

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

N632269905

FACILITY: RIVERSIDE - ELMIRA 23 CPF		SRN / ID: N6322
LOCATION: NE 4 SE 4 SEC 23 T31N R4W, ELMIRA TWP		DISTRICT: Gaylord
CITY: ELMIRA TWP		COUNTY: OTSEGO
CONTACT: NATALIE SCHRADER , TECHNICAL ASSISTANT		ACTIVITY DATE: 11/07/2023
STAFF: Sharon LeBlanc	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: FY 2024 FCE Site inspection and records review.sgl		
RESOLVED COMPLAINTS:		

On Tuesday, November 7, 2023, AQD District Staff mobilized to the Riverside Energy Michigan, LLC (Riverside) Elmira 23 CPF (N6322) located in the NE/4 SE/4 of Section 23, Township 31N, Range 4W, Elmira Township, Otsego County, Michigan to conduct an unannounced, scheduled site inspection of the facility. The referenced facility presently operates under Permit to Install No. 353-97. A records request was made electronically on September 9, 2023, and received on September 13, 2023.

Previous site inspection activities were conducted on December 27, 2019. No compliance issues were identified with respect to the facility at that time.

FACILITY

The referenced facility is a fenced and unmanned CPF station operated by Riverside and is located at 4617 Parmater Road. Approximately 4-tenths of a mile East of the intersection of Parmater and Hallock roads. The CPF is located at the end of an approximately ½ mile drive and is not visible from the road. A sign is present identifying the Facility. Activities onsite include separation of gas and brine from the incoming Natural Gas (NG) stream and compression of the gas in the lines.

Equipment onsite at the time of the November 7, 2023, included two NG-fired compressor engines and one glycol dehydrator. No brine tanks exist onsite. Waters generated by the dehydrator is disposed of via an onsite injection well.

Weather conditions at the time of the inspection consisted of overcast skies, and temperatures of 34 degrees Fahrenheit, with little to no wind. No visible emissions were noted at the time of the November 7, 2023, site inspection.

REGULATORY

Permitting -The referenced facility operates under Permit to Install (PTI) No. 353-97, which was issued to O.I.L Energy Corporation for the Facility on August 8, 1887. 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.

Of note is that the Facility has indicated that EUENGINE2, which is presently shut-in will at some point in the future be removed from site. The remaining engine is

believed by the Facility to be exempt from permitting, and when it is the sole engine onsite, the permit will be requested to be voided.

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);

With regards to the existing engine(s) it appears that based on install and/or manufacture dates that neither Unit 812 or Unit 1017 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 reports that it is not subject to the subpart because it's average throughput is less than 85K cubic meters/day (3 MMscf/day). 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 has indicated that any requirements under the subpart have been incorporated into the Facilities PM/MAP. 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

At the time of the November 7, 2023, site visit AQD Staff identified two compressors with RICE, one glycol dehydrator present onsite. Note that PTI 353-97 does not refer to EU IDs. EU IDs referred to in this report are those utilized in the MAERS reports.

Each of the pieces of equipment are housed in a single building. No visible emissions were noted from any of the stacks associated with the facility, due to overcast skies, no heat waves were noted from any of the stacks.

Of note is that the stacks come out of the south side of the building horizontally rather than vertically, about half way up the height of the building, so emissions are released below building height.

Engines of record for the site include:

Engine ID	Type	Install date	Manufacturer date	Other
EUENGINE2* Unit 812 Sn 66B0614	CAT 398TA 625 HP Wth Catalyst	8/15/1993*	11/1/1977	Swing 9/15/2017 Shut in 4/1/2020
EUENGINE1* Unit 1017 Sn 4EK001336	CAT 3516 LE 1085 HP No Catalyst	5/5/2021	9/5/1997	Like for like Swing 5/10/2021 previous Sn 4EK112163

*Engine Id and Install date per MAERS.

Operational data at the time of the November 7, 2023, site inspection included the following

Unit	Hours of Operation	RPMs	Oil Pressure (PSI)	Coolant Temp. (deg. F)
Unit 1017	86026	1167	59	183
Unit 812	Not Operating – Shut In 4/1/2020			

The glycol dehydrator (EUDEHY) associated with the site was reported to be installed on August 15, 1993 (per MAERS). As previously indicated the facility is reported to process only Antrim gas. The referenced equipment is reported to have had a throughput of less than 3.0 MMcfd for the entire reporting period and reported emissions of 0.03 ton/year.

COMPLIANCE

MAERS- Reporting of actual emissions for CO, NOx, 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 February 3, 2023, for emissions associated with the calendar year 2022) included emissions for two engines and one glycol dehydrator onsite.

Fuel usage for EUENGINE2 for the period of January 1, 2022 through July 1, 2023 ranged from 3615 MCF- 4120 MCF.

Except for NOx and CO emissions for the two engines, the emissions for the facility were calculated using MAERS emission factors. Total emissions reported for the year 2022 and 2023 to date (July 2023) are presented below:

12-Month period ending	Total NOx emissions (TPY)	Total CO Emissions (TPY)	Total VOC Emissions (TPY)	Total Single HAP Emissions (TPY)*	Total combined HAP Emissions *(TPY)
December 2022	15.3	13.02	3.42	--	--
July 2023	15.21	12.94	3.40	--	--
Limit (SC 13 & 14)	89	89	89	9	22.5

*Note that Appendix A HAP emission factors indicate "--" for Antrim wells

Permit Conditions -Special conditions associated with Permit No. 353-97 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 NOx 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. All reported emissions were below permit limits.

Calculation of actual emissions on a monthly and 12-month rolling total for CO, NOx, VOC and HAPS are required under special condition 15. The PTI specifies that emissions will be determined using emission actors from Appendix A. A review of the EF indicated that a combination of manufacturer data and EF from Appendix A were used, and is in compliance with the permit conditions. Emissions for the two RICE associated with the site are summarized below:

Engine			

Month ending 12-month rolling time period		NOx Emissions (TPY)	CO Emissions (TPY)	VOC Emissions (TPY)
December 2022	EUENGINE1	14.15	12.73	3.40
	EUENGINE2	0	0	0
July 2023	EUENGINE1	14.05	12.65	3.37
	EUENGINE2	0	0	0

Special condition No. 16, 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

It should be noted as no oil is processed onsite, neither monthly oil processing or hydrocarbon liquid totals are associated with the facility. The other requested monthly records were submitted as requested. Monthly gas production records provided were consistent with those that would verify the less than 3.0 MMcfd for the glycol dehydrator and were previously presented for 2022 and 2023 to date (July 2023).

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 Riverside provided upon request a field maintenance log summarizing maintenance activities. Activities summarized in the documents appeared to meet general compliance with maintenance activities required under the RICE MACT though no compliance determination has been made at this time. In addition, Riverside provided copies of select monthly logsheets indicating that the operating EUS are monitored and operating parameters reported on a daily basis.

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. EUENGINE1 is the only operating engine onsite and does not have an associated control device, therefore this condition is not applicable at this time.

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, NOx 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. The Facility was sampled using stain tubes February 2, 2022, and July 27, 2023, reporting concentrations of 2.5 ppm and 2 ppm, respectively. Which confirms that the gas stream is in compliance with the referenced special condition.

SUMMARY

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Based on observations made, and information provided and reviewed, it appears the facility is operating in general compliance with their permit.

NAME *Mason J LeBlanc*

DATE 1-29-24

SUPERVISOR *Shane Nixon*