

State Registration Number
N6037

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-N6037-2022

Michigan Environs, Inc.

Menominee Landfill

State Registration Number (SRN): N6037

Located at

West 6214 Elmwood Road, Menominee, Menominee County, Michigan 49858

Permit Number: MI-ROP-N6037-2022

Staff Report Date: June 13, 2022

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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JUNE 13, 2022 - STAFF REPORT

ROP Number

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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:	Menominee Landfill West 6214 Elmwood Road Menominee, Michigan 49858
Source Registration Number (SRN):	N6037
North American Industry Classification System (NAICS) Code:	562212
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	202100076
Responsible Official:	Kurt Kietzer, Senior District Manager 920-377-0356
AQD Contact:	Joseph Scanlan, Environmental Quality Analyst 906-458-6405
Date Application Received:	January 4, 2021
Date Application Was Administratively Complete:	January 4, 2021
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	June 13, 2022
Deadline for Public Comment:	July 13, 2022

Source Description

The Menominee Landfill (Facility) is owned and operated by Michigan Environs Inc., a subsidiary of Waste Management of Michigan Inc; Kurt Kietzer, Senior District Manager, is the designated Responsible Official. The Facility is located at W6214 Elmwood Road, Menominee County, Menominee, Michigan.

A landfill means an area of land or an excavation in which wastes are placed for permanent disposal. Michigan Environs Inc. is a legacy controlled landfill and is classified as a Type II Municipal Solid Waste (MSW) landfill. A MSW landfill or a Type II landfill according to Part 115, Solid Waste Management, of Act 451, is:

"A landfill which receives household waste, municipal solid waste incinerator ash or sewage sludge and which is not a land application unit, surface impoundment, injection well, or waste pile. A municipal solid waste landfill also may receive other types of solid waste, such as commercial waste, non-hazardous sludge, conditionally exempt small quantity generator waste, and industrial waste. Such a landfill may be publicly or privately owned."

The Facility currently accepts sludge, asbestos containing wastes, fly ash, industrial waste, and miscellaneous solids, along with municipal household waste. Natural biological processes occurring in landfills transform the waste's constituents (above listed wastes) producing leachate and landfill gas. Initially, decomposition is aerobic until the oxygen supply is exhausted. Anaerobic decomposition of buried refuse creates most of the landfill gas. Landfill gas consists mainly of methane, carbon dioxide, and non-methane organic compounds (NMOC). The NMOC is the primary regulated air pollutant associated with landfill gas generation, which is promulgated as a regulated air pollutant under the Standards of Performance for New Stationary Sources, Subpart 000 - Standards of Performance for Municipal Solid Waste Landfills (NSPS, Subpart 000).

Landfill gas from the Facility is collected through a passive gas collection system consisting of 26 vents and 19 passive flares. The vent wells rely on positive pressure created by the Facility to move the gas rather than through the use of mechanical equipment. The landfill gas migrates up through the wells and is then released into the atmosphere or is combusted via flaring. The requirements of this system can be found in Table EULANDFILL<34.

The current passive system and future active system can be operated by Michigan Environs Inc. until 30 months after the Facility's actual NMOC emissions reach 34 Megagrams (Mg). When emission calculations show NMOC emissions > 34 Mg/year, the Facility has the option of either installing an active gas collection and control system (GCCS) within 30 months or conducting Tier 2 and/or Tier 3 testing within 6 and 12 months, respectively. Tier 2 testing utilizes site-specific NMOC concentrations and Tier 3 testing utilizes site-specific methane generation rate. If Tier 2 and/or Tier 3 NMOC mass emission rate is < 34 Mg/year, the Facility resumes annual submittal of NMOC emission rate reports, using Tier 2 or 3 data, until such time as either calculations show NMOC mass emission rate is greater than or equal to 34 Mg/year, triggering installation of a GCCS, or the Facility permanently closes. Based on the most recent Tier 2 testing that was completed on November 6, 2020, Facility NMOC emissions at the Menominee Landfill are approximately 7.51 Mg/year.

