

State Registration Number
B7219

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-B7219-2020

**ANR Pipeline Company
South Chester Compressor Station**

State Registration Number (SRN): B7219

Located at

6327 Old State Road, Johannesburg, Otsego County, Michigan 49751

Permit Number: MI-ROP-B7219-2020

Staff Report Date: July 20, 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

JULY 20, 2020 - STAFF REPORT	3
AUGUST 24, 2020 - STAFF REPORT ADDENDUM	9

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

State Registration Number

B7219

RENEWABLE OPERATING PERMIT

JULY 20, 2020 - STAFF REPORT

ROP Number

MI-ROP-B7219-2020

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 South Chester Compressor Station 6327 Old State Road Johannesburg, Michigan 49751
Source Registration Number (SRN):	B7219
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:	201700001
Responsible Official:	W. Craig Rundle, Director of US Pipelines Operations – Great Lakes Region 231-587-2142
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:	July 22, 2020
Deadline for Public Comment:	August 19, 2020

Source Description

The South Chester Compressor Station is located in Otsego County, South Chester Township at 6327 Old State Road, Johannesburg, Michigan near the intersection of Old State and Lovells Roads.

The facility operates as both Natural Gas (NG) storage and transmission facility. The facility functions to maintain pressure in pipelines to transport NG to other ANR facilities and end users. The facility injects into and withdraws NG from an underground storage reservoir, consisting of a natural porous rock formation. During the spring and summer seasons, the compressor engines are used to inject the NG into the underground reservoir. During the winter season, NG is withdrawn from the underground reservoir. During withdrawal, NG free flows out of the reservoirs. If reservoir pressure is not sufficient for the gas to free flow, one or more compressor engines are brought online to compress the gas and continue flow to the pipeline. During withdrawal glycol dehydration is used to condition the field gas going into the pipeline for quality. The glycol dehydration system uses a condenser as control. Ng heaters are used to heat the gas as necessary.

Permitted equipment associated with the facility includes:

- Ethylene Glycol Dehydrator with condenser control (EUSCGD006)
- 2 Cooper Bessemer Model 12Q145LM 3,600 HP, 2 cycle, lean-burn, NG fired Reciprocating Internal Combustion Engines (RICE) used to inject NG into the storage field. (EUSCENG002 and EUSCENG003, AKA Compressor Engine A and Compressor Engine B)
- Waukesha Model F2859GU 526 HP, 4 cycle, rich-burn NG-fired RICE used for emergency backup power. (EUSCGEN001)
- 4 NG-fired 10 MMBtu/hr. withdraw gas heaters (EUSCHTR001 through EUSCHTR004) (FGSCDDDD>10)
- Cleaver Brooks NG-fired 1.35 MMBtu/hr. boiler (EUSCBOILER002)

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)	36.73
Lead (Pb)	NA
Nitrogen Oxides (NO _x)	49.79
Particulate Matter (PM)	3.73
(PM10 primary/PM 2.5 primary)	3.64
Sulfur Dioxide (SO ₂)	0.05
Volatile Organic Compounds (VOCs)	10.98

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

Individual Hazardous Air Pollutants (HAPs) **	Tons per Year
Acetaldehyde	0.58
Acrolein	0.59
Benzene	0.0
Formaldehyde	4.15
Methanol	0.19
Total Hazardous Air Pollutants (HAPs)	5.65

**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 for Nitrogen Oxides (NOx) and Carbon Monoxide (CO) exceed 100 tons per year.
- The potential to emit of any single HAP regulated by the 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.

EUSCENG002 and EUSCENG003 at 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 NOx was greater than 250 tons per year. AQD District files contain copies of USEPA PSD Permit No. EPA-5-A-79-15 identifies which indicated NOx emissions of over 600 tons/year in its PSD permit issued on June 7, 1979. Michigan obtained delegation in September 1979, and subsequently issued PTI 147-80. Emission limits from the USEPA permit have been incorporated into the ROP.

No emission units onsite were identified as having been installed prior to August 15, 1967. As a result, none is considered "grandfathered" and none were subject to New Source Review (NSR) permitting requirements. Future modifications of this equipment may also be subject to NSR.

No emission units at the stationary source are subject to the Standards of Performance promulgated in 40 CFR Part 60, nor the National Emission Standard for Hazardous Air Pollutants promulgated in 40 CFR Part 61.

The following table summarizes emission units at the stationary source and applicable National Emission Standards for Hazardous Air Pollutants (NESHAP) or Maximum Achievable Control Technology (MACT) subparts promulgated in 40 CFR Part 63:

Emission Unit ID	Applicable 40 CFR Part 63, Subpart (NESHAP/MACT)
EUSCGD006	Subparts A & HHH (NG transmission and Storage Facilities)
EUSCGEN001	Subparts A & ZZZZ Reciprocating Internal Compression Engines (RICE)
EUSCHTR001 EUSCHTR004	Subparts A & DDDDD (Industrial, Commercial, and Institutional Boilers and Process Heaters)
EUSCBOILER002 EUSCGD006 (reboiler only)	Subparts A & DDDDD (Industrial, Commercial, and Institutional Boilers and Process Heaters)

Applicability of 40 CFR Part 63, Subpart DDDDD for the reboiler of EUSCGD006 was based on a March 21, 2016 USEPA Applicability Determination Letter issued by USEPA Region 6 to the El Paso natural Gas Company, LLC, and reconfirmed in a phone call from USEPA Region 5 staff the week of July 22, 2019. The base for this determination lies in the definition of a control device under Subpart HHH, which excludes the reboiler as a pollution control device.

