

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

N821765638

<b>FACILITY:</b> Riverside Energy Michigan, LLC - Unit 179 Booster		<b>SRN / ID:</b> N8217
<b>LOCATION:</b> SW 1/4 NW 1/4 SEC 34 T30N R02E, BRILEY TWP		<b>DISTRICT:</b> Gaylord
<b>CITY:</b> BRILEY TWP		<b>COUNTY:</b> MONTMORENCY
<b>CONTACT:</b> Natalie Schrader , Compliance Coordinator		<b>ACTIVITY DATE:</b> 11/14/2022
<b>STAFF:</b> Sharon LeBlanc	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> MINOR
<b>SUBJECT:</b> FY2023 targeted site inspection and records review. sgl		
<b>RESOLVED COMPLAINTS:</b>		

### INTRODUCTION

On November 14, 2022, AQD District Staff conducted a site inspection of the Riverside Energy, LLC (Riverside) Unit 179 Booster (N8217). The referenced Facility is located in the SW ¼ NW 1/4 Section 34, T30N R2E, South Briley Township, Atlanta, Montmorency County, Michigan.

The Facility operates under Permit to Install (PTI) 394-08 issued on February 9, 2009. The most recent site inspection was conducted on June 9, 2017.

Weather conditions at the time of the site inspection included mostly cloudy skies, with temps of 34 degrees Fahrenheit. The site is in a wooded area, no winds were noted.

### FACILITY

Unit 179 is an unmanned booster station located in the SW 1/4, NW ¼ of Section 34, T30N R2E, South Briley Township. The facility is located a short distance off Shoreline Drive, south of the Riverside South Briley 34, SRN N6154. The Facility latitude and longitude has previously been reported as approximately 44.951669, -84.192001. To reach the site, continue 0.25-miles south from (0.3-miles south of the intersection of 489 and Shoreline Drive) Hillside Trail will be the first trail to your left. It is not visible from the road. There is no sign identifying the Facility.

The facility is covered under Permit to Install 394-08, issued to Highmount Exploration & Production, LLC on February 9, 2009. The present operator (Riverside) acquired the site in 2019.

This permit lists one natural gas fired reciprocating engine (EUENGINE1). PTI 394-08 is an opt-out permit and allows for engine replacement and/or swings under special condition (S.C.) VII.1.

Readily available aerials appeared to indicate construction of the site between April 1998 and August 2005.

### EQUIPMENT

Consistent with the June 9, 2017, site inspection, the Facility consists of a single building housing one Compressor with NG-fired, Reciprocating Internal Combustion Engine (RICE). The unit was operating at the time of the November 14, 2022, site inspection. Equipment onsite consists of:

Emission Unit	Description
EUENGINE1	CAT3406TA

	<b>Unit 179</b>
	<b>Rich Burn</b>
	<b>No Catalyst</b>

**Operational parameters recorded on November 14, 2022, for EUENGINE1 consisted of :**

- RPM-1608
- Compressor Oil Temp-158 degrees
- Engine Oil Pressure-191 PSI

**It appears that there is an empty catalyst shell located post engine, but no leads for monitors are present. The Operator reports no catalyst is present. Note that the following notes were written on the compressor:**

- New Engine & Compressor 1-30-2017, Hours 44070
- New Cylinder Head 2-17-2018, Hours 52873

### **PERMITTING**

**As previously indicated, the Facility operates under PTI 394-08, issued on February 9, 2009, to Highmount Exploration & Production LLC. Conditions within the referenced permit are limited to one compressor engine (EUENGINE1).**

### **FEDERAL REGULATION -**

**The referenced facility does not process or store petroleum liquids and is therefore 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);

**NSPS (40 CFR Part 60) Subpart JJJJ, as applicable Reciprocating Internal Combustion Engines (RICE) commencing construction after June 12, 2006. Riverside reports that the engine is not subject to Subpart JJJJ. Aerials suggest that the Facility was constructed before 2005.**

**With respect to 40 CFR Part 63 (Maximum Achievable Control Technology Standards) the following Subparts may apply:**

- Subpart HH (HAPS from Oil and NG Production Facilities)
- Subpart JJJJJ (Boiler MACT)
- Subpart ZZZZ (RICE MACT)

**With respect to Subpart HH, the affected unit is believed to be dehy units. Riverside staff report that the Facility is not subject to Subpart HH as no dehy is present onsite.**

NESHAP Subparts JJJJJJ pertain to Industrial, Commercial and Institutional Boilers and Process Heaters for Area source of HAPS, respectively. At the time of the site inspection, it appears that the reboiler of the glycol dehydration process would not be subject to the subpart, as a process heater is not present onsite, this subpart is not applicable.

