

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

N020065063

<b>FACILITY:</b> Lambda Energy Resources LLC - Otsego Lake 34		<b>SRN / ID:</b> N0200
<b>LOCATION:</b> 913 Softwood Tr., WATERS		<b>DISTRICT:</b> Gaylord
<b>CITY:</b> WATERS		<b>COUNTY:</b> OTSEGO
<b>CONTACT:</b>		<b>ACTIVITY DATE:</b> 10/05/2022
<b>STAFF:</b> David Bowman	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> SM OPT OUT
<b>SUBJECT:</b> scheduled inspection.		
<b>RESOLVED COMPLAINTS:</b>		

On 5 October 2022 I, David Bowman MIEGLE AQD, conducted an inspection of N0200 (Optout permit – source is synthetic minor due to fuel limitation), located off Softwood trail, Frederic, MI operating under PTI 327-07A dated Jan 7 2010. Originally a Merit Energy Company site, a letter dated 16 July 2018 changed ownership to Lambda Energy Resources, LLC. Otsego Lake 34 CPF is a gas sweetening facility that uses amine process to remove H<sub>2</sub>S and a glycol dehydrator to remove water vapor and then sells the remaining gas. The emissions from the amine process and glycol dehy are controlled by flare.

To get to site travel east of Marlette Rd from Sherman rd for approximately 0.6 miles, go straight onto Softwood trail (dirt road as Marlette curves to the north) The two-track entrance to the site is on the south side of road approximately 0.2 miles then travel south for approximately 0.3 miles to the site. There was a metal gate that was closed, but not locked. I ensured it was secured before departing the site. The temperature was 52° F, the sky was overcast, and the winds were light out of the West. There were no odors present and no signs of any spills. The source was not operating. With the source being shut in it is not possible to verify all requirements of the PTI, such as safety systems that shut off parts of the process if detection equipment detects a high level of H<sub>2</sub>S. All the fluid tanks for machinery onsite were empty. There were no check sheets that I could find so I do not have any evidence of the day the site stopped operating. There did not appear to have been any activity at the site since my last inspection 19 July 2022. MAERS reports no emissions in 2020 and 2021 but did report emissions in 2019. MAERS for 2021 lists the site in not operating for CY 2021. The last FCE was completed in 2018 and the site was operating at that time.

There are three EU located at the source:

Emission Unit ID	Emission Unit Description	Stack Identification
EU-OL34-SGSP	Sour Gas Sweetening Plant. Natural gas, crude oil, condensate, and brine fluids are extracted from wells drilled into a production reservoir. These materials are transmitted through flow lines, generally located within a 5 mile radius of the central production facility. The temperature of this stream of material is increased by inline heaters and the fluids are then separated and stored in fixed roof tanks. The gas is compressed by an	SV-OL34-FLARE

	internal combustion driven compressor, fueled by sweet natural gas. There is hydrogen sulfide present in some of the gas which is removed by an amine process and burned at the flare. Water vapor is removed from the gas by glycol dehydration and the remaining gas is sold.	
EU-OLS34-COMP1	Natural Gas Fired Reciprocating engine	SV-OL34-COMP1
EU-OLS34-DEHY	Glycol dehydration system, emissions controlled by a flare	SC-OL34-FLARE

**Flexible groups at the source:**

Flexible Group ID	Emissions units included in Flexible Group	Stack ID
FGMETHANOL	Methanol Storage equipment totaling less than 5,000 gallons for all equipment	N/A
FGFACILTIY	All process equipment at the stational source, including equipment covered by other permits, grandfathers equipment and exempt equipment	N/A

EU-OL34-SGSP is a process that sweetens the gas by an amine process. The building housing this process is shut in and not operating. The plant has the required signage for "Danger – Poison Gas" posted as required in the permit (SC 1.5) Each building has lights to indicate if it is safe to enter, but as stated earlier the plant is not operating so no lights were powered on.

SV-OL34-FLARE - The plant is shut in, no flare is in operation (SC 1.4 and SC 1.7). There did not appear to be a pilot lit and the entire site is shut in based upon the valves for the inbound piping. The flare stack does appear to meet the permit requirements of a maximum of 8" diameter and minimum of 75' above ground (SC 1.15). I used the Gaylord District's Nikkon Forestry Pro II range finder to get an average (of three readings) reading of 76' for the stack height.

