DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

B721957995

FACILITY: ANR Pipeline Co. South Chester Compressor Station		**SRN / ID:** B7219
LOCATION: 6327 Old State Rd., JOHANNESBURG		**DISTRICT:** Gaylord
CITY: JOHANNESBURG		**COUNTY:** OTSEGO
CONTACT: Chris Waltman , Senior Environmental Specialist		**ACTIVITY DATE:** 04/28/2021
STAFF: Sharon LeBlanc	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Onsite inspection and records review for FY 2021 assigned site inspection activities. sgl		
RESOLVED COMPLAINTS:		

INTRODUCTION

On April 28, 2021, AQD District Staff arrived onsite to conduct stack test oversite and scheduled compliance evaluation activities at the ANR Pipeline Company South Chester Compressor Station, State Registration Number (SRN) B7219. The referenced Facility is located at 6327 Old State Road, Johannesburg, Michigan. The Facility is operated by TC Pipelines, LP (AKA Transcanada).

The referenced facility operates under Renewable Operating Permit (ROP) MI-ROP-N7219-2020, issued on October 12, 2020.

The most recent site inspection for the Facility was conducted on November 19, 2018. The Facility at that time was reported to be in compliance at the time of the inspection.

Transcanada Staff onsite at the time of the site inspection included:

- Mike Coy, Operations Team Leader, and
- Onsite operational staff

Transcanada due to the pandemic is still on a no travel order. The Facility had CoVid sign in forms, and requirements to wear masks and maintain 6-foot spacing whenever possible.

Site conditions at the time of the inspection included overcast skies, little to no wind, fog and temperatures in the mid 40's. Chance of rain had been predicted for the day. Both engines were operating, but no visible emissions were noted.

FACILITY

The South Chester Compressor Station is a manned Facility located in the NW ¼ of Section 15, T29 N – R 2W, Otsego County, South Chester Township, Johannesburg, Michigan. The address of record is 6327 Old State Road, Johannesburg, Michigan. The entrance to the Facility is near the intersection of Old State and Lovells Roads. The Facility is fenced and gated, with an intercom system to provide access to the Facility.

The Facility operates as both Natural Gas (NG) storage and transmission facility. The Facility functions to maintain pressure in pipelines transporting 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 compress and inject the NG into the underground reservoir. Past descriptions of the

facility included compression of NG, however despite having the word compressor in the Facility name, it is felt by more experienced staff that storage and transmission more accurately reflects the Facility activities.

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 engine 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 heaters are used to heat the gas as necessary.

No changes at the facility in the way of new processes or process changes since the last inspection. Some personnel changes have occurred as a result of retirements and career changes.

Facility staff report that a new storage tank has been installed, though not commissioned onsite. The purpose of the tank is to store liquids captured by the outlet separator when under withdrawal conditions.

Facility staff indicated that they hope to install a vent combustor for the dehy later this year, but that with the tight schedule remaining for the year, they anticipate that it may be postponed. The facility reports that they anticipate replacing the existing steam boiler with a glycol boiler possibly in 2023.

The Otsego County Property Records identified the following Oil & Gas properties are located north of the Facility across Old State Road:

- DTE Michigan Holdings, Inc.
- CORE Midstream LLC
- Wilderness-Chester Gas Process, and
- DCP Antrim Gas, LLC South Chester Antrim Carbon Dioxide (CO2) Removal Facility

The Facility and an Enervest Gathering Station, which is located adjacent to the Facility are located in undeveloped State lands. To the east and south of the Facility adjacent properties are listed in the Otsego County records as being held by the Government of Johannesburg, Michigan.

PERMITTING

As previously indicated, the referenced facility operates under Renewable Operating Permit (ROP) MI-ROP-N7219-2020. All previously issued Permits to Install (PTIs) have been rolled into the ROP. MDEQ AQD Permits rolled into the ROP include the following:

EMISSION UNIT	PTI NO.
EUSCGD006	75-97, 10-95 and 8-81A
EUSCENG002 and EUSCENG003	147-80 and 60-01A

Of note is that in addition to PTIs issued by the MDEQ AQD, US EPA permit No. EPA-5-A-79-15 was issued on June 7, 1979. The US EPA permit identified NOx emissions of over 600 tons/year. Michigan obtained delegation in September 1979, and subsequently issued PTI 147-80. Discussions resulting from the "discovery" of the EPA PSD permit in District Files has resulted in the conditions of the US EPA permit being incorporated into the ROP as part of the most recent renewal process.

REGULATORY

- Classifications based on Potential to Emit (PTE) and other significant comments:

PARAMETER	CLASSIFICATION	COMMENT
NOx	Major	PSD review for 147-80
SO2	Minor	
CO	Major	
Pb	Minor	
PM	Minor	
VOC	Minor	
HAPs	Major	

- Applicable Federal Requirements:

EMISSION UNIT	40 CFR SUBPART	TITLE
Source	Part 70	State Operating Permit Program
EUSCDGS006	40 CFR Part 63, Subpart HHH	Natural Gas Transmission and Storage Facilities (Major source of HAPs)
EUSCHTR001 – EUSCHTR004 EUSCBOILER002 EUSCDGS006 (reboiler only)**	40 CFR Part 63, Subpart DDDDD	Industrial, Commercial and Institutional Boilers and Process Heaters (BOILER MACT)

EUSCGEN001*	**40 CFR Part 63, Part 63, Subpart A and ZZZZ**	**National Emission Standards for HAPs for Stationary Reciprocating Internal Combustion Engines (RICE)**

*** Note - the facility has two compressor engines (EUSCENG002 and EUSCENG003) with SI RICE that meet exemption requirements under 40 CFR 63.6590(b)(3)(i). which exempts existing spark ignition 2-stroke lean burn RICE with ratings of more than 500 HP located at a major source of HAPs emissions.**

**** EPA Applicability determinations by US EPA Region 6 dated February 4, 2015 and February 10, 2016, were reviewed during ROP Renewal working draft preparation. The referenced documents indicated that the reboiler for the glycol dehydration unit is also subject to Subpart DDDDD (Boiler MACT). The company indicated that clear language exists which would indicate that the reboiler would not be subject to the Boiler MACT and referenced EPA's 2011 responses to Public Comments. No additional comments were made by the company during working draft review or public comment for MI-ROP-B7219-2020.**

EQUIPMENT

The Facility is operated and monitored through a control room in the main building. The computer and associated controls are linked with the corporate offices in Houston, Texas. Emission units (EUs) associated with the Facility include the following:

- Ethylene Glycol Dehydrator with condenser control **(EUSCGD006)**
  Installed in 1981, the company reports that the referenced unit is considered a small, existing, dehydrating unit as defined in 40 CFR 63.1271 and is subject to 40 CFR Part 63 Subpart HHH. Which is an unit at a major source with an actual annual average NG flowrate of less than 283K scm/day or actual annual average benzene emissions of less than 0.90 Mg/yr determined according to 63.1282(a). The facility reports using the 0.90 Mg/yr threshold to meet the definition of a small dehy unit.

