M444149
MAWLA

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

M444941595

FACILITY: WOODLAND MEADOWS RDF		**SRN / ID:** M4449
LOCATION: 5900 HANNAN, WAYNE		**DISTRICT:** Detroit
CITY: WAYNE		**COUNTY:** WAYNE
CONTACT: Paul Mazanec , District Engineer		**ACTIVITY DATE:** 08/28/2017
STAFF: Jill Zimmerman	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Target Inspection		
RESOLVED COMPLAINTS:		

DATE OF INSPECTION	:	August 28, 2017
TIME OF INSPECTION	:	11:00 am
NAICS CODE	:	562212
EPA POLLUTANT CLASS	:	NMOC, CO
INSPECTED BY	:	Jill Zimmerman
PERSONNEL PRESENT	:	Paul Mazanec, District Engineer
FACILITY PHONE NUMBER	:	734- 326-8230
EMAIL ADDRESS	:	PMazanec@wm.com

FACILITY BACKGROUND

Woodland Meadows is a recycling and disposal facility. The facility is located in western Wayne County near the intersection of Van Born Road and Hannan Road. Part of the landfill is located in Canton Township and part of the landfill is located in Van Buren Township, with the nearest residences approximately 200 yards to the east of Van Buren portion of the landfill.

Woodland Meadows is owned and operated by Waste Management of Michigan, Inc. The landfill consists of three separate disposal areas: Woodland Meadows North, which is closed, Woodland Meadows South, which is closed and Woodland Meadows – Van Buren, which began accepting waste in 1994. Woodland Meadows North operated from 1974 to until 1984 and was certified as closed in 1992. Woodland Meadows South operated from 1984 until 1994. Certification to officially close Woodland Meadows South was certified as closed in 2016. Woodland Meadows North and Woodland Meadows South had a combined waste capacity of 8.3 megagrams. The last expansion / construction permit was issued to Woodland Meadows – Van Buren occurred in 2006. This construction permit allowed for an additional 18 million cubic yards of waste to be deposited in the landfill, giving this section of the landfill a design capacity of 53 million megagrams. This permit will expire in approximately eight years.

REQUIRED PPE

During the onsite inspection, I wore steel toed shoes, a hardhat, and a safety vest.

COMPLAINT/COMPLIANCE HISTORY

One odor complaint was received on December 23, 2016. The inspection was unable to verify the reported methane/landfill odors. Surveillance should continue in the area. No additional complaints have been received. No odors were detected off site during the onsite inspection.

PROCESS EQUIPMENT AND CONTROLS

A Municipal Solid Waste landfill is an area in which household and other wastes have been deposited for permanent disposal. Anaerobic decomposition of the buried waste generates landfill gas (LFG). LFG consists mainly of carbon dioxide, methane, and non-methane organic compounds (NMOC). NMOC consists of various organic hazardous air pollutants (HAP) and

volatile organic compounds (VOC). NMOC is the primary regulated pollutant associated with LFG.

On March 12, 1996 the United States Environmental Protection Agency (USEPA) promulgated New Source Performance Standards (NSPS) for MSW landfills which commenced construction, reconstruction, or had their construction permit modified on or after May 31, 1991. The NSPS regulations are coded in 40 CFR 60 Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills. NSPS Subpart WWW required MSW landfills with a design capacity of greater than 2.5 megagrams and a NMOC emission rate greater than 50 megagrams per year to install a LFG collection and control system. Any landfill subject to NSPS Subpart WWW is automatically subject to Maximum Achievable Control Technology (MACT) Subpart AAAA for MSW landfills. The landfill MACT requires subjected landfills to develop a startup, shutdown and malfunction plan (SSM) and to report any SSM events on an annual and semiannual basis.

Woodland Meadows-Van Buren is regulated under NSPS Subpart WWW. A NMOC emission rate report was submitted on May 30, 1996, showing that NMOC emissions were estimated to be greater than 50 megagrams per year. A gas collection and control system (GCCS) design plan was submitted on June 17, 1997. The last update to the GCCS plan was submitted in November 2001.

The Woodland Meadows facility has several devices designed to control LFG:

1). Four enclosed flares near the north portion of the landfill. Currently the ROP lists 4 enclosed flares, while MAERS reported an additional flare that was installed on December 18, 2014. The location of the flares was verified during the onsite inspection.

