

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

N600629303

FACILITY: Autumn Hills Recycling and Disposal Facility		SRN / ID: N6006
LOCATION: 700 56th Ave., ZEELAND		DISTRICT: Grand Rapids
CITY: ZEELAND		COUNTY: OTTAWA
CONTACT: Fred Sawyers, District Manager		ACTIVITY DATE: 05/04/2015
STAFF: David Morgan	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT:		
RESOLVED COMPLAINTS:		

At 12:30 P.M. on May 4, 2015, Air Quality Division staff Dave Morgan and Kaitlyn DeVries 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-N6006-2012. Accompanying AQD staff on the inspection was Fred Sawyers, District Manager/Engineer for Autumn Hills; Matt Rosser, Site 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.

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-P0264-2012.

COMPLIANCE EVALUATION

(EULF>50):

The landfill has a design capacity of 20 million cubic yards. Currently the facility has approximately 11 million cubic yards of waste in place.

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 on a quarterly basis in accordance with the NSPS and ROP. Surface monitoring records for 2014 and 2015 were reviewed on site and copies made. There were instances where the initial monitored surface methane exceeded the 500 ppm limit. Corrective actions were taken and re-monitoring was conducted within required timeframes. No additional wells were necessary due to the exceedances. (see records). 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 is collected is uploaded to a centralized company database. According to company records, there are 87 active collection devices with 86 subject to

NSPS monitoring.

According to company records for May 2014 through April 2015 there were no temperature exceedances in any monitored wells. There were very few wells with oxygen concentration above 5%, in each case, corrective actions were taken to address the exceedances and to return the wells to compliant operating parameters within the required timeframes. No wells had positive pressure. It is noted that the company is interested in decommissioning wells GW 101 through GW 106 for an interim period while additional waste lifts are added. Since these wells are already deep, the company is concerned about the integrity of these wells should they be extended further. The company already has horizontal collectors installed in the area of these wells and feel that there would be adequate gas collection. The approach to decommissioning the wells sounds approvable, but Mr. Sawyers was advised to submit a formal proposal for review and approval.

(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 approximately 345 scfm of gas was going to the flare. Typically flow to the flare is under 500 scfm with the remainder of gas flow going to the treatment system. The company does not have a bypass line to the atmosphere. No visible emissions were observed from the flare. Approximately 1,915 scfm of gas was going to the NANR plant.

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 landfill open flare or the blower to the collection system was shutdown.

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. Proper notification is also submitted to the AQD District Office if Waste Management conducts digging in or near asbestos areas.

EVALUATION SUMMARY

Autumn Hills RDF appear to be in compliance with all applicable requirements.

NAME 

DATE 5/21/15

SUPERVISOR 