The glycol dehydration system consists of both a two-phase and three-phase separator and glycol reboiler (AKA regenerator) with a natural gas-fired heater. The exhaust vents associated with the system includes one that transfers gases to the regenerator reboiler burner vent, and the other that transfers gases from the regenerator still column to the condenser.

The Facility reports that the system is operated primarily in the winter when gases are extracted from storage underground, but that it is held on an operational standby during the calendar year. Potential emissions generated during operation of the system are controlled by venting into the burner of the glycol regenerator. During standby periods potential emissions are controlled by the condenser.

It should be noted that in addition to the condenser, the Facility pipes gases from the separator to the reboiler, prior to the condenser. The condenser addresses exhaust from the reboiler still vent.

Historically compliance for the facilities EUSCDGS006 was met thru:

- Leak detection and repair (LDAR) inspection of the system (submitted to MDEQ on 4/22/2015),
- Determination of a maximum operating temperature of 125 degrees Fahrenheit for the condenser (used as equipment setpoint) as well as a continuous monitoring plan, and
- Use of GLY-CALC to develop a performance curve to achieve compliance with BTEX emission limits under Subpart HHH.

The dehy reboiler process heater has been determined to be subject to the BOILER MACT. This process heater is rated at 750 MBTU/hr.

The Facility has indicated in electronic discussions in March 2021, their intention to replace the dehy condenser with a new condenser and a combustor. Onsite Staff anticipate that with the tight schedule remaining for the year, that the installation will not be completed this year, but next year. The activities would be exempt from Rule 201 permitting under R. 336.1285(2)(d), and would reflect an off permit change under Rule 215(3). Furthermore, the Facility has indicated that the change will NOT result in an increase in thruput. This was verified by onsite staff who indicated that the production rate/volume is not controlled/limited by the control device.

- 2 **NG Compressors** equipped with Reciprocating Internal Combustion Engines (RICE) **EUSCENG002 and EUSCENG003** (AKA Compressor Engine A and Compressor Engine B) (**FGSCENG**)

RICE associated with the NG-fired compressors consist of Cooper Bessemer Model 12Q145LM 3600 HP, 29.47 MMBTU/hr heat input, 2 cycle, lean-burn units. The referenced units are used to inject NG into the storage field. It should also be commented that based on the age of the engines, they are operated at approximately 3000 Hp rather than the 3600 Hp they are rated for.

The following summarizes the compressor engine IDs:

ROP ID	MAERS ID	FACILITY ID
EUSCENG002	EUSC002	Unit 1, Compressor Engine A S/N 48587
EUSCENG003	EUSC003	Unit 2, Compressor Engine B S/N 48588

At the time of April 28, 2021, site inspection, both engines were operational.

These two NG compressors are not subject to the RICE MACT (Subpart ZZZZ) based on 63.6590 (b)(3)(i). which exempts existing spark ignition 2-stroke lean burn RICE with ratings of more than 500 HP located at a major source of HAPs emissions.

With respect to the NSPS requirements of subpart JJJJ (Spark Ignition RICE), EUSCENG002 and EUSCENG003 were reported exempt from the referenced subpart based on the installation date. More specifically, the referenced units as >500 HP, lean burn engines they were ordered, manufactured, modified or reconstructed before June 12, 2006. The existing units were identified as having been installed in 1981.

Recent repair periods for the two engines are summarized below:

ENGINE	Down Period	Reason
EUSCENG002	Nov-Dec 2017	Work on ancillary systems for engine
EUSCENG003	Nov 16, 2018 –Jan. 9, 2019	Engine Failure (Piston failure) after recent rebuild
EUSCENG003	May 26 – June 18, 2020	3R power cylinder
EUSCENG003	July 18 – August 14, 2020	Crank case "Kaboom"

- Emergency Generator used for emergency backup power. **(EUSCGEN001)**

This EU consists of one Waukesha Model F2859GU 526 HP, 4.21 MMTU/hr heat input, 4 cycle, rich-burn NG-fired RICE used for emergency backup power. Note: that the emergency generator was exempt from Rule 201 permitting when installed in 1981, as Rule 285 (vi)(c) exempted internal combustion engines of less than 10,000,000 BTU/hr heat input. The recently revised exemptions (2016) the referenced emergency generator would be exempt under Rule 285 (2)(g).

The EU is included in the ROP based on applicability of the RICE MACT to emergency generators. MI-ROP-B7219-2012A contained only a high-level citation to the RICE MACT. (SC IX.1). MI-ROP-B7219-2020 contains templated conditions added as part of the most recent renewal activities.

- 4 NG-fired withdrawal gas heaters **(EUSCHTR001 - 004)**
  The referenced process heaters (10 million BTU/Hr Sivallis heaters) were added to the renewed ROP as they have been identified as being subject to the boiler MACT (subpart DDDDD). These processes were reported to be exempt from Rule 201 permitting based on Rule 282 (2)(b)(i) for sweet NG-fired equipment with a rated heat capacity of less than 50 million BTU/Hr used in oil and gas production. For purposes of the Boiler MACT they are rated at 10 MMBTU/hr each. Previous reference to these units clumped them all under the same EU (EUSCHTR001).

- Boiler **(EUSCBOILER002)**

EUSCBOILER002 is a Cleaver Brooks NG-fired 1.35 MMBTU/hr hot water heater. The unit was reported to be exempt from permitting under Rule 282 (2)(b)(i) for sweet NG-fired equipment with a rated heat capacity of less than 50 million BTU/Hr used for service water heating.

Under the Boiler MACT, hot water heaters are defined as a tankless unit which provides hot water on demand; a closed vessel with a capacity of less than or equal to 120 US gallons in which water is heated and withdrawn for use external of the vessel; or hot water boilers with a heat input of less than 1.6 million BTU/hr. Previously the Facility reported that the Cleaver brooks EU was insignificant, and not subject to the boiler MACT, more recently the Facility has indicated that EUSCBOILER002 has a capacity of 520 gallons and is not exempt from the Boiler MACT (Subpart DDDDD). It has been added to the EU Summary Table and is part of FGSCDDDDD which includes the 4 process heaters.

Note: EUSCHBOILER001, was reported to no longer exist onsite, and was requested to be removed from the ROP.

- 28 NG-fired Furnaces/Space Heaters (**EUSCSPHTR002**)
  The referenced space heaters are reported to have a rated capacity of 200,000 BTU/hr each and are reported exempt under Rule 282 (2)(b)(i). for sweet NG-fired equipment with a rated heat capacity of less than 50 million BTU/Hr used for space heating. The referenced units are reported to be exempt under 40 CFR Part 63 Subpart A and DDDDD because they are used for space heat and do not meet the definition of process heater as defined in the subpart. They are not included in the ROP. Previously they were identified under the ID EUSCHTR002.

- NG-fired Water Heater (**EUSCWHTR003**)
  The EU is reported to be rated a 53,000 BTU/hr water heater (note WH in EU designation) and is reported by the company to be exempt under Subpart DDDDD. The unit is also reported by Transcanada staff to be exempt from permitting under Rule 282 (2)(b)(i) for sweet NG-fired equipment with a rated heat capacity of less than 50 million BTU/Hr used for service water heating. This EU is not included in the ROP.