2). An enclosed flare and an open flare are located near the east side of Woodland Meadows North. These flares are only used to control any gas not used by Ameresco. Currently Ameresco is installing a new gas processing plant, for which will include a flare that Ameresco will be responsible. The open flare is an auxiliary stick flare that can be used on a temporary basis should a flare stop working properly.

3). A treatment system consisting of moisture removal (via knock-out pot), filtration (to remove particles up to one micron), and two stages of compression followed by refrigeration. The treatment system is capable of processing LFG from any of the three landfills. It is owned and operated by Ameresco Woodland Meadows and the treated gas is sent to Ford Motor Company's Wayne Assembly Plant. In the future Ameresco plans to modify their process so that the treated gas can be sold into the natural gas pipeline.

INSPECTION NARRATIVE

I arrived at the facility on August 28, 2017 at 11:00 am, meeting with Mr. Paul Mazanec, District Engineer with Waste Management. Ameresco Woodland Meadows and Woodland Meadows are both located on the same property. These facilities are currently operating as two separate facilities, with two separate Title V permits and two separate SRNs. At the time of the next Title V renewal, these facilities will be recombined as one facility with two separate sections of the Title V permit. The SRN M4449 will be retained with Woodland Meadows becoming Section 1 and Ameresco Woodland Meadows becoming Section 2. During our preinspection meeting, we discussed the wells that are currently operating with HOV.

Next we discussed the operations at the facility. No major changes have been made to this facility since the last time that it was inspected. We also discussed the impact that the

Ameresco project is having on the landfill. Currently, Ameresco is unable to accept any landfill gas. Therefore Woodland Meadows is flaring off all of the landfill gas. It is estimated that operation of the new Ameresco plant will begin around November. At this point, Ameresco will begin accepting landfill gas to process the gas.

After discussing the process, we next drove around the landfill. We observed the active face of the landfill. We then drove to the area of the facility where the flares are located. The flares appeared to be operating properly, and no smoke was observed to be coming from the flares. No odors were smelled while we were on the landfill. There are four enclosed flares located along Lotz Road. There are two additional flares located near the Ameresco plant, an enclosed flare and a candlestick flare. Ameresco will be installing a flare as part of their new plant.

APPLICABLE RULES/PERMIT CONDITIONS

Woodland Meadows was issued Renewable Operating Permit (ROP) MI-ROP-M4449-2012 on December 12, 2012. This permit will expire on December 12, 2017. The renewable period for this permit is between June 12, 2016 and June 12, 2017. The renewal application was received on May 12, 2017. Therefore, this facility is currently operating under the permit shield.

EULANDFILL – This emission unit represents the general Municipal Solid Waste (MSW) Landfill in which the collected landfill gas is sent primarily to a treatment system.

I. Emission Limit (s)
   1. Methane concentration – Compliance. The facility is limited to 500 ppm above background level. The facility monitors the surface concentration quarterly. No exceedances were reported during 2016.

II. Material Limits (s) – NA

III. Process / Operational Restriction (s)
   1. Compliance – The facility is complying with the federal landfill requirements. The facility preforms monthly monitoring of each well head for oxygen, pressure, and temperature. The facility also preforms quarterly monitoring for the surface methane.

IV. Design / Equipment Parameter (s)
   1. Compliance – The permittee has installed a collection and control system that captures the landfill gas that is generated within the landfill. This system appears to be operating properly.
   2. Compliance – The landfill gas is piped currently piped to one of the flares. Once the Ameresco plant is operational, the landfill gas will be processed by Ameresco, where it will either be added to the natural gas pipeline or, if it does not meet the proper characteristics, to the flare.

V. Testing / Sampling
   1. Compliance – The facility preforms surface monitoring on a quarterly basis. No exceedances were reported in 2016.
   2. Compliance – The facility completes quarterly methane monitoring. A record of all monitoring points is maintained onsite.
   3. Compliance – The facility maintains written records on site. The facility has records for all sample dates and locations, including a map of the facility with the locations marked.
   4. Compliance – The facility uses the proper instrumentations when preforming surface scans for methane at the facility.

