

Michigan Department of  
Environment, Great Lakes, and Energy  
Air Quality Division

State Registration Number  
N3391

**RENEWABLE OPERATING PERMIT  
STAFF REPORT**

ROP Number  
MI-ROP-N3391-2017a

**DTE Gas Company - Washington 10 Compressor Station**

SRN: N3391

Located at

12700 30 Mile Road, Washington Township, Macomb, Michigan 48095

Permit Number: MI-ROP-N3391-2017a

Staff Report Date: August 21, 2017

Amended Date: May 16, 2019

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) requires that the Michigan Department of Environmental Quality (MDEQ), 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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State Registration Number

N3391

**RENEWABLE OPERATING PERMIT**

**AUGUST 21, 2017 - STAFF REPORT**

ROP Number

MI-ROP-N3391-2017

**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 of 1990 and Michigan's Administrative Rules for Air Pollution Control pursuant to 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 - Washington 10 Compressor Station 12700 30 Mile Road Washington Township, Michigan 48095
Source Registration Number (SRN):	N3391
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:	201700011
Responsible Official:	Mr. Andrew Kashat, Manager, Transmission and Storage Operations 586-412-3088
AQD Contact:	Kerry Kelly, Environmental Quality Analyst 586-753-3746
Date Application Received:	January 17, 2017
Date Application Was Administratively Complete:	March 2, 2017
Is Application Shield In Effect?	Yes
Date Public Comment Begins:	August 21, 2017
Deadline for Public Comment:	September 20, 2017

## Source Description

DTE operates a natural gas compressor station in western Macomb County one-tenth of a mile east of M-53 on 30 Mile Road. The area surrounding Washington 10 is rural, sparsely populated with commercial, residential, and industrial properties. The nearest residence is approximately two-tenths of a mile north of Washington 10.

The function of this 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. Washington 10 Storage facility currently consists of six reciprocating compressor engines, one SI emergency generator, one direct heater, four indirect heaters, four organic liquid storage vessels, two cold cleaners, seven boilers, and various auxiliary fuel-burning equipment.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2016**.

### **TOTAL STATIONARY SOURCE EMISSIONS**

<b>Pollutant</b>	<b>Tons per Year</b>
Carbon Monoxide (CO)	29.04
Lead (Pb)	0.00
Nitrogen Oxides (NO <sub>x</sub> )	38.20
Particulate Matter (PM)	3.48
Sulfur Dioxide (SO <sub>2</sub> )	0.12
Volatile Organic Compounds (VOCs)	2.99

The following table lists Hazardous Air Pollutant emissions as calculated by AQD in MAERS for the year 2016.

	<b>Tons per Year</b>
<b>Individual Hazardous Air Pollutants (HAPs) **</b>	<b>NA*</b>
<b>Total Hazardous Air Pollutants (HAPs)</b>	<b>0.22</b>

\* Each individual HAP listed in MAERs AQD Calculated Emissions was less than 0.10 ton.

\*\*As listed pursuant to Section 112(b) of the federal Clean Air Act.

In addition to the pollutants listed above that have been reported in MAERS, the potential to emit of Greenhouse Gases in tons per year of CO<sub>2</sub>e is 170,849.93 tons. CO<sub>2</sub>e is a calculation of the combined global warming potentials of six Greenhouse Gases (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride).

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 located in Macomb County, which is currently designated by the U.S. 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 carbon monoxide, nitrogen oxide, and volatile organic compounds exceeds 100 tons per year and the potential to emit of any single HAP regulated by the federal Clean Air Act, Section 112, 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 stationary source was 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, nitrogen oxide, and volatile organic compounds was greater than 250 tons per year.

EUENGINE4 and EUENGINE5 at the stationary source are subject to the Standards of Performance for Stationary Spark Ignition Internal Combustion Engines promulgated in 40 CFR Part 60, Subparts A and JJJJ, specifically 40 CFR 60.4236.

