

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

N600640839

FACILITY: Waste Management of Michigan, Inc. – Autumn Hills		SRN / ID: N6006
LOCATION: 700 56th Ave., ZEELAND		DISTRICT: Grand Rapids
CITY: ZEELAND		COUNTY: OTTAWA
CONTACT: Matt Rosser , Landfill Operations Manager		ACTIVITY DATE: 07/26/2017
STAFF: David Morgan	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT:		
RESOLVED COMPLAINTS:		

At 9:00 A.M. on July 26, 2017, Air Quality Division staff Dave Morgan conducted a scheduled inspection of the Autumn Hills Recycling and Disposal Facility (RDF) located at 700 56th Avenue in Zeeland. The purpose of the inspection was to determine the facility's compliance with state and federal air pollution regulations as well as Renewable Operating Permit (ROP) No. MI-ROP-N6006-2012a. Accompanying AQD staff on the inspection was Matt Rosser, Operations Manager; and Chad Dammen, Landfill Gas Technician for Waste Management.

FACILITY DESCRIPTION

Autumn Hills RDF is a municipal solid waste landfill owned and operated by Waste Management Inc. The Autumn Hills RDF has a design capacity greater than 2.5 million cubic meters and a non-methane organic compound (NMOC) emission rate greater than 50 megagrams per year. The landfill is subject to the New Source Performance Standards (NSPS) for Municipal Solid Waste (MSW) Landfills (40 CFR Part 60 Subpart WWW). Because the potential NMOC emissions are greater than 50 megagrams per year the company has installed an active gas collection control system. Landfill gases are either controlled by a flare or are treated for subsequent reuse. The site also includes a solidification process and a composting operation. The facility has discontinued leachate recirculation.

In addition to the NSPS, the source is subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) from Municipal Solid Waste Facilities, promulgated under 40 CFR Part 63, Subpart AAAA.

Autumn Hills is subject to the Standards of Performance for Municipal Solid Waste Landfills promulgated in 40 CFR, Part 60, Subparts A, WWW and XXX. However, by letter dated May 5, 2017, the U.S.EPA Administrator announced the reconsideration of certain requirements in the final rules for "Standards of Performance for Municipal Solid Waste Landfills," under 40 CFR Part 60, Subpart XXX. In addition, the U.S.EPA issued a 90-day stay of 40 CFR Part 60, Subpart XXX requirements, until August 29, 2017 pending reconsideration of the rule. Although the requirements of 40 CFR Part 60, Subpart XXX are stayed, the requirements of 40 CFR Part 60, Subpart WWW remain in effect and applicable to the landfill.

North American Natural Resources Inc. (NANR), which treats the landfill gas for Autumn Hills is located adjacent to Autumn Hills RDF. NANR is subject to the NSPS under 40 CFR Part 60, Subpart WWW because it controls emissions from an NSPS affected source. The NANR facility is permitted under ROP No. MI-ROP-P0264-2012b. Formerly, the two companies were operating under separately issued ROPs, but will be combined into one ROP due to an AQD policy change.

COMPLIANCE EVALUATION

(EULF>50):

The landfill has a design capacity of 20 million cubic yards. Currently the facility has approximately 11,654,000 million cubic yards of waste in place according to the most recent site survey which was conducted in April of 2017.

Records pertaining to maximum design capacity, year-by-year acceptance rate, and amount of waste in place are maintained on site in accordance with the NSPS. In addition, the company has developed and is implementing a startup, shutdown, malfunction plan in accordance with 40 CFR Subpart 63, Subpart AAAA.

Surface Monitoring:

Cover integrity and necessary cover repairs are done on a monthly basis and recorded. These records were reviewed on site. Several leachate outbreaks were documented and addressed.

