

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

N240730531

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, OWNER ASBESTOS		ACTIVITY DATE: 07/31/2015
STAFF: Matthew Deskins	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Unannounced Scheduled Inspection.		
RESOLVED COMPLAINTS:		

On July 31, 2015 AQD staff (Matt Deskins and Monica Brothers) 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. A couple of years ago FLL entered into a contract with another company, now known as CB&I Government Solutions (CBI), to handle their leachate evaporation process. The leachate evaporator owned by FLL ultimately was dismantled and CBI installed a new system. The ROP was later reopened and CBI became Section 2 of FLL's ROP. 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-N2407-2011b). Note: FLL recently submitted their ROP Renewal Application and staff found it administratively complete. Staff departed the district office at approximately 9:10 a.m.

Staff arrived at the FLL at approximately 10:40 a.m. Prior to entering the landfill, staff drove around the east and south perimeters to see if any odors could be detected (Winds were out of the W/SW). Staff noted a pretty strong garbage smell along the east perimeter of the landfill and would rate it at about a 3 on the AQD odor scale (distinct, definite objectionable). Staff will follow up during the inspection on why the odors are so noticeable. Staff then proceeded to the office and signed in. Staff then proceeded into a conference room where he saw Frank Camilli (Operations Supervisor) and Derek Mauntel conversing. Staff then introduced themselves to Frank and Derek and stated the purpose of the visit. Staff then gave Derek a copy of the DEQ's "Environmental Inspections Brochure" to which Derek gave to Frank. Frank then had to excuse himself to take care of an issue. It appeared they were shorthanded that day with a lot going on. Staff started off conducting the inspection with Derek. Since Monica had never been to a landfill before, staff asked Derek if he would summarize how landfills are designed and operated. Derek agreed and after explained things using maps and poster board items. A little while later, Frank came back into the conference room. Frank mentioned that after lunch he was going to have to operate the scales because one of their employees had a doctor's appointment. He mentioned that if staff wanted him to take them on a tour of the landfill, it would have to be done fairly soon. Staff decided to take the tour now and proceeded with Frank and Derek out to the landfill. Along the way things were pointed out to Monica such as leachate side slope risers, gas wells and their associated parts, the air stripper for groundwater treatment, the leachate evaporator, the open flare, sedimentation ponds, the scalehouse etc. Staff also went up to the active area of the landfill and we watched one of the trucks being unloaded using the tipper. It was also explained how the bulldozer typically pushes the trash and the compactor compacts it. They mentioned how they have approval to use auto fluff as daily cover as well.

Between the initial discussions with Derek and later the tour of the landfill with Derek and Frank, staff had asked how much waste they take in a day to which Derek responded 1500 to 1600 tons. He said that next year they expect that to drop though. Staff also asked what their current hours of operation were and Frank said Monday through Friday from 6:00 a.m. until 4:30 p.m. They said they're only open on Saturday for post holiday disposal (if a holiday had fallen on a weekday). Staff asked about leachate evaporation and they said that they are averaging around 17,000 gallons a day with 3 to 5 loads of residual being placed back in the landfill. Each load of residual is approximately 4,500

gallons. Derek said that current leachate amounts haven't really justified the agreement with CBI and the installation of the new leachate evaporator. He said that if they ever look to get and are approved for a vertical expansion on the older cells, that would generate a lot more volume to be evaporated. After the tour of the landfill, staff proceeded back to the conference room to look at records. The following is a summary of the ROP emission units for the landfill, the things staff noted, and the landfill's compliance status. After that, Section 2 of the ROP will be discussed that pertains to CBI.

**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 and it was tested and shown to meet the NSPS NMOC 98% Destruction Efficiency. The facility has been conducting quarterly surface emissions monitoring and appears to be keeping the appropriate records as required. The facility (their consultant) 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. 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 (this is also required by the DEQ Office of Waste Management and Radiological Protection (OWMRP)). The facility has a Startup, Shutdown, and Malfunction Plan (SSM) on site as required and has not needed to make any updates to it. 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.

**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). The facility maintains an up to date As-Built drawings showing the locations of all piping and wells in the system. The facility currently has about 174 monitoring points in their collection system. This includes 145 vertical wells, 4 horizontal wells, 18 leachate risers, 2 cell pump risers, and 4 condensate drip legs. The wells in the collection system are equipped with sampling ports and temperature gauges as required. The facility is conducting wellhead monitoring at least monthly and 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. In the past few years we have had concerns regarding a number of wells that have had elevated temperatures well above NSPS requirements. After initial internal discussions between AQD, RMD, 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 plan (EMP) for them. The EMP has been updated to include any additional wells as needed. These reports are submitted quarterly to the AQD. 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. Staff forgot to look at the waste manifests that pertain to each load accepted, but the landfill has always had them in the past and they are located in the scale house. The required semi-annual reports are being submitted.

**EUAIRSTRIPPER: Appears to be in COMPLIANCE.**

The facility is conducting visible emissions monitoring as required and staff did not observe any during the inspection. 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 (See Attached). 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 it is being operated 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 of 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. The open flare currently combusts on average about 3,500 scfm and another 500 scfm goes to the leachate evaporator.

**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. Note: As mentioned previously, staff forgot to look at the waste manifests during this inspection but the landfill has always had them on record in the past. Staff also viewed a map and associated spreadsheet that indicated the depth and location of the buried asbestos.

**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 inside and outside of the lid. It doesn't appear that it is being used very often.

**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 Section 1 of ROP No. MI-ROP-N2407-2011b. Staff thanked Derek for his time and departed to go out back to where the leachate evaporator was located.

#### **SECTION 2 – CB&I Government Solutions**

During staff's inspection of the leachate evaporator, they met with Jason of CBI. The system has just been in operation around a couple of years now and Jason explained its operation to staff. Staff noted during the inspection that the daily leachate flow was 17,288 gallons per day and the residual flow was approximately 4,000. The evaporator is equipped with a monitor that continuously records the flow of leachate and totalizes it. Currently the inlet valve was almost closed allowing approximately 5 gpm into the evaporator. Jason said when the valve is open (about 80%), it lets in about 50 gpm. Staff noted that the burner temperature was about 1870 degrees F and the vapor temperature was 176 degrees F. During the performance test a couple of years ago, staff noted seeing similar readings in their test report which had indicated the emissions had passed. The following lists CBI's special conditions 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 June 2015 that the evaporator had processed 15,776,504 gallons of leachate (18,638,769 of leachate

minus 2,862,254 of residual) since it began operation. During the 12 month rolling time period ending March 2015, it indicated 6,064,916 gallons of leachate was processed (See Attached).

### **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 <sup>1</sup>	56 <sup>1</sup>	R 336.1225 R 336.2803 R 336.2804 40 CFR 52.21(c)and (d)
2. SVEVAPSYS2	16 <sup>1</sup>	56 <sup>1</sup>	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-N2407-2011b. Staff thanked Jason for his time and departed at approximately 2:30 p.m. On their way out, staff stopped back by the FLL office to return a fluorescent vest and to let Derek know that they were leaving. Staff departed the landfill at approximately 2:45 p.m.

NAME Matt Dahl

DATE 8-10-15

SUPERVISOR MA 8/11/2015