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

N623473636

FACILITY: Lambda Energy Resources LLC - Mancelona B		**SRN / ID:** N6234
LOCATION: 11775 Sand Lake Rd, MANCELONA		**DISTRICT:** Cadillac
CITY: MANCELONA		**COUNTY:** ANTRIM
CONTACT: Nick Summerland , Operations Manager		**ACTIVITY DATE:** 07/25/2024
STAFF: Tammie Puite	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: FY 2024 Compliance Evaluation		
RESOLVED COMPLAINTS:		

On December 7, 2023, Lambda requested the permit to be void due to only using exempt equipment on site – Ajax Compressor Engine and two heaters. On December 13, 2023, David Bowman inspected the source and found that the data provided by the company and equipment on site warranted the voiding of the Permit. However, the void was not fully processed, due to the site being selected for a full compliance evaluation for the 2024 fiscal year.

On July 25, 2024, Lindsey Wells and I inspected this source for compliance with Permit to Install 102-97A. A records request was sent on August 26, 2024.

Upon my arrival onsite, the facility was operating, and vegetation was becoming invasive. Records found onsite demonstrated that the equipment is being maintained per industry standards.

Equipment on site included an Ajax Compressor Engine (EUENGINE1); Type DPC-280; serial number 75769; RPM 250 – 400; and was operating at 320 RPM. Engine is uncontrolled with a muffler and stack that meets the permitted requirements. Cooper Energy Services, Engine Spec sheet says that this engine is a 269 BHP engine, with NOx emissions of 11.4 gm/bhph, and 8200 brake specific fuel consumption. Company records showed that 18.9 MMcf of fuel usage for 12-month rolling, and field gas rating of 1328 BTU/cf, which equated to 34.34 TPY NOx emissions for 12 Month rolling from June of 2023 to June of 2024. A fuel analysis was submitted with the records request and this stated that the Real Gas Dry BTU is 1271.7 btu/cf. My calculations showed that NOx emissions are actually 36.8 TPY, without a higher heating value. With a higher heating value calculated in, NOx emissions are 33.5 TPY. Reported calculations as well as Actual emissions are in violation of the permitted limit of 34.0 TPY of NOx. CO emissions of actual and calculated emissions are below permitted requirements of 20.0 TPY. The potential to Emit is 29.6 TPY for the engine, so a request was made to Lambda to see if there may be an error in reporting. Even though the NOx emissions are above permitted requirements, they are below significant thresholds. Same with the Potential to Emit calculations, the engine is not able to produce NOx or any other contaminant above the significant threshold. The second permitted engine (EUENGINE2) has been removed and no longer on site.

There are two horizontal heater treaters onsite, next to the sales buildings, that did not appear to be operating. Lambda records show that one heater is 3.0 MMBtu/hr, with 2,259.04 cf/hr and the other is a 1.0 MMBtu/hr unit, with 753.01 cf/hr, and a total of 26.39 MMcf/yr, which equated to 1.32 TPY of NOx emissions. There are no permitted emission limits for this equipment.

There are two separators in a building that are not operating. Both have zero pressure, and only one has some fluids in it, from visual inspection of the site glass. There are no emissions from these vessels. Inside this building is a meter showing 460 BPD and 247712 BBL, and a switch above it, being in the on position.

Onsite, flow lines are metered and appeared to be in use, there is a tank containing scale inhibitor in secondary containment hooked up, as well as a large electric air compressor in a small shed. There is a large red semi-trailer tank, inside secondary containment that is hooked to a well head nearby and appears to be part of a remediation system.

Permitted Conditions and my review:
Process/Operational
SC 1.2. Maintain Malfunction Abatement Plan. The last MAP on file is from 2008. This needs to be updated.
SC 1.3 and 1.4. Operation of engines equipped with a control device. There are no control devices installed on the Engine.
Testing
SC 1.5. Testing to determine NOx and CO emissions and emission factors has not been requested.
Monitoring
SC 1.6. A meter is installed that measures natural gas usage as required. Monthly records show natural gas usage of 17.1 to 18.9 MMcf.

Recordkeeping
SC 1.7. Monthly calculations are required. Monthly emissions calculations are maintained and were provided for the requested period.
SC 1.8. Maintenance records are on file and were provided for the requested time period showing 4 maintenance events.
SC 1.9. Records of operation without control. Not applicable.
SC 1.10. Fuel use records. Monthly fuel usage is maintained and show natural gas usage of 17.1 to 18.9 MMcf.
SC 1.11 and 1.12. Maintain monthly NOx and CO emission calculation records. These records are maintained and were provided for the requested time period.
SC 1.13 (a and b). Stack parameters for EUENGINE1 appeared to be accurate.

The 2023 MAERS report was submitted on time and indicates total Annual source emissions of CO = 3.8 tons, NOx = 33.33 tons.

A fuel gas analysis was provided that showed that only sweet gas is being burner by the Blue Lake 17, which is the facility that further processes the natural gas from this facility, and that the Real Gas Dry BTU value is 1271.7. Company says that the Field gas rating is 1328 Btu/cf.

As a result of this compliance evaluation, it appears that the source is in violation of its permit limits for NOx, however the limits for NOx are below the significant threshold, thus I recommend the voiding of PTI 102-97A.

Image 1(AJAX Engine) : EUENGINE1 - Ajax Compressor Engine, Type DPC-280; serial number 75769. Is a 269 HP Engine.

Image 2(Name Plate) : Ajax Name Plate found on Engine.

Image 3(Heater Treaters) : 2 Horizontal Heaters

Image 4(Seperators) : 2 separators not in operations and no venting of emissions.

Image 5(Tank) : Semi Trailer Tank in Secondary Containment

NAME _____ DATE 12-4-24 SUPERVISOR Shane Nixon