

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

N615860668

FACILITY: RIVERSIDE - LOUD 15 CPF		SRN / ID: N6158
LOCATION: SW4 NW4 NW4 SEC 15, T29N-R3E, LOUD TWP		DISTRICT: Gaylord
CITY: LOUD TWP		COUNTY: MONTMORENCY
CONTACT: Natalie Schrader , Compliance Coordinator		ACTIVITY DATE: 10/11/2021
STAFF: Sharon LeBlanc	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: FY 2022 FCE including both onsite inspection and records review. sgl		
RESOLVED COMPLAINTS:		

On Thursday, October 11, 2021, AQD District Staff mobilized to the Riverside Energy of Michigan LLC (Riverside) – Loud 15 CPF (N6158), located in the SW1/4, NW 1/4, NW 1/4 Section 15, T29N, R3E, Loud Twp, Montmorency County, Michigan to conduct a scheduled compliance inspection of the facility. The referenced facility presently operates under Permit to Install No. 717-96. A records request was made electronically on October 8, 2021. With records received on October 19, 2021.

The most recent compliance inspections were September 25, 2014, and October 24, 2017. No compliance issues noted on those dates.

FACILITY

The referenced facility is a fenced and unmanned CPF station operated by Riverside and is located at 4875 Green Valley Trail (formerly Francisco Road). The station is reported to service Antrim Formation wells in the area. Activities onsite include separation of gas and brine from the incoming gas stream and compression of the gas in the lines.

To reach the facility Staff traveled north from the intersection of M-33 and CO-612 one-mile to Harwood Road. At Harwood Road, Staff turned to the west (left) and traveled two-miles to Francisco Road. At Francisco Road Staff turned south (left) (now Green Valley Trail). The site was located on the left-hand side of the road approximately 1/8th of a mile south of the intersection.

At the time of the inspection skies were partly sunny with temperatures in the low 70's. Intermittent emissions were noted from the dehy stack. Some water collection had occurred in the secondary containment associated with the brine and slop tanks, but would be consistent with recent rains.

REGULATORY

Permitting -The referenced facility operates under Permit to Install (PTI) No. 717-96, which was issued to the Facility in 1996. The PTI was issued as an opt-out permit, but not a Rule 201 permit and was issued around the same time as other Michigan Oil and Gas Association (MOGA) permits that did not undergo 201 reviews. The PTI conditions were generic and refer to the stationary source as a whole rather than conditions that address individual pieces of equipment.

At the time of permitting the facility consisted of three NG-fired compressor and one glycol dehydration unit and was reported to have the potential to emit over 100 tons of NOx. The referenced permit limits the emissions to 89 tons per year for NOx, CO and VOCs.

Though not identified in the permit, the facility may be subject to Federal Regulation. Subparts frequently associated with oil and gas facilities are identified below. Note however, that compliance with these subparts has not been determined as part of this inspection.

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);

In addition, the existing engine(s) have installation dates no later than 1995, which would make them not 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) the following Subparts may apply:

- Subpart HH (HAPS from Oil and NG Production Facilities)
- Subpart ZZZZ (RICE)

With respect to Subpart HH, the affected unit is believed to be the dehy unit. However, the facility may comply with the standard by demonstrating an average throughput is less than 85K cubic meters/day (<3 MMcf/day) or average benzene emissions are less than 0.9 Mg/yr (approximately 1 ton/yr). Information provided indicated that the the daily average throughput for the Facility is 3.232 MMcf/day. Wet gas data and GRI-GLYCalc version 4.0 (October 2021) yielded total uncontrolled VOC emissions of 3.51 ton/year and benzene concentrations of 0 ton/year.

With respect to Subpart ZZZZ, the facility reports that the engines on site are remote and are subject to the referenced subpart. 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. Riverside has indicated that requirements under the subpart have been incorporated into the MAP for the Facility. Compliance with the MAP may indicate compliance with the referenced subpart.

EQUIPMENT

Consistent with the October 12, 2017, site visit AQD Staff identified three compressors, one glycol dehydrator, one brine tank and one slop tank with lined-secondary containment were present onsite. Of the compressors, one has been non-operating since as early as 2007. Each of the referenced pieces of equipment are housed separately. Due to the overcast conditions at the

time of the site inspection, no Visible Emissions (VEs) or heat shimmers were noted from exhaust stacks onsite.

Review of District Files and annual emissions reports submitted by the facility indicate that at the time of permitting, three compressors were permitted onsite. A review of MAERs submittals for the facility identified the following engines. Note that a like for like engine swing is of record as having occurred for Unit 4055 due to catastrophic engine failure on June 13, 2019, by Riviera Resources, the operator at that time. No other engine change out is of record. No pollution control devices were identified with the referenced engines.

MAERs ID	ENGINE PTI or Other ID	ENGINE TYPE	INSTALLATION DATE	REMOVAL DATE
EUCOMP#1	NA	Superior 86 TLE 825	5/4/1992	NA (not operated since 2007)
EUCOMP#2	Unit 3980 EUENGINE1 SN 3RC0063	Caterpillar 3516 TA LE No Control 1085 HP	2/24/1994 Note on panel indicated new engine 24464 on 7/14/2016 - Head Change reported for 9/2/2021	NA
EUCOMP#3	Unit 4050 EUENGINE2 SN4EK00402	Caterpillar 3516 TA LE No Control 1085 HP	2/22/1995 Note Engine Swing reported to have occurred 7/13/2019	NA

Operational parameters for the referenced engines at the time of the October 11, 2021, site inspection consists of the following:

EUCOMP#1, Superior 86 TLE 825- This unit was not operational at the time of the October 11, 2021, site inspection, and per MAERS and the Facility has not been operated since 2007.