EUGENERATOR, EUENGINE1, EUENGINE2, EUENGINE3, EUENGINE4, EUENGINE5 and EUENGINE6 at the stationary source are 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. At this time, EUGENERATOR and FGENGINES1(EUENGINE1, EUENGINE2, and EUENGINE3) do not have to meet the requirements of 40 CFR Part 63, Subparts A and ZZZZ per 40 CFR 63.6590(b)(3)(iii) and 40 CFR 63.6590(b)(3)(i) and respectively.

EUINDIRECTHEATER, EUINDIRECT1, EUINDIRECT2, EUINDIRECT3, EUINDIRECTHEATER4, EUP1\_BMBLR1, EUP1\_BMBLR2, EUP1\_BMBLR3, EUP1\_KC1000, EUP2\_BMBLR1, EUP2\_BMBLR2, EUP2\_KC1000 at the stationary source are 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 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."

The emission limitation or standard for CO from EUENGINE4, EUENGINE5, and EUENGINE6 at the stationary source are exempt from the federal Compliance Assurance Monitoring (CAM) regulation under 40 CFR 64.2(b)(1)(i), because CO emission standard is addressed by 40 CFR 63, Subpart ZZZZ. Therefore, EUENGINE4, EUENGINE5, and EUENGINE6 are exempt from CAM requirements for CO.

The emission limitations or standards for CO and VOC for EUENGINE4, EUENGINE5, and EUENGINE6 at the stationary source are subject to the federal Compliance Assurance Monitoring rule under 40 CFR Part 64, but monitoring included in 40 CFR 63, Subpart ZZZZ is considered to be presumptively acceptable monitoring for CO and VOC emission limits and is included in the ROP in FGENGINES2.

Emission Unit ID	Pollutant/Emission Limit	UAR(s)	Control Equipment	Monitoring	Presumptively Acceptable Monitoring?
EUENGINE4	CO = 2.5 grams/hp-hour	R 336.1205(1)(a) and (3), 40 CFR 52.21 (c) and (d)	Oxidation Catalyst	Catalyst inlet temperature and pressure drop across the catalyst	Yes
	VOC = 1.0 gram/hp-hour	R 336.1702(a)			
EUENGINE5	CO = 2.5 grams/hp-hour	R 336.1205(1)(a) and (3), 40 CFR 52.21 (c) and (d)	Oxidation Catalyst	Catalyst inlet temperature and pressure drop across the catalyst	Yes
	VOC = 1.0	R 336.1702(a)			

Emission Unit ID	Pollutant/ Emission Limit	UAR(s)	Control Equipment	Monitoring	Presumptively Acceptable Monitoring?
	gram/hp-hour				
EUENGINE6	CO = 2.5 grams/hp-hour	R 336.1205(1)(a) and (3), 40 CFR 52.21 (c) and (d)	Oxidation Catalyst	Catalyst inlet temperature and pressure drop across the catalyst	Yes
	VOC = 1.0 gram/hp-hour	R 336.1702(a)			

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-N3391-2012c are identified in Appendix 6 of the ROP.

PTI Number			
459-97A	28-04A		

### **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
EUFURNACE1	Natural gas fired forced air furnace to heat the office building	R 336.1212(4)(b)	R 336.1282(2)(b)(i)
EUFURNACE2	Natural gas fired forced air furnace to heat the office building	R 336.1212(4)(b)	R 336.1282(2)(b)(i)
EUFURNACE3	Natural gas fired forced air furnace to heat the office building	R 336.1212(4)(b)	R 336.1282(2)(b)(i)
EUWATERHTR	Natural gas fired water heater for office building	R 336.1212(4)(b)	R 336.1282(2)(b)(i)

<b>PTI Exempt Emission Unit ID</b>	<b>Description of PTI Exempt Emission Unit</b>	<b>Rule 212(4) Citation</b>	<b>PTI Exemption Rule Citation</b>
EURADIANT1	Natural gas fired radiant heater located in the garage/storage building	R 336.1212(4)(b))	R 336.1282(2)(b)(i)
EURADIANT2	Natural gas fired radiant heater located in the garage/storage building	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 the MDEQ, 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 Ms. Joyce Zhu, Southeast Michigan 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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**SEPTEMBER 28, 2017 - STAFF REPORT  
ADDENDUM**

MI-ROP-N3391-2017

**Purpose**

A Staff Report dated August 21, 2017, was developed in order to set forth the applicable requirements and factual basis for the draft Renewable Operating Permit (ROP) terms and conditions as required by R 336.1214(1). 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 R 336.1214(3). In addition, this addendum describes any changes to the draft ROP resulting from these pertinent comments.