- Tanks

The following table summarizes tanks associated with the facility. None are included in the ROP.

ROP ID	MAERS ID	Tank IDs	Content	Total Capacity (gallons)	Exemption Claimed
EUSCTNK001	ESC008	T8, T9 and T10	Hydrocarbon/Brine	51,800	Rule 284 (2)(e)
EUSCTNK003	See Below		MISC		Rule 282 (b)(i)
		T1	Ambitrol tank	4,900	
	EUSCTANKS(GLY)	T2 and T17	Ethylene Glycol	8,400 *	

	EUSCTANKS(GLY)	T4	Ethylene Glycol	2,632 *	
	EUSCTANKS(WW)	T15	Waste Water	4,475	
	EUSCTANKS(GLY)	T27	Ethylene Glycol	300 *	
EUSCTNK005	EUSCTANKS (OIL)	T5	Lubricating Oil	10,000 *	Rule 284 (2)(c)
EUSCTNK006	EUSCTANKS (OIL)	T6	Lubricating Oil	1,600 *	Rule 284 (2)(c)
EUSCTNK007	EUSCTANKS (OIL)	T7	Used Oil	1,900 *	Rule 284 (2)(d)
EUSCTNK013	EUSCTANKS (#2 distillate)	T13	Diesel Fuel Oil	1,000	Rule 284 (2)(e)
EUSCTNK016		T16	Condensate	660	Rule 284 (2)(e)
EUSCTNK025		T25	Condensate Slop	300	Rule 284 (2)(e)
		Outlet separator safety tank	Condensate	150	

Note that MAERS reported that the following sources were installed in 2011:

- EUSCTANKS (OIL) 11,900 gallon total capacity
- EUSCTANKS(WW) 4,475 gallon total capacity
- ESC008, three condensate tanks, 51,800 gallon total capacity
- EUSCTANKS(GLY) 14,575 gallon total capacity
- EUSCTANKS (#2 distillate)

***A discrepancy between reported total capacity of tanks reported during ROP technical review between MAERS and ROP Renewal Application.**

COMPLIANCE

The most recent site inspection for the Facility was conducted on November 19, 2018. The Facility at that time was reported to be in compliance with permit requirements. No complaints, Violation Notices, Consent Orders or other compliance issues are of record for the Facility since the November 19, 2018, site

inspection. Compliance will be determined based on conditions of MI-ROP-N7219-2020.

It should be noted that per the ROP, the Facility is required to promptly report deviations pursuant to General Conditions 21 and 22 of Part A of the ROP. The Facility is also required to report semiannual and annual deviations (SC VII.1, 2 & 3) for EUSCGD006, EUSCGEN001 and FGSCENG. A review of records indicate that the Facility has submitted the required semiannual and annual reports in a timely manner and in compliance with permit requirements.

SOURCEWIDE -

MI-ROP-B7219-2020 identifies source wide restrictions with reference to venting of NG in quantities greater than 1,000,000 scf for routine maintenance or relocation of transmission distribution systems (SC III.1) or gathering pipelines (SC III.2). This includes notifications to AQD (SC VII.4 and VII.6) and other state and federal agencies (SC VII.5, VII.7 and VII.8).

No notifications are of record for venting activities associated with the Facility. Discussions with Facility staff indicated that in order for the facility to experience a venting occurrence with quantities greater than 1,000,000 scf they would have to have a valve failure or some other type of occurrence. They would not have that size venting occurrence for routine maintenance.

A review of documentation of 2018, 2019 and 2020 venting activities confirmed that no single event exceeded the 1,000,000 scf threshold. The largest single event appears to be a partial station blowdown of 196.11 mscf in 2020. Total blowdown activities for the 2020 calendar year exceeded 1,000,000 scf, with a total of 1492.64 Mscf. Blowdown events for the Facility are presented below:

Blowdown Activity	2018 Events	2019 Events	2020 events
Facility Piping	0	12	18
Compressor	32	23	28
Pig launcher/receiver	6	0	0
ESD	8	0	0

EUDCGD006 – Glycol Dehydrator

The glycol dehydration system consists of both a two-phase and three-phase separator and glycol reboiler (AKA regenerator) with a natural gas-fired heater. The exhaust vents associated with the system includes one that transfers gases to the

regenerator reboiler burner vent, and the other that transfers gases from the regenerator still column to the condenser.

At the time of the site visit, EUDCGD006 was not operating, as the compressors were transferring NG from the fields into underground storage.

OPERATION LIMITS - EUSCGD006 is limited to operation under the following conditions for the system condenser:

- The glycol regenerator still is equipped with a condenser and the condenser including any associated monitoring equipment, is installed and operating properly. (SC III.1)
- The control device(s) must be designed and operated to meet BTEX limits of SC I.4 (as calculated per Appendix 7 of ROP). (SC III.2)
  - The condenser shall be equipped with a maintained exhaust gas temperature monitor. (SC IV.1, SC IV.5)
  - The thermocouples of the gas temperature monitor (CPMS) shall measure condenser temp +/- 2 % of temperature monitored or +/- 2.5% whichever is greater and locate the monitor in exhaust vent stream away from condenser. (SC IV.5)
- Exhaust gas temperatures of 140 degrees Fahrenheit or less. (SC III.4)
- The condenser shall be equipped with a maintained alarm that activates when the exhaust gas temperature exceeds 140 degrees Fahrenheit (SV IV.2)
- Each CPMS shall measure data values at minimum of once per hour, and record each measured data values, should more than one data value be taken per hour, a one block average will be recorded. (SC IV.4)

At the time of the site inspection, the dehy system included a condenser with a temperature monitor and alarm. A review of records appears to indicate that the system and it's monitors are operating properly. Facility staff report that maintenance activities are tracked via work order.

Thermo couples are tested annually for calibration, the most recent being in conjunction with the November 9, 2020 CPMS inspection. Thermocouple accuracy was verified as part of a previous site inspection. Semi-annual HHH reporting indicated that the most recent CPMS inspection and testing was conducted on November 9, 2020. In addition, the past three semi-annual HHH reports indicated that no monitor downtime has occurred.

The ROP limits the maximum operating temperature of the condenser to less than 140 degrees Fahrenheit. But the Facility uses an equipment setpoint of 120 degrees as determined by the 2015 performance curve, to guarantee compliance with permit conditions, and has an alarm at 100 degrees. They report no occurrences for the year. Data provided for 2019 and 2020 indicated that EUSCGD0006 operated for the following periods:

Calendar Year	Operating Period
2019	January 1-5th
	January 8-9th

	January 11- March 12
	March 17 – 20th
	October 1 – 16th
	December 4 - 20th
	December 26 – 31st
2020	January 7 & 8th
	January 11th
	January 15 -22cnd
	January 27 – 29th
	February 6 & 7th
	February 11 – 15th
	February 18 – 20th
	February 27 – 28th
	March 5th
	October 25 – November 3rd
	November 9 – 13th
	November 15 -17th
	November 24 & 25th

	November 30 – December 2
	December 12 – 18th
	December 23 -31st
2021	January 3 – 5th
	January 7 & 8th
	January 10 – 12th
	January 17 – February 22cnd
	March 1st

Data provided by the Facility indicated the following operating parameters:

Date	Condenser Stack Temp	Operating hours
January 24, 2019	17.9	24
March 9, 2019	33.3	23.1
December 30, 2019	29.8	24
October 28, 2020	43.0	23.8
January 24, 2020	23.2	24.0
March 1, 2021	9.5	9.0

The highest condenser stack temperature for the period of 2019 to present was reported on November 9, 2020, at 73.2 degrees Fahrenheit.