There was 2 x 400 bbl storage with vapor capture that appears to be piped out to the flare (SC 1.6). One is labeled flammable oil and the other water. Each of the gates leading to the top of the tanks is labeled to require SCBA to ensure proper safety.

EU-OL34-COMP1. Review of the MAP (approved 14 July 2008) lists a Waukesha L5790G, naturally aspired rich burn, 550 hp, without control. This is the same type of motor I found on the site. The stack, SV-OL34-COMP1, appears to be a maximum of 8" diameter and 22' above ground level meeting the permit requirements (SC 2.14). I used the Gaylord District's Nikkon Forestry Pro II range finder to get an average (of three readings) reading of 22' for the stack height.

I have reviewed the Preventive Maintenance/Malfunction Abatement Plan (MAP) required by SC 2.3. The MAP was accepted by AQD July 14, 2008. This plan appears to meet all the

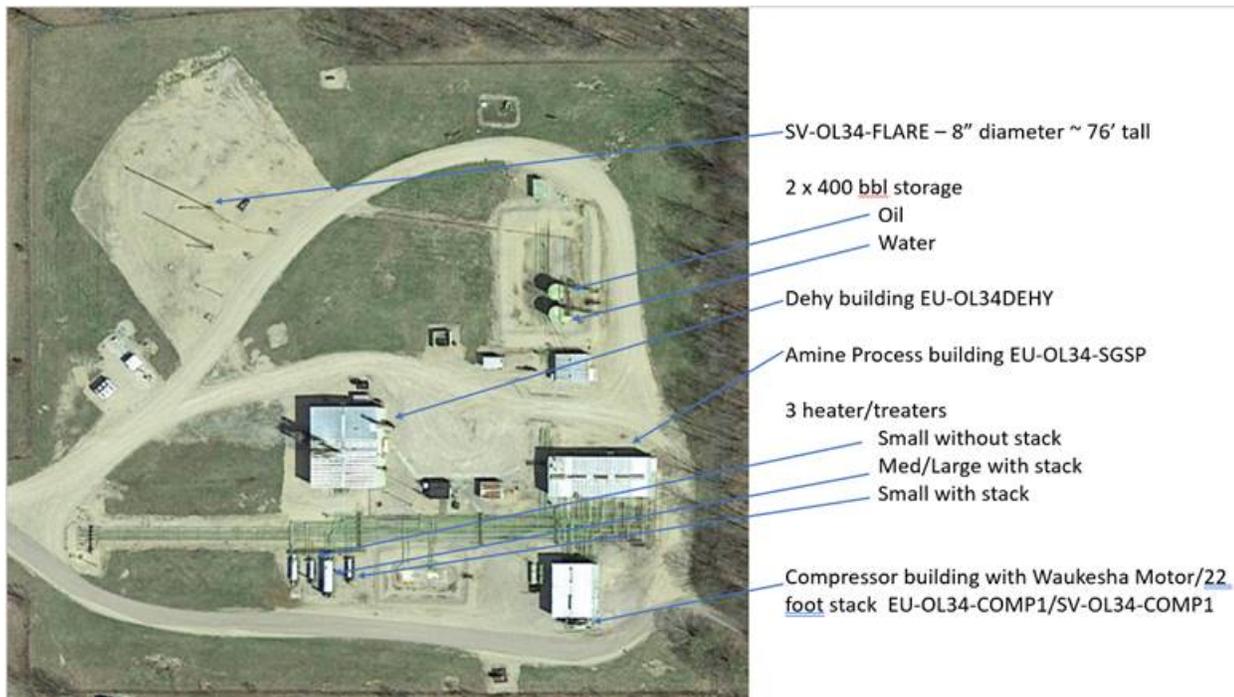
requirements of the PTI. The MAP states no control and a visual inspection of the engine confirmed no control.

EU-OL34-DEHY is present and is piped to a flash tank (SC 3.2) and appears to be piped to a condenser located immediately adjacent to the building that houses EU-OL34-DEHY (SC 3.3).

FGMETHANOL – I did not find any labeled “methanol” onsite. I found several places, along the gas line piping, where stainless steel tubing was routed. This tubing is the same that I have normally seen with methanol systems at other sites. At no place is the tubing connected to any tank. There are several locations where the tubing is not connected to anything.

There are three process heaters, one large and two smaller. The smaller heater on the West side of the three has no stack on it.

#### Aerial view of the site:



NAME DJB

DATE 10-19-22

SUPERVISOR Shane Nixon