**General Information**

Responsible Official:	Mr. Andrew Kashat, Manager, Transmission and Storage Operations 586-412-3088
AQD Contact:	Kerry Kelly, Environmental Quality Analyst 586-753-3746

**Summary of Pertinent Comments**

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

**Changes to the August 21, 2017 Draft ROP**

No changes were made to the draft ROP.



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**NOVEMBER 21, 2017 - STAFF REPORT  
ADDENDUM**

MI-ROP-N3391-2017

**Purpose**

A Staff Report dated August 21, 2017, was developed in order to set forth the applicable requirements and factual basis for the draft Renewable Operating Permit (ROP) terms and conditions as required by R 336.1214(1). The purpose of this Staff Report Addendum is to summarize any significant comments received on the proposed ROP during the 45-day EPA comment period as described in R 336.214(6). In addition, this addendum describes any changes to the proposed ROP resulting from these pertinent comments.

**General Information**

Responsible Official:	Mr. Andrew Kashat, Manager, Transmission and Storage Operations 586-412-3088
AQD Contact:	Kerry Kelly, Environmental Quality Analyst 586-506-9817

**Summary of Pertinent Comments**

No pertinent comments were received during the 45-day EPA comment period.

**Changes to the September 28, 2017 Proposed ROP**

No changes were made to the proposed ROP.

Michigan Department of  
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Air Quality Division

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**RENEWABLE OPERATING PERMIT**  
**MAY 16, 2019 - STAFF REPORT FOR RULE 216(2)**  
**MINOR MODIFICATION**

ROP Number  
MI-ROP-N3391-2017a

**Purpose**

On November 21, 2017, the Department of Environmental Quality, Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-N3391-2017 to DTE Gas Company - Washington 10 Compressor Station pursuant to Rule 214 of the administrative rules promulgated under Act 451. Once issued, a company is required to submit an application for changes to the ROP as described in Rule 216. The purpose of this Staff Report is to describe the changes that were made to the ROP pursuant to Rule 216(2).

**General Information**

Responsible Official:	Mr. Ben Parrotta, Manager, Transmission and Storage Operations 586-540-8268
AQD Contact:	Caryn E. Owens, Environmental Engineer 231-878-6688
Application Number:	201900019
Date Application for Minor Modification was Submitted:	February 11, 2019

**Regulatory Analysis**

The AQD has determined that the change requested by the stationary source meets the qualifications for a Minor Modification pursuant to Rule 216(2).

**Description of Changes to the ROP**

Minor Modification No. 201900019 was to incorporate PTI 28-04B, which was for an administrative change to update the 40 CFR Part 63, Subpart ZZZZ Conditions. In addition, the following changes were made: typographical errors corrected in EUBOILER names and EUINDHEATERS; removed FGINDIRECTHEATERSDDDDDD since no emission units fall in that Flexible Group; and removed FGENGINES2ZZZZ since the applicable 40 CFR Part 63, Subpart ZZZZ requirements were mostly included in FGENGINES2 Conditions issued through PTI 28-04B. There were a few Conditions that applied to FGENGINES2 in the FGENGINES2ZZZZ, so those Conditions were moved to FGENGINES2 Table during this Minor Modification.

**Compliance Status**

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements associated with the emission unit(s) involved with the change as of the date of approval of the Minor Modification to the ROP.

### **Action Taken by the DEQ**

The AQD proposes to approve a Minor Modification to ROP No. MI-ROP-N3391-2017, as requested by the stationary source. A final decision on the Minor Modification to the ROP will not be made until any affected states and the United States Environmental Protection Agency (USEPA) has been allowed 45 days to review the proposed changes to the ROP. The delegated decision maker for the AQD is the District Supervisor. The final determination for approval of the Minor Modification will be based on the contents of the permit application, a judgment that the stationary source will be able to comply with applicable emission limits and other requirements, and resolution of any objections by any affected states or the USEPA.