

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

N605858276

<b>FACILITY:</b> RIVERSIDE - WARNER 10 CPF		<b>SRN / ID:</b> N6058
<b>LOCATION:</b> NE NE NE SEC 16 WARNER TOWNSHIP, WARNER TWP		<b>DISTRICT:</b> Cadillac
<b>CITY:</b> WARNER TWP		<b>COUNTY:</b> ANTRIM
<b>CONTACT:</b> Natalie Schrader ,		<b>ACTIVITY DATE:</b> 12/01/2020
<b>STAFF:</b> Jodi Lindgren	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> SM OPT OUT
<b>SUBJECT:</b>		
<b>RESOLVED COMPLAINTS:</b>		

### FACILITY DESCRIPTION

On Tuesday, December 1 2020, 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) – Warner 10 CPF (N6058) located on an access road 0.5 miles north of M-32 and approximately 1.38 miles northwest of the intersection of M-32 and US-131 in section 16, T31N-R5W, Warner Township, Antrim County, Michigan, 49730. The facility was unmanned at the time of inspection.

The Warner 10 CPF is an opt-out facility with PTI 70-09A issued on November 21, 2017. The facility is subject to 40 CFR Part 63 Subparts ZZZZ and HH which the EGLE is not delegated to enforce. The facility has two compressor buildings, Building No. 1 and Building No. 2. Building No. 1 houses a compressor, compressor engine, glycol dehydrator (dehy), and dehy flash tank. Building No. 2, which housed the permitted Caterpillar 3406 TA engine and compressor, was found empty with all permitted equipment and all associated processing equipment completely removed.

### 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 70-09A associated with this emission unit; therefore, this section is not applicable.

2. Material Limits – There are no material limits established in PTI 70-09A. 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 0.893 MMCF during the inspection time period. The records also included an actual annual average flow rate of 0.029 MMCF/day.

3. Process/Operational Restrictions – There are no process or operational restrictions associated with this emission unit; therefore, this section is not applicable.

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 70-09A 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. FGENGINES** – Two natural gas fired reciprocating engines, EUENGINE1 and EUENGINE2. Riverside reported that EUENGINE2 was removed from the facility on July 6, 2020 and did not operate during the inspection time period. EUENGINE1 is a 1265 hp CAT G3516 lean burn engine with no emission control equipment. The engine serial number is 4EK04804 with a rebuild date of July 16, 2019 and unit number 1243. At the time of the inspection, the engine was running with a RPM of 1200, oil temperature of 196°F, oil pressure of 48 psi, coolant system temperature of 122°F, a compressor oil temperature of 185°F, a compressor oil pressure of 58 psi, and 10,599 hours of operation.. This was consistent with the records kept on site which indicated that on December 1, 2020, the engine was running with an RPM of 1200, engine oil pressure 48 psi, and oil temperature of 192°F.

1. **Emission Limits** – For EUENGINE1, PTI 70-09A established a NOx limit of 55 tons per year (tpy) and a CO limit of 28 tpy calculated at the end of each month using a 12-month rolling time period. Records provided by Riverside indicate 14.79 tpy of NOx emissions and 14.05 tpy CO emissions calculated for a 12-month rolling time period of November 2019 to October 2020. These records indicate compliance with the emission limits established in PTI 70-09A.

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

3. **Process/Operational Restrictions** – PTI 70-09A requires an AQD approve preventative maintenance/malfunction abatement plan (PM/MAP). An AQD approval letter dated December 15, 2017 was issued for the PM/MAP received on November 27, 2017.

4. **Design/Equipment Parameters** – PTI 70-09A 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 November 2019 to October 2020.

5. **Testing/Sampling** – PTI 70-09A dictates that the AQD District Supervisor may request testing NOx and CO emission verification. No testing has been requested by the AQD Supervisor during the time constraints of this compliance evaluation.

**6. Monitoring/Recordkeeping – Riverside demonstrated compliance with monitoring and recordkeeping requirements of PTI 70-09A 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 70-09A as well. Riverside provided AQD staff the required documentation upon request.**

**7. Reporting – Recordkeeping requirements pursuant PTI 70-09A were provided to AQD staff upon request.**

**8. Stack/Vent Restrictions – PTI 70-09A requires EUENGINE1 to have a stack with a maximum diameter of ten inches and a minimum height above ground level of 41 feet. The engine exhaust stack appeared to meet these requirements during the inspection.**

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

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

**1. Emission Limits – PTI 70-09A established a NOx limit of 72 tpy and a CO limit of 46 tpy calculated at the end of each month using a 12-month rolling time period. Records provided by Riverside indicate 15.52 tpy of NOx emissions and 14.23 tpy CO emissions calculated for a 12-month rolling time period of November 2019 to October 2020. These records indicate compliance with the emission limits established in PTI 70-09A.**

**2. Material Limits – PTI 70-09A 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. Riverside does not burn sour gas.**

**3. Process/Operational Restrictions – FGFACILITY is subject to 40 CFR Part 63 Subpart HH. Riverside maintains and provided AQD records demonstrating 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.**

**4. Design/Equipment Parameters – There are no design or equipment parameters associated with this flexible group; therefore, this section is not applicable.**

**5. Testing/Sampling – PTI 70-09A dictates that the AQD District Supervisor may request verification of 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 70-09A mandates monthly and 12-month rolling time period NOx and CO emission calculations for FGFACILITY to be calculated at the end of each month. Riverside provided AQD staff the required documentation upon request.**

**7. Reporting – There are no reporting requirements associated with this flexible group; therefore, this section is not applicable.**

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

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

**EVALUATION SUMMARY**

**Conclusion – Based upon the Full Compliance Evaluation, it appears the source was in compliance with PTI 70-09A at the time of the evaluation.**

NAME \_\_\_\_\_

DATE \_\_\_\_\_

SUPERVISOR \_\_\_\_\_