

State Registration Number

N3392

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number

MI-ROP-N3392-2020

DTE Gas Company Taggart Compressor Station

State Registration Number (SRN): N3392

Located at

10450 Nevins Road, Six Lakes, Montcalm County, Michigan 48886

Permit Number: MI-ROP-N3392-2020

Staff Report Date: August 17, 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).

TABLE OF CONTENTS

August 17, 2020 - STAFF REPORT	3
September 17, 2020 - STAFF REPORT ADDENDUM	9

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August 17, 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:	DTE Gas Company Taggart Compressor Station 10450 Nevins Road Six Lakes, Michigan 48886
Source Registration Number (SRN):	N3392
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:	201900178
Responsible Official:	Tyler Gage, Manager, Transmission and Storage Operations 989-365-5122
AQD Contact:	Chris Robinson, Environmental Quality Analyst 616-286-0083
Date Application Received:	October 18, 2019
Date Application Was Administratively Complete:	October 18, 2019
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	August 17, 2020
Deadline for Public Comment:	September 16, 2020

Source Description

DTE Gas Company owns and operates several compressor stations in Michigan including the Taggart Compressor Station. The Taggart Compressor Station is located in Six Lakes, Montcalm County in a rural area. The purpose of this station is to maintain pressure in the pipelines to allow for transporting sweet natural gas to both the underground storage field for temporary storage and for distribution to local facilities. The compressor station consists of a sorbead gas-liquid separator, twenty-one sweet natural gas fired only lean burn reciprocating engines and auxiliary equipment. The reciprocating engines are equipped with natural gas compressors which are used for maintaining pipeline pressure. The facility was constructed from 1955 through 1959.

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)	146.52
Nitrogen Oxides (NO _x)	1,042.45
Particulate Matter (PM)	7.41
Sulfur Dioxide (SO ₂)	0.22
Volatile Organic Compounds (VOCs)	46.90

The following table lists Hazardous Air Pollutant emissions as calculated for the year 2019 by the company:

Individual Hazardous Air Pollutants (HAPs) **	Tons per Year
1,3-Butadiene	0.10
Acetaldehyde	3.13
Acrolein	1.92
Benzene	0.16
Formaldehyde	19.75
Methanol	0.94
n-Hexane	0.42
Toluene	0.15
Total Hazardous Air Pollutants (HAPs)	27.01

**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 Montcalm 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, volatile organic compounds, and carbon monoxide exceeds 100 tons per year and 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. However, future modifications of this equipment may be subject to PSD.

All of the compressor engines {EUENGINE101, EUENGINE102, EUENGINE103, EUENGINE104, EUENGINE105, EUENGINE106, EUENGINE107, EUENGINE108, EUENGINE109, EUENGINE110, EUENGINE111, EUENGINE201, EUENGINE202, EUENGINE203, EUENGINE204, EUENGINE205, EUENGINE206, EUENGINE207, EUENGINE208, EUENGINE209, and EUENGINE210} 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.

Previous ROPs have noted the installation date for emergency generators EUAUX1 and EUAUX2 as "Pre 1960" which would qualify them as being "grandfathered" from Rule 201 permitting requirements since the installation occurred prior to August 15, 1967. Based on conversations with the facility during the most recent on-site inspection it was discovered that although both EUAUX1 and EUAUX2 were manufactured prior to 1967 they were installed at this facility at later dates. During this renewal, DTE notified EGLE that an internal study of the station was conducted in September 1995, EUAUX1 had been "recently installed" at Taggart about that time. Other documents indicate that EUAUX2 was removed from DTE's Belle River Mills Compressor Station and installed at the Taggart Compressor Station between August and December of 2007. DTE determined that EUAUX1 was installed at this facility on January 1, 1995 and EUAUX2 was installed on August 1, 2007. These dates will be used going forward. In order for a source to be considered "grandfathered" from permitting requirements, the emission unit must have been installed, not manufactured, prior to August 15, 1967. Therefore, neither generator is considered to be "grandfathered" and both are subject to Rule 201 permitting requirements. However, Rule 285(2)(g) exempts "*internal combustion engines that have a maximum heat input of less than 10 MMBTU/hr.*" The heat rating for both emission units was calculated to be less than 10 MMBTU/hr (EUAUX1, approximately 3.5 MMBTU/hr and EUAUX2, approximately 4.3 MMBTU/hr). Therefore, neither emission unit is subject to NSR permitting.

EUPLT1BLR1, EUPLT1BLR2, EUPLT2BLR1, EUPLT2BLR2, EUP2BLR, EUSHOPBLR, EUDEHYREGENHTR, EUSTORAGEHTR1 and EUSTORAGEHTR2 are exempt from NSR permitting since the facility is operating these emission units under permitting exemption Rule 282(2)(b)(i) for sweet natural gas-fired equipment with a heat input rating of less than 50 MMBTU/hr being used for space heating, service water heating, or indirect heating.

EUDEHYREGENHTR (12.4 MMBTU/hr), EUSTORAGEHTR1 (19.4 MMBTU/hr) and EUSTORAGEHTR2 (19.4 MMBTU/hr) at the stationary source are subject to the New Source Performance Standards (NSPS) for Industrial-Commercial-Institutional Steam Generating Units promulgated in 40 CFR Part 60, Subparts A and Dc, since each emission unit has a maximum heat input capacity of greater than or equal to 10 MMBTU/hr and were installed after June 9, 1989. An NSPS Subpart Dc table has been added to the ROP. Boilers and process heaters EUPLT1BLR1, EUPLT1BLR2, EUPLT2BLR1, EUPLT2BLR2, EUP2BLR, EUSHOPBLR are not subject to this standard since each of these emission units have a maximum heat input capacity of less than 10 MMBTU/hr.

