

State Registration Number
N1099

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-N1099-2023

Consumers Energy Northville Compressor Station

State Registration Number (SRN): N1099

Located at

9440 Napier Road, Northville, Wayne County, Michigan 48167

Permit Number: MI-ROP-N1099-2023

Staff Report Date: March 6, 2023

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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RENEWABLE OPERATING PERMIT

MARCH 6, 2023 - STAFF REPORT

ROP Number

MI-ROP-N1099-2023

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:	Consumers Energy Northville Compressor Station 9440 Napier Road Northville, Michigan 48167
Source Registration Number (SRN):	N1099
North American Industry Classification System (NAICS) Code:	486210 - Pipeline Transportation of Natural Gas
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	202200068
Responsible Official:	Avelock Robinson, Director of Gas Compression Operations 586-716-3326
AQD Contact:	Stephen Weis, Senior Environmental Engineer 313-720-5831
AQD ROP Writer:	Matt Karl, Environmental Quality Analyst 517-282-2126
Date Application Received:	March 14, 2022
Date Application Was Administratively Complete:	March 14, 2022
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	March 6, 2023
Deadline for Public Comment:	April 5, 2023

Source Description

The Consumers Energy Northville Compressor Station is located on approximately 28 acres on the east side of Napier Road, about halfway between 7 Mile and 8 Mile Roads in Northville Township in Wayne County. Napier Road marks the border between Wayne and Washtenaw counties, with areas to the east being in Wayne County. The area around the Northville Compressor Station is primarily a residential area. The closest residences are located across the street, and along the south fence line. The closest residence is located approximately 250 yards from the primary air emissions sources. Maybury State Park is located to the east and north of the Northville Compressor Station and shares a fence line.

The Northville Compressor Station utilizes four (4) compressors to maintain pressure and flow through the natural gas pipelines and, when needed, pump natural gas into and out of nearby storage fields. There are three (3) natural gas storage fields located 1-2 miles to the west and northwest, with one (1) in Washtenaw and two (2) in southwest Oakland Counties. As natural gas is needed, a valve is opened to allow the pressurized gas to flow from the storage fields to the natural gas distribution pipes. The pressure in the storage field is greater than the distribution pipes, which determines the direction of flow (from higher to lower pressure). The compressors raise the pressure of the pipeline gas to approximately 2,000 pounds per square inch (psi) prior to distribution. The main air emission sources at the facility are the four (4) natural gas fired engines that provide mechanical energy to the compressors. Engines #1 and #2 were installed in 1959 and engines #3 and #4 were installed in 1960. Each engine is rated at 19 MMBTU per hour (2700 HP).

The Northville Compressor Station has additional emission units that support operations around the facility. These include eleven (11) natural gas fired building heaters, three (3) natural gas fired hot water boilers, one (1) natural gas fired space heater, one (1) natural gas fired emergency generator, two (2) natural gas fired industrial process heaters, and multiple organic fluid storage tanks from 1000- to 8800-gallon capacities for natural gas condensate, gasoline, and methanol. Also, there are two (2) cold cleaners.

Air emissions from the facility mainly consist of natural gas combustion byproducts such as carbon monoxide (CO), nitrogen oxides (NO_x), volatile organic compounds (VOC) and particulate matter (PM).

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)	19.54
Lead (Pb)	5.00 x 10 ⁻⁶
Nitrogen Oxides (NO _x)	153.93
Particulate Matter (PM)	4.82
Sulfur Dioxide (SO ₂)	3.45 x 10 ⁻²
Volatile Organic Compounds (VOCs)	5.91
Ammonia	6.48 x 10 ⁻³

The following table lists Hazardous Air Pollutant emissions as calculated for the year 2021 by the Air Quality Division:

Individual Hazardous Air Pollutants (HAPs) **	Tons per Year
Acetaldehyde	0.05
Acrolein	0.05
Benzene	0.01
Formaldehyde	0.33

Methanol	0.01
Total Hazardous Air Pollutants (HAPs)	0.45

**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 Wayne 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.

A portion of Wayne County is currently designated by the United States Environmental Protection Agency (USEPA) as a non-attainment area with respect to the SO₂ standard. However, this stationary source is not located in this portion of Wayne County.

