

State Registration Number
B7390

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-B7390-2021

**ANR Pipeline Company
Central Charlton Compressor Station**

State Registration Number (SRN): B7390

Located at

14490 Beckett Road, Johannesburg, Otsego County, Michigan 49751

Permit Number: MI-ROP-B7390-2021

Staff Report Date: March 8, 2021

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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State Registration Number

B7390

RENEWABLE OPERATING PERMIT

MARCH 8, 2021 - STAFF REPORT

ROP Number

MI-ROP-B7390-2021

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:	ANR Pipeline Company Central Charlton Compressor Station 14490 Beckett Road Johannesburg, Michigan 49751
Source Registration Number (SRN):	B7390
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:	201700002
Responsible Official:	Keith R. Mossman Director – Great Lakes Region 248-205-4510
AQD Contact:	Sharon LeBlanc, Environmental Quality Analyst 989-217-0055
Date Application Received:	December 28, 2016
Date Application Was Administratively Complete:	December 28, 2016
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	March 8, 2021
Deadline for Public Comment:	April 7, 2021

Source Description

The Central Charlton Compressor Station is located in Otsego County, Section 1, Township 30 North, Range 1 West, Charlton Township at 114490 Beckett Road, Johannesburg, Michigan. The Facility operates as both a Natural Gas (NG) storage and transmission Facility. It functions to maintain pressure in pipelines transporting NG to other ANR facilities and end users.

During the summer, NG is pulled from the field, compressed and injected into underground reservoirs consisting of natural porous rock formations for storage until needed. During the winter, the gas is withdrawn and transported by pipeline to customers for distribution. The withdrawal process is accomplished by allowing the NG to free flow out of the reservoir. When insufficient reservoir pressure exists to allow for free-flow, one or more compressor engines is brought online to compress the gas and continue flow to the pipeline. During withdrawal, the field gases are conditioned by cooling and glycol dehydration to meet pipeline quality. NG-fired heaters are used to heat the gas as necessary. Moisture (in the form of brine) and liquid hydrocarbons present in the reservoir rocks are collected through the conditioning process. The liquid hydrocarbons are sold as a product and the brine is reinjected into a well for disposal.

Equipment associated with the Facility was installed in 1981, and includes:

- Two 4,000 horsepower (Hp), Cooper-Bessemer, Model 12Q145H2, two-cycle, lean burn, Reciprocating Internal Combustion Engines (RICE).
- One Waukesha Model F3531GSIU, 694 Hp RICE emergency generator,
- One glycol dehydration system with regenerator and condenser control,
- Four C.E. Natco withdrawal heaters rated at 10 million BTU per Hour (MMBTU/Hr) heat-input,
- One Kewanee 3.72 MMBTU/Hr boiler,
- Thirteen space heaters with rated capacities of less than 100,000 BTU/Hr,
- One 75,000 BTU/Hr water heater, and
- Various tanks for storage of hydrocarbons, brine, lubricating oils, and waste oils.

All of the referenced devices burn NG with less than 20 grains of sulfur per 100 square feet as their fuel.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the calendar year **2019**.

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	38.51
Lead (Pb)	0
Nitrogen Oxides (NO _x)	37.10
Particulate Matter (PM10/PM2.5)	3.56/3.55
Sulfur Dioxide (SO ₂)	0.04
Volatile Organic Compounds (VOCs)	9.84

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

Individual Hazardous Air Pollutants (HAPs) **	Tons per Year
Formaldehyde	4.05
Acetaldehyde	0.57
Acrolein	0.57
Methanol	0.18

Total Hazardous Air Pollutants (HAPs)	5.71
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**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 Otsego 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 oxide and Carbon monoxide exceeds 100 tons per year.
- The potential to emit of any single HAP (Formaldehyde) 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.

Compressor engines EUCTCOMPENG001 and EUCTCOMPENG002 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 nitrogen oxides was greater than 250 tons per year.

With respect to toxics review under Rule 336.1224/1225 emission units associated with the site were installed in 1981 prior to implementation of the Rule 224/225 toxics evaluation in 1992. The Rule 901 UAR indicates that they used the pre-1992 toxics evaluation was conducted at the time of permitting.

The glycol dehydration system, EUCTGDS001 at the stationary source is subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Natural Gas Transmission and Storage Facilities promulgated in 40 CFR Part 63, Subparts A and HHH. In addition, based on EPA applicability determinations dated February 4, 2015 and February 10, 2016, the boiler of the glycol regenerator is subject to the NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters promulgated in 40 CFR Part 63, Subparts A and DDDDD.

Withdrawal heaters EUCTHTR001A through EUCTHTR001D and the boiler EUCTBOILER001 at the stationary source are subject to the NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters promulgated in 40 CFR Part 63, Subparts A and DDDDD.

The emergency generator engine EUCTGEN001 at the stationary source is subject to the National Emission Standard for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines promulgated in 40 CFR Part 63, Subparts A and ZZZZ. It should be noted that at the time of the ROP renewal compressor engines EUCTCOMPENG001 and EUCTCOMPENG002 appear to be exempt from the referenced subpart under 40 CFR 63.6590(b)(i), which exempts 2-stroke, lean burn, stationary RICE with a site rating of more than 500 brake HP located at a major source of HAPs. Therefore, requirements under the subpart have not been applied to the compressor engines as part of this ROP renewal.

