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

P047870900

FACILITY: RIVERSIDE - MANCELONA 8 BIJOU BOOSTER STATION		**SRN / ID:** P0478
LOCATION: PART OF E 1/2 OF SE 1/4...SEC 11 T 29N R6W, MANCELONA TWP		**DISTRICT:** Gaylord
CITY: MANCELONA TWP		**COUNTY:** ANTRIM
CONTACT: Natalie Schrader , Compliance Coordinator		**ACTIVITY DATE:** 10/10/2023
STAFF: Lindsey Wells	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: on-site scheduled inspection and records review		
RESOLVED COMPLAINTS:		

Introduction

On October 10, 2023, AQD District staff Lindsey Wells and Sharon LeBlanc mobilized to the Mancelona 8 Bijou C4-11 booster station to conduct an unscheduled compliance inspection of the facility. This facility is identified as State Registration Number (SRN: P0478) and is located in the northeast quarter of the southeast quarter of Section 11 in Mancelona Township of Antrim County (township 29 north, range 6 west, T29N R6W). The facility is currently operated by Riverside Energy.

The purpose of the on-site inspection and records review were to determine compliance with permit to install (PTI) 169-13.

Summary

The evaluation indicates that the facility was in general compliance with PTI 169-13 at the time of the inspection. No compliance issues were noted during the site visit or records review.

Follow-ups

Staff will contact the facility for confirmation of stack height which could not be verified in the field. The PTI application notes Niagaran wells and does not appear to include an analysis of NSPS OOOO. These items will be further evaluated and addressed in a separate report.

Facility Information

This is a gated and unmanned facility that uses an engine to boost pressure in the pipeline that transmits gas from area wells to the Mancelona 8 central production facility (CPF). Depletion of associated wells requires the use of the booster engine in order to maintain pipeline pressure.
The referenced facility is classified as a synthetic minor Title 5 opt-out source by virtue of the permit limiting emissions below major source thresholds.

Permits of Record

The facility operates under PTI 169-13, which was issued on February 18, 2014 to Linn Operating. Linn Operating notified AQD of a name change to Riveria in March 2019. The permitted equipment included 1 natural gas fired reciprocating engine. The permit application noted the engine would compress and transport natural gas from Antrim and Niagaran wells via production lines to the Mancelona 8 CPF. Review of district files indicate at the time of permitting, the engine was a Caterpillar 3408 HCTA rich burn engine rated at 400 horsepower with no control device, serial number 6NB01686. The installation date is listed as 3/12/2014. Subsequent operators of record are Riverside beginning in August 2019.

The last compliance inspection of record was conducted on May 22, 2020. At that time no compliance issues were noted.

Facility Access

Staff traveled west on Scholl Road (having traveled from N7457 Mancelona 8 CPF, off Bocook Road). The drive is a two-track west of Cinder Hill road, and adjacent to the west of the residence located at 4843 Scholl Rd (north). There is no signage at the road and the gate may not be visible, but is present, past the adjacent residence. There are signs for DNR dog training area once inside the gate. The drive back is a rough and sandy, particularly at the fork, thus four-wheel drive is recommended. The booster station is located not far down the first fork to the left.
At the time of the inspection the property layout appeared as follows:

A single building on the property houses the compressor engine. The west end of the property includes a well labeled SWD. One produced water tank is present in a lined secondary containment area. A well is located adjacent to the compressor building. The stack is located behind the compressor building.

On-Site Observations

At the time of the October 10, 2023 site inspection weather conditions were overcast with slight intermittent winds, temperatures were in the mid-forties (Fahrenheit), light drizzle at times. No visible emissions were noted from the stack on -site. Previous inspections note that the site was undeveloped in 1998 aerial photographs, after which time a tank battery was present.

The engine was operating at the time of inspection. No control devices were apparent. The compressor/engine skid is marked #3596, consistent with the last inspection. Located near the engine is a single Altronic control panel with compressor gauges and electronic engine status readout.
The oil pressure gauge read 70 PSI and the digital readout displayed 1579 RPM. Staff were unable to locate a nameplate on the engine. An operator's log was present and included daily entries for the compressor/engine identified on the logs as a Model 3408 NA or TA, Unit #303596.

COMPLIANCE EVALUATION PTI 169-13
Requested records were received electronically on November 11, 2023. The records review is incorporated into this document.

EUENGINE is the only emission unit of record in PTI 169-13. Pollution control equipment is noted as not applicable.

Emission Limits
These special conditions **(I.1 and I.2)** limit emissions of nitrogen oxides (NOx) to 83 tons per year (TPY), and carbon monoxide (CO) to 7 tons per year (TPY), both expressed as 12-month rolling averages. Appendix A requires the facility to calculate emissions using engine fuel usage and equipment specific emission factors from vendor data or engine specific stack testing data.

Records provided report NOx emissions of 53.9 TPY and CO emissions of 4.1 TPY. The facility reports that emissions are calculated using pound pollutant per million cubic feet of fuel combusted vendor emission factors.

