

State Registration Number  
**N3920**

Michigan Department of Environmental Quality  
Air Quality Division  
**RENEWABLE OPERATING PERMIT  
STAFF REPORT**

ROP Number  
**MI-ROP-N3920-2014b**

**Consumers Energy  
FREEDOM COMPRESSOR STATION**

SRN: N3920

Located at

12201 Pleasant Lake Road, Manchester, Michigan 48158

Permit Number: MI-ROP-N3920-2014b

Staff Report Date: March 10, 2014

Amended Dates: April 29, 2016  
December 6, 2017

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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Michigan Department of Environmental Quality  
Air Quality Division

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**RENEWABLE OPERATING PERMIT**  
**MARCH 10, 2014 STAFF REPORT**

ROP Number  
MI-ROP-N3920-2014

**Purpose**

Major stationary sources of air pollutants, and some non-major sources, are required to obtain and operate in compliance with a 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 report, as required by Rule 214(1), sets forth the applicable requirements and factual basis for the draft permit terms and conditions including citations of the underlying applicable requirements, an explanation of any equivalent requirements included in the draft permit 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:	Freedom Compressor Station 12201 Pleasant Lake Road Manchester, Michigan 48158
Source Registration Number (SRN):	N3920
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:	201300166
Responsible Official:	Ocie Gregory, Jr., Manager of Gas Operations & Maintenance 248-433-5805
AQD Contact:	Sersena M. White, Senior Environmental Engineer 517-780-7844
Date Permit Application Received:	October 4, 2013
Date Application Was Administratively Complete:	October 8, 2013
Is Application Shield In Effect?	Yes
Date Public Comment Begins:	March 10, 2014
Deadline for Public Comment:	April 9, 2014

## Source Description

The Freedom Compressor Station is owned by Consumers Energy. The Station is located at 12201 Pleasant Lake Road, in a rural area, northeast of the City of Manchester, Michigan. The primary function of the station is to transport natural gas primarily from the Panhandle Eastern Pipeline Company's supply lines to Consumers Energy's pipeline system. The Freedom Station uses natural gas fired reciprocating engines to power their natural gas compressors. The compressors are used to raise the pressure of the gas along the distribution pipeline system. There are two plants at this facility. Plant No. 1 is located on the north side of the property and shelters four natural gas engines/compressors. Four of the previous eight engines that were in Plant 1 were removed in December of 2006. Plant No. 2 shelters five natural gas engines/compressors. There are also two diesel fired reciprocating engines/generators, used for emergency back-up power. The back-up power engines are exempt from requiring a permit to install under Rule 336.1285(g). All of the natural gas engines and diesel generators located in Plant 1 and 2 were installed between 1946 and 1955. Storage vessels on site are also exempt from requiring a permit. There are no permits to install for this facility as all of the equipment is either "grandfathered" or meet the exemption requirements within Michigan's Air Pollution Control Rules for obtaining an Air Use Permit.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System in the **2012** submittal.

### TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	37.05
Lead (Pb)	0
Nitrogen Oxides (NO <sub>x</sub> )	304.27
Particulate Matter (PM)	4.64
Sulfur Dioxide (SO <sub>2</sub> )	0.06
Volatile Organic Compounds (VOCs)	11.79

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

See Parts C and D in the draft 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 Washtenaw 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 nitrogen oxides exceeds 100 tons per year.

No emissions units at the stationary source are currently subject to the Prevention of Significant Deterioration (PSD) regulations of Part 18, Prevention of Significant Deterioration of Air Quality of Act 451 or 40 CFR, Part 52.21 because the process equipment was constructed/installed prior to June 19, 1978, the promulgation date of the PSD regulations.

FGENGINES 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.

The source is subject to 40 CFR 63, Subpart ZZZZ Reciprocating Internal Combustion Engines (RICE) as a major source of Hazardous Air Pollutants (HAPs) because the potential to emit for a single HAP is greater than 10 tons per year and the potential to emit for all HAPs is greater than 25 ton per year.

EUENGINE01, EUENGINE13, EUENGINE14, EUENGINE28, EUENGINE29, EUENGINE57, EUENGINE58, EUENGINE59 and EUENGINE60 are classified as existing 2-stroke lean burn (2SLB) engines according to the definitions provided in 40 CFR 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants from Stationary Reciprocating Internal Combustion Engines (RICE). Pursuant to 63.6590(b)(3)(i), existing spark ignition 2SLB stationary RICE greater than 500 HP do not have to meet the requirements of this subpart and of subpart A. Additionally, no notification was necessary. If these units are reconstructed, or new units are installed, they may be subject to this subpart.

