Michigan Department of Environment, Great Lakes, and Energy
Air Quality Division

State Registration Number

N2952

RENEWABLE OPERATING PERMIT STAFF REPORT

ROP Number

MI-ROP-N2952-2022

Hastings Landfill

State Registration Number (SRN): N2952

Located at

1899 North M-43 Highway, Hastings, Barry County, Michigan 49058

Permit Number: MI-ROP-N2952-2022

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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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:	Hastings Landfill 1899 North M-43 Highway Hastings, Michigan 49058
Source Registration Number (SRN):	N2952
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:	202200036
Responsible Official:	Matthew Rosser, District Manager 616-953-5912
AQD Contact - District Inspector:	Dave Morgan, Environmental Quality Specialist 616-5824-1139
AQD Contact - ROP Writer	Matthew Karl, Environmental Quality Analyst 517-282-2126
Date Application Received:	February 4, 2022
Date Application Was Administratively Complete:	February 4, 2022
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	June 27, 2022
Deadline for Public Comment:	July 27, 2022

Source Description

Hastings Landfill is located just north of Hastings, Michigan. The nearest business is Brite Beginnings Childcare Center which is located approximately 1000 feet to the north along the North M-43 Highway. The nearest residences are located within 500 feet across the M-43 Highway along Coats Grove Road. The nearest body of water is Leach Lake which is approximately 500 feet to the east.

Hastings Landfill is classified as a Municipal Solid Waste (MSW) landfill or Type II landfill. In Michigan, the Materials Management Division (MMD), EGLE, 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."

The landfill first started receiving waste in 1955. The landfill has a permitted design capacity of 4.48 million cubic yards and accepts approximately 250 tons of waste per day. The last recorded waste survey was from April 2020 and at that time there were approximately 2.46 million cubic yards of waste in place. The landfill began accepting asbestos waste in December 2003. Asbestos waste is placed in a consolidated area within the landfill and is covered immediately after placement.

Waste is transported to the landfill in a variety of vehicles that potentially generate fugitive dust particulate matter (PM) from interaction with the landfill's roads. After waste is transported to the landfill, it is emplaced in one of the active working areas known as cells. The landfill consists of a closed disposal cell and various active disposal cells. 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 LFG. LFG consists mainly of methane (CH_4), carbon dioxide (CO_2), carbon monoxide (CO), hydrogen sulfide (H_2S), volatile organic compounds (VOCs) and non-methane organic compounds (NMOC). NMOC is the primary regulated air pollutant associated with LFG generation. The Hastings Landfill has been evaluated and determined to generate less than 34 megagrams per year NMOC emissions.

Although not required because of the amount of emissions generated, the landfill installed and operates an active gas collection and control system (GCCS) that is used to prevent off-site migration of LFG as well as to control odor. The LFG is routed to an enclosed flare control for combustion.

The landfill also has a venturi air stripper used to purge and treat contaminated groundwater. The air stripper has been operational since 1993.

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)	6.9
Nitrogen Oxides (NO_x)	2.3
PM10*	1.6
Sulfur Dioxide (SO_2)	0.6
Volatile Organic Compounds (VOCs)	0.1

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

The following table lists Hazardous Air Pollutant emissions potential to emit by 2025 submitted by the source:

Individual Hazardous Air Pollutants (HAPs) **	Tons per Year
NMOC (HAP Surrogate)- uncontrolled***	11.3
NMOC (HAP Surrogate)- fugitive***	**3.0**

**As listed pursuant to Section 112(b) of the federal Clean Air Act.
***LandGEM output and fugitive emissions based on equation from the EGLE Supplemental Instructions for Municipal Solid Waste Landfills.

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 Barry 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 was subject to the new source performance standard (NSPS) 40 CFR Part 60, Subpart WWW which requires affected facilities with a design capacity equal to or greater than 2.5 million cubic meters and 2.5 million megagrams to obtain a renewable operating permit (ROP).

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 have been 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.

The stationary source was subject to the Standards of Performance for Municipal Solid Waste Landfills promulgated in 40 CFR Part 60, Subparts A and WWW. On June 21, 2021, the facility became subject to the Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction On or Before July 17, 2014 and Have Not Been Modified or Reconstructed Since July 17, 2014 as specified in 40 CFR Part 62, Subpart OOO. Hastings Landfill is considered a legacy landfill under the Federal Plan. Michigan is not currently the authorized representative (the “authorized representative” is the legal entity who can act on behalf of the public, in this case the “authorized representative” is the EPA) and therefore Michigan is implementing and enforcing this regulation through the ROP.

The landfill is not subject to the National Emission Standard for Hazardous Air Pollutants for Municipal Solid Waste Landfills promulgated in 40 CFR Part 63, Subpart AAAA since the stationary source is a minor source of HAP emissions and the estimated uncontrolled NMOC emissions are less than 50 megagrams per year (Mg/yr). The most recent Tier 2 NMOC Emission Rate Report, dated February 11, 2021, included a five-year estimate of NMOC emissions. The highest projected NMOC emission rate over this period was 10.27 Mg/yr in 2025.

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. These requirements are contained in EUASBESTOS.

EUGWTS is for a groundwater treatment system that contains a venturi air scrubber to remediate groundwater contaminated with VOCs. The company monitors and records the VOC concentration of the influent and effluent on a quarterly basis through grab sampling.

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 62, Subpart OOO 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 meet 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)

The following table lists all individual PTIs that were incorporated into previous ROPs. PTIs issued after the effective date of ROP No. MI-ROP-N2952-2017 are identified in Appendix 6 of the ROP.

PTI Number			
535-91A	535-91B		

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
FGHEATERS	LFG-fired heaters used for building heat.	Rule 212(4)(c)	Rule 282(2)(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 Christopher Ethridge, 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	RENEWABLE OPERATING PERMIT	ROP Number
N2952	July 28, 2022 - STAFF REPORT ADDENDUM	MI-ROP-N2952-2022

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:	Matthew Rosser, District Manager 616-953-5912
AQD Contact - District Inspector:	Dave Morgan, Environmental Quality Specialist 616-5824-1139
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.