Records reviewed were found to be consistent with the requirements of SC VI.1.

- NG used as fuel for the glycol dehydrator contains no more than 20 grains of total sulfur per 100 cubic feet. (SC III.5)
- The permittee shall not emit to the atmosphere NG with more than 1 grain of H2S or 10 grains of total sulfur per 100 cubic feet without destruction of H2S or mercaptans in properly engineered flare, incinerator or other combustion device that:
  - For NG in which the volume and concentrations of hydrogen sulfide are < 28 lb/day, the flare or other control device will be equipped with an auto ignition system or a pilot flame which burns continuously. (SC III.6.a)
  - For NG in which volumes and concentration of hydrogen sulfide of 28 lb/day or greater shall be equipped with a continuously burning pilot flame and an auto shut-off should the pilot flame fail. (SC III.6.b)

The Facility reports that they are limited to no greater than 20 grains of total sulfur per 100 scf by the ANR Pipeline Company FERC Gas Tariff agreement. In addition, the Facility is required under SC V.1 to sample and analyze the wet gas stream every 5 years for constituent components.

DATE	H2S Concentration
February 24, 2017	0.45 ppm (<8 grains)

The Facility has indicated that they will be collecting the required sample spring of 2022.

Exhaust vents for the dehy system EUSCGD006 vent to the reboiler burner or the condensor meeting the requirements of SC III.6.a.

- The closed vent system shall be designed and operated such that all closed vent system shall route all gases-vapors and fumes from the materials in and from the EU to the condenser. (SC III.3)
- Emissions from the 2-phase and 3-phase separator may be incinerated in the glycol regenerator reboiler burner. (SC III.5)

Facility staff confirmed that the gaseous emissions from both separators are piped to the burner of the glycol regenerator/reboiler for destruction in compliance with the permit conditions. They also report that this incineration represents the primary pollution control for the system, as the greater volume of emissions is generated from the separators and the dehy itself.

- The glycol circulation rate shall not exceed 6.0 gpm. Compliance ensured by only two of three recirculation pumps being in operation at any time. (SC III.7)

- Fixed circulation rate of 3 gpm for each recirculation pump. (SC IV.3)
- Operation of only two of three recirculation pumps being in operation at any time. (SC III.8)

With respect to the glycol recirculation pumps, the Facilty reports that only one pump is operated at a time, and at a fixed rate of 3 gpm. The system logic controlling the pumps is for operation of two pumps, with the second pump reported to operate only on rare occasions. The third pump being a redundant pump, only used should one of the other two fail.

- The Permittee shall not use stripping gas in the glycol regenerator still (SC III.9)

No stripping gas is reported to be used in the glycol regenerator still.

- EUSCGD006 shall be operated with no detectable emissions except from it's designed process vents (SC III.10)

The dehydrator was not operating at the time of the site visit, as the engines were pushing gas into storage, so verification of visible emissions was not possible at that time. Facility staff report that process vents are hard-piped and should show no detectable emissions. In addition, the piping is inspected for leaks as part of the LADAR program.

MATERIAL LIMITS - EUSCGD006 is limited to a limit of 225 million scf/day, as determined by the end of the calendar month (SC II.1). TransCanada staff report that the gas flow is monitored using a flow meter and that TransCanada Gas Control has established a setpoint limit of 225 million scf/day limiting the actual volume through the plant to below the limit. In addition, it was indicated that the field was incapable of producing that much flow.

A review of records provided by the Facility for the period of January 2019 through March 2021 indicated the highest daily throughput (as recorded by condenser throughput) during the period was 217.3 million scf/day reported on February 15, 2021.

EMISSION LIMITS - EUSCGD006 is limited to daily emissions of VOCs, and 12-month rolling total VOC and benzene emissions. VOC emissions are reported annually and in a timely manner as part of the MAERS Program. MAERS emissions for 2018, 2019 and 2020 are summarized below:

Calendar Year	Total VOC (tons/year)	Benzene (lb/year)
2018	1082.79	NR
2019	1275.53	70.58
2020	646.71	35.67
Limits	6 tons/year (SC I.3)	0.992 tons/year (SC I.1)

12-month Daily VOC emissions are limited to 33 lbs/day (SC I.2) A review of records for the period of January 2019 through March 2021 indicated that the highest VOC

emissions for the period was 20.9 lb/day reported on February 15, 2021. Records were also noted to be consistent with understood operation of the system, which was reported to be limited to winter months.

End of 12-Month Rolling Period	Total VOC (tons/year)	Benzene (tons/year)
December 2019	0.605	0.056
March 2020	0.257	0.024
December 2020	0.308	0.029
April 2021	0.485	0.045
Limits	6 tons/year (SC I.3)	0.992 tons/year (SC I.1)

TESTING ACTIVITIES – As previously indicated, EUSCGD006 is required by permit to sample and analyze the wet gas stream every five years for constituent components (SC V.1). As previously indicated, the most recent wet gas analysis (February 24, 2017) showed compliance with permit conditions.

In addition, the Facility is required to test the regenerator still condenser for capture efficiency once every 60 months. (SC V.2) This condition was met by the facility completing an efficiency calculation using procedures documented in "Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions" as inputs for the model GRI-GLYCalc version 3.0 or higher.

DATE of Capture Efficiency Testing	Test Type	Due Date for Next Test
April 22, 2015	GRI-GLYCalc	April 2020
March 5, 2018 *	GRI-GLYCalc	March 2023

***used 2017 wet gas analysis.**

Testing requirements under EUSCGD006 also includes the following:

- Verification testing of BTEX concentration using an approved RPA Method and at the owner's expense if requested by AQD Supervisor. (SC V.3)

No documentation exists on file to indicate that verification testing has been requested. Therefor SC V.3 and notification requirements contained in SC V.4 are not applicable at this time.

- Determination of actual flow rate of NG by installation of a flow meter to directly measure flow with a +/- 2% accuracy or better. The annual average flow will be determined by taking the actual annual flow and dividing it by the total number of days of operation of EUSCGD006 or other method acceptable to AQD. (SC V.5)

Flowrate is measured using an 8-path ultrasonic meter. Facility staff report that it is an extremely accurate flowmeter. Facility staff reported that the present flow meter installed in apx. 2018 replaced a 4-path ultrasonic meter.

