

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

N747070540

FACILITY: Lambda Energy Resources, LLC - Caledonia 10 & 11		SRN / ID: N7470
LOCATION: 4409 Fruchey Ranch RD., CALEDONIA TWP		DISTRICT: Gaylord
CITY: CALEDONIA TWP		COUNTY: ALCONA
CONTACT:		ACTIVITY DATE: 01/12/2024
STAFF: David Bowman	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled inspection FY 24		
RESOLVED COMPLAINTS:		

On 12 January 2024 I, David Bowman, MI EGLE AQD, conducted a site inspection of N7470 Lambda Caledonia 10 and 11, an opt out site, operating under the conditions of permit to install (PTI) 190-05. The site is located by traveling Weston Fruhey Ranch Rd from the intersection of Hubbard Lake Trail and Fruhey Ranch Road approximately 2.6 miles. The site is more than one mile from the nearest residential structure. Although the map appears that Fruhey Ranch Rd is accessible from the west it is not due to Little Wolf Creek not being bridged.

The weather at the time of the inspection was 26°F; winds were zero; sky was cloudy; there was no visible spills on the property, and mostly no odors. The only exception to odors was that near the DEHY's there was a slight (level 1) odor of glycol. There is a fence surrounding the facility that has a man gate and vehicle gate. The man gate does not appear to be locked.

The site has two engine buildings, one on the east side and one on the west side. In the middle of the site is a small tank battery. Each building contains two engines and one DEHY. On the southern fence line there is an open gate that leads to an opening with a small structure, but that structure did not have any equipment in it that would require an air permit and it is not part of the main site that is permitted as N7470.

Emission Units (EU) on the site:

EU ID	EU Description	Stack ID
EU-ENGINE1	Natural Gas Fired Reciprocating Engine	SV-ENGINE1
EU-ENGINE2	Natural Gas Fired Reciprocating Engine	SV-ENGINE2
EU-ENGINE3	Natural Gas Fired Reciprocating Engine	SV-ENGINE3
EU-ENGINE4	Natural Gas Fired Reciprocating Engine	SV-ENGINE4
EU-DEHY01	Glycol dehydration system processing gas from the Antrim formation with a 125,000 BTU/Hr natural gas fired burner	SV-DEHY01

EU-DEHY02	Glycol dehydration system processing gas from the Antrim formation with a 125,000 BTU/Hr natural gas fired burner	SV-DEHY02
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Flexible Groups (FG) on site:

FG ID	EU included in the FG	Stack ID
FG-ENGINES	EU-ENGINE1; EU-ENGINE2; EU-ENGINE3; EU-ENGINE4	N/A
FG-FACILITY	All process equipment at the facility including equipment covered by other permits, grandfathered equipment and exempt equipment	N/A

The PTI does not list any specific conditions by EU. EU DEHY does not have any conditions and the emissions appear to be required by FG-FACILITY only.

FG-ENGINES:

Special Condition (SC) 1.3 Permittee shall monitor the natural gas usage from each engine included in FG-ENGINES on a continuous basis...

Discussion – Each engine had a monitor system that monitors the fuel usage at the engine. Records reviewed support that the fuel is being tracked by engine. The records were reviewed in a separate report.

In the eastern building there were two engines. Neither engine had a data plat that I could locate. One engine was operating, and one was tagged with a Do Not Operate tag. The engine on the west side of the east building was operating. The current hours on the display were 115267 and it was operating at 1059 RPM. The eastern engine was not operating and was tagged with a sign that stated, “WARNING: Do not attempt to start unit. Unit has been preserved for long term storage. Call NGCS personnel for restarting.”

In the western building there were two engines. Neither engine had a data plate that I could locate. One was operating and one was tagged with a Do Not Operate tag. The engine on the east side was operating. The current hours on the display were 139594 and it was operating at 1194 RPM. The western engine was not operating and was tagged with a sign that stated, “WARNING: Do not attempt to start unit. Unit has been preserved for long term storage. Call NGCS personnel for restarting.”

There was no VE observed from the operating stacks, just a heat shimmer was visible.

Stack ID	Max Diameter	Estimated Diameter	Minimum height above ground	Estimated height above ground
SV-ENGINE1	12"	10-12"	22'	24'
SV-ENGINE2	12"	10-12"	22'	24'
SV-ENGINE3	12"	10-12"	22'	24'
SV-ENGINE4	12"	10-12"	22'	24'

Diameter was estimated by eye and the height above ground was estimated by using the Nikon Forestry Pro III laser range finder.

FG-FACILITY:

SC 2.2 permittee shall only burn sweet gas...

Discussion – there was nothing to indicate that any gas other than sweet gas is burned at the facility.

Other parts of the site:

I was not able to locate a data plate on either DEHY, but previous inspections indicated that the BTU of the burners was 200,000 BTU/hr and not the 125,000 that was indicated in the EU description. Previous inspections and investigations indicate that these were the original equipment installed. AQD does not have delegation for 40 CFR Part 63 Subpart HH so no compliance assessment was made during this inspection.

The small tank battery is comprised by three tanks, all smaller than the normal 400 bbl size that I have seen at other oil and gas production facilities. Two are larger and appear to be the same size at approximately 300 bbl and they are labeled "Brine Water" and the third is smaller and labeled used oil. The two larger are vented to atmosphere and the third is piped to an underground line that I could not determine where it led to. All three tanks are in a raised wall (approximately 3 feet tall) cement secondary containment.

NAME



DATE 1-29-24

SUPERVISOR

