

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

P000652232

FACILITY: RIVERSIDE - CENTRAL LAKE 15 CPF		SRN / ID: P0006
LOCATION: Central Lake 15 CPF, CENTRAL LAKE		DISTRICT: Cadillac
CITY: CENTRAL LAKE		COUNTY: ANTRIM
CONTACT: Natalie Schrader,		ACTIVITY DATE: 01/24/2020
STAFF: Jodi Lindgren	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: FY 2020 Full Compliance Evaluation, site inspection and records review.		
RESOLVED COMPLAINTS:		

FACILITY DESCRIPTION

On Friday November 1 2019, 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) – Central Lake 15 CPF Site located approximately 0.25 miles due east of the intersection of M-88 and Kiessel Road in section 15, T31N-R8W of Central Lake Township, Antrim County, Michigan, 49622. There are two access roads to the facility, one through the Central Lake Township Recycling facility and the other through a private residence north of the recycling center. The facility was operating but unmanned at the time of inspection.

The Central Lake 15 CPF is an opt-out facility with PTI 254-09B issued on February 25, 2015. The facility is subject to 40 CFR Part 63 Subpart ZZZZ which EGLE-AQD is not delegated to enforce. The facility consists of a fixed roof 400-barrel storage tank, an iron sponge system for hydrogen sulfide treatment, and a compressor building, which houses a compressor, a compressor engine, a process heater, and a glycol dehydrator. The glycol dehydrator, process heater, and fixed roof tank are reported as exempt from Rule 201, the requirement to obtain a permit to install.

SCHEDULED INSPECTION

A. EUENGINE1 – One 1265 hp CAT G3516 lean burn natural gas fired reciprocating engine equipped with oxidation catalytic control. The engine nameplate could not be located, but the skid unit number is 139. At the time of the inspection, the engine was running with a RPM of 1253, oil temperature of 240°F, oil pressure of 63 psi, coolant system temperature of 184°F, a compressor oil temperature of 183°F, a compressor oil pressure of 59 psi, oxidation catalyst temperature of 804°F, and 22,822 hours of operation. This was consistent with the records kept on site which indicated earlier on November 1, 2019 the engine was running with a RPM of 1254, oil pressure of 62 psi, oil temperature of 203°F, coolant system temperature of 183°F, a compressor oil temperature of 187°F, and a compressor oil pressure of 58 psi.

1. Emission Limits – PTI 254-09B established a NOx limit of 60.0 tons per year (tpy) and a CO limit of 30.0 tpy calculated at the end of each month using a 12-month rolling time period. Records provided by Riverside indicate 16.98 tpy of NOx emissions and 16.13 tpy CO emissions calculated for a 12-month rolling time period of October 2018 to September 2019. These records indicate compliance with the emission limits established in PTI 254-09B (records are attached).

2. Material Limits – PTI 254-09B 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 254-09B (records attached).

3. Process/Operational Restrictions – PTI 254-09B requires an AQD approved preventative maintenance/malfunction abatement plan (PM/MAP). An AQD approval letter dated November 16, 2015 was issued for the PM/MAP dated July 1, 2015. The PM/MAP dictates the engine 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 provided by Riverside demonstrate daily monitoring of the various system parameters necessary to ensure the engine is functioning within safe operational constraints. A provided maintenance log indicates the performance of routine maintenance including two cooling system filter changes, four basic service checks, and three motor oil and filter changes in the time period of October 2018 to September 2019. At the time of the inspection, the engine did not require a rebuild or replacement having 22,822 operation hours. The

PM/MAP requires the oxidation catalytic converter to be monitored for pressure differential, temperature differential, and actual inlet and outlet temperatures. Regular cleaning, catalytic insert replacement, gasket replacement, and baseline testing for the catalytic converter is established in the PM/MAP. Riverside provided records demonstrating appropriate monitoring and maintenance to the catalytic converter. Riverside does not account for emission control from the oxidation catalytic converter in the emission calculations to demonstrate compliance with the pollutant thresholds established in PTI 254-09B. Therefore, emission testing to verify the catalytic converter is properly controlling the subject pollutants is not required. These records indicate compliance with the AQD approved PM/MAP (records are attached).

4. Design/Equipment Parameters – PTI 254-09B dictates the installation, calibration, maintenance, and operation of a monitoring device to measure natural gas usage of EUEENGINE 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 of October 2018 to September 2019 (records are attached).

5. Testing/Sampling – PTI 254-09B 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 – PTI 254-09B mandates recordkeeping for all emissions calculations, natural gas usage for EUENGINE1, and monitoring and maintenance activities logs. Riverside provided AQD staff with all the requested recordkeeping documentation for the time period of October 2018 to September 2019 indicating compliance with PTI 254-09B.

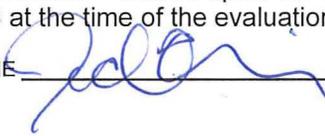
7. Reporting – PTI 254-09B dictates that the AQD District Supervisor be notified if the engine is replaced. The engine covered by PTI 254-09B has not been replaced.

8. Stack/Vent Restrictions – PTI 254-09B a stack with a maximum diameter of twelve inches and a minimum height above ground level of 50 feet. The engine exhaust stack appeared to meet these requirements during the inspection.

9. Other Requirements – There are no other requirements associated with the continued compliance of EUENGINE1; therefore, this section is not applicable.

EVALUATION SUMMARY

Conclusion – Based upon the Full Compliance Evaluation, it appears the source was compliant with PTI 254-09B at the time of the evaluation.

NAME 

DATE 1/24/2020

SUPERVISOR 