The ROP contains no "limit" with respect to the actual annual average flow of NG to EUSCGD006. However, the value is pertinent in that it determines whether the dehy is considered a small, dehydrating unit as defined in 40 CFR is an unit at a major source with an actual annual average NG flowrate of less than 283K scm/day or actual annual average benzene emissions of less than 0.90 Mg/yr determined according to 63.1282(a). The Facility uses the 0.90 Mg/yr option to meet the definition. The actual annual average NG flow rate for EUSCGD006 is summarized below:

Calendar Year	Actual NG Flow for Calendar Year (mmscf)	Days of Operation for Calendar Year (hours - days)
2019	12,604.0	2337.2 - 97.38
2020	6,393.0	1119.9 – 46.66
	(SC VI.9)	(SC VI.2)

- Determination of the actual average BTEX concentration shall be made using GRI-GlyCalc version 3.0 or higher and using inputs into model representative of actual operating conditions for the unit. (SC V.6)
- No detectable emissions testing for closed vent systems using method 21 and procedures per 40 CFR 63.1282(b) (SC V.7)

No detectable emissions testing for the closed vent systems shows compliance with SC III.10.

MONITORING/RECORDKEEPING –Per the ROP the permittee is required to monitor and record the following parameters:

- Total amount of NG processed through EUSCGD006 per calendar day. (SC VI.3)
- Maximum annual NG throughput, and records of it's calculation. (SC VI.8 & 9)
- Total hours of operation of dehy system on a monthly and 12-month-rolling time period. (SC VI.2)

As previously reported the Facility monitors and records NG-flow using a meter to determine the volume processed per day, month and year in compliance with the

above referenced permit conditions. Records provided by the Facility shows compliance with recordkeeping requirements for EUSCGD006.

The Permittee is required to monitor/ calculate and record the following emissions:

- VOCs on a daily (SC VI.4), monthly and 12-month rolling basis. (SC VI.5)
- Benzene on a 12-month rolling time period (SC VI.5)
- BTEX on a monthly and 12-month rolling time period (SC VI.7)

VOC and Benzene emissions are based on EFs determined using GRI-GLYCalc Version 3.0 or higher and the volume of NG being processed. Records provided indicated that calculations were conducted in compliance with permit conditions.

Calendar Year	Daily VOC range (lb/day)	Monthly VOC Range (tons)	12-month Rolling VOC (tons)
2019	0.1 – 20.1	0.084 – 0.215	0.485 – 0.595
2020	0.1 - 19	0.001 – 0.078	0.257 – 0.495
2021 (to date)	0.9 – 20.9	0.002 – 0.192	0.352 -0.485
	SC VI.4	SC VI.5	SC VI.5

Calendar Year	BTEX Monthly (Mg)	BTEX 12-month Rolling (Mg)	Benzene 12-Month Rolling (tons)
2019	0.06040 – 0.15408	0.43451	0.045 – 0.056
2020	0.00044 – 0.05574	0.22039	0.024 – 0.033
2021 (to date)	0.00133 – 0.13756	0.34769	0.033 – 0.045
	SC VI.7	SC VI.7	SC VI.5

Startup-Shutdown and Malfunctions –Under the ROP, the Facility is required to monitor and record the occurrence and duration of any startup, shutdown which results in an exceedance of any applicable emission limit (SC VI.19), any malfunction in the operation of the dehy or it's condenser and actions taken to correct the

situation (SC VI.19 and VI.25) and any maintenance activities for EUSCGD006 and it's control device (SC VI.19). The required data was reviewed for the 2019 and 2020, and indicated that no major maintenance activities were required for the system.

Control Device(s)- In addition to general operations monitoring/recordkeeping requirements, the Facility is required to equip the condenser associated with EUSCGD006 with a continuous monitor to record the exhaust gas temperature for the condenser, as well as calculate the daily average temperature for each operating day (SC VI.10) Alarm conditions occur whenever the condenser exhaust gas temperatures exceed 140 degrees F (maximum condenser temperature established in compliance with SC VI.16). In addition, should alarm conditions occur, the day and time as well as actions taken are required to be recorded. (SC VI.1)

Records for 2019 and 2020 indicated the following:

DATE	EXHAUST GAS TEMP. (aka condenser outlet temp) (Degrees F)	ALARM Period	ACTIONS
2019	-8.2 - 90	NA	NA
2020	10.8 – 73.2	NA	NA
2021 (to date)	3.9 – 32.5	NA	NA

When using a condenser as a control device, SC VI.11 allows the permittee to show compliance with the BTEX emission limit by:

- establishing a site-specific performance curve (per SC VI.17);
- calculate the daily average condenser outlet temperature (SC VI.15);
- determine the condenser efficiency for the current operating day using the daily average condenser outlet temperature and condenser performance curve;
- at the end of each operating day calculate the 30-day average BTEX emission reductions from the condenser efficiencies of the preceeding 30 operating days:

Compliance is achieved if the average BTEX reduction is equal to or greater than the minimum percent reduction established in SC VI.16. A deviation per SC VI.18 is defined as one of the following:

- Daily average operating parameters greater than the determined maximum operating parameter limit.
- 30-day average condenser efficiency is less than identified 30-day required percent reduction.
- A monitoring data not available for 75% or more operating hours in a one-day period.

The Facility reports that compliance with BTEX emission limits is determined by an automated system, and that no deviations or periods of missing monitoring data were reported for the calendar years 2019, 2020 or 2021 to date. The dehy condenser performance curve was submitted with the MACT HHH notification of compliance status on April 11, 2016.

Inspection of closed vent systems (aka LDAR) is conducted by a third party for the Facility. Monitoring and recordkeeping requirements for inspection of closed vent systems, and bypass devices with respect to "No Detectable Emissions" included in:

- SC VI.12 (closed vent seams or other connections permanently or semi-permanently sealed or bypass devices),
- SC VI.13 and VI.21 (locations unsafe to inspect),
- SC VI.14 and VI.22 (locations difficult to inspect).

Records are required to be maintained for each inspection during which a leak or defect is detected as well as for those events in which no leaks or defects are identified. (SC VI.23 and VI.24) These records require documentation of the inspector, locations inspected, status determined, date of repair attempt, date of repair confirmation and information regarding repair attempts, shutdown periods to make attempts, etc. A copy of the most recent report was provided at the time of the April 28, 2021 inspection :

DATE	Inspection Type	Locations Inspected	# of leak or defect detected	Repair Date(s)
March 5, 2020	Annual LDAR (year 5)	50	0	NA

The March 5, 2020, report represents a 5-year inspection report and included all difficult or unsafe locations in compliance with SC VI.12 – 14 and VI.21 and 22. Based on reporting history, it appears that the initial leak detection inspection occurred on February 25, 2015. Subsequent inspection activities were conducted:

DATE	Reported
January 15, 2019	Subpart HHH
March 5, 2020	Subpart HHH – 5 year
November 19, 2020	Subpart HHH
April 12, 2021	Subpart W - GHG

Reports reviewed by District Staff appear to be complete with respect to content outlined in SC VI.23. At present the Facility has no reported leaks or defects to be repaired.

REPORTING - In addition to prompt reporting of deviations under GC 20 and 21(SC VII.1), the Facility is required to submit annual (SC VII.3) and semi-annual (SC VII.2) compliance reports. The referenced documents are submitted on time and with the appropriate responsible official certification forms. The Facility is also required to submit:

- 40 CFR Part 63, Subpart HHH semi-annual compliance reporting for EUSCGD006 (SC VII.5).

