

State Registration Number
N5581

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-N5581-2023

Great Lakes Gas Transmission, LP – Farwell Compressor Station No. 12

State Registration Number (SRN): N5581

Located at

3400 Hickory Road, Lake George, Clare County, Michigan 48633

Permit Number: MI-ROP-N5581-2023

Staff Report Date: April 24, 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).

TABLE OF CONTENTS

APRIL 24, 2023 - STAFF REPORT	3
MAY 30, 2023 - STAFF REPORT ADDENDUM	9

State Registration Number

N5581

RENEWABLE OPERATING PERMIT

APRIL 24, 2023 - STAFF REPORT

ROP Number

MI-ROP-N5581-2023

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:	3400 Hickory Road Lake George, Michigan 48633
Source Registration Number (SRN):	N5581
North American Industry Classification System (NAICS) Code:	486210
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	202200215
Responsible Official:	Keith R. Mossman, Director US Pipeline Operations Great Lakes Region 248-205-4510
AQD Contact:	Nathanael Gentle, Environmental Quality Analyst 989-778-0025
Date Application Received:	November 18, 2022
Date Application Was Administratively Complete:	November 18, 2022
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	April 24, 2023
Deadline for Public Comment:	May 24, 2023

Source Description

Great Lakes Gas Transmission, LP - Farwell Compressor Station No. 12 (Compressor Station No. 12) is in a rural area about two miles south of the town of Lake George, Clare County, Michigan.

The primary function of this facility is to provide motive force for natural gas flowing through the pipeline. Compressor Station No. 12 consists of five (5) stationary natural gas fired reciprocating engines and one (1) natural gas fired dry low nitrogen oxide (NO_x) turbine, which in turn drive six (6) natural gas compressors. The five engines are all two-cycle, lean burn, spark ignition engines. The engines (EUUNIT1201, EUUNIT1202, EUUNIT1203, EUUNIT1204) are 3400 horsepower (hp) Cooper Bessemer model 10V-250 natural gas fired reciprocating engines that were installed when the facility was first built in 1968, except for EUUNIT1204 which was installed in 1969. EUUNIT1205 is an 8000 hp Cooper Bessemer model 16W-330 natural gas fired reciprocating engine that was installed in 1975.

EUUNIT1206 is a 9700 hp Solar Taurus 70 natural gas fired turbine that was installed in 1998. This turbine was permitted with stack parameters and NO_x limits. Since EUUNIT1206 was installed after October 3, 1977, it is subject to 40 CFR Part 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, which includes emission limits for SO₂ and NO_x as well as monitoring and testing requirements.

Compressor Station No. 12 has one (1) 4-stroke lean burn 1053 hp Caterpillar G3516 SITA emergency generator (EUGENERATOR1) that was installed in 1996 to provide power in the event of a power outage. The generator is equipped with an internal combustion engine whose emissions exhaust from a single exhaust stack. It burns natural gas and has a maximum heat capacity of 7.896 MMBTU/hr.

Compressor Station No. 12 has three (3) natural gas fired boilers. EUBOILER1 and EUBOILER2 are Hurst Model S3-G-150-15-W with maximum heat capacities of 4.18 MMBTU/hr installed in 1998 and 1999. EUBOILER3 is a Weil-McLain Model PFG-7 with a maximum heat capacity of 0.39 MMBTU/hr installed in 1990.

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)	38.69
Lead (Pb)	NA
Nitrogen Oxides (NO _x)	293.21
Particulate Matter (PM)	4.73
Sulfur Dioxide (SO ₂)	0.08
Volatile Organic Compounds (VOCs)	11.19

The following table lists Hazardous Air Pollutant emissions as calculated for the year 2021 by MAERS Emission Factor:

Individual Hazardous Air Pollutants (HAPs) **	Tons per Year
Formaldehyde	5.05

**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 Clare 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 (NO_x) and carbon monoxide (CO) exceeds 100 tons per year. 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. The potential to emit for formaldehyde exceeds 10 tons per year and the potential to emit of all HAPs combined is greater 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.

Although EUUNIT1201, EUUNIT1202, EUUNIT1203, EUUNIT1204, and EUUNIT1205 were installed after August 15, 1967, this equipment was exempt from New Source Review (NSR) permitting requirements at the time it was installed. However, future modifications of this equipment may be subject to NSR.

EUUNIT1206 at the stationary source is subject to the Standards of Performance for Stationary Gas Turbines promulgated in 40 CFR Part 60, Subparts A and GG. The EUUNIT1206 turbine at the facility is greater than 10 MMBTU/hr and was installed in 1998.

EUUNIT 1206 at the stationary source is not subject to the Standards of Performance for Stationary Gas Turbines promulgated in 40 CFR Part 60, Subparts A and KKKK. The standards of performance for Stationary Combustion Turbines, applies to combustion turbines with peak load heat input greater than 10 MMBTU/hour constructed, modified, or reconstructed after February 18, 2005. The turbine at Compressor Station No. 12 was constructed prior to February 18, 2005 and has not been modified or reconstructed since February 18, 2005.

