

State Registration Number
M4449

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-M4449-2024

**Woodland Meadows RDF
and
Ameresco Woodland Meadows Romulus LLC**

State Registration Number (SRN): M4449

Located at

5900 Hannan Road and 4620 Hannan Road, Wayne, Wayne County, Michigan 48184

Permit Number: MI-ROP-M4449-2024

Staff Report Date: October 23, 2023

This Staff Report is published in accordance with Sections 5506 and 5511 of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Specifically, Rule 214(1) of the administrative rules promulgated under Act 451, requires that the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), prepare a report that sets forth the factual basis for the terms and conditions of the Renewable Operating Permit (ROP).

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State Registration Number

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RENEWABLE OPERATING PERMIT

OCTOBER 23, 2023 - STAFF REPORT

ROP Number

MI-ROP-M4449-2024

Purpose

Major stationary sources of air pollutants, and some non-major sources, are required to obtain and operate in compliance with an ROP pursuant to Title V of the federal Clean Air Act; and Michigan’s Administrative Rules for Air Pollution Control promulgated under Section 5506(1) of Act 451. Sources subject to the ROP program are defined by criteria in Rule 211(1). The ROP is intended to simplify and clarify a stationary source’s applicable requirements and compliance with them by consolidating all state and federal air quality requirements into one document.

This Staff Report, as required by Rule 214(1), sets forth the applicable requirements and factual basis for the draft ROP terms and conditions including citations of the underlying applicable requirements, an explanation of any equivalent requirements included in the draft ROP pursuant to Rule 212(5), and any determination made pursuant to Rule 213(6)(a)(ii) regarding requirements that are not applicable to the stationary source.

General Information

Stationary Source Mailing Address:	Woodland Meadows RDF Ameresco Woodland Meadows Romulus LLC 5900 Hannan Road and 4620 Hannan Road Wayne, Michigan 48184
Source Registration Number (SRN):	M4449
North American Industry Classification System (NAICS) Code:	562212 221210
Number of Stationary Source Sections:	2
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	201700067/201700043
Responsible Official Section 1:	Jim Hamann, Area Director of Disposal Operations Woodland Meadows RDF/ Waste Management of Michigan, Inc. 330-316-0707
Responsible Official Section 1:	Matt Ball, District Manager Woodland Meadows RDF/ Waste Management of Michigan, Inc. 586-201-5990
Responsible Official Section 2:	Harold Stewart, Manager - Plant Operations Ameresco Woodland Meadows Romulus LLC 847-463-0628
AQD Contact - District Inspector:	Jon Lamb, Senior Environmental Quality Analyst 313-348-2527
AQD Contact - ROP Writer	Matt Karl, Senior Environmental Quality Analyst 517-282-2126
Date Application Received:	May 11, 2017
Date Application Was Administratively Complete:	May 11, 2017

Is Application Shield in Effect?	Yes
Date Public Comment Begins:	October 23, 2023
Deadline for Public Comment:	November 22, 2023

Source Description

Section 1:

Woodland Meadows Recycling and Disposal Facility (RDF) is located at the intersection of Van Born and Hannan Road in Western Wayne County. Part of the landfill is in Canton Township, and part of it is in Van Buren Township. The nearest residences are approximately 200 yards east of the Van Buren portion.

Woodland Meadows RDF is classified as a Type II landfill or a Municipal Solid Waste (MSW) landfill. In Michigan, the Materials Management Division (MMD) establishes standards for Solid Waste Management. Rule 299.4104(d) defines a MSW or Type II landfill as:

“A landfill which receives household waste or municipal solid waste incinerator ash, and which is not a land application unit, surface impoundment, injection well, or waste pile. A municipal solid waste landfill may also receive other types of solid waste, such as any of the following: construction and demolition waste, sewage sludge, commercial waste, nonhazardous sludge, hazardous waste from conditionally exempt small quantity generators, industrial waste. Such a landfill may be publicly or privately owned.”

Woodland Meadows RDF is owned and operated by Waste Management of Michigan, Inc., and consists of three separate disposal areas: Woodland Meadows North and South, which are closed, and Woodland Meadows RDF - Van Buren, which opened in 1994. Woodland Meadows North operated from 1974 to until 1984 and was certified as closed in 1985. Woodland Meadows South operated from 1984 to 1994. Certification to officially close Woodland Meadows South was in 1999. The North and South landfills have a combined design capacity of 8.3 million megagrams (Mg). The last expansion and construction permit was issued to the Van Buren landfill in 2021. The Van Buren landfill has a design capacity of 74,905,000 cubic meters.

Waste materials arrive in a variety of vehicles that have the potential to generate fugitive particulate matter (PM) emissions; this is controlled by frequent wetting and sweeping of the entrance roads.