EUAUXGEN1 and EUAUXGEN2 are classified as existing compression ignition (CI) stationary emergency RICE, less than 500 HP, located at a major source of HAPs. Pursuant to §63.6602, these stationary sources must comply with Table 2c to Subpart ZZZZ of Part 63 "Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions." Compliance with Subpart ZZZZ was required by May 3, 2013.

EULINEHEATER1, EUFUELHEATER1, EUBOILER2, EUBOILER3, EUBOILER4, EUBOILER5, EUBOILER6, EUBOILER7 and EUBOILER 8 are classified as process heaters and/or boilers and are subject to 40 CFR 63 Subpart DDDDD, National Emission Standards for Industrial, Commercial, and Institutional Boilers and Process Heaters. These units must be in compliance with Subpart DDDDD operating limitations and work practices by January 31, 2016. The AQD is not delegated the regulatory authority for this major source MACT; therefore, the special conditions for the Boiler Major Source MACT contained in FGBLRSHTRS were not reviewed by the AQD.

The source is not considered a major source of Greenhouse Gas emissions (GHG) because the potential to emit Greenhouse Gases in tons per year of carbon dioxide equivalents (CO<sub>2</sub>e) is less than 100,000 tons per year, even though the potential to emit GHGs on a mass basis is greater than 100 tons per year. 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).

At this time there are no applicable requirements for Greenhouse Gases to include in the ROP. The mandatory Greenhouse Gas Reporting Rule, under 40 CFR 98, is not a ROP-applicable requirement and is not included in the ROP.

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."

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.

### **Non-applicable Requirements**

Part E of the draft ROP lists requirements that are not applicable to this source as determined by the AQD, if any were proposed in the application. These determinations are incorporated into the permit shield provision set forth in Part A (General Conditions 26 through 29) of the draft 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.

<b>Exempt Emission Unit ID</b>	<b>Description of Exempt Emission Unit</b>	<b>Rule 212(4) Exemption</b>	<b>Rule 201 Exemption</b>
EUAMBTANK1	100 gal Coolant storage tank	R336.1212(3)(c)	R336.1284(i)
EUDRIPTANK	500-gal. Natural gas condensate storage tank	R336.1212(3)(c)	R336.1284(e)
EUGASTANK	500-gal. Gasoline storage tank	R336.1212(3)(c)	R336.1284(g)(i)
EUHEATERTANK1	60 gal Pipeline heater coolant tank	R336.1212(3)(c)	R336.128(i)
EUHOTWTRHTR1	40,000 BTU/hr. Natural gas fired hot water heater located in Plant 1 Aux Building	R336.1212(3)(b)	R336.1282(b)(i)
EUHOTWTRHTR2	50,000 BTU/hr. Natural gas fired hot water heater located in Plant 2 Aux Building	R336.1212(3)(b)	R336.1282(b)(i)
EUSPACEHTR1	125,000 BTU/hr. Natural gas fired space heater located in heated shed	R336.1212(3)(b)	R336.1282(b)(i)
EUTANK8	2,000 gal. Ethylene glycol/water tank	R336.1212(3)(c)	R336.1284(i)
EUTANK9	6,000 gal. Ethylene glycol/water tank	R336.1212(3)(c)	R336.1284(i)
EUTANK14	3,000 gal. Natural gas condensate storage tank	R336.1212(3)(c)	R336.1284(e)

### **Draft ROP Terms/Conditions Not Agreed to by Applicant**

This permit 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 DEQ**

The AQD proposes to approve this permit. 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 U.S. Environmental Protection Agency (USEPA) is allowed up to 45 days to review the draft permit 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 Scott Miller, Jackson District Supervisor. The final determination for ROP approval/disapproval 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 terms and conditions, and resolution of any objections by the USEPA.

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**APRIL 10, 2014 STAFF REPORT ADDENDUM**

MI-ROP-N3920-2014

**Purpose**

A Staff Report dated March 10, 2014, 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:	Ocie Gregory, Jr., Manager of Gas Operations & Maintenance 248-433-5805
AQD Contact:	Sersena M. White, Senior Environmental Engineer 517-780-7844

**Summary of Pertinent Comments**

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

**Changes to the March 10, 2014 Draft ROP**

No changes were made to the draft ROP.

Michigan Department of Environmental Quality  
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**RENEWABLE OPERATING PERMIT**

ROP Number

N3920

**APRIL 29, 2016 - STAFF REPORT FOR  
RULE 216(2) MINOR MODIFICATION**

MI-ROP-N3920-2014a

**Purpose**

On July 1, 2014, the Department of Environmental Quality, Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-N3920-2014 to Consumers Energy - Freedom Compressor Station pursuant to R 336.1214. Once issued, a company is required to submit an application for changes to the ROP as described in R 336.1216. The purpose of this Staff Report is to describe the changes that were made to the ROP pursuant to R 336.1216(2).

