

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Other

N759263655

FACILITY: RIVERSIDE - CUSTER 7 CPF		SRN / ID: N7592
LOCATION: 3996 DB Trail, CUSTER TWP		DISTRICT: Cadillac
CITY: CUSTER TWP		COUNTY: ANTRIM
CONTACT: Natalie Schader , Compliance Coordinator		ACTIVITY DATE: 07/15/2022
STAFF: Jodi Lindgren	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Record Review. Facility inspection report was done separately		
RESOLVED COMPLAINTS:		

FACILITY DESCRIPTION

Jodi Lindgren of the Department of Environmental, Great Lakes, and Energy (EGLE) – Air Quality Division (AQD) conducted a review of records for Riverside Energy Michigan, LLC (Riverside) – Custer 7 CPF located at 3996 D&B Trail in section 9, T29N-R7W of Custer Township, Bellaire, Antrim County, Michigan, 49615.

The Custer CPF is an opt-out facility with PTI 96-06D issued on August 2, 2017. The facility may be subject to 40 CFR Part 63 Subpart ZZZZ (MACT ZZZZ) and 40 CFR Part 63 Subpart HH (MACT HH). EGLE-AQD is not delegated authority to enforce MACT HH. EGLE-AQD has been delegated authority to implement and enforce MACT ZZZZ, but compliance assessments for area sources have not been completed. The facility consists of a fixed roof 400-barrel storage tank, an iron sponge system for hydrogen sulfide treatment, three natural gas compressors, two natural gas fired reciprocating compressor engines engine, one electric 400 hp, CAT 3408 compressor engine, and a glycol dehydrator. The glycol dehydrator, electric compressor engine, and fixed roof tank are reported as exempt from Rule 201, the requirement to obtain a permit to install.

SCHEDULED INSPECTION

A. FGENGINES – FGENGINES includes two natural gas fired reciprocating engines (RICE), EUENGINE1 and EUENGINE2. EUENGINE1 is a 1340 hp CAT 1316 lean burn RICE with no emission control. EUENGINE1 skid unit number is 191. EUENGINE2 is a 1005 hp CAT 3512 lean burn RICE with no emission control. EUENGINE2 skid unit number is 192

1. Emission Limits – For EUENGINE1, PTI 96-06D established a NOx limit of 19.4 tons per year (tpy) and a CO limit of 24.6 tpy calculated at the end of each month using a 12-month rolling time period. For EUENGINE2, PTI 96-06D established a NOx limit of 14.6 tons per year (tpy) and a CO limit of 20.4 tpy calculated at the end of each month using a 12-month rolling time period. Records provided by Riverside indicate EUENGINE1 emitted 12.68 tpy of NOx and 16.07 tpy of CO calculated for a 12-month rolling time period of June 2021 to May 2022. It was reported that EUENGINE2 emitted 6.19 tpy of NOx and 8.67 tpy of CO calculated for a 12-month rolling time period of June 2021 to May 2022. These records indicate compliance with the emission limits established in PTI 96-06D.

2. Material Limits – There are no material limits associated with this flexible group; therefore, this section is not applicable.

3. Process/Operational Restrictions – PTI 96-06D requires an AQD approved preventative maintenance/malfunction abatement plan (PM/MAP). Riverside submitted a PM/MAP in

October 2017 which was approved by AQD in November 2017. The PM/MAP dictates the engines shall receive routine monitoring and maintenance including, daily performance monitoring, basic service checks every 60 to 90 days, motor oil and filter changes every 3,000 operation hours, and an engine rebuild or replacement every 85,000 operation hours. Monitoring records for EUENGINE1 and EUENGINE2 provided by Riverside demonstrate daily monitoring of the various system parameters necessary to ensure the engines are functioning within safe operational constraints. The provided maintenance logs demonstrate ample performance of routine maintenance including engine oil and filter changes, spark plug replacement, sensor cleaning and calibration, valve replacement, and electrical system testing. PTI 96-06D specifies FGENGINES must comply with the conditions of 40 CFR Part 60 Subpart JJJJ. Riverside reported the manufacture dates of EUENGINE1 and EUENGINE2 to be prior to the January 1, 2008 established for lean burn engines in 40 CFR 60.4230(a)(4)(ii). The engines were installed in 2007 therefore the manufacture date must be prior to January 1, 2008 and Riverside does not report any modifications or rebuilds to the engines. These records indicate compliance with the AQD approved PM/MAP and PTI 96-06D.

