State Registration Number N2689

RENEWABLE OPERATING PERMIT STAFF REPORT

ROP Number

MI-ROP-N2689-2020b

Vienna Junction Industrial Park Sanitary Landfill

State Registration Number (SRN): N2689

Located at

6233 Hagman Road, Erie, Monroe County, Michigan 48133

Permit Number: MI-ROP-N2689-2020b

Staff Report Date: November 25, 2019

Amended Dates: June 20, 2022

October 26, 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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State Registration Number

RENEWABLE OPERATING PERMIT

ROP Number

N2689

NOVEMBER 25, 2019 - STAFF REPORT

MI-ROP-N2689-2020

<u>Purpose</u>

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:	Vienna Junction Industrial Park Sanitary Landfill 6233 Hagman Road Erie, Michigan 48133 and Vienna Junction Energy, LLC 6505 Hagman Road Erie, Michigan 48133
Source Registration Number (SRN):	N2689
North American Industry Classification System (NAICS) Code:	562212
Number of Stationary Source Sections:	2
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	201800165
Responsible Official Section 1:	Mr. Brent Goodsell, Area President Republic Services 317-917-7358
Responsible Official Section 2:	Mr. Anthony J Falbo, Senior Vice President – Operations, Fortistar 716-439-1004
AQD Contact:	Ms. Diane Kavanaugh Vetort Senior Environmental Quality Analyst 517-416-3537 Ms. Stephanie Weems Environmental Quality Analyst 517-416-3351
Date Application Received:	January 7, 2019
Date Application Was Administratively Complete:	January 7, 2019

Is Application Shield in Effect?	Yes
Date Public Comment Begins:	November 25, 2019
Deadline for Public Comment:	December 26, 2019

Source Description

The Vienna Junction Industrial Park Sanitary Landfill (Vienna Junction LF) is a municipal solid waste (MSW) landfill located in Erie, Michigan. The Vienna Junction LF (Section 1) is owned and operated by Republic Services. Vienna Junction LF has design capacity greater than 2.5 million megagrams (Mg) and 2.5 million cubic meters and has estimated uncontrolled emissions greater equal to or greater than 50 megagrams per year (Mg/yr) of nonmethane organic compounds (NMOC).

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 alternate daily cover materials (ADCM) on a daily basis. When a cell reaches its design capacity, a liner 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 NMOC. The NMOC fraction consists of various organic hazardous air pollutants (HAPs), greenhouse gases, and volatile organic compounds (VOC).

At Vienna Junction LF the landfill gas (LFG) is collected through a series of vertical gas extraction wells/horizontal collectors/connections to leachate sumps and cleanout risers. Collected gas is transmitted to Vienna Junction Energy, LLC (VJE) (Section 2) for treatment for off-site sale to an end user. LFG intended for sale is treated first by entering a fuel gas compressor. The LFG is compressed to the pressure required to transmit the gas to the end user. The LFG temperature is raised above the dew point by compression. The compressed LFG passes through an air-to-gas heat exchanger and a gas-to-gas heat exchanger to condense the water vapor. A chiller will operate intermittently to further reduce the water vapor. Particulates and water are removed by a minimum of 10 micron coalescing filter. The LFG passes through a final gas-to-gas heat exchanger. The heat exchanger reheats the LFG to approximately 20 degrees F above its dew point. This prevents condensation of the remaining water vapor in the LFG in the pipeline. The gas is then metered and enters the pipeline for sale to the end user.

Any gas that is not conditioned by the treatment system and sold to an off-site customer is burned in the enclosed flare owned by Vienna Junction LF. Both the treatment system and the enclosed flare are subject to 40 CFR Part 60, Subparts A and WWW because the equipment provides the air pollution control of the NMOC emissions form the NSPS affected source. Additionally, Vienna Junction LF is currently subject to 40 CFR Part 60, Subpart XXX. This is because the site obtained an expansion permit and commenced construction, reconstruction, or modification after July 17, 2014. Since Vienna Junction LF is also subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for MSW landfills, 40 CFR Part 63, Subpart AAAA which references Subpart WWW, Vienna Junction LF and VJE must comply with the requirements of both WWW and XXX.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2018**

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	32.4
Lead (Pb)	0
Nitrogen Oxides (NO _x)	9.7
Particulate Matter (PM)	27.7
Sulfur Dioxide (SO ₂)	0.7
Volatile Organic Compounds (VOCs)	0.4
Nonmethane Organic Compounds (NMOC)	5.9

Pollutant	Tons per Year
Individual Hazardous Air Pollutants (HAPs)**	
Total Hazardous Air Pollutants (HAPs)	NA

^{**}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 Monroe County, which is currently designated by the United States Environmental Protection Agency (USEPA) as a non-attainment area with respect to the 8-hour ozone standard.

