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

N825670744		
FACILITY: RIVERSIDE - LLOYDS OF LONDON CPF		SRN / ID: N8256
LOCATION: SE NW NE SEC 18 T31N R3E, HILLMAN		DISTRICT: Gaylord
CITY: HILLMAN		COUNTY: MONTMORENCY
CONTACT:		ACTIVITY DATE: 12/05/2023
STAFF: Caryn Owens	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: On-site Inspection and Records Review		
RESOLVED COMPLAINTS:		

On Tuesday, December 5, 2023, Caryn Owens and Lindsey Wells of the Department of Environment, Great Lakes, and Energy (EGLE) – Air Quality Division (AQD) conducted an On-site field inspection of Riverside – Lloyds of London CPF (SRN: N8256) located in the southeast quarter of the northwest quarter of the northeast quarter of Section 18, Township 31, North, Range 3 East. More specifically, the site is located on the north side of Brush Creek Truck Trial, approximately ³/₄ mile southeast of County Road 624 and 2 miles east of M-33 Road that is north of Atlanta, in Hillman Township, Montmorency County, Michigan.

The field inspection and records review were to determine compliance with the permit to install (PTI) 84-09B. The site is currently an area source that has opted out of being a major source by limiting the operational and/or production limits potential to emit (PTE) to be below the major source thresholds.

The site is an area source for National Emission Standards for Hazardous Air Pollutants (NESHAP) from Oil and Natural Gas Production facilities (40 CFR, Part 63, Subpart HH), and NESHAP for Stationary Reciprocating Internal Combustion Engines in 40 CFR, Part 63, Subpart ZZZ.

Summary:

The activities covered during this full compliance evaluation (FCE) appear to be in compliance with PTI 84-09B. Review of the records for the facility indicates the facility was in compliance with emission limits in accordance with the PTI. No further actions are necessary at this time. Specific permit conditions that were reviewed are discussed below.

On-site Inspection:

AQD was unaccompanied during the field inspection. The weather conditions were mostly cloudy, with winds from the north-northwest at about 5-10 miles per hours, and 32 degrees Fahrenheit. Activities onsite were limited to gas and fluids separated then compression of natural gas that flows through a glycol dehydrator which removes water from the natural gas stream, then pushes the natural gas through the sales line. The facility consisted of one main building, and that contained a glycol dehydrator and the compressor engine. There was a lined tank battery containing one approximate 400 barrel (BBL) tank used to store brine.

During the inspection, the compressor engine was a Caterpillar 399 TA natural gas engine, operating at 1,170 revolutions per minute, 170 degrees Fahrenheit, and 65 pounds per square inch (psi) of pressure. The daily logs for the engine indicated the compressor as Unit #7573, and imprinted on the base was CO7573. The engine at the site contained a 3-way catalyst and the most recent reading on the updated spreadsheet indicated the inlet temperature was at 927 degrees Fahrenheit and the outlet temperature was at 982 degrees Fahrenheit. There was a readout for the catalyst, but I didn't want to press buttons on the monitor to read it. The engine stack was located on the northern portion of the building and contained a muffler. The stack was approximately 36 feet above ground surface (ags), no visible emissions were observed from the compressor engine stack.

There were a few workers on site when AQD was there. They seemed busy with maintenance activities, one appeared to be cleaning up oil around the compressor inside the building, and two workers were working on piping at the tank battery. AQD stayed out of their way during the inspection.

Records Review:

EUDEHY: This emission unit is for a glycol dehydration system processing gas from the Antrim zone. The requirements for EUDEHY were regarding the NESHAP from Oil and Natural Gas Production facilities (40 CFR, Part 63, Subpart HH). The State of Michigan does not have delegated authority of the area source NESHAP, and thus compliance with the federal requirements in accordance with the EUDEHY were not reviewed by the AQD at this time.

• Emission Limits:

converter used for control.

The Emission Limits are 20 tons per year (tpy) based on a 12-month rolling time-period for Nitrogen Oxides (NOx), and 30 tpy for Carbon Monoxide (CO) based on a 12-month rolling time-period. Based on records from November 1, 2022 through October 31, 2023, the highest emissions reported were 6.59 tons of NOx per 12-month rolling time period and 0.67 tons of CO per 12-month rolling time period. The emissions were reported within the permitted limits.

