner, the leachate feed rate to the evaporator on a continuous basis. The permittee shall keep these records on file at the facility and make them available to the Department upon request. (R 336.1803, R 336.1804, 40 CFR Part 52.21(c) and (d))**

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

VII. REPORTING

1. **The permittee shall submit to the appropriate AQD District Office semi-annual reports for the landfill gas collection system (related to the combustion of landfill gas in the EUEVAPSYS). Reports shall be postmarked or received by appropriate AQD District Office as follows:**
 - a. **by March 15 for reporting period July 1 to December 31**
 - b. **by September 15 for reporting period January 1 to June 30**

For enclosed combustion devices and flares, reportable exceedances are defined under 60.758 (c). The semi-annual report shall contain:

- i. **Value and length of time for exceedance of applicable parameters monitored under 60.756(b). (40 CFR 60.757(f)(1), 40 CFR 63.1980(a), 40 CFR 63.1955(a))**
- ii. **Description and duration of all periods when the control device was not operating for a period exceeding 1 hour and length of time the control device was not operating. (40 CFR 60.757(f)(3), 40 CFR 63.1980(a), 40 CFR 63.1955(a))**

AQD Comment: Appears to be in COMPLIANCE. The facility is submitting the above reports and information.

2. The permittee shall submit the startup, shutdown, and malfunction (SSM) report to the appropriate AQD district office and it shall be delivered or postmarked as follows:
 - a. by March 15 for reporting period July 1 to December 31
 - b. by September 15 for reporting period January 1 to June 30

(40 CFR 63.10(a)(5), 40 CFR 63.10(d)(5))

AQD Comment: Appears to be in COMPLIANCE. The facility has an SSM Plan and has not needed to make any updates to it yet. They have been submitting the required reports noted above as required.

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVEVAPSYS1	16 ¹	56 ¹	R 336.1225 R 336.2803 R 336.2804 40 CFR 52.21(c)and (d)
2. SVEVAPSYS2	16 ¹	56 ¹	R 336.1225 R 336.2803 R 336.2804 40 CFR 52.21(c)and (d)

AQD Comment: Appears to be in COMPLIANCE. The stack heights appear to meet the above dimensions.

IX. OTHER REQUIREMENTS

1. The permittee shall comply with all applicable provisions of 40 CFR Part 63 Subpart A and AAAA. (40 CFR Part 60 Subpart A and AAAA)

AQD Comment: Appears to be in COMPLIANCE.

SECTION 2 INSPECTION CONCLUSION:

CBI appears to be in COMPLIANCE with both federal and state air regulations contained within Section 2 of ROP No. MI-ROP-N2407-2016. Staff thanked Jason for his time and departed at approximately 2:50 p.m.

NAME Matt Deh

DATE 2-3-17

SUPERVISOR MA 2/3/2017