In the ROP Renewal Application, the facility claims the following regarding applicability of the 40 CFR Part 63, Subpart ZZZZ and 40 CFR Part 60, Subpart JJJJ:

Emission Unit	40 CFR Subpart	Applicability
EUSCENG002 EUSCENG003	40 CFR Part 63, Subpart ZZZZ (RICE MACT)	Engines do not have to meet the requirements of 40 CFR Part 63, Subpart ZZZZ per 40 CFR 63.6590(b)(3)(i)
EUSCENG002 EUSCENG003	40 CFR Part 60, Subpart JJJJ (New Source Performance Standard (NSPS) for Stationary Spark Ignition (SI) RICE)	Facility reports engines are not subject because each engine was installed before the June 12, 2006 applicability date for >500 HP, lean-burn, SI RICE

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. The only emission unit with a control device is EUSCGD006, which has a condenser and pre-control emissions of 22.3 tpy VOC as determined by GRI-GLYCalc. Per PTI application for 6-01A for EUSCGD006, the uncontrolled potential to emit for benzene and toluene is 0.8151 tpy and 5.3094 tpy (determined by GRI-GLYCalc - using 2011 wet gas analysis), respectively. Both are below thresholds for a major source for the referenced HAPs.

The emission limitation(s) or standard(s) for benzene and BTEX at the stationary source with the underlying applicable requirement(s) of 40 CFR Part 63, Subpart HHH (NG transmission and Storage Facilities) from EUSCGD006 would also appear to be exempt from the federal Compliance Assurance Monitoring (CAM) regulation pursuant to 40 CFR 64.2(b)(1)(i) because emission limits for Benzene and BTEX meet(s) the CAM exemption for NSPS or MACT proposed after November 15, 1990.

No Compliance issues are associated with the referenced site. No Violation Notices have been issued to the site under the previous ROP (MI-ROP-B7219-2012a) and as a result no escalated enforcement actions or compliance schedules are associated with the facility.

Significant changes in the ROP include:

- Removal of EUSCBOILER001, which is out of service.
- Addition of applicable requirements under 40 CFR Part 63, Subpart DDDDD for EUSCBOILER002 and the glycol dehydrator reboiler (EUSCGD006) (FGSCDDDD<10).
- Addition of 40 CFR Part 63, Subpart HHH requirements for the glycol dehydrator (EUSCGD006).
- Addition of applicable 40 CFR Part 63, Subpart DDDDD requirements for process heaters (EUSCHTR001 through EUSCHTR004) in FGSCDDDD>10.
- Addition of Source Wide Condition template with a condition regarding gas line venting activities.

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-B7219-2020 are identified in Appendix 6 of the ROP.

PTI Number			
10-05	6-01A	75-97	147-80

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).

In the ROP Renewal Application for this Facility, ANR Pipeline Company proposed that the requirements under 40 CFR Part 63, Subpart ZZZZ (NESHAP for Stationary RICE) were not applicable to EUSCENG002 and EUSCENG003 (FGSCENG) per 40 CFR 63.6590 (b)(3)(i). The referenced regulation states existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions do not have to meet the requirements of 40 CFR Part 63, Subpart A and Subpart ZZZZ.

A determination or a summary of the determination by the department that 40 CFR Part 63, Subpart ZZZZ is not applicable to the stationary source pursuant to Rule 213(6)(a)(ii) was not included in Part E of the ROP.

In addition, no requirements from 40 CFR Part 63, Subpart ZZZZ have been incorporated into FGSCENG of the ROP at this time.

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
EUSCTNK001	Hydrocarbon/Brine Storage Tank, 16,800 gal (T8)	R 336.1212(4)(d)	R 336.1284(2)(e)
	Hydrocarbon/Brine Storage Tank, 5,000 gal (T9)		
	Hydrocarbon/Brine Storage Tank, 30,000 gal (T10)		

PTI Exempt Emission Unit ID	Description of PTI Exempt Emission Unit	Rule 212(4) Citation	PTI Exemption Rule Citation
EUSCSHTR002	Twenty-eight (28) NG Fired furnaces/space heaters, 200K BTU/hr. each.	R 336.1212(4)(c)	R 336.1282(2) (b)(i)
EUSCWHTR003	53K BTU/hr. NG-Fired Water Heater	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUSCTNK003	Ambitrol Tank, 4,900 gal (T1)	R 336.1212(4)(d)	R 336.1284(2)(i)
	Two (2) Ethylene Glycol Tanks, 8,400 gal each (T2 and T17)		
	Ethylene Glycol Tank, 2,632 gal (T4)		
	Wastewater Tank, 4,475 gal (T15)		
	Ethylene Glycol Tank, 300 gal (T27)		
EUSCTNK005	Lubricating Oil Tank, 10K gal (T5)	R 336.1212(3)(e)	R 336.1284(2)(c)
EUSCTNK006	Lubricating Oil Tank, 1,600 gal (T5)	R 336.1212(3)(e)	R 336.1284(2)(c)
EUSCTNK007	Used Oil Tank, 1,900 gal (T7)	R 336.1212(3)(e)	R 336.1284(2)(c)
EUSCTNK013	Diesel Fuel Tank, 1,000 gal (T13)	R 336.1212(3)(e)	R 336.1284(2)(c)
EUSCTNK016	Condensate Tank, 660 gallons (T16)	R 336.1212(4)(d)	R 336.1284(2)(e)
EUSCTNK025	Condensate Slop Tank, 300 gal (T25)	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 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
B7219

RENEWABLE OPERATING PERMIT
AUGUST 24, 2020 - STAFF REPORT ADDENDUM

ROP Number
MI-ROP-B7219-2020

Purpose

A Staff Report dated July 20, 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:	W. Craig Rundle, Director of US Pipelines Operations – Great Lakes Region 231-587-2142
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.