5. Compliance – The facility preforms quarterly surface methane monitoring. Any exceedances are reported as part of the annual and semiannual ROP certification as a deviation. No exceedances have been reported in 2016.

VI. Monitoring / Recordkeeping
1. Compliance – The facility monitors the landfill cover on a monthly basis.
2. Compliance – The facility maintains a record on the capacity of the landfill. The annual acceptance records were reviewed as part of the records submitted in MAERS for 2016.
3. Compliance – The facility maintains a record on the capacity of the landfill. Annual acceptance records were reviewed as part of the records submitted in MAERS for 2016. This record includes the MG/year and short ton/year of waste in place and accepted each year between 1995 and 2016 for the active side of the landfill. This same record for the north and south sections of the landfill is maintained between 1976 and 2016, though no waste has been accepted since 1994.
4. Compliance – The facility maintains records for the NMOC emissions. In 2016 the facility emitted less than 162 tons of NMOC.
5. NA – No liquid is added to control the waste.

VII. Reporting
1. Compliance – All deviations are reported promptly. During 2016, one deviation were reported and the facility requested higher operating values for four differet wells to correct these deviations.
2. Compliance – Semiannual deviation reports for the past year have been received on time. A detailed deviation report was included for the reporting time period of January 1, 2016 through June 30, 2016. There were no deviations reported between July 1, 2016 and December 31, 2016.
3. Compliance – The Annual ROP certification report was received on March 15, 2017. A detailed deviation report was included.
4. NA – No equipment has been removed since the last inspection.
5. Compliance – The required semiannual reports were received on time. On September 14, 2016 the report for a reporting period between January 1, 2016 and June 30, 2016 was received. On March 15, 2017 the report for a reporting period between July 1, 2016 and December 31, 2016 was received.
6. Compliance – SSM reports were received on time. On September 14, 2016 the SSM report for a reporting period between January 1, 2016 and June 30, 2016 was received. On March 15, 2017 the SSM report for a reporting period between July 1, 2016 and December 31, 2016 was received.

VIII. Stack / Vent Restriction (s) – NA

IX. Other Requirement (s)
1. NA – The landfill control system has not been removed.
2. NA – The landfill is not closed.
3. NA – Monitoring demonstrates compliance at this time.
4. Compliance – The facility is using an approved collection and control system.
5. Compliance – The facility appears to be operating in compliance with 40 CFR Subpart WWW.
6. Compliance – The facility appears to be operating in compliance with 40 CFR Part 63 subparts A and AAAA.
7. NA

EUALGCS – This emission unit represents the active landfill gas collection system at the landfill. Gas mover equipment is used to draw landfill gas from the wells and deliver it to the

control equipment.

I. Emission Limit (s) – NA
II. Material Limit (s) – NA
III. Process / Operational Restriction (s)
1. Compliance – The control system is monitored regularly and all malfunctions are repaired promptly.
2. Compliance – The gas collection system is operating properly throughout the landfill.
3. Compliance – The facility monitors the well heads on a monthly basis for temperature, pressure, and nitrogen or oxygen. If the facility is unable to resolve any exceedances within 15 days, the facility sends a report to MDEQ requesting an alternative operating scenario. A list of all wells operating with an alternative operating scenario was included with the annual ROP certification.
4. Compliance – The facility monitors the well heads for temperature, nitrogen levels and oxygen levels. The facility has requested higher operating temperature, nitrogen, or oxygen values at a particular well as needed. A list of all wells with his alternative operating scenario was included with the annual ROP certification.

IV. Design / Equipment Parameter (s) – Compliance. The facility operates the gas collection system which has been properly designed for this site. When there is a need to install an additional well, the facility will complete this task.
V. Testing / Sampling – NA
VI. Monitoring / Recordkeeping – Compliance. The facility monitors all of the wells on a quarterly basis for temperature, pressure, and nitrogen or oxygen. For any wells with any exceedances, an alternative operating scenario is developed and approved by MDEQ. A record is maintained with the installation dates of each well.
VII. Reporting
1. Compliance – All deviations are reported promptly.
2. Compliance – Semiannual deviation reports for the past year have been received on time. The reports have been received on March 15, 2017, and September 14, 2016. A detailed deviation report was included with this report.
3. Compliance – The Annual ROP certification report was received on March 15, 2017. A detailed deviation report was included.
4. Compliance – The facility submits a semiannual report for the gas collection system. This report was last received on March 15, 2017. The report includes all well head exceedances as well as what action has been done.
5. Compliance – The facility submits a start-up, shut-down, malfunction report semiannually. The last report was received on March 15, 2017.