The surface concentration of methane is monitored at 30 meter intervals, using a TVA-1000 organic vapor analyzer, on a quarterly basis in accordance with the NSPS and ROP. Surface monitoring records for 2016 and 2017 were reviewed on site; the following table is a summary:

Quarter	Results	Response	Compliance
2nd 2016	5 locations > 500 ppm (range 800 - 2,500 ppm)	Cover material added	Y
3rd 2016	No methane > 500 ppm	NA	Y
4th 2016	2 locations > 500 ppm (range 950 - 1,800 ppm)	Cover material added	Y
1st 2017	No methane > 500 ppm	NA	Y
2nd 2017	No methane > 500 ppm	NA	Y

Corrective actions were taken and re-monitoring was conducted within required timeframes. No additional wells needed to be added to the system to address exceedances. Required calibrations were conducted in accordance with the NSPS and ROP prior to the surface monitoring events.

Active Landfill Gas Collection System (EUALGCS/FGLGCS):

Gas generated by the landfill is collected through a series of vertical gas extraction wells that are piped to a main header. On a monthly basis, in accordance with the ROP, the company monitors the vacuum pressure of the collection header, as well as the oxygen concentration, temperature and pressure at each wellhead using a Landtec GEM monitoring device. By design each wellhead has a thermometer and sampling port installed. All data collected is uploaded to a centralized company database. According to company records, there are 102 active collection devices with 102 subject to NSPS monitoring.

According to company records for July 2016 through June 2017 there were no temperature exceedances in any monitored wells. Two wells, HC02 and HC06, had oxygen concentrations above 5% in April and May 2017. These horizontal collectors were approved for abandonment as other collection points were available. No wells had positive pressure.

AQD staff observed wells GW58R3, GW59R2, HC10, HC1, GW118, and GW117. All wells were installed with required equipment and operating properly. It is noted that there was a slight landfill gas odor around GW58R3, however, additional investigation would be necessary to determine the exact source of the odor.

(EUOPENFLARE):

In general, most of the landfill gas generated from the landfill is routed to an off-site treatment system, owned and operated by NANR, that treats the gas for subsequent reuse. Any remaining portion of landfill gas generated is routed to an open flare with a rated capacity to burn 3,000 scfm of landfill gas. The flare is equipped with an infrared detection sensor that continuously monitors flame presence. The flame controller shuts the blower down and the main well field valve upon detection of flame absence. There is also a backup thermocouple which monitors flame temperature and will shut the flare down if the temperature falls below the set point. Automatic attempts are made to reignite the flame if extinguished. The company continuously monitors and records the temperature of the flare.

There is an interlock between the flame controller and the flow valve to insure that gas will not flow to the flare without a flame present. Gas flow to the flare is monitored and recorded on a continuous basis. Records of gas flow to the flare were reviewed on site. When there is no flow to the flare either ZFS or the NANR engine plant is taking all the gas or the flare is not igniting.

During the inspection, there was approximately 524 scfm of gas going to the flare. Typically flow to the flare is under 500 scfm with the remainder of gas flow going to the treatment system. Approximately 1,650 scfm of gas was going to the NANR plant. The company does not have a bypass line to the atmosphere. No visible emissions were observed from the flare.

Startup, Shutdown, Malfunction:

Waste Management is maintaining the necessary documentation of startup, shutdown, malfunction events in accordance with the ROP. All SSM events are addressed in accordance with the SSM plan. Most of the shutdowns were the result of well-field upgrades or power outages. During these shutdowns, gas was burned in the open flare or the blower to the collection system was shutdown. SSM records are attached to this report.

Asbestos Waste (EUASBESTOS):

Asbestos waste is usually received in small quantities and immediately covered over once placed in the landfill. All disposal of waste is plotted on a site map. The company is maintaining all required records including the date of

receipt, generator, transporter, location within the landfill (northing and easting coordinates), elevation, and amount. Records were reviewed on-site which showed approximately 680 yards of asbestos received over the past 12 months. It is noted that proper notification is also submitted to the AQD District Office if Waste Management conducts digging in or near asbestos areas, however, the company generally tries to avoid digging in asbestos areas.

EVALUATION SUMMARY

Autumn Hills RDF appears to be in compliance with all applicable requirements. Records of well monitoring data for August 2016 through July 2017 have been written to CD and are attached to this report. SSM records are also attached to this report.

NAME 

DATE 8/7/17

SUPERVISOR 