Semi annual Subpart HHH compliance reports are received in a timely manner. These periodic reports also provide notice of the completion of LDAR and other testing methods.

- If methods GPA 2286 or ASTM-D-5504 were not used during wet stream gas sampling, then the permittee is required to submit a sample analysis protocol for approval by AQD TPU Staff 30-days prior to the sampling event (SC VII.4)
- Reports of process change or any information on the Notification of Compliance Status are to be submitted within 180 days, or on the next periodic report. (SC VII.8)

Neither of the two above documents are applicable at this time. Other periodic reports are required to include when applicable (SC VII.7):

- Deviation reports, or if appropriate a statement indicating no deviations occured
- LDAR Results per SC VI.24, VI.23
- Change in compliance methods
- Results of any periodic testing

To date the Facility has not conducted stack or performance testing, thus notification and reporting requirements under SC VII.5, VII.6, VII.9 are not applicable at this time. No deviations have been reported as part of compliance or periodic reporting. LDAR testing is reported as part of the semi-annual compliance reporting.

STACK/VENT RESTRICTIONS - The ROP identifies two stacks. Stack restrictions are limited to the following:

Stack	Maximum Diameter (inches)	Minimum Height (feet above land surface)
Regenerator Still Column (vents thru condenser) (VIII.1)	2-inch	24-feet
Reboiler (VIII.2)	NA	22-feet

Based on information provided the stack is in compliance with permit conditions.

OTHER REQUIREMENTS- Include a high level citation of 40 CFR Subpart A and HHH as they apply to EUSCGDS006 (SC IX.1) as well as the requirement to develop a site specific monitoring plan (SC IX.2). The referenced monitoring plan addresses the continuous parameter monitoring system, its design, data collection and AQ/QC elements, and each CPMS must be installed, calibrated, operated and maintained in accordance with the procedures in the approved plan. The referenced document was submitted on December 21, 2015, and will be amended following the proposed control upgrades for EUSCGD006.

General Compliance with HHH is shown by compliance with permit conditions.

EUSCGEN001- Emergency Generator Engine

The referenced EU as already indicated consists of a Waukesha 526 Hp, 4-cycle rich burn, NG-fired engine which powers the emergency electricity generator. No pollution control device is associated with the EU. MI-ROP-B7219-2020 contains no emission limits, material limits, testing requirements or stack restrictions.

OPERATION LIMITS - The permittee is required to operate EUSCGEN001 in a manner consistent with safety and good air pollution control practices for minimizing emissions (SC III.1). Based on available information it appears that the Facility is in compliance with this condition.

Operation of EUSCGEN001 is limited to the following restrictions:

- Operation as necessary during emergencies (SC III.2)
- 100 hours of operation of the engine for the purpose of maintenance checks and readiness testing recommended by Federal, State or local Government, engine manufacturer, vendor or insurance company associated with the engine (SC III.3)
- Operation of engine for up to 50 hours (of the 100 hours allowed) per year for non-emergency situations (SC III.3)

EUSCGEN001 is equipped with a non-resettable hour meter in compliance with SC IV.1. The Facility reports that the EU is run monthly for maintenance purposes. Records provided by the Facility were in general compliance with SC VI.1 and indicated the following:

DATE	Emergency Hours Operated	Non-Emergency Hours Operated
2019 calendar year	1.9	10.1
2020 calendar year	8.4	7.6

MONITORING/RECORDKEEPING – Requirements for EUSCGEN001, are limited to recording of the date, the hours of operation and the reason operated. (SC VI.1) As indicated above, the referenced records were provided by the Facility upon request and confirm that appropriate levels of documentation are being kept, and report the total hours of non-emergency operation for the following calendar years:

OTHER REQUIREMENTS- The ROP contains a high-level citation requiring compliance with 40 CFR Part 63, Subpart A and ZZZZ (RICE MACT) as they apply to EUSCGEN001. Requirements for emergency generators have been previously added to the ROP, therefore compliance with permit conditions would indicate general compliance with the subpart.

It should be noted that in addition to required information per MI-ROP-B7219-2020 the Facility provided a summary of engine maintenance, oil sample collection as well as any additional maintenance related testing.

FGSCENG – Compressor Engines

This flexible group consists of two Cooper Bessemer model 12Q145LM, 3600 HP, NG-fired RICE. No controls are associated with the EUs. No material limits or equipment design conditions are provided for the EU.

OPERATION LIMITS – EUSCENG002 and EUSCENG003 (FGSCENG) are limited to the following operational limits.

- NG used as fuel for FGSCENG contains no more than 20 grains of total sulfur per 100 cubic feet. (SC III.1)

The Facility reports that they are limited to no greater than 20 grains of total sulfur per 100 scf by the ANR Pipeline Company FERC Gas Tariff agreement. However, the Facility is required under SC V.6 to sample and analyze the wet gas stream every 5 years for constituent components. Based on the 2017 analysis date, the next sampling is required sometime yet this calendar year.

DATE	H2S Concentration
February 24, 2017	0.45 ppm (<8 grains)

- The engines shall be operated and maintained per the manufacturer emission related written instructions. (SC III.2)

The Facility reports that the two engines (FGSCENG) are maintained per manufacturer instructions. Maintentance records were provided as part of the records review for the April 28, 2021, site inspection.

EMISSION LIMITS – Nox limits in lb/hour and grams per Hp, are included in the ROP and are summarized in the ROP Table. As part of the most recent ROP renewal activity emission limits for Nox, CO and non-methane hydrocarbons associated with EPA PSD permit No. 5-A-79-15 have been added. Testing to date has verified that engine emissions are below permit limits for NOx.

The Faciity uses test data to determine annual emissions. NOx emissions for the last three years are summarized below.

Emission Unit	NOx Emissions 2018	NOx Emissions 2019	NOx Emissions 2020

EUSCENG002	36.948	20.781	20.781
EUSCENG003	5.562	30.765	31.162

Compliance with emission limits is shown thru verification testing once every 5 years (SC V.5). Compliance with emission limits associated with the USEPA PSD permit are met using (SC VI.4) manufacturer's emission-related written instructions, and records demonstrating that the engines have been maintained according to those instructions.

TESTING ACTIVITIES –Testing conditions for FGSCENG were modified during the most recent ROP renewal to reflect PTI testing requirements and EPA every 5-year testing requirements. PTI requirements for the engines under FGSCENG required NOx verification testing for one of the two engines every 5 years (SC V.1). SC V.5 requires testing for NOx, non-methane hydrocarbons and CO for both engines a minimum of 5 years from the date of the last test. Testing is required to be conducted using approved methods (SC V.2) with submittal of test protocols 30 days prior to testing, 7-day notification of testing and submittal of test results 60 days after the final test date are required under V.3 & V.4

Based on testing requirements of SC V.5, it appears that the Facility will be required to add non-methane hydrocarbons and CO to NOx testing activities with the 2023 testing.