Various natural gas-fired boilers and process heaters, including EUPLT1BLR1, EUPLT1BLR2, EUPLT2BLR1, EUPLT2BLR2, EUP2BLR, EUSHOPBLR, EUDEHYREGENHTR, EUSTORAGEHTR1 and EUSTORAGEHTR2 at the stationary source are subject to the National Emission Standard for Hazardous Air Pollutants for Major Source Industrial, Commercial and Institutional Boilers and Process Heaters promulgated in 40 CFR Part 63, Subparts A and DDDDD. The most recent Boiler MACT template tables have been added to the ROP.

On January 18, 2008, the USEPA promulgated a New Source Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (40 CFR Part 60, Subpart JJJJ). This regulation does not apply to the existing compressor engines since they were ordered prior to December of 2006.

National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart ZZZZ (RICE MACT) of 40 CFR Part 63 regulates HAP emissions from existing, new, and reconstructed stationary reciprocating internal combustion engines (RICE) located at both major and minor sources of HAPs. However, there are no requirements under this standard for natural gas-fired lean burn engines greater than 500 hp that were constructed prior to December 19, 2002. All of the compressor engines at the facility are greater than 500 hp, natural gas fired and were installed prior to 2002. Therefore, these engines are subject to this regulation but have no applicable requirements.

The emergency generators are subject to the RICE MACT for existing sources, based on a horse power (hp) rating of greater than 500 and the lack of obligation to operate for emergency demand response per 40 CFR 63.6640(f)(2)(ii) and (iii). Engines constructed prior to December 19, 2002 have no applicable requirements, but are still subject to this standard, which includes EUAUX1 and EUAUX2. EUAUX1 is an existing emergency stationary RICE with a site rating of more than 500 brake HP that was relocated to the site prior to December 19, 2002. Although EUAUX2 was not relocated to the site until August 2007, it is also considered an existing emergency stationary RICE under 40 CFR Part 63, Subpart ZZZZ. Per 40 CFR 63.6590(b)(3)(iii), neither EUAUX1 or EUAUX2 have to meet the requirements 40 CFR Part 63, Subpart ZZZZ or 40 CFR Part 63, Subpart A, including initial notification requirements. Both of these emergency generators were manufactured prior to 1967. The RICE MACT defines construction as *“the on-site fabrication, erection, or installation of an affected source”* specifying that *“construction does not include the removal of all equipment comprising an affected source from an existing location and reinstalling of such equipment at a new location.”*

This facility is subject to the NESHAP for “Natural Gas Transmission and Storage Facilities promulgated in 40 CFR Part 63, Subpart HHH. Although Taggart is subject to this rule, the requirements only apply to facilities that utilize glycol dehydrators. Taggart’s dehydration system is a Sorbead desiccant system that does not use glycol and, therefore, not subject to any requirements of Subpart HHH.

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 either do not have a control device or those with a control device do not have potential pre-control emissions over the 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-N3392-2015 are identified in Appendix 6 of the ROP.

PTI Number			
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
EUVALVEBLDGHTE	Catalytic heater located in the valve building.	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUNPOLEBARNHTR 1-2	Radiant heaters.	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EULUNCHFURNACE	Natural gas fired forced air furnace located in the lunchroom.	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUSHOPWATERHTR	Natural gas fired water heater.	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUAIRCOMP#1-5	Five (5) Catalytic heaters located in the air compressor building.	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUFUELGASHTR	Catalytic heater located in the fuel building.	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUSTOCKRMRADH TR1-4	Four (4) Omega II radiant heater located in stock room.	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUGARAGECATHT R#1-5	Five (5) Catalytic heating units.	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUGARAGERADHT R#1-2	Two (2) Reverbray tube type radiant heaters.	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUGARAGEREZNOR# 1-2	Two (2) gas fired forced air hanging furnaces.	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUANNEXWTRHTR	Natural gas fired water heater.	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
EUANNEXFURNACE	Forced air furnace for building heat.	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUHCSTORAGE F-3	Storage of hydrocarbons condensed from the natural gas during its movement through the pipeline	R 336.1212(4)(d)	R 336.1284(2)(e)
EUHCSTORAGE H-1 thru H-4	Storage of hydrocarbons condensed from the natural gas during its movement through the pipeline	R 336.1212(4)(d)	R 336.1284(2)(e)
EUHCSTORAGE J-2	Storage of hydrocarbons condensed from the natural gas during its movement through the pipeline	R 336.1212(4)(d)	R 336.1284(2)(e)
EUSORBEADDEHY C-1	Storage of hydrocarbons condensed from the natural gas during its movement through the pipeline	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 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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RENEWABLE OPERATING PERMIT

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2020

September 17, 2020 - STAFF REPORT ADDENDUM

Purpose

A Staff Report dated August 17, 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:	Tyler Gage, Manager, Transmission and Storage Operations 989-365-5122
AQD Contact:	Chris Robinson, Environmental Quality Analyst 616-286-0083

Summary of Pertinent Comments

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

Changes to the August 17, 2020 Draft ROP

No changes were made to the draft ROP.