The stationary source, Vienna Junction LF, is a Type II sanitary landfill, which is a Municipal Solid Waste (MSW) landfill. Act 451, Part 115, Solid Waste Management defines an MSW or Type II landfill as:

"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 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 initial Renewable Operating Permit (ROP) contained Vienna Junction LF's Permit to Install (PTI) No. 522-96 for a system composed of an enclosed flare, compressor internal combustion engine, and dehydration unit reboiler. This system had emission limits for VOC, nitrogen oxide, sulfur dioxide, and carbon monoxide. The flare was owned by Vienna Junction LF and the dehydration unit reboiler and internal combustion engine for gas compression were owned by VJE. The emission limits were placed in both the EUENCLOSEDFLARE Table in Section 1 and the EUICENGINE Table in Section 2. During the ROP technical review, it was determined that both the compressor engine and reboiler were exempt from Rule 201.

In 2005, VJE dismantled and removed the dehydration boiler and compressor engine. An electric compressor is now used to compress the LFG as part of the EUTREATMENTSYS. The EUENCLOSEDFLARE was modified/reconstructed in April 2008 and is considered exempt from Rule 201 pursuant to Rule 285(aa).

Subsequently, the compression equipment at VJE has been shut down since March 18, 2016; therefore, currently all LFG is routed to the enclosed flare.

Vienna Junction LF was issued a solid waste expansion permit to construct on July 2, 2015 and commenced construction of the expansion in May 2016. Due to this expansion, the source became subject to the requirements of the New Source Performance Standards (NSPS) under 40 CFR Part 60, Subpart XXX. With this expansion, a phased gas collection control system (GCCS) design has been implemented at the site in order to comply with the NSPS. This design includes additional extraction wells and horizontal collection trenches being installed as needed and estimated peak LFG generation expected to occur in the year 2031.

In Section 1 of the ROP, Vienna Junction LF has the following emission unit and flexible groups: EULANDFILL, EUACTIVECOLL, EUENCLOSEDFLARE, EUASBESTOS, and FGCOLDCLEANERS.

In Section 2, VJE has one emission unit: EUTREATMNTSYS.

EULANDFILL, EUACTIVECOLL, EUTREATMNTSYS, and EUENCLOSEDFLARE are subject to Title 40 of the Code of Federal Regulations (CFR) Part 70, because the landfill is subject to the New Source Performance Standard (NSPS) for Municipal Solid Waste Landfills, which was promulgated in Title 40 of the Code of Federal Regulations, Part 60, Subparts A, WWW, and XXX, and the Maximum Achievable Control Technology (MACT) Standard for Municipal Solid Waste Landfills, which was promulgated in Title 40 of the Code of Federal Regulations, Part 63, Subparts A and AAAA.

EULANDFILL, EUACTIVECOLL, EUTREATMNTSYS, and EUENCLOSEDFLARE are subject to the NSPS for Municipal Solid Waste Landfills promulgated in 40 CFR Part 60, Subparts WWW and XXX and the MACT for Municipal Solid Waste Landfills promulgated in 40 CFR Part 63, Subpart AAAA because Vienna Junction LF was modified after July 17, 2014, and has a design capacity greater than 2.5 million Mg and 2.5 million cubic meters and has estimated uncontrolled emissions equal to or greater than 50 Mg/yr of NMOC.

EUASBESTOS is subject to 40 CFR Part 61, Subpart M – National Emission Standards for Hazardous Air Pollutants (NESHAP) for Asbestos. All applicable requirements and underlying applicable regulations are included within the EUASBESTOS Table of the 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 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.

The stationary source is not subject to the federal Compliance Assurance Monitoring (CAM) rule (40 CFR 64) because the emission limitations or standards for MSW landfills are covered by 40 CFR Part 63, Subpart AAAA. Thus, MSW landfills are exempt from CAM requirements.

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."

The stationary source is not subject to the federal Compliance Assurance Monitoring (CAM) rule (40 CFR Part 64) because the emission limitations or standards for MSW landfills are covered by 40 CFR Part 63, Subpart AAAA. Thus, MSW landfills are exempt from CAM requirements.

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-N2689-2014 are identified in Appendix 6 of the ROP.