EUCOMP#2/EUENGINE1, Caterpillar 3516 TA LE, 3RC00633, installed 2/24/1994

- RPMs – 1145
- Oil Temp – 166
- Engine Oil Pressure – 60 psi

EUCOMP#/EUENGINE2, Caterpillar 3516 TA LE, 4EK00402, installed 2/22/1995

- RPMs – 1146
- Oil Temp – 182
- Engine Pressure – 60 psi
- Hrs – 12978

The glycol dehydrator referred to as Dehy Still, Antrim -90/15 pump, was reported to have been installed on May 4, 1992.

COMPLIANCE

At the time of the October 11, 2021, site visit, visible emissions were limited to intermittent emissions generated by the dehy. Minor quantities of liquids were noted in the secondary containment of the above ground tanks and is believed to reflect waters from recent rains.

MAERS- Reporting of actual emissions for CO, NO_x, VOCs and HAPs is required under special condition 18 of the permit. A review of the most recent MAERS submittal for the facility (received on January 22, 2021 for emissions associated with the calendar year 2020) included emissions for three engines and one glycol dehydrator onsite.

Total emissions reported for the calendar years 2019, 2020 submitted to MAERS as well as and the 12-month rolling total as of September 2021 are summarized below:

CALENDAR YEAR*	NOX (tpy)	CO (tpy)	VOC (tpy)	Single HAP**
2019	40.80	36.72	9.86	0.36
2020	39.63	35.67	8.06	0.35
September 2021	40.05	35.55	9.44	NR
EMISSION LIMITs	89	89	89	9

**reflects AQD calculated for the highest single HAP

Permit Conditions -Special conditions associated with Permit No. 745-96 are limited to record keeping, reporting and emission limits. Emission limits for the facility are defined in special conditions 13 and 14. These two conditions limit CO, VOC and NO_x emissions to 89 tons/year for each referenced parameter as well as individual HAPs to below 9 tons/year and total HAPs to below 22.5 tons/year.

Calculation of actual emissions on a monthly and 12-month rolling total for CO, NO_x, VOC and HAPS are required under special condition 15. The PTI specifies that emissions will be

determined using emission factors from Appendix A. Except for NO_x and CO emissions for the two engines, the emissions for the facility were calculated using EPA emission factors.

Special condition No. 16 and/or 17 require Monthly records of:

- Fuel consumption, in million cubic feet (MMcf)
- Crude/condensate throughput to the tank in barrels (bbls)
- Hydrocarbon liquid trucked offsite (bbls), and
- Oil and gas processed onsite

The above records for the calendar years 2020 and 2021 to date were provided upon request. Fuel consumption records for the two operating engines onsite indicated the following fuel consumption ranges for January 2020 thru September 2021:

- EUENGINE1 – 4672 – 5918 MMcf/month
- EUENGINE2 – 4780 – 5806 MMcf/month

The facility keeps records of gas processed onsite as a standard business practice. No hydrocarbon liquids or crude/condensates are stored or trucked off site.

Special condition 19 requires the owner or operator of the source to conduct all necessary maintenance and make all necessary attempt to keep all components of the process equipment in proper working order and maintain a log of significant maintenance activities and all repairs made to the equipment. Records indicate that Riverside submitted a revised Preventative Maintenance/Malfunction Abatement Plan (PM/MAP) dated August 12, 2020 (received 12/1/2020 and approved in correspondence mailed the week of 11/30/2020). Riverside has indicated that the referenced PM/MAP reflects Facility maintenance practices, as well as practices required under Subpart ZZZZ (RICE MACT). Reports provided indicated a regular maintenance schedule, general compliance with the PM/MAP and general compliance with the permit condition.

Special condition 20 applies to crude oil or condensate storage tanks greater than or equal to 952 barrels, and the liquid having a true vapor pressure of greater than 1.5 psia. This condition is not applicable as the facility does not store crude or condensate onsite.

Special condition 21 applies to malfunction of a pollution control device and limits bypass of the control device for a period not to exceed 48 hours per event nor a total of 144 hours per calendar year. The referenced permit condition is not applicable as no pollution control devices are associated with the engines onsite.

Special condition 22 requires the owner or operator of an oil-gas facility constructed on or after January 20, 1984 to determine if they are subject to Federal standards in 40 CFR, Part 60, Subpart KKK. No hydrocarbon liquids are reported to be produced at the facility, so the facility is reported not to be subject to the referenced Subpart.

Special condition 23 refers to requirements associated with verification stack testing for CO, VOC, NO_x or HAP. No request for verification testing was found in District Files, so the condition is not applicable at the time of the report preparation.

Special condition 24 requires the facility to only process sweet gas as defined in Rule 119. Records provided by Riverside are summarized below and show compliance with the permit condition.

Date	Hydrogen Sulfide Content (ppm)	Method
October 15, 2021	0	Draeger Tube
October 23, 2018	<1	Lab Analysis

SUMMARY

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Based on information obtained during the onsite inspection and records review, it appears that the site is in general compliance with permit conditions.

NAME _____

DATE _____

SUPERVISOR _____