Material Limits:

There are no material limits applicable for EUENGINE.

Process/Operational Restrictions:

The facility submitted a Malfunction Abatement Plan (MAP) on January 2006. Based on review of the MAP and maintenance records, the engine was inspected on a daily basis. The engine was shut down while performing general maintenance such as: replacing filters, valves, and/or repair leaks. Based on the records, the engine is serviced approximately one to four times per month.

The catalyst temperatures were reported properly. The catalyst numbers were reported inverted in August 2023, and the facility replaced the catalyst on September 5, 2023. The facility tested the exit of the stack to show that the catalyst temperature and the catalyst had the appropriate destruction efficiency. The records did not show maintenance concerns with the engine or catalyst, and the facility appears to be following the MAP.

• <u>Design/Equipment Parameters:</u> The engine has not operated EUENGINE without the control device within the requested reporting period.

• Testing/Sampling:

The facility uses engine specific emission factors to calculate the emissions for nitrogen oxides (NOx) and carbon monoxide (CO) emissions. Performance testing has not been completed at this facility.

• Monitoring/Recordkeeping:

The facility records monthly and 12-month rolling time period calculations for NOx and CO. The 12-month rolling time period emissions are discussed above, under Emission Limits. The facility monitors and records the natural gas usage on a monthly and 12-month rolling time period basis for EUENGINE. The facility maintains a log of all significant activities at the facility. As previously stated, the facility has not operated without the control device.

<u>Reporting:</u>

AQD was notified that the facility replaced the engine at the facility on September 22, 2021. The new engine fulfilled SC VII.1. The engine was manufactured in 1984.

• Stack/Vent Restrictions:

The stack to EUENGINE is located on the north side of the compressor building and the stack appeared to meet the permitted limits of 36 feet above ground surface and approximately 12 inches in diameter.

• Other Requirements:

Although the PTI does not address applicable Other Requirements for EUENGINE, the facility is subject the NESHAP for Stationary Reciprocating Internal Combustion Engines (40 CFR, Part 63, Subpart ZZZZ). Compliance with these federal requirements in accordance with EUENGINE were not reviewed by the AQD at this time.

FGFACILITY: Includes all source-wide activities at the facility including equipment covered by grand-fathered equipment and exempt equipment.

I. Emission Limits:

There are no emission limits applicable for FGFACILITY.

II. Material Limits:

The facility shall only burn sweet gas at the facility. Based on the gas sample results of the facility, only sweet natural gas is burned at the site.

III. Process/Operational Restrictions:

As previously stated, AQD did not review compliance with the NESHAP from Oil and Natural Gas Production facilities (40 CFR, Part 63, Subpart HH).

IV. Design/Equipment Parameters:

No Design/Equipment Parameters are applicable to FGFACILITY conditions of the stationary source.

V. Testing/Sampling:

Sampling and testing for the sulfur content of the natural gas is only required upon request by AQD staff. The facility processes natural gas from the Antrim formation which does not have high levels of H2S, therefore AQD did not require a gas analysis at this time. According to the facility, they burn sweet gas only.

VI. Monitorina/Recordkeepina:

No Monitoring/Recordkeeping requirements are applicable to FGFACILITY conditions of the stationary source.

VII. Reporting:

No Reporting requirements are applicable to FGFACILITY conditions of the stationary source.

VIII. Stack/Vent Restrictions:

No Stack parameters are applicable to FGFACILITY conditions of the stationary source.

IX. Other Requirements:

Although the PTI does not address applicable Other Requirements for FGFACILITY, the existing engine was manufactured in 1984, which would make it not subject to NSPS Subparts JJJJ for Spark Ignition (SI) RICE.

Subpart OOOO would apply to onshore affected facilities that are constructed, modified or reconstructed after August 23, 2011. Based on available information it appears that the referenced subpart is not applicable at this time but that future changes may be subject to the referenced subpart.

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DATE 4-29-24 SUPERVISOR Thank Mixon