PTI Number			
552-96			

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
DV-Furnaces	Natural Gas furnaces for comfort heat	R 336.1212(4)(c)	R 336.1282(b)(i)
DV-Propane	500 gallon propane tank	R 336.1212(4)(d)	R 336.1284(2)(b)
DV-Powerwasher	Natural gas – hot water power washer	R 336.1212(4)(b)	R 336.1282(b)(i)
DV-Diesel Tank	10,000 gallon diesel fuel tank – stationary	R 336.1212(4)(d)	R 336.1284(2)(b)

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 Scott Miller, Jackson 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.

State Registration Number

RENEWABLE OPERATING PERMIT

ROP Number

N2689

MI-ROP-N2689-2020

JANUARY 7, 2020 - STAFF REPORT ADDENDUM

<u>Purpose</u>

A Staff Report dated November 25, 2019, 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:	Mr. Brent Goodsell, Area President Republic Services 317-917-7358
Responsible Official Section 2:	Mr. Anthony J Falbo, Senior Vice President – Operations, Fortistar 716-439-1004
AQD Contact:	Ms. Diane Kavanaugh Vetort Senior Environmental Quality Analyst 517-416-3537 Ms. Stephanie Weems Environmental Quality Analyst 517-416-3351

Summary of Pertinent Comments

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

Changes to the November 25, 2019 Draft ROP

No changes were made to the draft ROP.

State Registration Number

RENEWABLE OPERATING PERMIT

ROP Number

N2689

JUNE 20, 2022 - STAFF REPORT FOR RULE 217(2) REOPENING MI-ROP-N2689-2020a

Purpose

On March 4, 2020, the Department of Environment, Great Lakes, and Energy, Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-N2689-2020 to Vienna Junction Sanitary Landfill and Vienna Junction Energy, LLC, pursuant to Rule 214 of the Michigan Air Pollution Control Rules. Once issued, the AQD is required to reopen the ROP if the criteria described in Rule 217 are met. Only those conditions to be added or changed in the ROP are to be considered during this public comment period. The purpose of this Staff Report is to describe the changes that were made to the ROP pursuant to Rule 217.

General Information

Responsible Official Section 1:	Heather Brown, General Manager 734-848-5216
Responsible Official Section 2:	Anthony Falbo, Senior Vice President -Operations 716-439-1004
AQD Contact:	Diane Kavanaugh Vetort, Senior EQA 517-416-3537
Date Public Comment Begins:	June 20, 2022
Deadline for Public Comment:	July 20, 2022

Regulatory Analysis

The AQD has determined that the ROP must be reopened in order to remove obsolete requirements related to 40 CFR Part 60, Subpart WWW and 40 CFR Part 63, Subpart AAAA, and to add new applicable requirements associated with 40 CFR Part 60, Subpart XXX and 40 CFR Part 63, Subpart AAAA.

This ROP previously contained requirements to ensure compliance with 40 CFR Part 60, Subpart WWW, and Subpart XXX, for Municipal Solid Waste Landfills with NMOC emissions greater than 50 megagrams per year combined with 40 CFR Part 63, Subpart AAAA requirements. For 40 CFR Part 63, Subpart AAAA, new applicable provisions per 40 CFR 63.1930(b) apply after September 28, 2021. 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 used to comply with the provisions of the 40 CFR Part 60, Subpart XXX.

Description of Changes to the ROP

The following emission unit special conditions which included requirements from 40 CFR Part 60, Subpart WWW and 40 CFR Part 63, Subpart AAAA has been replaced by flexible group special conditions for the new applicable requirements from 40 CFR Part 60, Subpart XXX and 40 CFR Part 63, Subpart AAAA. Additionally, Appendix 7-1 in Section 1 of the ROP has been updated with 40 CFR Part 60, Subpart XXX and 40 CFR Part 63, Subpart AAAA requirements.

SECTION 1:

FGLANDFILL-WWW and FGLANDFILL-XXX have been replaced by revised FGLANDFILL-XXX and FGLANDFILL-AAAA. In FGLANDFILL-XXX, Special Condition III.1 requiring a written startup, shutdown, and malfunction (SSM) plan per Rule 213(3) and Rule 911 has been removed as obsolete. This special condition was added as a regulatory gap filler at ROP renewal because of then applicable 40 CFR Part 63, Subpart AAAA requirements.

FGACTIVECOLL-WWW and FGACTIVECOLL-XXX have been replaced by revised FGACTIVECOLL-XXX and FGACTIVECOLL-AAAA.