**General Information**

Responsible Official:	Gregory Baustian, Ex. Manager Gas Compression & Storage
AQD Contact:	Caryn E. Owens, Environmental Quality Analyst 231-876-4414
Application Number:	201600002
Date Application For Minor Modification Was Submitted:	December 17, 2015

**Regulatory Analysis**

The AQD has determined that the change requested by the stationary source meets the qualifications for a Minor Modification pursuant to R 336.1216(2).

**Description of Changes to the ROP**

Updated emission unit and installation dates for EUENGINE1, and installation date for EULINEHEATER1, and updated the description for EUDEGREASER to represent the actual equipment at the facility, and for 40 CFR, Part 63, Subpart DDDDD (Boiler MACT) applicability for the facility. EUFUELHEATER1 was removed from the ROP, which was initially thought to be the same piece of equipment as EUSPACEHTR1; however, after a field inspection and discussions with the company EUFUELHEATER1 was determined to actually be the same piece of equipment as EUBOILER5.

Additionally, on April 11, 2016, Consumers Energy requested to remove EUBOILER6, EUBOILER7, EUBOILER8, and EUBOILER9 because these boilers are space heaters that were initially thought to be covered under 40 CFR, Part 63, Subpart DDDDD. However, based on a determination from the EPA that states units which heat glycol/water mixture to provide comfort heat are not subject to 40 CFR, Part 63, Subpart DDDDD. Therefore, these emission units were removed from the ROP.

**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 MDEQ**

The AQD proposes to approve a Minor Modification to ROP No. MI-ROP-N3920-2014, 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 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.

Michigan Department of Environmental Quality  
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**RENEWABLE OPERATING PERMIT**

ROP Number

N3920

**JUNE 27, 2016 - STAFF REPORT ADDENDUM FOR  
RULE 216(2) MINOR MODIFICATION**

**MI-ROP-N3920-  
2014a**

**Purpose**

A Staff Report dated April 29, 2016, was developed in order to set forth the applicable requirements and factual basis for the proposed Minor Modification to the Renewable Operating Permit's (ROP) terms and conditions as required by R 336.1216(2)(c). The purpose of this Staff Report Addendum is to summarize any significant comments received on the proposed ROP modification during the U.S. Environmental Protection Agency's (USEPA) 45-day comment period as described in R 336.1216(2)(c). In addition, this addendum describes any changes to the proposed ROP Minor Modification resulting from these pertinent comments.

**General Information**

Responsible Official:	Gregory Baustian, Ex. Manager Gas Compression & Storage
AQD Contact:	Caryn E. Owens, Environmental Quality Analyst 231-876-4414

**Summary of Pertinent Comments**

No pertinent comments were received during the USEPA's 45-day comment period.

**Changes to the April 29, 2016 Proposed ROP Minor Modification**

No changes were made to the proposed ROP Minor Modification.

Michigan Department of Environmental Quality  
Air Quality Division

State Registration Number

**RENEWABLE OPERATING PERMIT**

ROP Number

N3920

**DECEMBER 6, 2017 - STAFF REPORT FOR  
RULE 216(1)(a)(i)-(iv) ADMINISTRATIVE  
AMENDMENT**

MI-ROP-N3920-2014b

**Purpose**

On June 27, 2016, the Department of Environmental Quality (DEQ), Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-N3920-2014a to Consumers Energy - Freedom Compressor Station pursuant to R 336.1214. Once issued, a company is required to submit an application for changes to the ROP as described in R 336.1216. The purpose of this Staff Report is to describe the changes that were made to the ROP pursuant to R 336.1216(1)(a)(i-iv).

**General Information**

Responsible Official:	Gregory Baustian, Ex. Manager Gas Compression & Storage
AQD Contact:	Caryn E. Owens, Environmental Engineer 231-878-6688
Application Number:	201700140
Date Application For Administrative Amendment Was Submitted:	November 9, 2017

**Regulatory Analysis**

The AQD has determined that the change requested by the stationary source meets the qualifications for an Administrative Amendment pursuant to R 336.1216(1)(a)(i).

**Description of Changes to the ROP**

The Administrative Amendment is to correct the due date for the Renewal Application that was incorrect on the cover of the current ROP, which stated the Administratively Complete ROP Application was due between January 1, 2017 to January 1, 2018. The expiration date of the ROP is July 1, 2019, so the dates for the Administratively Complete ROP Application were updated to January 1, 2018 to January 1, 2019.

**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 Administrative Amendment to the ROP.

**Action Taken by the DEQ**

The AQD approved an Administrative Amendment to ROP No. MI-ROP-N3920-2014a, as requested by the stationary source. The delegated decision maker for the AQD is the District Supervisor.