A review of District Files appears to indicate that timely submittal of test protocols, 7-day notifications and test reports by the company prior to testing. Historical test results in District Files are summarized in the table below:

EMISSION UNIT	EUSCENG002	EUSCENG003	LIMIT
TEST RESULTS (May 2, 2019)	—	15.62 lb/Hr 2.59 g/Bhp/Hr	72.9 lb/Hr (SC I.1) 9.2 g/bhp/Hr (SC I.2)
TEST RESULTS (Nov. 19, 2018)	12.66 lb/Hr 1.91 g/Bhp/Hr	--	72.9 lb/Hr (SC I.1) 9.2 g/bhp/Hr (SC I.2)
TEST RESULTS (June 17, 2014)	27.62 lb/Hr 3.99 g/Bhp/Hr	13.08 lb/Hr 1.81 g/Bhp/Hr	72.9 lb/Hr (SC I.1) 9.2 g/bhp/Hr (SC I.2)
TEST RESULTS (July 22, 2009)	32.45 lb/Hr 4.22 g/Bhp/Hr	--*	72.9 lb/Hr (SC I.1)

			9.2 g/bhp/Hr (SC I.2)
(TEST RESULTS August 5, 2004)	31.91 lb/Hr 4.00 g/Bhp/Hr	--*	72.9 lb/Hr (SC I.1) 9.2 g/bhp/Hr (SC I.2)
(TEST RESULTS April 18, 2000)	20.2 lb/Hr 2.62 g/Bhp/Hr	--*	72.9 lb/Hr (SC I.1) 9.2 g/bhp/Hr (SC I.2)

***Note a review of District Files indicates that only one Engine was tested for pre-2014 test activities. In each case it appears that Unit 1 or A (AKA EUSCENG002) was the unit tested.**

MONITORING/RECORDKEEPING – Under MI-ROP-B7219-2020, the permittee is required to complete the following for each engine on a calendar month basis:

- Record fuel consumption (SC VI.1)
- Record hours of operation (SC VI.2), and
- Calculate the nitrogen oxide emissions in lb/hr. (SC VI.3)

The Facility reports metered fuel usage, and hours of operation. Operational parameters recorded at the time of the April 28, 2021, site inspection included the following:

Parameter	EUSCENG002	EUSCENG003
HP	3041	2304
Torque Actual	89.2%	67.9%
Thruput (MMscfd)	56.2	34.9
Hours of operation	106,774.7	93,365.8

The records provided were complete with respect to permit requirements and appear to be accurate. EUSCENG002 data provided is summarized below:

Calendar Year	Total Fuel Consumption (mmscf)	Hours of Operation	NOx emissions (lb/hr)

2019	70.7078	3290.38	20.781
2020	70.780	3290.360	20.781
2021 (to date)	2.639	129.580	0.782

. EUSCENG003 data provided is summarized below:

Calendar Year	Total Fuel Consumption	Hours of Operation	NOx emissions (lb/hr)
2019	77.497	3679.630	30.765
2020	77.497	3579.630	31.162
2021 (to date)	1.780	94.250	0.716

Tables provided summarizing monthly NOx emission calculations were provided and indicated that emission factors were based on the most recent testing results and provided the conversion from g/BHp/Hr to lb/MMscf. SC VI.4 requires the permittee to recalculate the emission factor each time a stack test (acceptable to the AQD) is performed. The company has at the time of the information request used the information from the most recent test as required.

In addition, recordkeeping conditions associated with FGSCENG includes keeping copies of the manufacturer emission-related written instructions and records demonstrating that the engines have been maintained per those instructions. (SC VI.4) Documentation provided by the Facility indicated that the engines were on regular maintenance schedules.

REPORTING – In addition to reporting of deviations (GC 21 and 22), the Facility is required to submit semi-annual (SC VII.2) and annual (SC VII.3) compliance reporting. Records indicate that the required reporting is received in a timely manner and contains a copy of the required cert form signed by the responsible official.

STACK/VENT RESTRICTIONS - Stacks for EUSCENG002 and EUSCENG003 are both required not to exceed a maximum of 24-inches in diameter, and meet a minimum height requirement of 49 feet above land surface. The stacks are reported to meet the permit requirements.

FGSCDDDDD>10 – Boiler MACT Requirements

This FG consists of process boilers and heaters fueled under the Gas 1 category, and with a heat input of 10 MMBTU/hr and greater. This group consists of four Sivalls natural gas-fired withdrawal gas heaters (EUSCHTR001 through EUSCHTR004) each with a maximum heat capacity of 10.0 MMBTU/hr at a major source of HAPs.

The FG does not include emission limits, testing, sampling or stack requirements.

OPERATIONAL RESTRICTIONS – The permittee is required to operate and maintain each EU in the FG in a manner consistent with safety and good air pollution control practices for minimizing pollution (SC III.3). Toward this purpose, the permittee is required to conduct an annual tune up of each process heater or boiler in the FG.(SC III.1) The annual tune-up must be conducted no more than 13 months after the previous tune-up and will consist of at minimum:

- Inspection of the flame pattern,
- Inspection of the Air to Fuel Ratio (AFR) and the system controlling it,
- Optimize total CO emissions consistent with the manufacturer's instructions, and
- Measure concentration of CO (ppm) and oxygen (volume %) before and after adjustments

Should an EU in the FG not be operating at the time of the required annual tune-up, it shall be completed within 30 days of the EU startup (SC III.2) A review of Tune-up report(s)/Checklist(s) provided by the Facility indicated that the required inspection activities had been conducted in compliance with tune-up requirements. A copy of the most recent boiler tune-up was provided as part of the April 28, 2021, site inspection. A review of submittals received by the District Office since the previous site inspection included:

Date	Document Title
November 23, 2020	Boiler MACT Tune-up
December 26, 2019	Boiler MACT Tune-up Checklist
December 26, 2018	Boiler MACT Tune-up

MONITORING/RECORDKEEPING – Under MI-ROP-B7219-2020, the permittee is required to keep records of each occurrence, maintenance activity, corrective action, measurement notification, or report for a period of 5 years (SC VI, VI.4 and VI.5), two of which the records will be accessible onsite for review (SC VI.6). Records are maintained by the facility in compliance with the requirements.

SC VI.2 requires the permittee to keep copies of the use of fuel other than Gas #1 fuels. The records if applicable shall include the total hours operating with each fuel type as well as the total hours per year of operation under gas curtailment or gas supply emergencies. (SC VI.2) The Facility reports that no fuel other than Gas#1 are used by the Facility therefore this requirement is not applicable.

The Facility shall also maintain onsite a copy of the annual tune-up report (SC VI.3) which will include the following and are to be measured at high fire or typical operating load both before and after tune-up.:

- Concentration of CO in effluent stream (ppm by volume)
- Concentration of Oxygen in effluent stream (volume %)

The annual tune-up report should also incule a description of any corrective actions taken as part of the tune-up and the type and amount of fuel used 12-months prior to the tune-up. The annual tune-up report reviewed appears complete with reference to requirements, in compliance with the permit conditions.

REPORTING – In addition to prompt reporting of deviations under GC 20 and 21(SC VII.1), the Facility is required to submit annual (SC VII.3) and semi-annual (SC VII.2) compliance reports. Compliance reporting is required to be submitted via the Compliance and Emissions Data Reporting Interface (CEDRI) (SC VII.8). CEDRI submittals were verified by AQD District staff for the previous two calendar years.

