

M4449

MANILA

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

M444950258

FACILITY: WOODLAND MEADOWS RDF		SRN / ID: M4449
LOCATION: 5900 HANNAN, WAYNE		DISTRICT: Detroit
CITY: WAYNE		COUNTY: WAYNE
CONTACT: Paul Mazanec , District Engineer		ACTIVITY DATE: 07/25/2019
STAFF: Jill Zimmerman	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Target Inspection		
RESOLVED COMPLAINTS:		

DATE OF INSPECTION : July 25, 2019
TIME OF INSPECTION : 1:45 pm
INSPECTED BY : Jill Zimmerman
PERSONNEL PRESENT : Paul Mazanec, District Engineer
Joe Reed
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 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 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, safety glasses, a hardhat, and a safety vest.

COMPLAINT/COMPLIANCE HISTORY

No complaints have been received since the last onsite inspection in 2017.

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 active landfill. These flares are listed as EUSFLARE1, EUSFLARE2, EUSFLARE3 and EUSFLARE4 in MAERS.
- 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. The open flare is an auxiliary stick flare that can be used on a temporary basis should a flare stop working properly. The facility is considering replacing the enclosed flare at this location with a similar one in the future.
- 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 is sold into the natural gas pipeline.

INSPECTION NARRATIVE

I arrived at the facility on July 25, 2019 at 1:45 pm, meeting with Mr. Paul Mazanec, District Engineer with Waste Management and Joe Reed, 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. During the last onsite inspection, I explained to both Ameresco and Woodland Meadows that EGLE, formerly DEQ, planned to reunite the facilities as one source with separate sections in the Title V permit. Ameresco has requested that the facility remain two separate sources. This decision is pending.

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. Landfill gas is piped to Ameresco, who cleans the gas to pipeline quality and sells it to be used in the natural gas pipeline. Any landfill gas not being used by Ameresco is flared off.

Recently, the landfill has seen an increase of incoming waste, possibly due to the pending

closure of the Detroit incinerator. Long term planning had including the landfill applying for an expansion in about the next five years. However, due to the increased waste recently, the facility is considering applying for the expansion within the next year.

After discussing the process, we next drove around the landfill. We observed the active face of the landfill. The landfill is currently filling in cell 10. The flares appeared to be operating properly, and no smoke was observed to be coming from the flares during preinspection surveillance. 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.

APPLICABLE RULES/PERMIT CONDITIONS

Woodland Meadows was issued Renewable Operating Permit (ROP) MI-ROP-M4449-2012 on December 12, 2012. This permit expired on December 12, 2017. The renewal application was received on May 12, 2017. Therefore, this facility is currently operating under the permit shield. Work on this ROP is on hold until a determination on whether it is appropriate to combine the facility with Ameresco.

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. During the second quarter of 2019 the surface monitoring discovered four exceedances. The exceedances were corrected within 10 days.
- II. Material Limits (s) – NA
- III. Process / Operational Restriction (s)
 1. Compliance – The facility is complying with the federal landfill requirements. The facility performs monthly monitoring of each well head for oxygen, pressure, and temperature. The facility also performs 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 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. The landfill maintains flares to control any gas not accepted by Ameresco.
- V. Testing / Sampling
 1. Compliance – The facility performs surface monitoring on a quarterly basis. The last quarterly surface monitoring occurred on May 21 and 22, 2019.
 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 performing surface scans for methane at the facility.
 5. Compliance – The facility performs quarterly surface methane monitoring. Any exceedances are reported as part of the annual and semiannual ROP

certification as a deviation if not corrected within 10 days.

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 2018.
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 2018. This record includes the MG/year and short ton/year of waste in place and accepted each year between 1995 and 2018 for the active side of the landfill. This same record for the north and south sections of the landfill is maintained between 1976 and 2018, though no waste has been accepted since 1994.
4. Compliance – The facility maintains records for the NMOC emissions. In 2018 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. Deviation reports were most recently received on March 15, 2019.
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 July 1, 2018 through December 31, 2018, with one deviation reported. This report was received on March 15, 2019.
3. Compliance – The Annual ROP certification report was received on March 15, 2019. 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, 2018 the report for a reporting period between January 1, 2018 and June 30, 2018 was received. On March 15, 2019 the report for a reporting period between July 1, 2018 and December 31, 2018 was received.
6. Compliance – SSM reports were received on time. On September 14, 2018 the SSM report for a reporting period between January 1, 2018 and June 30, 2018 was received. On March 15, 2019 the SSM report for a reporting period between July 1, 2018 and December 31, 2018 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 ELGE 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 the 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 ELGE. 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, 2019, and September 14, 2018. A detailed deviation report was included with this report.
 - 3. Compliance – The Annual ROP certification report was received on March 15, 2019. 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, 2019. 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, 2019.
- VIII. Stack / Vent Restriction (s) – NA
- IX. Other Requirement (s)
 - 1. Compliance – The facility performs 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, 2018 the SSM report for a reporting period between January 1, 2018 and June 30, 2018 was received. On March 15, 2019 the SSM report for a reporting period between July 1, 2018 and December 31, 2018 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. This flare 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, 2018 the SSM report for a reporting period between January 1, 2018 and June 30, 2018 was received. On March 15, 2019 the SSM report for a reporting period between July 1, 2018 and December 31, 2018 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 day's 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 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.

VII. Reporting

1. Compliance – All deviations are reported promptly.
2. Compliance – Semiannual deviation reports for the past year have been received on time.
3. Compliance – The Annual ROP certification report was received on March 15, 2019.
4. NA – This site is not closed.
5. Compliance – Records were available for review during the onsite inspection.
6. Compliance – Proper notification is received by the department and shared with the asbestos inspectors as necessary.

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% based on the manufacturers rate as reported in MAERS.
- II. Material Limit (s) – NA
- III. Process / Operational Restriction (s) – Compliance. The flares operate with a constant pilot. 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. EUENCLOSEDSOUTH4 was performance tested on May 7, 2015.
- 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. The last semiannual deviation report was received on March 15, 2019.
 3. Compliance – The Annual ROP certification report was received on March 15, 2019. 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 March 15, 2019 the SSM report for a reporting period between July 1, 2018 and December 31, 2018 was received.
- VIII. Stack / Vent Restriction (s) – NA
- IX. Other Requirement (s) – Compliance. The flares appear 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

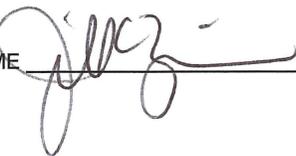
MAERS REPORT REVIEW

This report was received on time. For EUSFLARE1, the numbers used in the supporting data calculations do not appear to match the numbers needed for the calculations. For example, the heat input to flare was calculated to be 183,351 MMBTU/yr. This number appears to have been used in the calculation for the emissions. However, in the supporting information, the number 513,765 MMBTU/yr is recorded. It appears that the emissions are calculated and reported accurately. However, it appears there are errors in the written description. This error appears to have been repeated in EUSFLARE2, EUSFLARE3 and EUSFLARE4. The correct data appears to have been used for all emission calculations.

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. Once it has been decided whether to recombine these sources, the ROP renewal process will proceed.

NAME



DATE

9/27/19

SUPERVISOR

JK