Process/Operational Restrictions
These special conditions **(III.1)** require the permittee to implement an AQD approved malfunction abatement plan (MAP). District records indicate that the current MAP was approved in November 2020. The MAP indicates that offline checks are performed every 60-90 days, and oil changes are performed approximately every 2160 hours of operation, which roughly corresponds to a quarterly basis. Records provided indicate that the facility performs service in 60-90 day intervals in accordance with the MAP. The operators record operational parameters for the compressor and engine on a daily log, and record scheduled service and repairs on a maintenance log.

The conditions **(III.2)** limiting operation of the engine without the control device are not applicable EUENGINE is not equipped with add-on controls.

Design/Equipment Parameters
As noted above, conditions in this section related to add-on control devices are not currently applicable.
Special condition **(IV.2)** requires satisfactory calibration, operation, and maintenance of a device to monitor and record the natural gas usage of the engine on a continuous basis. Records provided by the facility included the most recent fuel meter calibration record and note an annual frequency of calibration. The monthly and 12-month rolling time period NOx and CO emission calculation records include monthly and 12-month rolling fuel usage.

Testing/Sampling
The condition **(SC V.1)** to verify the emission factors used to calculate emissions via stack testing is not currently applicable as to date no testing has been requested.
Although not required by the permit, district files make note of records reporting that inlet gas samples taken in 2019 met the AQD sweet gas definition.

Monitoring/Recordkeeping
The following special conditions **(SC VI.1)** require the permittee to complete and make available in an acceptable format all required monitoring records and/or calculations by the last day of the calendar month for the previous calendar month unless otherwise noted. Required records include:

- **(SC VI.2)** monitoring and recordkeeping of natural gas usage for EUENGINE on a continuous basis. This requirement was evaluated in the previous discussion of SC IV.2
- ***(SC VI.3)*** *a log of all maintenance activities to be maintained at an approved location and made available to the department upon request. Maintenance records for the evaluation period included dates, activity, and compressor downtime associated with the activity.*

- **(SC VI.5, VI.6 and VI.7)** monthly fuel use records, monthly and 12-month rolling time period NOx and CO calculation records. These records were evaluated in previous discussion of the Emissions limit section.

The requested records conformed to the applicable requirements.
As previously noted, conditions addressing add-on control devices are not currently applicable as there are no controls associated with the engine.

Reporting
This special condition **(SC 2.8)** requires notification to the department if the engine is replaced with an equivalent and/or lower emitting engine, except as provided in Rule 285. The current operators report no engine swings or replacements since they acquired the site in September 2019.

Stack / Vent Restrictions
The permittee is required to discharge all exhaust gases from the engine vertically without obstruction. Additionally, this special condition (SC VIII.1) restricts the maximum exhaust diameter of the stack vent for the engine to 8 inches and requires a minimum height of 34 feet above ground level. The stack is exhausted vertically. Staff were not able to estimate stack height in the field and will request stack height from the facility, to be addressed in a separate report.

Other Requirements
Special Condition IX.1 requires the permittee to comply with all applicable provisions of 40 CFR 63 Subpart ZZZZ (referred to as Rice MACT or Quad Z) by October 19, 2013. At the time of this report preparation, AQD has been delegated authority to implement and enforce the subpart. However, at this time compliance determinations for Quad Z area sources have not been made. Provided records included documentation that the engine meets the definition of a remote engine.

COMPLIANCE EVALUATION: Other Requirements
This section addresses the applicability of requirements not listed in PTI 169-13 that may apply to the facility.
The facility is required to report annual emissions to the air quality division. Records indicate that emissions were reported for the 2022 calendar year in a timely and appropriate manner. The facility appears to utilize the same method of emission calculation for annual reporting as is used for demonstrating compliance with PTI 169-13. The 2023 calendar year emission report is due March 15, 2024.
Although not identified in PTI 169-13, the facility may be subject to federal regulations. Subparts frequently associated with this source category are identified below. Note however that compliance with these subparts has not been determined as part of this evaluation.

At the time of site inspection the referenced facility appears to not be currently subject to the following 40 CFR Part 60 (New Source Performance Standards NSPS);

- K, Ka or Kb (Storage vessels for Petroleum Liquids); The storage vessel appears not to be subject by virtue of being a produced water tank, and also based on a capacity less than 40,000 gallons (or approximately 952 bbl).
- KKK (Equipment Leaks of volatile organic compounds (VOC) from onshore natural gas processing plants); The referenced facility does not appear to process petroleum liquids on-site.

NSPS Subpart JJJJ for Spark Ignition (SI) Reciprocating Internal Combustion Engines (RICE) may apply in the future. Previous evaluations referred to records indicating that the existing engine is not subject based on a pre 2006 manufacture date listed in the permit evaluation form.

NSPS Subpart OOOO may apply, and OOOOa may apply in the future in the event of a modification that triggers applicability. Staff will contact the facility for confirmation regarding OOOO and address in a separate report.

Based on the information available, it appears that the facility was operating in general compliance with PTI 169-13 at the time of inspection for the evaluation period.

NAME lindseywells DATE 7-30-24 SUPERVISOR Shane Nixon