

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

P009055776

FACILITY: RIVERSIDE - LOUD 13 - JOY BOOSTER 6647		SRN / ID: P0090
LOCATION: SE ¼ Section 18, T29N, R4E, Rust Township, HILLMAN		DISTRICT: Gaylord
CITY: HILLMAN		COUNTY: MONTMORENCY
CONTACT: Natalie Schrader , Compliance Coordinator		ACTIVITY DATE: 10/09/2020
STAFF: Sharon LeBlanc	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: FY 2021 scheduled site inspection. No compliance issues noted.sgl		
RESOLVED COMPLAINTS:		

On October 9, 2020, AQD District Staff conducted a scheduled site inspection for the Riverside Energy Michigan (Riverside) Loud 13, Unit 6647 Booster (AKA Joy Booster 6647) (P0090), located at the SE ¼ of Section 18, T29N R4E, Rust Township, Montmorency County, Hillman Michigan. The purpose of the site visit was to confirm compliance of equipment onsite with respect to Permit to Install (PTI) No. 69-10

Records were previously requested (September 14, 2020), received electronically on September 16, 2020, and have been reviewed as part of this site investigation.

The referenced site was previously inspected on May 19, 2017. No compliance issues were identified as part of the 2017 compliance evaluation.

FACILITY

The referenced facility is an unmanned booster station operated by Riverside in the Turtle Lake Hunt Club. The station is reported to service Antrim Formation wells in the area. Activities onsite are limited to compression of NG, which pushes it through the pipeline. Inlet gas samples collected by Riverside Staff on September 16, 2020, indicate that H2S concentrations are below detection and meet the AQD sweet gas definition. (Special Condition (SC) II.1 and V.2)

To get to the site, District Staff travelled north on M-33 to the intersection with County Road 612. From that intersection, Staff traveled approximately 1-mile north to Harwood (AKA Beauregard) Road, and made a right, and continued traveling an additional mile to the east where it intersected with Solomon Road. A hunt club gate is located at the south side of the intersection of Harwood and Solomon. The gate was unlocked at the time of the inspection.

A review of readily available aerials appears to indicate that the compressor building was constructed prior to December 2005, which is the earliest aerial of the structure (Google Earth Pro). The site was undeveloped in aerials dated as late as April 1993.

The Facility since permitting (2010) has been operated by the following companies:

- Highmount Exploration and Production LLC (at time of permitting)
- LINN Operating, LLC (March 4, 2019, notification of name change)
- Riviera Operating LLC, (March 4, 2019 – August 1, 2019)
- Riverside Energy Michigan, LLC, (August 1, 2019 to Present)

At the time of the site inspection, the skies were partly cloudy, temps in the high 40s and little to no wind. The site was not operating at the time of the inspection. Discussions with Riverside staff indicated that it had been shut down approximately 2 weeks prior, and that there was a good chance that it would not be restarted.

REGULATORY

Permitting -The referenced facility operates under PTI No. 69-10, which was issued to

Highmount Exploration and Production, LLC on April 8, 2010. The PTI was issued as an opt-out permit, and allows for replacement of the permitted engine with an equivalent or lower emitting engine with notification to the District Supervisor, and submittal of appropriate documentation of emissions (SC VII.1).

EQUIPMENT

Review of District Files indicates that the following compressor engine is of record for the site.

ENGINE ID	ENGINE TYPE	INSTALLATION DATE	REMOVAL DATE	COMMENT
EUENGINE1 Unit # 6647	Cat 3406 NA 215 Hp Rich Burn No Catalyst	4/1/2010	NA	No Swings of record since Riverside took ownership in August 2019.

At the time of the October 9, 2020, site visit a single engine was identified onsite. No catalyst was present. As previously indicated the unit was not operating at the time of inspection.

Federal Regulations - 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)

In addition, based on information provided in the engineers eval form for PTI 69-10, the engine is reported to have a manufacture date that would exempt (pre 2006) the existing RICE from NSPS Subparts JJJJ for Spark Ignition (SI) RICE.

The Facility is believed to not to be subject to NSPS Subpart OOOOa (finalized in 2016). The facility indicates that it is not subject to OOOa, as it only compresses pipeline gas.

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 ZZZZ (RICE)

With respect to Subpart HH, the affected unit is believed to be dehy units. However, the facility has no dehydrator onsite, and is therefore not subject to the subpart.