After waste is transported to the landfill, it is placed in one of the active working areas, known as cells and is covered daily with soil or other materials. When an area reaches design capacity, a final cover is installed to cover the waste. Over time, natural biological processes transform the waste materials and produce leachate and landfill gas (LFG). Initially, decomposition is aerobic until the oxygen supply is exhausted. Anaerobic decomposition of the buried wastes creates landfill gas (LFG). LFG consists mainly of methane (CH₄), carbon dioxide (CO₂), carbon monoxide (CO) and hydrogen sulfide (H₂S), volatile organic compounds (VOCs) and non-methane organic compounds (NMOC). NMOC consists of various organic hazardous air pollutants (HAPs) and VOCs, and it is the primary regulated pollutant associated with landfill gas. The landfill has been evaluated to have greater than 50 Mg per year in NMOC emissions.

The landfill has installed an LFG gas collection and control system (GCCS). The GCCS uses a series of interconnected wells, horizontal collectors, surface collectors and other gas extraction devices operating under negative pressure to collect LFG throughout the landfill and move the gas to one of the pollution control devices. Woodland Meadows can route the LFG to four (4) enclosed flares located near the north side of the Van Buren landfill's active portion along Lotz Road. An additional enclosed flare is located near the east side of the Van Buren landfill's active portion along Hannan Road. An open flare control is located near the east side of the Woodland Meadows North landfill. These flares are used to control any LFG not used by Ameresco. LFG can also be sent to the Ameresco Woodland Meadows Romulus LLC treatment plant to create high British thermal unit (HBTU) gas as described further in Section 2 below.

Section 2:

Ameresco Woodland Meadows, LLC is a LFG treatment facility. The facility dewateres or removes moisture from the LFG via a knock-out pot. The facility then performs two stages of compression of the LFG followed by refrigeration. The treatment system processes LFG from both the closed south section and the Van Buren section of the landfill. After the LFG is treated, it is sent to a third-party end user via a natural gas pipeline. Any LFG not used by Ameresco is flared using either an enclosed or open flare control.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year 2022.

TOTAL STATIONARY SOURCE EMISSIONS

Section 1: Woodland Meadows RDF

Pollutant	Tons per Year
Carbon Monoxide (CO)	83.8
Nitrogen Oxides (NO _x)	16.8
PM10*	118.8
Sulfur Dioxide (SO ₂)	28.4
Volatile Organic Compounds (VOCs)	1.1

* Particulate matter (PM) that has an aerodynamic diameter less than or equal to a nominal 10 micrometers.

The following table lists Hazardous Air Pollutant emissions as calculated for the year 2022 by Woodland Meadows RDF:

Hazardous Air Pollutants (HAPs) **	Tons per Year
NMOC (HAP Surrogate per 40 CFR Part 63 Subpart AAAAA) – uncontrolled***	143.71
NMOC (HAP Surrogate per 40 CFR Part 63 Subpart AAAAA) – fugitive***	35.9

**As listed pursuant to Section 112(b) of the federal Clean Air Act.

Section 2: Ameresco Woodland Meadows Romulus LLC

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	56.0
Nitrogen Oxides (NO _x)	14.5
PM10*	3.6
Sulfur Dioxide (SO ₂)	37.7
Volatile Organic Compounds (VOCs)	1.2

* Particulate matter (PM) that has an aerodynamic diameter less than or equal to a nominal 10 micrometers.

The following table lists Hazardous Air Pollutant emissions as calculated for the PTE demonstration included with the application for PTI No. 61-16 by the facility:

Individual Hazardous Air Pollutants (HAPs) **	Tons per Year
Toluene	0.46
Total Hazardous Air Pollutants (HAPs)	1.88

**As listed pursuant to Section 112(b) of the federal Clean Air Act.

See Parts C and D in the ROP for summary tables of all processes at the stationary source that are subject to process-specific emission limits or standards.

Regulatory Analysis

The following is a general description and history of the source. Any determinations of regulatory non-applicability for this source are explained below in the Non-Applicable Requirement part of the Staff Report and identified in Part E of the ROP.

The stationary source is in Wayne County, which is currently designated by the United States Environmental Protection Agency (USEPA) as attainment/unclassified for all criteria pollutants except for a portion of Wayne County which is currently designated by the USEPA as a non-attainment area with respect to the SO₂ standard.

The stationary source is subject to Title 40 of the Code of Federal Regulations (CFR) Part 70 because the potential to emit of carbon monoxide and particulate matter exceeds 100 tons per year. Also, the potential to emit of any single HAP regulated by Section 112 of the federal Clean Air Act, is equal to or more than 10 tons per year and/or the potential to emit of all HAPs combined is equal to or more than 25 tons per year. NMOC is considered a surrogate for HAPs, and the fugitive emissions of NMOC from the landfill exceed the major source thresholds for HAPs.