VIII. Stack / Vent Restriction (s) – NA
IX. Other Requirement (s)
1. Compliance – The facility preforms the required actions to resolve the well head exceedances.
2. Compliance – The facility maintains a record of the start-up, shutdown or malfunctions.
3. NA – The current collection system meets the specifications or alternative parameters.
4. Compliance – The facility is maintains a SSM plan on site. SSM reports were received on time. On September 14, 2016 the SSM report for a reporting period between January 1, 2016 and June 30, 2016 was received. On March 15, 2017

the SSM report for a reporting period between July 1, 2016 and December 31, 2016 was received.

EUNORTHSTICK – Open flare is an open combustor without enclosure or shroud. The initial performance testing for the open flare has already been performed and, therefore, is not required by this table. However, testing conditions are included for the event of a modification.

I. Emission Limit (s) – Compliance. No opacity was observed from the flare during the onsite inspection.
II. Material Limit (s) – Compliance. The net heating value of the LFG was calculated during the initial performance test and was found to be greater than 200 BTU/scf. The facility continually monitors the methane content of the gas produced by the landfill and have determined it to be about 50% methane. LFG with a methane content of 50% has a net heating value of approximately 500 BTU/scf.
III. Process / Operational Restriction (s) – Compliance. The facility operates the flares according to these requirements. There is a continuous pilot in the flare.
IV. Design / Equipment Parameter (s) – NA
V. Testing / Sampling – Compliance. EUNORTHSTICK was performance tested on April 16, 1999.
VI. Monitoring / Recordkeeping — Compliance. The facility maintains the proper records for this flare. The flare has a constantly lit pilot.
VII. Reporting
1. Compliance – All deviations are promptly reported.
2. Compliance – The semiannual reports were received on time.
3. Compliance – The annual report was received on time.
4. Compliance – All gas collection reports were received on time.
5. Compliance – The SSM reports were received on time. SSM reports were received on time. On September 14, 2016 the SSM report for a reporting period between January 1, 2016 and June 30, 2016 was received. On March 4, 2017 the SSM report for a reporting period between July 1, 2016 and December 31, 2016 was received.
6. NA – The landfill is not closed at this time.
7. NA – No equipment has been removed from this facility.

VIII. Stack / Vent Restriction (s) – NA
IX. Other Requirement (s) – The SSM has been developed for this open flare.

EUASBESTOS – The landfill may receive asbestos waste.

I. Emission Limit (s) – NA
II. Material Limit (s) – NA
III. Process / Operational Restriction (s) – Compliance. The facility is notified before the asbestos waste arrives. The asbestos is put in the bottom of that days lift. The facility then covers the waste and keeps records of where this waste is located. Asbestos waste manifests are kept onsite. No visible emissions were observed during the onsite inspection, and no asbestos waste was being accepted during the onsite inspection.
IV. Design / Equipment Parameter (s) – Compliance. The facility has all of the active sites of the landfill on the landfill gas collection system.
V. Testing / Sampling – NA
VI. Monitoring / Recordkeeping – Compliance. These conditions require the facility to maintain records of the following information for any asbestos-containing waste

received by the facility: the name, date, address, and phone number of the waste generator; the name, address, and phone number of the waste transporter; the quantity of asbestos-containing waste in cubic meters or cubic yards; the presence of improperly enclosed or uncovered waste; and the date the waste was received. AQD staff verified that the facility is documenting this information on their shipping invoices.

VII. Reporting
1. Compliance – All deviations are reported promptly. During 2016, no deviations were reported for this emission unit.
2. Compliance – Semiannual deviation reports for the past year have been received on time. No deviations were reported for this emission unit during the past two semiannual deviation reports.
3. Compliance – The Annual ROP certification report was received on March 14, 2017. No deviations were reported from this emission unit during the past year.
4. NA – This site is not closed.
5. Compliance – Records were available for review during the onsite inspection.
6. Compliance – On August 25, 2017 a notification was received. The landfill was installing landfill gas management system components. This installation may have resulted in the disturbance of previously disposed asbestos containing material.