With respect to Subpart ZZZZ, the permit application reports that the Facility RICE are subject to 40 CFR Part 63, Subpart ZZZZ, maintenance plan requirements for engines ≤500 hp. These requirements appear to have been incorporated into the Site Preventative Maintenance/Malfunction Abatement Plan (PM/MAP)(dated June 12, 2020) submitted September 16, 2020 and include the following activities approximately every

60-90 days of operation:

- Oil and oil filter changes
- Inspection of spark plugs, and replacement if necessary
- Inspection of hoses and belts and replace as necessary.

Major service to the engine is scheduled every 2160 hours. Swings and overhauls are conducted every 85K hours of engine operation.

In addition, Riverside operators monitor the site daily for changes in operational parameters. Documentation provided was sufficient to verify that equipment maintenance activities were being conducted in general accordance with the PM/MAP.

COMPLIANCE

MAERS- Annual reporting of actual emissions for the facility under the MAERS reporting system, has been completed in an appropriate and timely manner. The most recent submittal was dated January 27, 2020.

EUENGINE1- The referenced EU consists of one NG-fired, CAT 3406 NA, 215 Hp, RICE (EUENGINE1). No material limits are associated with EUENGINE1, however SC 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 the NG usage for each engine. Records provided were sufficient to confirm compliance with permit conditions.

As EUENGINE1 is not equipped with an add-on control device the following special conditions are not applicable to EUENGINE1 at this time:

- Operational limit of 200 hours per year for engine without it’s control device. (SC III.2)
- Proper installation, operation and maintenance of the add-on control device (SC IV.1 and VI.3)
- Documentation of the hours of engine operation without it’s control device (SC VI.4)

OPERATION LIMITS – No later than 60 days after the issuance of Permit 69-10 the permittee is required to submit for review and approval a Preventative Maintenance/Malfunction Abatement Plan (PM/MAP). Records indicate that the required document was submitted in a timely manner (June 3, 2010) in compliance with the permit condition. (SC III.1)

A PM/MAP revision dated June 12, 2020, was submitted by Riverside as part of the September 16, 2020, records submittal. The document was approved on October 15, 2020.

EMISSION LIMITS

Emissions for RICE associated with the Facility are calculated using emission factors from Manufacturer Spec sheets (SC VI.6, VI.7 and Appendix A) when available and are based on NG usage documented (SC IV.2 and SC VI.5). Emissions reported for EUENGINE1 are summarized below:

Emission Unit	NOx	CO	Reporting Period
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	Emissions (TPY)	Emissions (TPY)	
EUENGINE1	41.34	2.70	12-month rolling ending August 2020
EUENGINE1	52.713	3.45	2019
EUENGINE1	49.06	2.46	2018
EUENGINE1	34.06	1.71	2017
LIMIT	65* (SC I.1)	6* (SC I.2)	12-month rolling*

TESTING ACTIVITIES – Under the present permit verification of NOx and CO emissions are required upon request of the AQD District Supervisor. (SC V.1) District files contain no copies of written requests for verification testing, and the permit condition not applicable at the time of report preparation.

MONITORING/RECORDKEEPING –Permit requirements for monitoring and recordkeeping include the following:

- Completion of all required calculations by the last day of the calendar month for the month prior and made available to AQD staff upon request, (SC VI.1)
- Monitor and record NG usage for EUENGINE1 on a continuous basis (SC IV.2, VI.2 and VI.5)
- Maintain a log of all maintenance activities conducted according to the PM/MAP (SC VI.3) and
- Monthly and 12-month rolling time period NOx and CO emission calculation records for EUENGINE1 as required by SC I.1 and SC I.2 and Appendix A. (SC VI.6 and SC VI.7)

Records provided by the Facility were sufficient to indicate compliance with the above referenced permit conditions. These records with respect to emission calculations and NG usage are summarized on spreadsheets generated monthly, which summarizes all the required information, as well as equipment descriptions and emission factor sources.

NG usage records for EUENGINE1 are summarized below:

Reporting Period	NG usage (MMCF)
12-month rolling ending August 2020	13.626
2019	17.374
2018	16.1
2017	11.3

STACK/VENT - Permit 69-10 (SC VIII.1) limits the exhaust dimensions for the stack associated with EUENGINE to:

Emission Unit	Exhaust Diameter (inches)	Minimum Height Above Land Surface (feet)	Source
EUENGINE1	6-inch	30 feet	Facility Operator

LIMIT	6-inch Maximum	30-feet Minimum
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SUMMARY

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NAME _____

DATE _____

SUPERVISOR _____

Sharon LeBlanc

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