Emission units at the stationary source have not been subject to the Prevention of Significant Deterioration regulations of Part 18, Prevention of Significant Deterioration of Air Quality of Act 451 or 40 CFR Part 52.21 because at the time of New Source Review (NSR) permitting, the potential to emit of each criteria pollutant was less than 250 tons per year. In 2016, a "synthetic minor" permit limiting the potential to emit of sulfur dioxide (SO₂) to less than 73.7 tons per year, Permit to Install (PTI) No. 61-16, was issued for enclosed and open flares designed to combust gas associated with the Ameresco operations.

EULANDFILL-ASBESTOS at the stationary source is subject to the National Emission Standard for Hazardous Air Pollutants for Asbestos promulgated in 40 CFR Part 61, Subparts A and M. The landfill has previously accepted and still can accept asbestos containing materials.

EULANDFILL, EULANDFILL-ASEBESTOS, EUACTIVECOLL, EUNORTHSTICK, EUVBENCLOSED1, EUSOUTHENCLOSED1, EUSOUTHENCLOSED2, EUSOUTHENCLOSED3, EUSOUTHENCLOSED4, EUTREATMENTSYS, EUHBTUOPEN, EUHBTUENCL at the stationary source as subject to the Standards of Performance for Municipal Solid Waste Landfills that commenced construction, reconstruction, or modification after July 17, 2014, promulgated in 40 CFR Part 60, Subparts A and XXX.

The stationary source is subject to the National Emissions Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills as promulgated in 40 CFR Part 63, Subpart A and AAAA. The permittee has opted to comply with the provisions for the operational standards in 40 CFR 63.1958 (as well as the provisions in 40 CFR 63.1960 and 40 CFR 63.1961) for a Municipal Solid Waste Landfill with a gas collection and control system. The regulatory language in 40 CFR Part 60, Subpart XXX and 40 CFR Part 63, Subpart AAAA are similar but not identical. Where applicable, similar citations are grouped together.

The monitoring conditions contained in the ROP are necessary to demonstrate compliance with all applicable requirements and are consistent with the "Procedure for Evaluating Periodic Monitoring Submittals."

No emission units have emission limitations or standards that are subject to the federal Compliance Assurance Monitoring rule pursuant to 40 CFR Part 64. The emission limitation(s) or standard(s) for NMOC at the stationary source with the underlying applicable requirement(s) of 40 CFR Part 60, Subpart XXX and 40 CFR Part 63, Subpart AAAA are exempt from the federal Compliance Assurance Monitoring (CAM)

regulation pursuant to 40 CFR 64.2(b)(1)(i) because the emission limitations and standards meets the CAM exemption for regulations proposed after November 15, 1990.

Please refer to Parts B, C and D in the draft ROP for detailed regulatory citations for the stationary source. Part A contains regulatory citations for general conditions.

Source-Wide Permit to Install (PTI)

Rule 214a requires the issuance of a Source-Wide PTI within the ROP for conditions established pursuant to Rule 201. All terms and conditions that were initially established in a PTI are identified with a footnote designation in the integrated ROP/PTI document.

The following table lists all individual PTIs that were incorporated into previous ROPs. There were no new PTIs issued after the effective date of ROP No. MI-ROP-M4449-2012. PTIs issued after the effective date of ROP No. MI-ROP-P0317-2012a are identified in Section 2 Appendix 6 of the ROP.

PTI Number			
NA			

Streamlined/Subsumed Requirements

This ROP does not include any streamlined/subsumed requirements pursuant to Rules 213(2) and 213(6).

Non-applicable Requirements

Part E of the ROP lists requirements that are not applicable to this source as determined by the AQD, if any were proposed in the ROP Application. These determinations are incorporated into the permit shield provision set forth in Part A (General Conditions 26 through 29) of the ROP pursuant to Rule 213(6)(a)(ii).

Processes in Application Not Identified in Draft ROP

The following table lists processes that were included in the ROP Application as exempt devices under Rule 212(4). These processes are not subject to any process-specific emission limits or standards in any applicable requirement.