4. Design/Equipment Parameters – PTI 96-06D dictates proper installation, maintenance, and operation of an engine add-on control device. EUENGINE1 and EUENGINE2 are not equipped with an add-on control device. PTI 96-06D requires the installation, calibration, maintenance, and operate a device to monitor and record the natural gas usage for FGENGINES be monitored on a continuous basis. Riverside provided records showing the maintenance, testing, and calibration records for the devices recording fuel usage of EUENGINE1 and EUENGINE2.

5. Testing/Sampling – PTI 96-06D dictates that the AQD District Supervisor may request testing to verify NOx and CO emission factor. No testing has been requested by the AQD District Supervisor and no testing was completed by Riverside during the time constraints of this compliance evaluation.

6. Monitoring/Recordkeeping – PTI 96-06D mandates natural gas usage for FGENGINES be monitored on a continuous basis. Riverside provided AQD staff with fuel usage logs for EUENGINE1 and EUENGINE2. The greatest monthly fuel usage for EUENGINE1 was 5.133 MMCF in March 2022 and the total usage for EUENGINE1 was 57.424 MMCF for a 12-month rolling time period of June 2021 to May 2022 indicating compliance with for the time period of June 2021 to May 2022. The greatest monthly fuel usage for EUENGINE2 was 2.46 MMCF in July 2021 and the total usage for EUENGINE2 was 27.46 MMCF for a 12-month rolling time period of June 2021 to May 2022. PTI 96-06D establishes FGENGINES recordkeeping for all emissions calculations, natural gas usage, and monitoring and maintenance activities logs. Riverside provided all of the requested records in a timely manner.

7. Reporting – PTI 96-06D requires Riverside to report if either of the engines in FGENGINES is replaced for an equivalent-emitting or lower-emitting engine. The engines in FGENGINES have not been replaced.

8. Stack/Vent Restrictions – There are no records associated with the stacks of this flexible group; therefore, this section is not applicable.

9. Other Requirements – There are no other requirements associated with the continued compliance of FGENGINES; therefore, this section is not applicable.

B. FGFACILITY – All process equipment source-wide including equipment covered by other permits, grandfathered equipment, and exempt equipment.

1. Emission Limits – PTI 96-06D established a CO limit of 89 tons per year (tpy) calculated at the end of each month using a 12-month rolling time period. Records provided by Riverside indicate 24.89 tpy of CO emissions calculated for a 12-month rolling time period of June 2021 to May 2022. These records indicate compliance with the emission limits established in PTI 96-06D.

2. Material Limits – PTI 96-06D dictates only sweet natural gas may be processed at the facility. An iron sponge is utilized by the facility to remove H₂S from the field gas prior to entering the process equipment. Riverside provided records of gas analyses from upstream and downstream of the iron sponge to verify H₂S to is sufficiently reduced to meet the definition of sweet natural gas. The records also demonstrated regular maintenance and filter changes.

3. Process/Operational Restrictions – The dehy has been reported to meet an exemption (40 CFR 63.764(e)(1)(i)) from MACT 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 an actual annual average flow rate of 0.0244 MMCF/day.

4. Equipment Parameters – There are no equipment parameters associated with FGFACILITY; therefore, this section is not applicable.

5. Testing – PTI 96-06D dictates that the AQD District Supervisor may request testing to verify H₂S and/or sulfur content of the natural gas burned. No testing has been requested by the AQD District Supervisor.

6. Monitoring/Recordkeeping – PTI 96-06D establishes FGFACILITY recordkeeping for CO emission calculations. Riverside provided all of the requested records in a timely manner.

7. Reporting – PTI 96-06D establishes recordkeeping for all emissions calculations. Riverside provided documentation for the required calculations denoting compliance with PTI 96-06D.

8. Stack/Vent Restrictions – There are no stack nor vent restrictions associated with FGFACILITY; therefore, this section is not applicable.

9. Other Requirements – There are no other requirements associated with the continued compliance of EUENGINE; therefore, this section is not applicable.

EVALUATION SUMMARY

Conclusion – Based upon the review of records, it appears the source was compliant with PTI 96-06D at the time of the evaluation.

NAME 

DATE _____

SUPERVISOR _____