The permittee is required if intending to use a fuel other than NG, refinery gas, or gaseous fuel subject to another subpart to submit a notification of alternative fuel use within 48 hours. (SC VII.4) If the permittee has switched fuels or made a physical change to the boiler or process heater and the fuel switch or physical change resulted in the applicability of a different subcategory, they must provide notice within 30-days of the date upon which the fuel switch or physical change was made. (SC VII.5) The Facility reports no change in fuel or intent of fuel change therefore SC VII.4 and VII.5 are not applicable.

The Facility is also required to submit the boiler and process heater tune-up compliance reports to both the appropriate AQD District Office as well as to USEPA via CEDRI (SC VII .6). Each compliance report must meet the requirements of SC VII.7. District Staff confirmed submittal of appropriate documents via CEDRI. Hardcopies were also received by the District Office.

OTHER REQUIREMENTS – The ROP includes a high-level citation requiring the permittee to comply with all applicable provisions of 40 CFR Part 63, Subparts DDDDD (Boiler MACT). As applicable requirements under the subpart were added to the ROP during the most recent renewal, compliance with the ROP is believed to reflect compliance with the subpart.

FGSCDDDDD<10 -Boiler MACT Requirements

This FG consists of process boilers and heaters with under the Gas 1 category, with a heat input of less than 10 MMBTU/hr. This group includes one NG fired Cleaver Brooks boiler with a maximum heat input of 1.35 MMBTU/hr and one glycol dehydration unit reboiler with a maximum heat capacity of 750 MBTU/hr. Both or less than 5 MMBTU/hr.

This FG does not include any material or emission limits, testing requirements or stack restrictions.

OPERATIONAL RESTRICTION(S) – Under MI-ROP-B7219-2020, all boilers or process heaters with heat input capacity of 5 MMBTU or less must conduct a 5-year tune-up according to 40 CFR 63.7540(a)(12) and must be conducted no more than 61 months (but may be delayed until the next schedule or unscheduled unit shutdown to at least once every 72 months) after the previous tune-up (SC III.1). If the EU is not operated on the required tune-up date, the tune-up activity must be conducted within 30 calendar days of startup. (SC III.3) Inspection dates for records for the FG since the last inspection include:

Tune Up Date	EUs
12/15/2020	EUSCBOILER002
11/23/2020	Glycol Reboiler
12/26/2018	EUSCBOILER002

Each tune-up is required to include a burner inspection and will consist of at minimum:

- Inspection of the flame pattern,
- Inspection of the Air to Fuel Ratio (AFR) and the system controlling it,
- Optimize total CO emissions consistent with the manufacturer's instructions, and
- Measure concentration of CO (ppm) and oxygen (volume %) before and after adjustments.

As part of the April 28, 2021, site inspection, the Facility provided a copy of a Dean Boiler, Inc. Service Report for the Cleaver Brooks Boiler dated December 15, 2020. The referenced document included the boiler control safety check list, which appears to be consistent with the above referenced tune-up requirements.

The permittee is required to operate and maintain each EU in the FG in a manner consistent with safety and good air pollution control practices for minimizing pollution (SC III.4). Available records and the lack of visible emissions appears to indicate that the requirement is being met.

MONITORING/RECORDKEEPING – Under MI-ROP-B7219-2020, the permittee is required to keep records of each notification and report submitted under 40 CFR Part 63, Subpart DDDDD, including all documentation supporting any:

- initial notification,
- notification of compliance status,
- 2 or 5 year compliance report and
- one-time energy assessment.

In addition, the permittee is required to keep any records for 5 years of each occurrence, measurement, maintenance, corrective action, report or record. (SC VI.1 and 3) The records shall be kept in a suitable form and readily available for expeditious review two of which the records will be accessible onsite for review (SC VI.2) and actually onsite for at least 2 years after the date, and offsite for the remaining 3 of the 5 years (SC VI.4) Copies of the required documents are kept on file onsite as well as are readily accessible electronically from the Facility.

Date	Report Type	Comment
May 22, 2013	Initial Notification	All but dehy reboiler

January 6, 2021	Notification of Compliance status	Also initial for dehy reboiler
July 2015	One-time energy assessment	

Annual tune up dates were reported previously.

REPORTING – In addition to prompt reporting of deviations under GC 20 and 21(SC VII.1), the Facility is required to submit annual (SC VII.3) and semi-annual (SC VII.2) compliance reports. Compliance reporting is required to be submitted via the Compliance and Emissions Data Reporting Interface (CEDRI) (SC VII.8).

The Facility is also required to submit the boiler and process heater tune-up compliance reports to both the appropriate AQD District Office as well as to USEPA via CEDRI (SC VII .6). Each compliance report must meet the requirements of SC VII.7. A review of submittals indicates that the Facility is in general compliance with reporting requirements.

OTHER REQUIREMENTS – A high-level citation requiring the permittee to comply with all applicable provisions of 40 CFR Part 63, Subparts DDDDD (Boiler MACT). Compliance with FG conditions show general compliance with the Subpart.

SUMMARY

On April 28, 2021, AQD District Staff arrived onsite to conduct stack test oversite and scheduled compliance evaluation activities at the ANR Pipeline Company South Chester Compressor Station, State Registration Number (SRN) B7219. The referenced Facility is located at 6327 Old State Road, Johannesburg, Michigan. The Facility is operated by TC Pipelines, LP (AKA Transcanada). The referenced facility operates under Renewable Operating Permit (ROP) MI-ROP-N7219-2020, issued on October 12, 2020.

Site conditions at the time of the inspection included overcast skies, little to no wind, fog and temperatures in the mid 40's. Chance of rain had been predicted for the day. Both engines were operating, but no visible emissions were noted.

The South Chester Compressor Station is a manned Facility located in the NW ¼ of Section 15, T29 N – R 2W, Otsego County, South Chester Township, Johannesburg, Michigan. The address of record is 6327 Old State Road, Johannesburg, Michigan. The entrance to the Facility is near the intersection of Old State and Lovells Roads. The Facility is fenced and gated, with an intercom system to provide access to the Facility.

The Facility operates as both Natural Gas (NG) storage and transmission facility. The Facility functions to maintain pressure in pipelines transporting 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 compress and inject the NG into the underground reservoir. Past descriptions of the facility included compression of NG, however despite having the word compressor in

the Facility name, it is felt by more experienced staff that storage and transmission more accurately reflects the Facility activities.

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 engine 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 heaters are used to heat the gas as necessary.

No changes at the facility in the way of new processes or process changes since the last inspection. Some personnel changes have occurred as a result of retirements and career changes.

Facility staff report that a new storage tank has been installed, though not commissioned onsite. The purpose of the tank is to store liquids captured by the outlet separator when under withdrawal conditions.

At the time of the April 28, 2020, site inspection the facility was found to be in general compliance with ROP MI-ROP-B7219-2020.

Sharon LeBlanc Digitally signed by Sharon LeBlanc Date: 2021.06.17 12:08:45 -04'00'

NAME _____ DATE _____ SUPERVISOR _____ Shane Nixon Digitally signed by Shane Nixon Date: 2021.06.17 12:09:33 -04'00'