Section 1:

PTI Exempt Emission Unit ID	Description of PTI Exempt Emission Unit	Rule 212(4) Citation	PTI Exemption Rule Citation
DV LEACHATE TANK	6,000-gallon leachate holding tank with conservation vent	R 336.1212(3)(f)	R 336.1285(2)(aa)
DV DIESEL TANK 1	12,000-gallon diesel storage tank	R 336.1212(3)(e)	R 336.1284(2)(d)
DV DIESEL TANK 2	1,000-gallon diesel storage tank	R 336.1212(3)(e)	R 336.1284(2)(d)
DV FACILITY HEATING	Space heaters used to heat facility	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
DV GASOLINE TANK	1,000-gallon gasoline storage tank	R 336.1212(4)(d)	R 336.1284(2)(g)(ii)
DV USED OIL TANK	500-gallon used oil tank	R 336.1212(3)(e)	R 336.1284(2)(c)
DV PRODUCT OIL TANKS	(3) 400-gallon product oil storage tanks	R 336.1212(4)(d)	R 336.1284(2)(i)
DV PROPANE TANKS	(2) 500-gallon propane storage tanks	R 336.1212(4)(d)	R 336.1284(2)(b)

PTI Exempt Emission Unit ID	Description of PTI Exempt Emission Unit	Rule 212(4) Citation	PTI Exemption Rule Citation
EU PRETREAT TANK	14,000-gallon tank used to pretreat leachate prior to it being discharged into the municipal sewage system	R 336.1212(3)(f)	R 336.1285(2)(aa)

Draft ROP Terms/Conditions Not Agreed to by Applicant

This draft ROP does not contain any terms and/or conditions that the AQD and the applicant did not agree upon pursuant to Rule 214(2).

Compliance Status

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements as of the effective date of this ROP.

Action taken by EGLE, AQD

The AQD proposes to approve this ROP. A final decision on the ROP will not be made until the public and affected states have had an opportunity to comment on the AQD's proposed action and draft permit. In addition, the USEPA is allowed up to 45 days to review the draft ROP and related material. The AQD is not required to accept recommendations that are not based on applicable requirements. The delegated decision maker for the AQD is Brad Myott, Field Operations Supervisor. The final determination for ROP approval/disapproval will be based on the contents of the ROP Application, a judgment that the stationary source will be able to comply with applicable emission limits and other terms and conditions, and resolution of any objections by the USEPA.

State Registration Number
M4449

RENEWABLE OPERATING PERMIT
NOVEMBER 28, 2023 - STAFF REPORT ADDENDUM

ROP Number
MI-ROP-M4449-2024

Purpose

A Staff Report dated October 23, 2023, was developed to set forth the applicable requirements and factual basis for the draft Renewable Operating Permit (ROP) terms and conditions as required by Rule 214(1) of the administrative rules promulgated under Act 451. The purpose of this Staff Report Addendum is to summarize any significant comments received on the draft ROP during the 30-day public comment period as described in Rule 214(3). In addition, this addendum describes any changes to the draft ROP resulting from these pertinent comments.

General Information

Responsible Official Section 1:	Jim Hamann, Area Director of Disposal Operations Woodland Meadows RDF/ Waste Management of Michigan, Inc. 330-316-0707
Responsible Official Section 1:	Matt Ball, District Manager Woodland Meadows RDF/ Waste Management of Michigan, Inc. 586-201-5990
Responsible Official Section 2:	Harold Stewart, Manager - Plant Operations Ameresco Woodland Meadows Romulus LLC 847-463-0628
AQD Contact - District Inspector:	Jon Lamb, Senior Environmental Quality Analyst 313-348-2527
AQD Contact - ROP Writer	Matt Karl, Senior Environmental Quality Analyst 517-282-2126

Summary of Pertinent Comments

No pertinent comments were received during the 30-day public comment period.

Changes to the October 23, 2023 Draft ROP

No changes were made to the draft ROP.

State Registration Number

M4449

RENEWABLE OPERATING PERMIT

JANUARY 18, 2024 - STAFF REPORT ADDENDUM

ROP Number

MI-ROP-M4449-2024

Purpose

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AQD Contact - District Inspector:	Jon Lamb, Senior Environmental Quality Analyst 313-348-2527
AQD Contact - ROP Writer	Matt Karl, Senior Environmental Quality Analyst 517-282-2126

Summary of Pertinent Comments

One comment was received during the 45-day EPA comment period. EPA recommended that General Condition 19 be updated to reflect that annual compliance certifications be submitted electronically through the EPA’s Central Data Exchange (CDX) using the Compliance and Emissions Data Reporting Interface (CEDRI).

Changes to the November 28, 2023 Proposed ROP

General Condition 19 was updated for electronic submissions to the EPA as follows:

19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The annual compliance certification (pursuant to Rule 213(4)(c)) shall be submitted to the USEPA through the USEPA’s Central Data Exchange (CDX) using the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through CDX (<https://cdx.epa.gov/>), unless it contains confidential business information then use the following address: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604-3507. **(R 336.1213(4)(c))**