FGENCLOSEDFLARE-WWW and FGENCLOSEDFLARE-XXX have been replaced by revised FGENCLOSEDFLARE-XXX and FGENCLOSEDFLARE-AAAA. In both Tables, the V. Testing/Sampling, Condition 1 requirement that the initial test be conducted within 180 days has been removed as this has been completed.

SECTION 2:

FGTREATMNTSYSTEM-WWW and FGTREATMNTSYSTEM-XXX have been replaced by revised FGTREATMENTSYS-XXX and FGTREATMENTSYS-AAAA.

Action Taken by the Department

The AQD proposes to approve this change to ROP No. MI-ROP-N2689-2020, which was reopened by the AQD to incorporate applicable requirements associated with 40 CFR Part 60, Subpart XXX and 40 CFR Part 63, Subpart AAAA. A final decision on the approval of the revised ROP will not be made until the public and any affected states have had an opportunity to comment on the proposed changes to the ROP and the United States Environmental Protection Agency (USEPA) has been allowed 45 days to review the proposed changes to the ROP. The delegated decision maker for the AQD is Scott Miller, Jackson District Supervisor. The final determination for approval of the revised ROP will be based on a judgment that the stationary source will be able to comply with applicable emission limits and other requirements, and resolution of any objections by the public, any affected states or the USEPA.

State Registration Number

RENEWABLE OPERATING PERMIT

ROP Number

N2689

JULY 26, 2022 - STAFF REPORT ADDENDUM FOR RULE 217(2) REOPENING

MI-ROP-N2689-2020a

Purpose

A Staff Report dated June 20, 2022, was developed to set forth the applicable requirements and factual basis for the draft reopening to Renewable Operating Permit's (ROP) terms and conditions as required by Rule 214(3) 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 reopening during the 30-day public and affected state(s) comment period as described in Rule 214(3) and (4). In addition, this addendum describes any changes to the proposed ROP reopening resulting from these pertinent comments.

General Information

Responsible Official Section 1:	Heather Brown, General Manager 734-848-5216
Responsible Official Section 2:	Anthony Falbo, Senior Vice President -Operations 716-439-1004
AQD Contact:	Diane Kavanaugh Vetort, Senior EQA 517-416-3537

Summary of Pertinent Comments

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

Changes to the June 20, 2022 Draft ROP Reopening

No changes were made to the draft ROP reopening.

State Registration Number

RENEWABLE OPERATING PERMIT

ROP Number
MI-ROP-N2689-2020b

N2689

OCTOBER 26, 2022 - STAFF REPORT FOR RULE 216(2) MINOR MODIFICATION

Purpose

On September 13, 2022, the Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-N2689-2020a to Vienna Junction Industrial Park Sanitary Landfill and Vienna Junction Energy, LLC pursuant to Rule 214 of the administrative rules promulgated under Act 451. Once issued, a company is required to submit an application for changes to the ROP as described in Rule 216. The purpose of this Staff Report is to describe the changes that were made to the ROP pursuant to Rule 216(2).

General Information

Responsible Official Section 1:	Heather Brown, General Manager
	Republic Services
	734-848-5216
Responsible Official Section 2:	Mr. Anthony J Falbo, Senior Vice President – Operations,
·	Vienna Junction Energy LLC
	716-439-1004
AQD Contact:	Caryn Owens, Senior Environmental Engineer
	231-878-6688
Application Number:	202200185
Date Application for Minor Modification	September 29, 2022
was Submitted:	·

Regulatory Analysis

The AQD has determined that the change requested by the stationary source meets the qualifications for a Minor Modification pursuant to Rule 216(2).

Description of Changes to the ROP

Minor Modification Number 202200185 is to remove Section 2 of the ROP for Vienna Junction Energy LLC, since the Company has ceased operations and will no longer be operating this facility. Vienna Junction Energy is scheduled for demolition.

Compliance Status

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements associated with the emission unit(s) involved with the change as of the date of approval of the Minor Modification to the ROP.

Action Taken by EGLE

The AQD proposes to approve a Minor Modification to ROP No. MI-ROP-N2689-2020a, as requested by the stationary source. A final decision on the Minor Modification to the ROP will not be made until any affected states and the United States Environmental Protection Agency (USEPA) has been allowed 45 days to review the proposed changes to the ROP. The delegated decision maker for the AQD is the District Supervisor. The final determination for approval of the Minor Modification will be based on the contents of the permit application, a judgment that the stationary source will be able to comply with applicable emission limits and other requirements, and resolution of any objections by any affected states or the USEPA.