VIII. Stack / Vent Restriction (s) – NA

IX. Other Requirement (s) – NA

FGENCLOSEDFLARES – The enclosed flares serve as a supplemental and back-up control equipment in the event of treatment system outage, or when gas generation exceeds end user demand. Currently there are four enclosed flares located along Lotz Street and one enclosed flare located near the Ameresco Plant. EUENCLOSEDSOUTH4 was installed December 2014.

I. Emission Limit (s) – Compliance. The flares are operating at a destruction efficiency of 98%.

II. Material Limit (s) – NA

III. Process / Operational Restriction (s) – Compliance. The flares operate with a constant pilot. All gas that is not processed by Ameresco is piped to one of these flares. Currently Ameresco is no able to accept any gas until the completion of the installation of the new gas plant. The flares were operating during the onsite inspection.

IV. Design / Equipment Parameter (s) – NA

V. Testing / Sampling – Compliance. EUENCLOSEDSOUTH1 and EUENCLOSEDSOUTH3 were performance tested in January 2009. EUENCLOSEDSOUTH2 was performance tested in November 2011. The results of these tests are available in the Woodland Meadows file. It is unclear whether EUENCLOSEDSOUTH4 was ever performance tested since it was installed in 2014. All stack testing dates will be verified during the next onsite inspection.

VI. Monitoring / Recordkeeping – Compliance. Temperature and combustion records are maintained onsite and can be reviewed onsite.

VII. Reporting
1. Compliance – All deviations are reported promptly.
2. Compliance – Semiannual deviation reports for the past year have been received on time. A detailed deviation report was included with each report.

3. Compliance – The Annual ROP certification report was received on March 14, 2017. A detailed deviation report was included.
4. Compliance – Semiannual gas collection system reports were received promptly with a detailed report describing times when the flare was not operating properly.
5. Compliance – SSM reports have been received on time. SSM reports were received on time. On September 15, 2016 the SSM report for a reporting period between January 1, 2016 and June 30, 2016 was received. On March 14, 2017 the SSM report for a reporting period between July 1, 2016 and December 31, 2016 was received.

VIII. Stack / Vent Restriction (s) – NA
IX. Other Requirement (s) – Compliance. The flare appears to be operating in properly by manufacturer standards.

FGCOLDCLEANERS – Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 281 (h) or Rule 285 (r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.

I. Emission Limit (s) – NA
II. Material Limit (s) – Compliance. The cleaning solvent used in the cold cleaner is "Dyna 143" manufactured by Zep, Inc. According to the MSDS sheet, "Dyna 143" consists of 90-100% petroleum distillates (minerals spirits), by weight.
III. Process / Operational Restriction (s) – Unknown. The cold cleaner was not being used during the onsite inspection. The lid was closed during the onsite inspection.
IV. Design / Equipment Parameter (s) – Compliance. The cold cleaner was designed to meet all of the design requirements of this condition.
V. Testing / Sampling – NA
VI. Monitoring / Recordkeeping (s) – Compliance. The facility maintains a description of the chemicals used in the cold cleaner, including chemical characteristics. During the onsite inspection, the lid of the cold cleaner was closed and operation procedures were listed near the unit.
VII. Reporting – The ROP annual and semiannual certification reports have been received in a timely manner for the past two years.
VIII. Stack / Vent Restriction (s) – NA
IX. Other Requirement (s) – NA

MAERS REPORT REVIEW

This report was received on time. The VOC emissions for EU_COLDCLEANER appeared to have been reported low by a factor of ten and was corrected to 6600 pounds VOC based on the emission factor used by the facility. All other emissions appear to have been reported accurately based on the emission models that were submitted with this report.

FINAL COMPLIANCE DETERMINATION

Woodland Meadows appears to be operating in compliance with all state and federal regulations as well as all conditions of the Title V Renewable Operating Permit. The facility has submitted an application to renew the Title V ROP, and that application is being processed. This facility is located on the same property as Ameresco Woodland Meadows, which processes the LFG to be used for other purposes. During the renewable process, these two sources will be combined into one ROP with two sections. The number and location of the flares will be further investigated during the next onsite inspection.

NAME [signature] DATE 9/25/17 SUPERVISOR JK