If the Facility's annual NMOC mass emission rate is equal to or greater than 34 Mg/year, the Facility has 12 months to submit an approvable landfill gas collection and control design plan that satisfies the requirements of NSPS Subpart 000. Some of the requirements of NSPS Subpart 000 require the design plan to specify equipment that can fulfill specific capture and destruction efficiencies that includes reduction of NMOC from a control system by 98-percent, or an outlet concentration of less than 20 parts per million by volume. It is expected that this design plan will include an active landfill gas collection system that will be routed to a landfill gas combustion device. An active system mechanically pulls the landfill gas from the Facility, instead of allowing it to freely migrate to the collection points like a passive system. The

equipment specified by the approved design plan shall be installed and operating properly within 30 months after the first annual emission rate report showing NMOC greater than or equal to 34 Mg/year.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2021**.

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	2.44
Non-Methane Organic Compounds (NMOC)	2.45
Particulate Matter (PM10)	0.58
Particulate Matter (PM2.5)	0.11
Volatile Organic Compounds (VOCs)	0.96

This source is a true minor source of HAPs, thus no HAP emissions data is listed.

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 Menominee County, which is currently designated by the United States Environmental Protection Agency (USEPA) as attainment/unclassified for all criteria pollutants.

The stationary source is subject to the New Source Performance Standards for Municipal Solid Waste Landfills promulgated in Title 40 of the Code of Federal Regulations (CFR) Part 62, Subpart OOO. The stationary source is subject to Title 40 of the CFR, Part 70, because its design capacity exceeds 2.5 million Mg and 2.5 million cubic meters; however, no pollution control equipment is required at this time because actual NMOC emissions are less than 34 Mg/year. Additionally, the Facility is subject to the asbestos regulations found in 40 CFR 61.154, because the Facility accepts asbestos containing waste (asbestos requirements are found in Table EUASBESTOS).

The stationary source is a minor source of HAP emissions because the potential to emit of any single HAP regulated by Section 112 of the federal Clean Air Act, is less than 10 tons per year and the potential to emit of all HAPs combined are less than 25 tons per year.

No emission units at the stationary source are currently subject to the Prevention of Significant Deterioration regulations of Part 18, Prevention of Significant Deterioration of Air Quality of Act 451

EUASBESTOS 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 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, because all emission units at the stationary source either do not have a control device or those with a control device do not have potential pre-control emissions over the major source thresholds.

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. PTIs issued after the effective date of ROP No. MI-ROP-N6037-2016 are identified in Appendix 6 of the ROP.

PTI Number			
NA	NA	NA	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.

PTI Exempt Emission Unit ID	Description of PTI Exempt Emission Unit	Rule 212(4) Citation	PTI Exemption Rule Citation
EUGAS-AST	One 300-gallon gasoline above ground storage tank installed in 2007	R 336.1212(4)(c)	R 336.1284(g)(i)
EUPROPANE-HTRS	Three (3) propane fired space heaters for building service heat, each with rated heat input capacity < 200,000 Btu/hr	R 336.1212(4)(b)	R 336.1282(b)(i)
EURICE	Various small, mobile, non-road reciprocating internal combustion engines	R 336.1212(4)	R 336.1285(g)

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 Michael Conklin, Acting Marquette District 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.

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RENEWABLE OPERATING PERMIT
JULY 21, 2022 - STAFF REPORT ADDENDUM

ROP Number
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Purpose

A Staff Report dated June 13, 2022, 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:	Kurt Kietzer, Senior District Manager 906-377-0356
AQD Contact:	Joseph Scanlan, Environmental Quality Analyst 906-458-6405

Summary of Pertinent Comments

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

Changes to the June 13, 2022 Draft ROP

No changes were made to the draft ROP.