EUUNIT1201, EUUNIT1202, EUUNIT1203, EUUNIT1204, EUUNIT1205, and EUGENERATOR1 stationary spark ignition internal combustion engines at the stationary source are not subject to the Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (SI ICE) promulgated in 40 CFR Part 60, Subparts A and JJJJ. The engines at Compressor Station No. 12 were constructed prior to June 12, 2006 and have not been modified or reconstructed since June 12, 2006.

EUBOILER1, EUBOILER2, and EUBOILER3 at the stationary source are not subject to the Standards of Performance for Small Industrial Commercial-Institutional Steam Generating Units promulgated in 40 CFR Part 60, Subparts A and Dc because the natural gas-fired boilers have a design heat input capacity less than 10 MMBTU/hr.

Condensate, Lube Oil, Used Oil, Lube/Maintenance Oil, Antifreeze, Amibitrol, Diesel and Gasoline Storage tanks at the stationary source are not subject to the Standards of Performance promulgated in 40 CFR Part 60, Subparts A and K, Ka, or Kb because all the storage vessels have a capacity less than the applicability thresholds.

EUBOILER1, EUBOILER2, and EUBOILER3 at the stationary source are subject to the National Emission Standard for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

promulgated in 40 CFR Part 63, Subparts A and DDDDD. This regulation is applicable to the boilers located at Compressor Station No. 12, since the Station is a major source of HAPs. The boilers (EUBOILER1, EUBOILER2, EUBOILER3) are classified as existing (constructed before June 4, 2010), <5 MMBTU/hr natural gas-burning units.

EUUNIT1201, EUUNIT1202, EUUNIT1203, EUUNIT1204, and EUUNIT1205 stationary spark ignition internal combustion engines at the stationary source are not subject to the National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE) promulgated in 40 CFR Part 63, Subparts A and ZZZZ. Emission units EUUNIT1201 through EUUNIT1205 are considered existing engines rated at more than 500 hp and are 2-stroke lean burn engines which do not have any applicable requirements associated with the regulation per 40 CFR 63.6590(b)(3)(i). 40 CFR 63.6590(b)(3)(i) states existing spark ignition 2-stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements.

EUGENERATOR1 at the stationary source is not subject to the National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE) promulgated in 40 CFR Part 63, Subparts A and ZZZZ. EUGENERATOR1 is an existing (installed in 1996), Caterpillar G3516 SITA. It is a spark ignition, 4-stroke lean burn emergency engine rated at 1,053 hp. 40 CFR 63.6590(b)(3)(ii), states existing spark ignition 4-stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements.

EUUNIT1206 at the stationary source is not subject to the National Emission Standard for Hazardous Air Pollutants for Stationary Combustion Turbines promulgated in 40 CFR Part 63, Subparts A and YYYY. The turbine at the Compressor Station No. 12 is potentially subject to this regulation because it was constructed prior to January 14, 2003 and is located at a major source of HAPs. However, because the turbine is existing it does not have to meet the requirements of the Subpart.

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 an air pollution 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-N5581-2018 are identified in Appendix 6 of the ROP.

PTI Number			
513-97			

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
Space Heaters	Eleven (11) Natural gas-fired space heaters with a total maximum heat rated capacity of 1.235 MMBTU/hr	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
Separator	Condensate Storage Tank, 8,400 gal	R 336.1212(4)(d)	R 336.1284(2)(e)
Condensate	Condensate Storage Tank, 6,500 gal	R 336.1212(4)(d)	R 336.1284(2)(e)
Lube Oil	New Lube Oil Storage Tank, 10,000 gal	R 336.1212(3)(e)	R 336.1284(2)(c)
Lube Oil	Lube Make-up Oil Tank 55 gal	R 336.1212(3)(e)	R 336.1284(2)(c)
Used Oil	Used Oil Storage Tank, 1,500 gal	R 336.1212(3)(e)	R 336.1284(2)(c)
Lube/Maint. Oil	Lube/Maintenance Oil Tank, 1,500 gal	R 336.1212(3)(e)	R 336.1284(2)(c)
Lube/Maint. Oil	Lube/Maintenance Oil Tank, 1,000 gal	R 336.1212(3)(e)	R 336.1284(2)(c)
Lube/Maint. Oil	Lube/Maintenance Oil Tank, 650 gal	R 336.1212(3)(e)	R 336.1284(2)(c)
Antifreeze	Ambitrol FL50 Storage Tank, 8,000 gal (50% inhibitor, 50% glycol)	R 336.1212(3)(e)	R 336.1284(2)(c)
Ambitrol	Ambitrol Tank, 200 gal	R 336.1212(4)(d)	R 336.1284(2)(i)
Diesel	Diesel Storage Tank, 300 gal	R 336.1212(4)(d)	R 336.1284(2)(i)
Gasoline	Gasoline Storage Tank, 300 gal	R 336.1212(4)(d)	R 336.1284(2)(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 Chris Hare, Bay City 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
N5581

RENEWABLE OPERATING PERMIT
MAY 30, 2023 - STAFF REPORT ADDENDUM

ROP Number
N5581

Purpose

A Staff Report dated April 24, 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:	Keith R. Mossman, Director US Pipeline Operations Great Lakes Region 248-205-4510
AQD Contact:	Nathanael Gentle, Environmental Quality Analyst 989-778-0025

Summary of Pertinent Comments

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

Changes to the April 24, 2023 Draft ROP

No changes were made to the draft ROP.