

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

P003358298

FACILITY: RIVERSIDE - HELENA 23 CPF		SRN / ID: P0033
LOCATION: Helena 23 CPF, ALDEN		DISTRICT: Cadillac
CITY: ALDEN		COUNTY: ANTRIM
CONTACT: Natalie Schrader , Compliance Coordinator		ACTIVITY DATE: 02/02/2021
STAFF: Jodi Lindgren	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT:		
RESOLVED COMPLAINTS:		

FACILITY DESCRIPTION

On Tuesday, February 1 2021, Jodi Lindgren of the Department of Environmental, Great Lakes, and Energy (EGLE) – Air Quality Division (AQD) conducted an unannounced field inspection of Riverside Energy Michigan, LLC (Riverside) – Helena 23 CPF (P0033) located at the end of an access road 0.37 miles south of Alden Highway. The access road is approximately 0.25 miles east of the intersection of Cemetary Road and Alden Highway in section 23, T29N-R8W, Helena Township, Antrim County, Michigan, 49612. The facility was unmanned at the time of inspection.

The Helena 23 CPF is an opt-out facility with PTI 10-10 issued on March 2, 2010. The facility is subject to 40 CFR Part 63 Subpart HH which the EGLE is not delegated to enforce. The facility has one compressor building that houses a compressor, compressor engine, glycol dehydrator (dehy), and dehy flash tank.

SCHEDULED INSPECTION

A. EUDEHY1 – Glycol dehydration system processing natural gas from the Antrim zone. The dehy is exempt from R 336.1201(1) as it meets the requirements of exemption R 336.1288(2)(b)(ii) because it processes only Antrim natural gas. The Dehy is subject to 40 CFR Part 63, Subpart HH (NESHAP HH), which the State of Michigan is not delegated to enforce.

1. Emission Limits – There are no emission limits established in PTI 10-10 associated with this emission unit; therefore, this section is not applicable.
2. Material Limits – There are no material limits established in PTI 10-10 with this emission unit; therefore, this section is not applicable.
3. Process/Operational Restrictions – There are no process or operational restrictions associated with this emission unit beyond compliance with NESHAP HH regulations. However, the dehy is exempt from NESHAP HH with documentation of an actual annual average flow rate of natural gas less than 85,000 cubic meters per day or 3 MMCF/day. Records provided by Riverside indicate the greatest total monthly throughput was 1.339 MMCF during the inspection time period.
4. Design/Equipment Parameters – There are no design or equipment parameters associated with this emission unit; therefore, this section is not applicable.
5. Testing/Sampling – There are no testing or sampling requirements associated with this emission unit; therefore, this section is not applicable.

6. Monitoring/Recordkeeping – monitoring and recordkeeping to document actual annual average flow rate of natural gas to satisfy the NESHAP HH exemption criteria in 40 CFR 63.764(e) (1)(i). Riverside provided documentation to satisfy this exemption.

7. Reporting – Recordkeeping requirements pursuant PTI 10-10 were provided to AQD staff upon request (see attached).

8. Stack/Vent Restrictions – There are no stack or vent restrictions associated with this emission unit; therefore, this section is not applicable.

9. Other Requirements – There are no other requirements associated with this emission unit; therefore, this section is not applicable.

B. EUENGINE1 – One natural gas fired reciprocating engine that is a 1265 hp CAT G3516 lean burn engine with no emission control equipment. The engine serial number is 4EK00233 with a rebuild date of January 23, 2019 and unit number 1100. At the time of the inspection, the engine was running with a RPM of 1187, engine oil temperature of 189°F, engine oil pressure of 55 psi, coolant system temperature of 210°F, a compressor oil temperature of 178°F, a compressor oil pressure of 62 psi, and 17,232 hours of operation. This was consistent with the records kept on site which indicated that on February 2, 2021, the engine was running with an RPM of 1100, engine oil temperature of 193°F, engine oil pressure 56 psi, coolant system temperature of 197°F, a compressor oil temperature of 168°F, and a compressor oil pressure of 60 psi.

1. Emission Limits – For EUENGINE1, PTI 10-10 established a NOx limit of 60 tons per year (tpy) and a CO limit of 30 tpy calculated at the end of each month using a 12-month rolling time period. Records provided by Riverside indicate 13.32 tpy of NOx emissions and 12.66 tpy CO emissions calculated for a 12-month rolling time period of January 2020 to February 2021. These records indicate compliance with the emission limits established in PTI 10-10.

2. Material Limits – PTI 10-10 prohibits the burning of sour natural gas, which is defined as more than one grain of hydrogen sulfide or more than ten grains of total sulfur per 100 standard cubic feet. An iron sponge system is utilized at the facility to reduce hydrogen sulfide. Riverside provided AQD staff with hydrogen sulfide monitoring data post iron sponge. The data indicated compliance with the sour gas restrictions defined in PTI 10-10.

3. Process/Operational Restrictions – PTI 10-10 requires an AQD approve preventative maintenance/malfunction abatement plan (PM/MAP). A PM/MAP was submitted and the maintenance records demonstrate compliance with the plan.

4. Design/Equipment Parameters – PTI 10-10 dictates the installation, calibration, maintenance, and operation of a monitoring device to measure natural gas usage of FGENGINES on a continuous basis. Riverside demonstrated compliance by provided AQD staff with a calibration and maintenance record as well as a natural gas usage report for the time period January 2020 to February 2021.

5. Testing/Sampling – PTI 10-10 dictates that the AQD District Supervisor may request testing for NOx and CO emission verification and hydrogen sulfide and/or sulfur content of the natural gas burned. No testing has been requested by the AQD District Supervisor during the time constraints of this compliance evaluation.

6. Monitoring/Recordkeeping – Riverside demonstrated compliance with monitoring and recordkeeping requirements of PTI 10-10 to document natural gas usage and calculate NOx and CO emission for FGENGINES. A maintenance log conducted according to the approved PM/MAP is mandated in the PTI 10-10 as well. Riverside provided AQD staff the required documentation upon request.

7. Reporting – Recordkeeping requirements pursuant PTI 10-10 were provided to AQD staff upon request.

8. Stack/Vent Restrictions – PTI 10-10 requires EUENGINE1 to have a stack with a maximum diameter of twelve inches and a minimum height above ground level of 37 feet. The engine exhaust stack appeared to meet these requirements during the inspection.

9. Other Requirements – There are no other requirements associated with this emission unit; therefore, this section is not applicable.

EVALUATION SUMMARY

Conclusion – Based upon the Full Compliance Evaluation, it appears the source was in compliance with PTI 10-10 at the time of the evaluation.

NAME _____

DATE _____

SUPERVISOR _____