

State Registration Number
N6007

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-N6007-2022

Tri-City Landfill

State Registration Number (SRN): N6007

Located at

426 North Ruth Road, Carsonville, Sanilac County, Michigan 48419

Permit Number: MI-ROP-N6007-2022

Staff Report Date: June 27, 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 27, 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:	Tri-City Landfill 426 North Ruth Road Carsonville, Michigan 48419
Source Registration Number (SRN):	N6007
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:	202200022
Responsible Official:	John Gall, District Manager Waste Management 810-343-9231
AQD Contact: District Inspector:	Nathanael Gentle, Environmental Quality Analyst 989-778-0025
AQD Contact: ROP Writer:	Matthew Karl, Environmental Quality Analyst 517-282-2126
Date Application Received:	January 20, 2022
Date Application Was Administratively Complete:	January 20, 2022
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	June 27, 2022
Deadline for Public Comment:	July 27, 2022

Source Description

Tri-City Landfill is owned by Waste Management of Michigan, Inc. The facility is in Sanilac County in the City of Carsonville. The nearest structure is the Bridge Hampton Township Hall which is across the street along North Ruth Road. The nearest school is approximately a mile to the south at the intersection of North Ruth Road and Sanilac Road. The Black River runs to the north and west of the landfill. The Black River is within ~300 meters to the north, within ~800 meters to the west and ~430 meters to the southwest of the landfill.

The stationary source includes an active municipal solid waste landfill (MSW) with an active landfill gas collection system, both of which are operated year-round. The collection system is comprised of a series of gas wells, a network of collection piping and headers, condensate drains, and an open flare. Solid waste arrives in a variety of vehicles that potentially generate fugitive dust emissions. The primary standard industrial code (SIC) is 4953 (Municipal Solid Waste Landfill). The North American Industry Classification System (NAICS) code is 562212 - Solid Waste Landfill.

The landfill serves as the final disposal point for general and household waste and inert wastes such as construction and demolition debris, foundry sand, ash, and low-level contaminated soils. The facility also accepts asbestos waste. The solid waste is transported to the facility to an area (cell) where it is deposited on the working surface. The deposited waste is covered with soil or other EGLE approved alternative daily cover materials (ADCM) daily. When a cell reaches its design capacity, a top liner (cap) is installed, covering the waste. Natural biological processes occurring in landfills decompose the waste 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 a small percentage of non-methane organic compounds (NMOC). The NMOC fraction consists of various organic hazardous air pollutants (HAPs), greenhouse gases, and volatile organic compounds (VOCs).

The landfill gas is collected at the facility by an active gas collection and control system (GCCS). The system consists of vertical and horizontal wells installed in the landfilled refuse, which remove landfill gas by vacuum that is applied to the wells from a blower. The collected landfill gas is then routed to a non-assisted open flare for emission control. The collection system is periodically modified by adding or removing gas wells or collection piping when sections of the landfill have significant increases or decreases in gas production.

The landfill is classified as a Type II facility, and therefore does not receive any regulated quantities of hazardous waste that cannot be placed in a Type II facility.

The Materials Management Division (MMD) approved a construction permit for a vertical expansion of 80.2 acres at the RDF on May 15, 2012. The expansion increased the design capacity from 12.1 million cubic yards (9.3 million cubic meters) to 17.3 million cubic yards (13.2 million cubic meters). Therefore, the facility is categorized as having a capacity of >2.5 million megagrams and >2.5 million cubic meters. The facility has previously demonstrated a calculated NMOC emission rate ≥ 50 megagrams.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2020**.

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	9.12
Nitrogen Oxides (NO _x)	2.00
Particulate Matter (PM-10)*	7.32
Sulfur Dioxide (SO ₂)	1.09

Pollutant	Tons per Year
Volatile Organic Compounds (VOCs)	0.12

* 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 2020 by Tri-City Landfill:

Individual Hazardous Air Pollutants (HAPs) **	Tons per Year
NMOC (HAP Surrogate per 40 CFR Part 63, Subpart AAAA)	3.02
Total Hazardous Air Pollutants (HAPs)	3.02

**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 Sanilac 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 Title 40 of the Code of Federal Regulations (CFR) Part 70, because the source is subject to 40 CFR Part 62, Subpart OOO Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction On or Before July 17, 2014. The 40 CFR Part 62, Subpart OOO Federal Plan requires a 40 CFR Part 70, Renewable Operating Permit (ROP) for existing MSW landfills with a capacity equal to or exceeding 2.5 million megagrams and 2.5 million cubic meters. Subpart OOO includes the option to comply with the major compliance provisions of 40 CFR Part 63, Subpart AAAA.

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, because at the time of New Source Review permitting the potential to emit of each criteria pollutant was less than 250 tons per year.

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.

EULANDFILL, EUACTIVECOLL and EUOPENFLARE at the stationary source are subject to the National Emissions Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills as promulgated in 40 CFR Part 63, Subparts A and AAAA. Beginning no later than September 27, 2021, all landfills described in 40 CFR 63.1935 must meet the requirements of this subpart. A landfill may choose to meet the requirements of this subpart rather than the requirements identified in 40 CFR 63.1930(a) at any time before September 27, 2021. The facility notified the AQD that the facility elected to opt-in to 40 CFR Part 63, Subpart AAAA on September 16, 2021. Currently, the requirements for 40 CFR 63.1930(b) apply and are included as applicable in this ROP Renewal.

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.

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
EUSHOPHEATERS	Two (2) natural gas heaters rated at 0.80 MMBTU/hr.	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUSCALEHEATER1	Natural gas heater rated at 0.077 MMBTU/hr.	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUSCALEHEATER2	Natural gas heater rated at 0.01 MMBTU/hr.	R 336.1212(4)(c)	R 336.1282(2)(b)(i)

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 Christopher Ethridge, Field Operations Manager. 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 28, 2022 - STAFF REPORT ADDENDUM

ROP Number
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Purpose

A Staff Report dated June 27, 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:	John Gall, District Manager Waste Management 810-343-9231
AQD Contact: District Inspector:	Nathanael Gentle, Environmental Quality Analyst 989-778-0025
AQD Contact: ROP Writer:	Matthew Karl, 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 June 27, 2022 Draft ROP

No changes were made to the draft ROP.