

State Registration Number
B6480

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-B6480-2024

DTE Gas Company - Columbus Compressor Station

State Registration Number (SRN): B6480

Located at

1647 Caughill Road, Columbus, St. Clair, County, Michigan 48063-3111

Permit Number: MI-ROP-B6480-2024

Staff Report Date: November 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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NOVEMBER 6, 2023 - STAFF REPORT

ROP Number

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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:	DTE Gas Company – Columbus Compressor Station 1647 Caughill Road Columbus, Michigan 48063-3111
Source Registration Number (SRN):	B6480
North American Industry Classification System (NAICS) Code:	221210
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	202200155
Responsible Official:	Michael P. Waters, Manager, Transmission and Storage Operations 248-308-9967
AQD Contact:	Shamim Ahammod, Senior Environmental Engineer 586-212-0508
Date Application Received:	August 9, 2022
Date Application Was Administratively Complete:	August 9, 2022
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	November 6, 2023
Deadline for Public Comment:	December 6, 2023

Source Description

DTE Gas Company operates a natural gas compressor station in southwestern St. Clair County approximately one mile north of Gratiot Avenue on Caughill Road. The area surrounding Columbus Compressor Station is rural, and sparsely populated with residential properties. The nearest residence is approximately one-quarter of a mile south of Columbus Compressor Station.

The function of Columbus Compressor Station is to maintain pressure in pipelines transporting sweet natural gas between gas storage fields in southern Michigan and to inject natural gas into geological formations for storage. The Columbus Compressor Station consists of two reciprocating compressor engines (EU007 and EU008) which fire sweet natural gas and are used to increase the natural gas pressure, one emergency generator (EUEMERGEN), two glycol dehydrators (EUDEHY1 and EUDEHY2) used to remove impurities from withdrawn natural gas, various auxiliary equipment, several organic liquid storage vessels, and one cold cleaner.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2022**.

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	1.07
Lead (Pb)	NA
Nitrogen Oxides (NO _x)	107.90
PM10*	0.16
Sulfur Dioxide (SO ₂)	0.02
Volatile Organic Compounds (VOCs)	3.26
Ammonia	0.03

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

This source is an area source of hazardous air pollutant (HAP) emissions pursuant to Section 112(b) of the federal Clean Air Act. No HAP emissions data is reported.

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 St. Clair County, which is currently designated by the United States Environmental Protection Agency (USEPA) as attainment/unclassified for all criteria pollutants except for a portion of St. Clair County which is currently designated by the United States Environmental Protection Agency (USEPA) as a non-attainment area with respect to the SO₂ standard. But, the stationary source is located outside the designated area.

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 exceeds 100 tons per year.

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.

Flexible Group FGDELAVALS is for two 2,000 horsepower reciprocating compressor engines (EU007 and EU008) used to compress natural gas for transport and storage. In 1972, when these engines were installed, all internal combustion engines were exempt from the requirement to obtain an approved Air Use Permit by Rule 336.36(c). (Air Pollution Regulation in State Implementation Plans: Michigan; EPA-450/3-78-072, Aug 1978):

Rule 336.36 Permit System Exemptions: Miscellaneous. The permit system does not apply to: (c) internal combustion engines

EU007 and EU008 (FGDELAVALS) at the stationary source were not 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 and 40 CFR 52.21 because the process equipment was constructed/installed prior to June 19, 1978, the promulgation date of the PSD regulations.

No other emission units at the stationary source were subject to the Prevention of Significant Deterioration regulations of the Michigan Air Pollution Control Rules Part 18, Prevention of Significant Deterioration of Air Quality of Act 451 or 40 CFR 52.21 because at the time of New Source Review permitting the potential to emit of each criteria pollutant was less than significant.

EUEMERGEN 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.

EUEMERGEN, and EU007 and EU008 (FGDELAVALS) at the stationary source are subject to the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines promulgated in 40 CFR Part 63, Subparts A and ZZZZ. For EUEMERGEN, compliance with 40 CFR Part 63, Subpart ZZZZ is demonstrated through compliance with 40 CFR Part 60, Subpart JJJJ.