With respect to Subpart ZZZZ, the engineers eval form for PTI 394-08, the Facility RICE are subject to 40 CFR Part 63, Subpart ZZZZ and that the Operator has implemented appropriate activities to meet the referenced subpart requirements. These requirements appear to have been incorporated into the Site Preventative Maintenance/Malfunction Abatement Plan (PM/MAP) received by District Staff dated November 30, 2020 and approved on December 3, 2020. Though AQD has been delegated to implement and enforce the referenced subpart, a compliance determination has not been made with respect to this subpart.

### COMPLIANCE

No complaints, Notices of Violation, or enforcement activities are of record for Unit 179. Compliance status for the facility had been based on information provided in conjunction with the November 14, 2022, site inspection, as well as on supplemental data and reports submitted upon request or to meet permit requirements identified under PTI 394-08.

MAERS- Annual reporting of actual emissions for the facility under the MAERs program was most recently submitted on March 10, 2010, for emissions reported for the 2009 calendar year. As a true minor submittal has been previously determined un-necessarily.

EUENGINE1- The referenced EU consists of one NG-fired, RICE without catalyst.

Emission limits under PTI 394-08 includes limits for Nitrogen Oxides (NO<sub>x</sub>)(S.C. I.1) and Carbon monoxide (CO)(SC I.2). Monthly and 12-month rolling total NO<sub>x</sub> and CO emission calculations are conducted as required under SC VI.6 and VI.7.

Emissions reported by the Facility for select dates are summarized below:

Date	Monthly NO <sub>x</sub> (tons)	12-Month Rolling Nox (TPY)	Monthly CO (tons)	12-Month Rolling CO (TPY)
December 2021	2.58	31.04	0.19	2.31
October 2022	3.30	36.24	0.25	2.70
Limit	NA	68 TPY (SC I.1)	NA	6 TPY (SC I.2)

Material Limits for the referenced EU prohibits the burning of sour gas (SC II.1), which is defined as greater than 1 grain of hydrogen sulfide or 10 grains of total sulfur per 100 standard cubic feet of NG. The Facility reports compression of Antrim Formation gas which is almost always a sweet gas. Hydrogen sulfide content is not measured at the booster, but at the CPF. The Facility reports monitoring was conducted for the South Briley CPF (N6154). The most recent H<sub>2</sub>S analysis of the

influent gas stream indicated that each of four sampling events in 2021 indicated that H2S concentrations are 0.5 ppm (0.03 grains) and in compliance with permit limits.

Operational Condition III.1 requires preparation and implementation of a Malfunction Abatement Plan (MAP). The initial document submitted by the prior operator was approved on March 30, 2009. More recently Riverside, (the present operator) submitted a revised document on November 30, 2020, which was approved on December 3, 2020. Documentation of maintenance activities is required under VI.3.

A review of maintenance records provided for the period of January 2021 to October 2022 indicated that service activities are regularly conducted approximately every 2 months. On August 11, 2022, a service head change was conducted. Activities appear to be conducted in compliance with the PM/MAP and in compliance with permit conditions.

S.C. IV.2, VI.2 and VI.5 requires that the permittee installs, calibrates, maintains and operates in a satisfactory manner a device to continuously record/document the NG usage for each engine. NG- usage is recorded, and is summarized below:

Date	Monthly NG Usage (MMCF)	12-Month Rolling Total NG Usage (MMCF)
December 2021	1.006	12.082
October 2022	1.285	14.109
Limit	NA	NA

At the time of permitting, EUENGINE1 was not equipped with an add-on control and the following special conditions are not applicable:

- Operational limit of 200 hours per 12-month rolling time period for each engine without it's control device. (SC III.2)
- Proper installation, operation and maintenance of the add-on control device(s) (SC IV.1)
- Documentation of the hours of engine operation without it's control device (SC VI.4)

Condition VIII.1 sets stack dimensions as a maximum diameter of 6 inches and a minimum height of 36 feet above ground level. The June 1, 2017, site inspection report indicated that "the stack is about 6 inches diameter and appears to be about 30 feet high; judging by eye". Stack height based on measurements made using a Nikon Range Finder was 33.7 feet above land surface. The operator reports that the stack meets the minimum height requirement.

### **SUMMARY**

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The facility is covered under Permit to Install 394-08, issued to Highmount Exploration & Production, LLC on February 9, 2009. The present operator (Riverside) acquired the site in 2019.

This permit lists one natural gas fired reciprocating engine (EUENGINE1). PTI 394-08 is an opt-out permit and allows for engine replacement and/or swings under SC VII.1. No swings are of record for the Facility.

As a result of information reviewed as part of onsite inspection and records review, the Facility appears to be operating in general compliance with permit conditions.

NAME Sharon J LeBlanc

DATE 2-8-23

SUPERVISOR Shane Nixon