

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

B916461209

<b>FACILITY:</b> Lambda Energy Resources LLC - Paradise 19		<b>SRN / ID:</b> B9164
<b>LOCATION:</b> BLAIR TOWNHALL RD, KINGSLEY		<b>DISTRICT:</b> Cadillac
<b>CITY:</b> KINGSLEY		<b>COUNTY:</b> GRAND TRAVERSE
<b>CONTACT:</b> Vicki Kniss , Environmental Affairs Manager		<b>ACTIVITY DATE:</b> 12/20/2021
<b>STAFF:</b> Kurt Childs	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> SM OPT OUT
<b>SUBJECT:</b> 2022 FCE.		
<b>RESOLVED COMPLAINTS:</b>		

**Full Compliance Evaluation: B9161 Lambda Energy Resources, LLC Paradise 19,  
Grand Traverse County**

I conducted a Full Compliance Evaluation (FCE) of the Paradise 19 to determine compliance with Permit to Install number 657-96A and the air pollution control rules. I observed the site Prior to entering the facility, no odors were present, and no visible emissions were observed. The weather was overcast, 35 degrees F with wind from the Southwest at 15 mph. At the time of the inspection the following equipment was observed on site:

- Eight 400 bbl oil, brine, and skim AST's with vapor recovery
- One V-12 Waukesha compressor engine with no control
- Three heaters (two operating)
- One flare

Records regarding this source were received on 12/10/2022. The records were for the most recent 12-months rolling time-period and appeared complete.

## **EUDEHY**

There is no glycol dehydrator, the reboiler is gone but the contactor tower is still in use for the enclosed desiccant system. This system uses salt tablets that dissolve as they absorb water vapor from the gas stream. The resulting brine solution is stored in the water tank then sent to disposal.

**EUENGINE1** – Unit 193, a 550 hp. Waukesha L5790G V-12 model with no add on control device. The engine was running at the time of the inspection at 538 RPM with 45 psi engine oil pressure. These numbers were representative of readings on the engine logs that were present in the compressor building. There were no odors or visible emissions from the engine stack.

**2.1** NOx emissions from this EU are limited to 85 tons per year based on a 12-month rolling time-period as determined at the end of each calendar month. Records submitted by the facility indicate that engine emissions using the Waukesha L5790 emission factors were 68.01 tons per year NOx based on a 12-month rolling time period as determined at the end of each calendar month as of October 2021.

**2.2** The natural gas usage for this EU is limited to 23.5 million cubic feet per 12-month rolling time-period as determined at the end of each calendar month. Records submitted by the source indicate that the EU used 16.6 million cubic feet per 12-month rolling time-period as determined at the end of each calendar month as of December 2017.

**2.3** A PM\MAP for this EU is required and was approved 9/2007.

**2.4 The facility is not allowed to bypass any control device for this EU for more than 200 hours per year. The engine does not have an add-on control device. Therefore, this condition does not apply.**

**2.5 The permittee must maintain a control device for this EU if used. The engine does not have an add-on control device. Therefore, this condition does not apply.**

**2.6 Upon request by the AQD, the permittee must verify NOx and CO emission factors by conducting stack testing on this EU. As of the date of this inspection, stack testing has not been requested for this source.**

**2.7 The permittee is required to maintain a device to measure natural gas usage for this EU. Engine natural gas usage is monitored.**

**2.8 The permittee is required to perform emissions calculations monthly. Review of submitted records indicates emissions calculations for the facility have been performed.**

**2.9 A maintenance log for this EU is required to be maintained. The records for 2021 are attached.**

**2.10 The permittee is required to keep records of any bypass of any control device. The compressor does not have an add-on control device. Therefore, this condition does not apply.**

**2.11 Natural gas usage records for this EU are required to be maintained and included with the monthly emission summary of which a copy is attached.**

**2.12 NO<sub>x</sub> emissions records for this EU are required to be kept. These calculations are being performed monthly and used to update 12-month rolling time-period averages.**

**2.13 CO emissions records for this EU are required to be kept. These calculations are being performed monthly and used to update 12-month rolling time-period averages.**

**2.14 Stack parameters for this unit do not appear to have changed and appear correct.**

### **Facility Wide**

**3.1 NO<sub>x</sub> emissions from the source are limited to 89.9 tons per year based on a 12-month rolling time-period as determined at the end of each calendar month. Records submitted by the permittee indicate that as of November 2021, NO<sub>x</sub> emissions were 68.61 tons per year based on a 12-month rolling time-period as determined at the end of each calendar month.**

**3.2 The source is required to only burn sweet natural gas. This is a sour gas facility as indicated by the presence of an operating flare. There is an iron sponge for H<sub>2</sub>S reduction and the wet gas analysis from 6/23/2021 (attached) indicates that the H<sub>2</sub>S concentration at the inlet to the Dehy (desiccant system) was 11 ppm.**

**3.3 The source is required to comply with 40 CFR 60 Subpart KKK. This facility does not have equipment on site who's expressed purpose is to remove saleable natural gas liquids. Therefore, this condition does not apply.**

**3.4 The source is required to comply with 40 CFR 63 Subpart HH. The glycol dehydrator has been replaced by a closed vent desiccation system. As a result, emissions from the dehydration process are less than 0.9 Megatons and are therefore exempt from the general standards in 63.764(d).**

**3.5 The permittee may be required to verify H<sub>2</sub>S and sulfur content of the gas. As indicated above, the gas has been analyzed for H<sub>2</sub>S content.**

**3.6, 3.7 The permittee is required to perform emissions calculations monthly. Review of submitted records indicates emissions calculations for the facility have been performed.**

**At the time of the inspection, it appears this source was in compliance with PTI 657-96A and the air pollution control rules.**

NAME  \_\_\_\_\_

DATE \_\_\_\_\_

SUPERVISOR \_\_\_\_\_