Significant changes to the ROP include:

- Addition of units, EUCTHTR001A through EUCTHTR001D and EUCTBOILER001 to the emission unit summary table.

- Addition of FGCTHHH, which consists of EUCTGDS001 to the flexible group summary table, and incorporates applicable requirements of 40 CFR Part 63, Subparts A and HHH NESHAP standards for NG Transmission and Storage Facilities.
- Addition of FGCTDDDD which consists of EUCTHTR001A through EUCTHTR001D to the flexible group summary table.
- Addition of FGCTDDDD<10 which consists of EUCTBOILER001 and EUCTGDS001 (reboiler only) to the flexible group summary table.
- Incorporation of applicable requirements of 40 CFR Part 63, Subparts A and DDDDD NESHAP standards for Industrial, Commercial, and Institutional Boilers and Process Heaters to FGCTDDDD and FGCTDDDD<10.
- Incorporation of applicable requirements of 40 CFR Part 63, Subparts A and ZZZZ NESHAP standards for RICE for EUCTGEN001.
- Addition of Source Wide conditions to address Rule 336.285 (mm) NG venting activities.

No enforcement issues, including but not limited to Violation Notices (VNs) have occurred since the last ROP issuance. No compliance schedule is included in Appendix 2 of 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."

No emission units have emission limitations or standards that are subject to the federal Compliance Assurance Monitoring (CAM) 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.

The compressor engines EUCTCOMPENG001 and EUCTCOMPENG002 both are reported to have potential emissions of NOx above major source thresholds but are not subject to federal CAM pursuant to 40 CFR Part 64 because the referenced emission units are not equipped with a control device.

EUCTGEN001, EUCTBOILER001 and EUCTHTR001A – 001D are not subject to the federal CAM rule pursuant to 40 CFR Part 64, because the unit(s) potential emissions are below the major source thresholds. It should also be noted that none of the referenced units are equipped with pollution control devices.

The glycol dehydration system, EUCTGDS001 is equipped with a condenser as a pollution control device but is not subject to the federal CAM rule pursuant to 40 CFR Part 64, because the pre-control VOC emissions are 21.69 ton per year as determined using GRI-GLYCalc™.

The Facility and it's EUs are not subject to Cross-State Air Pollution Rules (CSPAR) or Acid Rain programs.

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-B7390-2012a are identified in Appendix 6 of the ROP.

PTI Number			
9-05	5-01A	5-01	321-00
576-96	660-80		

Streamlined/Subsumed Requirements

The following table lists explanations of any streamlined/subsumed requirements included in the ROP pursuant to Rules 213(2) and 213(6). All subsumed requirements are enforceable under the streamlined requirement that subsumes them.

Emission Unit/Flexible Group ID	Condition Number	Streamlined Limit/ Requirement	Subsumed Limit/ Requirement	Stringency Analysis
FGCTREC	SC I.2	40 CFR 52.21(j)	R 336.1801(4)(d)	The streamlined requirement imposes a NOx limit of 9.2 grams per horsepower hour, which is more stringent than the subsumed requirements

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
EUCTTNK001	Condensate Tank (and associated landing and unloading); 16,800 gal (T7)	R 336.1212(4)(c)	R 336.1284(e)
	Condensate Tank (and associated landing and unloading); 5,140 gal (T8)	R 336.1212(4)(c)	R 336.1284(e)
EUCTTNK002	Ambitrol Tank; 4,888 gal (T1)	R 336.1212(4)(c)	R 336.1284(i)
	Ethylene Glycol Tank; 2,490 gal (T2)	R 336.1212(4)(c)	R 336.1284(i)
	Wastewater Tank; 5,000 gal (T10)	R 336.1212(4)(c)	R 336.1284(i)
	Glycol Overfill Tank; 300 gal (T21)	R 336.1212(4)(c)	R 336.1284(i)
EUCTTNK003	Lubricating Oil Tank (New); 10,700 gal (T4)	R 336.1212(3)(e)	R 336.1284(c)
	Lubricating Oil Tank (Maintenance); 1,833 gal (T5)	R 336.1212(3)(e)	R 336.1284(c)
	Lubricating Oil Tank (Used); 1,833 gal (T6)	R 336.1212(3)(e)	R 336.1284(c)

PTI Exempt Emission Unit ID	Description of PTI Exempt Emission Unit	Rule 212(4) Citation	PTI Exemption Rule Citation
EUCTTNK019	Condensate Tank; 660 gal (T19)	R 336.1212(4)(c)	R 336.1284(e)
EUCTTNK020	Condensate Slop Tank; 300 gal (T20)	R 336.1212(4)(c)	R 336.1284(e)
EUCTHTR002	Thirteen (13) Natural Gas Fired Furnaces/Space Heaters; <100,000 Btu/Hr.	R 336.1212(4)(b)	R 336.1282(b)(i)
EUCTHTR003	Natural Gas Fired Water Heater; 75,000 Btu/hr	R 336.1212(4)(b)	R 336.1282(b)(i)

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
B7390

RENEWABLE OPERATING PERMIT
APRIL 12, 2021 - STAFF REPORT ADDENDUM

ROP Number
MI-ROP-B7390-2021

Purpose

A Staff Report dated March 8, 2021 , 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:	Keith R. Mossman Director – Great Lakes Region 248-205-4510
AQD Contact:	Sharon LeBlanc, Environmental Quality Analyst 989-217-0055

Summary of Pertinent Comments

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