EUDEHY1 and EUDEHY2 (FGDEHY) are not subject to the National Emissions Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities promulgated in 40 CFR Part 63, Subparts A and HHH because the facility is not a major source of hazardous air pollutants (HAP) based on emission calculations provided by DTE. Enforceable emission limits, process, operational, design, and equipment parameters included in the ROP for FGDEHY restrict HAP emissions to below major source thresholds.

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 emission limitation(s) or standard(s) for carbon monoxide at the stationary source with the underlying applicable requirement(s) of 40 CFR Part 63, Subpart ZZZZ, from EU007 and EU008 (FGDELAVALS) are exempt from the federal Compliance Assurance Monitoring (CAM) regulation pursuant to 40 CFR 64.2(b)(1)(i) because the carbon monoxide emission limit of 47 ppmvd at 15% O₂ -OR- 93% reduction or more meet the CAM exemption for NSPS or MACT proposed after November 15, 1990.

DTE Gas Company submitted pre-control potential to emit (PTE) calculations for EUDEHY1 and EUDEHY2 to determine CAM applicability. These calculations indicate the volatile organic compound pre-control PTE were below the major source threshold. The emission limitation(s) or standard(s) for volatile organic compounds from EUDEHY1 and EUDEHY2 at the stationary source, therefore, appear to not be subject to the CAM regulation under 40 CFR 64.2(b)(1)(i), because the pre-control volatile organic

compounds emissions for EUDEHY1 is 49 tons per year and for EUDEHY2 is 21 tons per year both below major source thresholds.

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-B6480-2018 are identified in Appendix 6 of the ROP.

PTI Number			
446-97B	74-14A	161-04	

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	Cleaver-Brook natural gas fired boiler located in auxiliary building, model # C8700-100, ser# L55146	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUHEATER1	Columbus line heater, B.S.&B. Mfg. Co., #62158-01	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUHEATER2	Columbus line heater number 2, B.S.&B. Mfg. Co., #62158-02	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUHEATER3	West Columbus line heater, Sivalls Tanks, Inc., Ser# 2499	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUHEATER4	West Columbus line heater, Sivalls Tanks, Inc., Ser# 2500	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUHEATER5	West Columbus line heater, Sivalls Tanks, Inc., Ser# 24501	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EURADCATHEATER 1-6	Radiant catalytic heater fired by sweet natural gas and located in the dehy building.	R 336.1212(4)(c)	R 336.1282(2)(b)(i)

Emission Unit ID	Description of Emission Unit	Rule 212(4) Citation	PTI Exemption Rule Citation
EUFURNACE	Space heating furnace located in 'break room' at north side of facility, Lennox brand, natural gas fired, ser# 5893J60632	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUWATERHEATER	AO Smith water heater located in 'break room' at north side of facility, 30 gallon capacity, natural gas fired, ser# 860-F-79-32599	R 336.1212(4)(c)	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 Julie Brunner, ROP Central Unit 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
B6480

RENEWABLE OPERATING PERMIT
JANUARY 8, 2024 - STAFF REPORT ADDENDUM

ROP Number
MI-ROP-B6480-2024

Purpose

A Staff Report dated November 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:	Michael P. Waters, Manager, Transmission and Storage Operations 248-308-9967
AQD Contact:	Shamim Ahammod, Senior Environmental Engineer 586-212-0508

Summary of Pertinent Comments

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

Changes to the November 6, 2023 Draft ROP

The USEPA has requested that annual compliance certifications be submitted electronically through the USEPA's Central Data Exchange (CDX) using the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through CDX (<https://cdx.epa.gov/>), unless it contains confidential business information. If confidential business information is included, continue to mail the submission to USEPA as specified in General Condition 19. General Condition 19 in all Renewable Operating Permits is being updated for electronic submissions to the USEPA as follows:

19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The annual compliance certification (pursuant to Rule 213(4)(c)) shall be submitted to the USEPA through the USEPA's Central Data Exchange (CDX) using the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through CDX (<https://cdx.epa.gov/>), unless it contains confidential business information then use the following address: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604-3507. **(R 336.1213(4)(c))**