

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

N569462688

FACILITY: RIVERSIDE ENERGY - Chestonia 17		SRN / ID: N5694
LOCATION: 2467 Cedar River Road, CHESTONIA TWP		DISTRICT: Cadillac
CITY: CHESTONIA TWP		COUNTY: ANTRIM
CONTACT:		ACTIVITY DATE: 04/21/2022
STAFF: Sharon LeBlanc	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Site inspection for FY 2022 FCE. Data review to be completed and reported in a separate document. sgl		
RESOLVED COMPLAINTS:		

On April 21, 2022, AQD District Staff conducted a site visit for the Riverside Chestonia 17 CO2 Plant (N5694), located at 2467 Cedar River Road, Chestonia Township, Green River, Antrim County, Michigan. The purpose of the site visit was to confirm equipment onsite with respect to Permit to Install (PTI) No. 365-95D. Records review was/will be conducted and documented in separate reporting.

The referenced site was previously inspected on April 25, 2019. No compliance issues were identified as part of the 2019 compliance evaluation.

FACILITY

The referenced facility is a CO2 Plant located in Chestonia township, Green River, Michigan. The Facility operates two CO2 "Plants" (referred to by the plant operator as Plants 1 & 2, respectively), are separately housed, each with it's own associated amine processes and boilers.

Plant 1 has been reported to have been not operated since 2016, and was not in operation at the time of the April 21, 2022, site visit. It should be noted that the two dehydrators were both operating. So it does not appear that the dehydrators are directly associated with the two different amine systems.

There are three incoming gas streams. Three inlet gas lines feed the Facility, of the three the Radec and Alba are reported to be the two main lines. The third line is referred to as the Chessplay. Up to 40% of the Radec line is bypassed and used to blend with treated NG to achieve the desired CO2 concentration for sales. The Facility reports that they have implemented an injection project, so only a portion of the CO2 produced is presently being emitted to the atmosphere.

The operations room is equipped with a station monitor, which shows the operational parameters for various Facility systems. The facility operations also houses an onsite gas chromatograph to monitor CO2 concentrations. At the time of the site visit, the average incoming CO2 concentration for the wet gas stream was reported to be 7.3%. Sales gas concentrations were reported to be 1.62%.

To get to the site, District Staff travelled to the intersection of Alba Road and M-131, then travelled west on Alba Road to where it ends at CR-66. At CR-66 Staff made a right and travelled North approximately 1.25-mile to W Eddy School Road. Travel west on W. Eddy School Road to Cedar River Road, then turn North(right) the Facility is the first on the right-hand side.

A review of aerials indicated that the site was constructed after 1993.

At the time of the site inspection, the skies were overcast, temps in the low 40s with little to no winds. Plumes visible were limited to those from the two dehy's.

The Facility does not report as part of the Michigan Air Emissions Reporting Program (MAERS).

REGULATORY

Permitting - PTIs issued for the Facility include the following:

PTI	Issued	Voided	Issued to
365-95D	April 20, 2021	NA	Riverside Energy Michigan LLC
365-95C	NA	10/23/2020	Riverside Energy Michigan LLC
365-94B	8/26/2008	NA	Cedarline LLC
365-95A	6/15/2001	8/26/2008	Cedarline LLC
365-95D	11/8/1995	6/15/2001	Cedarline LLC

Note that PTI 365-95D, was issued for the replacement of one glycol dehydrator and installation of two gensets. PTI 365-95B was only for the two Amine plants (FGAMINE). Application 365-95C was voided prior to issuance.

Federal Regulations - The referenced facility does not process or store petroleum liquids, nor store them onsite and is therefore appears to not be subject to 40 CFR Part 60 (New Source Performance Standards AKA NSPS) Subparts;

- K, Ka or Kb (Storage vessels for Petroleum Liquids);
- KKK (Equipment Leaks of VOC from onshore NG Processing Plants);
- VV (Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry);

With regards to the existing engine(s) it appears that based on install dates for the two Caterpillar 399 TA (1973 and 1967) would not be subject to NSPS Subparts IIII and JJJJ for Compression Ignition (CI) RICE and Spark Ignition (SI) RICE, respectively.

Subpart OOOO would apply to onshore affected facilities that are constructed, modified or reconstructed after August 23, 2011. Based on available information it appears that the

referenced subpart is not applicable at this time but that future changes may be subject to the referenced subpart.

With respect to 40 CFR Part 63 (Maximum Achievable Control Technology Standards A.K.A. MACT) the following Subparts may apply:

- Subpart HH (HAPS from Oil and NG Production Facilities)
- Subpart ZZZZ (Reciprocating Internal Combustion Engine aka RICE)

With respect to Subpart HH, the affected unit is believed to be the dehy unit. However, the facility is not subject to the subpart if it's average throughput is less than 85K cubic meters/day (3 MMscf/day) or average benzene emissions are less than 0.9 Mg/yr (approximately 1 ton/yr). A compliance determination has not been made with respect to this subpart, and at the time of report preparation AQD does not have authority to enforce the subpart.

With respect to Subpart ZZZZ, the company at the time of report preparation has provided no information indicating that the existing RICE would not be subject to the referenced subpart. A compliance determination has not been made with respect to this subpart, and at the time of report preparation AQD has been delegated authority to implement and enforce the subpart. However, at this time compliance determinations for Federal requirements under Subpart ZZZZ for Area Sources have not been made.

EQUIPMENT

Equipment associated with the site at the time of April 21, 2022, site inspection included the following:

EQUIPMENT	INSTALLATION DATE	Permit 365-95D	Comment
Gray Water AST	Unk	Exempt	Operator indicated gray water tank, other sources indicate blowdown tank
930 Hp CAT 399 TA RICE, NG-fired, with 3 way catalyst	To be installed	FGGENSET	Gen set purchased from DCP, manufacture date 6/25/1973
930 Hp CAT 399 TA RICE, NG-fired, with 3 way catalyst	To be installed	FGGENSET	Gen set purchased from DCP, manufacture date 3/27/1967
		Exempt	

Dehydrator (2) with reboiler	2021 and Pre-2021		Operating under Rule 288 (2)(b)(ii) Exemption
Amine Plant with reboiler Plant #1	Pre-2021	FGAMINE	Has not been operated since 2016
Amine Plant with Reboiler Plant #2	2021	FGAMINE	Presently operated

Limits associated with FGAMINE include not only CO₂ emission limits, as well as NG processing limits for the FG. Review of operational parameters on the operations screen at the time of the April 21, 2022, indicated that the plant was at that time processing NG for sales with a 2% CO₂ content. To achieve this they were processing at a rate of 10.36 MMCF/day thru FGAMINE and blended after processing with 3.128 MMCF/day.

Stack restrictions associated with PTI 365-95D include the following:

STACK	Maximum Diameter (inches)	Minimum Height above ground (feet)	Meets Conditions*
EUGENSET1	12	24	Not installed
EUGENSET2	12	24	Not installed
SV-AMINE_17.3	8	75	yes
SV-AMINE_4.6	4	75	yes

*Compliance with conditions was determined by visual estimations of height based on building heights, and documentation from previous site inspection reports.

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No compliance issues were identified in conjunction with the 2018 site evaluation activities, nor were any compliance issues noted with respect to the April 21, 2022, site inspection.

NAME _____

DATE _____

SUPERVISOR _____