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 (NO_x) exceeds 100 tons per year. Additionally, the potential to emit of any single HAP regulated by Section 112 of the federal Clean Air Act, is equal to or more than 10 tons per year and/or the potential to emit of all HAPs combined is equal to or more than 25 tons per year.

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.

EUENGINE1-1, EUENGINE1-2, EUENGINE1-3, and EUENGINE1-4 were installed prior to August 15, 1967. As a result, this equipment is considered "grandfathered" and is not subject to New Source Review (NSR) permitting requirements. However, future modifications of this equipment may be subject to NSR.

EUEMERGGEN 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.

EUEMERGGEN at the stationary source is subject to the National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines promulgated in 40 CFR Part 63, Subparts A and ZZZZ.

EUFUELHEATER1 and EULINEHEATER3 at the stationary source are 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.

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 do not 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-N1099-2017 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
EUBOILER1	0.5 MMBTU/hr natural gas boiler for comfort heat (Aux Bldg)	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUBOILER2	0.5 MMBTU/hr natural gas boiler for comfort heat (Aux Bldg)	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUBOILER3	0.5 MMBTU/hr natural gas boiler for comfort heat (Aux Bldg)	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUBLDGHEATER	0.14 MMBTU/hr natural gas heater for comfort heat (Weld Shop)	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUBLDGHEATER2	0.14 MMBTU/hr natural gas heater for comfort heat (Weld Shop)	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUBLDGHEATER3	0.08 MMBTU/hr natural gas heater for comfort heat (Warehouse)	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUBLDGHEATER4	0.08 MMBTU/hr natural gas heater for comfort heat (Warehouse)	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUBLDGHEATER5	0.08 MMBTU/hr natural gas heater for comfort heat (Warehouse)	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUBLDGHEATER6	0.08 MMBTU/hr natural gas heater for comfort heat (Warehouse)	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUHEATER1	0.08 MMBTU/hr natural gas heater for comfort heat (Storage Bldg)	R 336.1212(4)(c)	R 336.1282(2)(b)(i)

PTI Exempt Emission Unit ID	Description of PTI Exempt Emission Unit	Rule 212(4) Citation	PTI Exemption Rule Citation
EUHEATER2	0.1 MMBTU/hr natural gas heater for comfort heat (Production Bldg/Fab Shop)	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUHEATER3	0.11 MMBTU/hr natural gas heater for comfort heat (Office Bldg)	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUHEATER4	0.1 MMBTU/hr natural gas heater for comfort heat (Office Bldg)	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUHEATER5	0.1 MMBTU/hr natural gas heater for comfort heat (Office Bldg)	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUHOTWTRHTR2	0.032 MMBTU/hr natural gas hot water heater (Aux Bldg)	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUHOTWTRHTR3	0.05 MMBTU/hr natural gas hot water heater (Production Bldg/Fab Shop)	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUHOTWTRHTR4	0.042 MMBTU/hr natural gas hot water heater (Office Bldg)	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUSPACEHTR1	0.1 MMBTU/hr natural gas space heater (Salem City Gate)	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUTANK1	6,500-gallon natural gas condensate storage tank	R 336.1212(4)(d)	R 336.1284(2)(e)
EUTANK9	3,200-gallon natural gas condensate storage tank	R 336.1212(4)(d)	R 336.1284(2)(e)
EUTANK11	8,800-gallon natural gas condensate storage tank	R 336.1212(4)(d)	R 336.1284(2)(e)
EUTANK18	1,000-gallon gasoline storage tank	R 336.1212(4)(d)	R 336.1284(2)(g)(ii)
EUTANK19	1,000-gallon methanol storage tank	R 336.1212(4)(d)	R 336.1284(2)(n)
EUTANK23	8,800-gallon natural gas condensate storage tank	R 336.1212(4)(d)	R 336.1284(2)(e)

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 Brad Myott, 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
N1099

RENEWABLE OPERATING PERMIT
APRIL 6, 2023 - STAFF REPORT ADDENDUM

ROP Number
MI-ROP-N1099-2023

Purpose

A Staff Report dated March 6, 2023, 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:	Avelock Robinson, Director of Gas Compression Operations 586-716-3326
AQD Contact- District Inspector:	Stephen Weis, Senior Environmental Engineer 313-720-5831
AQD Contact - ROP Writer:	Matt 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 March 6, 2023 Draft ROP

No changes were made to the draft ROP.