

State Registration Number
B2838

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-B2838-2020

Vicinity Energy Grand Rapids, LLC

State Registration Number (SRN): B2838

Located at

156 Fulton Street West, Grand Rapids, Kent County, Michigan 49503

Permit Number: MI-ROP-B2838-2020

Staff Report Date: July 6, 2020

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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July 6, 2020 - STAFF REPORT

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:	Vicinity Energy Grand Rapids, LLC 50 Louis Street NW, Suite 500 Grand Rapids, Michigan 49503
Source Registration Number (SRN):	B2838
North American Industry Classification System (NAICS) Code:	221330
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	202000012
Responsible Official:	Jerry Powell, Operations Manager 616-356-2535
AQD Contact:	Kaitlyn DeVries, Senior Environmental Quality Analyst 616-558-0552
Date Application Received:	February 14, 2020
Date Application Was Administratively Complete:	February 14, 2020
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	July 6, 2020
Deadline for Public Comment:	August 5, 2020

Source Description

Vicinity Energy Grand Rapids, LLC, is a district heating and cooling facility that provides steam to meet the heating and cooling demands of a defined portion of downtown Grand Rapids, Michigan. The service area is expanding but includes Grand Valley State University's downtown campus, Michigan State University's campus, and St. Mary's Hospital. The facility itself is located one block east of the Grand River, southeast of the intersection of two (2) major highways running through Grand Rapids, US-131 and Interstate I-196. The area is primarily commercial and residential in nature.

Operations at the facility began at this downtown location in 1888 as the Grand Rapids Edison Light and Fuel Company. In the 1920's Consumers Power Company rebuilt this source into a coal-fired steam plant with a back-pressure turbine/generator. In December 1966, Consumers Power Company installed three (3) 120 MMBTU/hr boilers and replaced the fourth boiler in 1970 with a 180 MMBTU/hr boiler. These are the current boilers installed at the facility. Kent County became the owner of the facility in 1986, with Veolia Energy Grand Rapids, LLC acquiring the facility in late 2008. In 2019, Veolia Energy Grand Rapids, LLC was sold to Vicinity Energy and the name was changed to Vicinity Energy Grand Rapids, LLC, which it is known as today.

The four (4) boilers have the capability to burn either natural gas or fuel oil. However, the use of oil is limited to specific circumstances under Permit to Install No. 78-13, and subsequently incorporated into the Renewable Operating Permit.

Also located on site is a Kohler Power Systems natural gas fired emergency generator for back-up in the event of a power failure.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2019**.

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	37.6
Lead (Pb)	0.45 pounds
Nitrogen Oxides (NO _x)	47.9
Particulate Matter (PM)	3.4
Sulfur Dioxide (SO ₂)	0.3
Volatile Organic Compounds (VOCs)	2.5

This source is a minor source of HAP's, therefore 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 Kent 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 potential to emit of nitrogen oxides and carbon monoxide exceeds 100 tons per year.

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. Additionally, the fuel restriction described below also limits the Potential to Emit (PTE) for HAPs.

No emission units at the stationary source are currently subject to the Prevention of Significant Deterioration (PSD) regulations of the Michigan Air Pollution Control Rules Part 18, Prevention of Significant Deterioration of Air Quality or 40 CFR 52.21 because the process equipment was constructed/installed prior to June 19, 1978, the promulgation date of the PSD regulations.

EU-UNIT-01, EU-UNIT-02, EU-UNIT-03, and EU-UNIT-04 at the stationary source are not subject to the National Emission Standard for Hazardous Air Pollutants for Major sources: Industrial Commercial, and Institutional Boilers and Process Heaters promulgated in 40 CFR Part 63, Subparts A and DDDDD because this is a minor source of HAPs. The boilers at the stationary source are also not subject to the National Emission Standard for Hazardous Air Pollutants Industrial, Commercial, and Institutional Boilers for Area Sources. Permit to Install (PTI) No. 78-13 restricted the fuel for the boilers to only natural gas, with fuel oil only allowed as a back-up for emergency, curtailment, and testing purposes. The restriction to natural gas only allows the facility to utilize the exemption in 40 CFR 63.11195(e), meeting the definition of a gas-fired boiler in 40 CFR 63.11237. With this fuel oil restriction, the PTI eliminated the sulfur dioxide limits from the permit. The limits on oil use define the facility as an Area Source of Hazardous Air Pollutants (HAPs), thus the boilers are regulated pursuant to the National Emissions Standard for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers 40 CFR Part 63, Subpart JJJJJJ as an Area Source.

EU-Unit-05, a natural gas-fired emergency generator at the stationary source, is subject to the Standards of Performance for Stationary Spark Ignition Internal Combustion Engines promulgated in 40 CFR Part 60, Subparts A and JJJJ. This unit is also subject to the National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines promulgated in 40 CFR Part 63, Subparts A and ZZZZ. Compliance with Subpart ZZZZ is demonstrated via compliance with Subpart JJJJ.

An economizer was installed at the facility in 2008 (completed in 2009) under Rule 201 permitting exemption Rule 285(2)(b). An economizer recovers the heat from the air, puts the heat into water, which is then recirculated back through the system. This allows for the overall system to be at least 10% more efficient. In 2018, there was an issue at the facility which caused the economizer to fail, and a replacement was required. A replacement economizer was installed using the same permitting exemption as used in 2008.

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 no emission units at the stationary source have a control device.

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-B2838-2015 are identified in Appendix 6 of the ROP.

PTI Number			
115-83	115-83A	115-83B	255-05
78-13			

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

There were no processes listed in the ROP Application as exempt devices under Rule 212(4). Exempt devices are not subject to any process-specific emission limits or standards in any applicable requirement.

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 Heidi Hollenbach, Grand Rapids 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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August 10, 2020 - STAFF REPORT ADDENDUM

Purpose

A Staff Report dated July 6, 2020, 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:	Jerry Powell, Operations Manager 616-356-2535
AQD Contact:	Kaitlyn DeVries, Senior Environmental Quality Analyst 616-558-0552

Summary of Pertinent Comments

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

Changes to the July 6, 2020 Draft ROP

No changes were made to the draft ROP.