

State Registration Number
B8573

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-B8573-2024

**Great Lakes Gas Transmission Company, LP
Boyne Falls Compressor Station**

State Registration Number (SRN): B8573

Located at

10339 Great Lakes Road, Boyne Falls, Charlevoix County, Michigan 49713

Permit Number: MI-ROP-B8573-2024

Staff Report Date: June 24, 2024

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

JUNE 24, 2024 - STAFF REPORT

ROP Number

MI-ROP-B8573-2024

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:	Great Lakes Gas Transmission Company, LP Boyne Falls Compressor Station 10339 Great Lakes Road Boyne Falls, Michigan 49713
Source Registration Number (SRN):	B8573
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:	202300141
Responsible Official:	Mike Coy, Area Manager – Great Lakes 989-939-8916
AQD Contact:	David Bowman, Environmental Quality Analyst 989-395-6298
Date Application Received:	October 3, 2023
Date Application Was Administratively Complete:	Yes
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	June 24, 2024
Deadline for Public Comment:	July 24, 2024

Source Description

Great Lakes Gas Transmission Limited Partnership (GLGT) operates a pipeline which carries natural gas across Northern Michigan. The GLGT Boyne Falls Compressor Station is approximately 10 miles northeast of the city of Boyne Falls. The GLGT Boyne Falls Compressor Station is also known, in some documents, as Compressor Station 11 because it is the eleventh station along the pipeline.

Pipeline compressor stations, including the GLGT Boyne Falls Compressor Station, boost the pressure inside the pipeline to push the natural gas through, to and from storage facilities or to local distribution companies. The two (2) compressor engines, identified as EUUNIT1101 and EUUNIT1102, are Rolls Royce Avon Model 76G Stationary Gas Turbines. They are rated at 16,000 horsepower (hp) each. They burn natural gas from the pipeline as fuel, at a heat input rate of 158.8 MMBtu/hr. each. Both turbines were installed in 1971. The facility operates on an as-needed basis. Normally, when the station runs, only one of the two compressor units will operate.

The compressor engines are the primary source of air emissions at the GLGT Boyne Falls Compressor Station. Air emissions are primarily the combustion products: nitrogen oxides (NO_x), carbon monoxide (CO) and volatile organic compounds (VOC). NO_x emissions result from thermal generation of nitric oxide (NO) in high-temperature combustion zones. CO and VOC emissions result from incomplete combustion of natural gas. GLGT Boyne Falls Compressor Station minimizes air emissions by employing good combustion practices and maintaining the compressor engines in good working order.

Emissions for additional pollutants emitted by the turbines are described below.

- NO_x and CO emissions are based on emission factors from AP-42 Table 3.1-1 (4/00).
- CO₂ emissions are based on emission factors and global warming potential specified in 40 CFR Part 98
- Particulate matter (PM), particulate matter less than 10 microns (PM₁₀) and particulate matter less than 2.5 microns (PM_{2.5}), and volatile organic compound (VOC) emissions are based on emission factors from AP-42 Table 3.1-2a (4/00).
- Annual sulfur dioxide (SO₂) emissions are based on 0.25 grains of sulfur per 100 standard cubic feet of natural gas, and maximum hourly emissions are based on 20 grains of sulfur per 100 standard cubic feet.
- Emissions of formaldehyde and total hazardous air pollutants (HAPs) are based on emission factors from AP-42 Table 3.1-3 (4/00).

Ancillary permitted equipment at the source includes one (1) 4-stroke rich burn (4SRB) engine and an emergency generator identified as EUAPU (FGMACTZZZZ≤500), and is rated at 408 hp.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2023**.

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	17.38
Lead (Pb)	0.00
Nitrogen Oxides (NO _x)	22.49
PM ₁₀ *	0.61
Sulfur Dioxide (SO ₂)	0.05
Volatile Organic Compounds (VOCs)	0.25

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

The following table lists Hazardous Air Pollutant (HAP) potential emissions as calculated by the source:

Individual Hazardous Air Pollutants (HAPs) **	Tons per Year
Formaldehyde	0.05
Total Hazardous Air Pollutants (HAPs)	1.59

**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 Charlevoix 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 carbon monoxide (CO) and nitrogen oxides (NOx) exceeds 100 tons per year each.

The stationary source is an area 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.

EUUNIT1101 and EUUNIT1102 at the stationary source were subject to review under the Prevention of Significant Deterioration regulations of 40 CFR 52.21, because at the time of New Source Review permitting the potential to emit of carbon monoxide (CO) and nitrogen oxides (NOx) was greater than 250 tons per year.

EUAPU at the stationary source is subject to the Maximum Achievable Control Technology Standards under the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines for Area Sources, promulgated in 40 CFR Part 63, Subparts A and ZZZZ.

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 none of the emission units at the source have control devices.

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-B8573-2019 are identified in Appendix 6 of the ROP.

PTI Number			
438-87B	438-87A	438-87	

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 Not in the Draft ROP

The following table lists PTI exempt processes that were not included in the Draft ROP pursuant to Rule 212(4). These processes are not subject to any process-specific emission limits or standards.

Emission Unit ID	Description of Emission Unit	Rule 212(4) Citation	PTI Exemption Rule Citation
EUBOILER	Natural gas fired boiler 4.18 MMBtu/hr.	R 336.1212(4)(b)	R 336.1282(2)(b)(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 Shane Nixon, Cadillac/Gaylord 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

B8573

RENEWABLE OPERATING PERMIT
AUGUST 26, 2024- STAFF REPORT ADDENDUM

ROP Number

MI-ROP-B8573-2024

Purpose

A Staff Report dated June 24, 2024, 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:	Mike Coy, Area Manager – Great Lakes 989-939-8916
AQD Contact:	Dave Bowman 989-395-6298

Summary of Pertinent Comments

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

Changes to the

No changes were made to the draft ROP.