

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

ACTIVITY REPORT: Scheduled Inspection

N593655728

FACILITY: Lambda Energy Resources LLC - Loud 29		SRN / ID: N5936
LOCATION: 2320 BLUE LAKES RD, LOUD TWP		DISTRICT: Gaylord
CITY: LOUD TWP		COUNTY: MONTMORENCY
CONTACT:		ACTIVITY DATE: 10/08/2020
STAFF: Bill Rogers	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Field inspection for FCE		
RESOLVED COMPLAINTS:		

On October 8, 2020, I inspected the Albert Loud 29 CPF on Blue Lake Road east of Lewiston. I did this inspection to determine compliance with the facility permits. There are two permits:

- PI 97-98, issued August 5, 1999, which speaks about one natural gas fired compressor engine.
- PI 236-01A, issued May 10, 2006, which speaks about five natural gas fired compressor engines.

The facility has two compressor sheds, an old one containing one engine and a newer one containing four compressor engines. I suspect these two buildings correspond with two phases of construction and the two permits.

See an activity report dated 9/30/2020 for review of facility records for compliance.

Permit 97-98 lists one engine and so is likely for the single engine in the old compressor shed. Special Condition 2 sets stack dimensions as a maximum diameter of 12 inches at a minimum height of 22 feet above ground level. The exhaust stack on the single engine shed appeared to comply with these specifications.

Condition 4 requires temperature probes in the engine's catalytic oxidizer. What I believe to be the engine referred to in this permit does not have a catalytic oxidizer. However, it was permitted as an engine with no catalytic oxidizer in the later permit. Therefore this condition is not applicable.

Permit 236-01a, Condition 1.1, requires that the flash tank on the glycol dehydrator be installed and operating properly. I saw what I thought was the flash tank. It appeared to be installed and operating properly.

Condition 2.5 requires that any emission control device on any engine which has one should be installed and operating properly. Three of the engines in the four-engine shed have catalytic oxidizers. All were installed. Only one engine was operating. Old data on clipboards on the engine control panels indicated that the outlet temperature of each catalytic oxidizer was higher than the inlet temperature of that oxidizer. This suggests that the oxidizers were operating properly.

Conditions 2.14a through 2.14e set stack dimensions. Stack dimensions have maximum diameters varying between 8 and 12 inches and heights varying between 25 and 26 feet. I was not able to estimate stack heights with great accuracy, but judging by eye it appeared they complied with requirements.

COMMENTS:

The four engine compressor shed contains four natural gas fired compressor engines. The glycol dehydrator is at the west end of this shed, under its roof but in an unwallled area. The fifth engine is in a separate building which appears to be older, up a slope from the rest of the facility.

All engines exhaust horizontally through the walls of their sheds to horizontal mufflers. Exhaust is then directed unobstructed vertically upward through pipe elbows. In the four-engine shed, the westernmost engine was the only one operating. The engine in the single engine shed was operating.

The glycol dehydrator was operating. I didn't see any opacity or steam from it. The burner stack was

perhaps 10 inches diameter and 25 feet above ground level, terminating in a flat cap. The still vent was about 3 inches diameter at about 14 feet above ground level. There were moderate glycol odors nearby.

I observed several tanks on site. There are two 400 barrel oil field storage tanks on site, inside a lined berm. Painted labels had faded nearly away, but one tank was still labeled "water" in faded paint, the second had a warning sign nearby which read non-potable water. These tanks are likely to be brine tanks.

There were several small drum on still tanks. Inside the 4 engine shed I saw many that looked a bit larger than the usual 300 gallon size, perhaps 500 gallons: Two "Bad Oil," two HDAX low ash gas engine oil, one Regal R&O ISO 150 lubricating oil, one antifreeze, one unmarked. There was a tank of similar size near the glycol dehydrator, over a plastic berm structure. It was labeled as triethylene glycol. There was a drum on stilts tank, over a plastic berm structure, labeled Methanol near the single engine shed. Inside the single engine shed I saw an oval metal tank labeled Delo 400 lubricating oil, one with the painted label "lube oil," and one with the painted label "waste oil."

ENGINE IDENTIFICATIONS:

It was not clear to me which emission unit was which engine. I discussed this somewhat in the previous report.

In the large engine shed with four engines, from east to west these were:

Unit 147c, according to the unit number on its clipboard and a sticker on the control panel. This also said it was a 1000 HP engine. It had a catalytic oxidizer. It was not running. The last run date listed on its clipboard was 9/4. I did not think to record the year of that date, if it was on the sheet. On that date catalyst inlet temperature was 913 degrees f and outlet was 1004 degrees f. The engine was cold.

According to Lambda's reports and emails, Unit 147c was permanently shut in October 5, 2019. I didn't find any reference to a catalytic oxidizer for this engine in the report. It is one of three Waukesha 7042 engines; the other two have catalytic oxidizers listed. Since EUENGINE1, EUENGINE2, and EUENGINE3 have the same emission limits and conditions, it is likely these three identical engines are EUENGINE 1, 2, and 3.

Unit 11r, according to the unit number on its clipboard. The clipboard said it was a 1000 hp engine. It had a catalytic oxidizer. It was not running. The last day of operation listed on its clipboard was 9/5. On that date catalyst inlet temperature was 863 degrees f and outlet was 906 degrees f.

According to Lambda's reports there is a Unit 11c, not 11r. It is a 1000 hp Waukesha engine with catalytic oxidizer. Lambda reports that they closed it down permanently March 3, 2020. This engine is listed as a Waukesha 7042 with catalytic oxidizer; as discussed above, probably either EUENGINE1, EUENGINE2, or EUENGINE3.

Unit 7c, according to the unit number on a sticker on its control panel. This engine was not operating. Its compressor was partially disassembled. It had no catalytic oxidizer. According to Lambda Unit 7c has not operated in "a long time," and has no fuel use within the past year.

Unit 5c, according to the unit number on the control panel and data on its clipboard. This engine was running. I did not find a working control panel (all the control panels at this facility appear to have been disconnected). The engine has a catalytic oxidizer. The last date on the clipboard was 9/8, at which time inlet temperature was 1041 degrees f and outlet was 1070. There was no opacity in its exhaust.

According to Lambda the engine had been "just recently" temporarily shut in for test purposes at the time I requested records for it. It is a Waukesha 7042 with catalytic oxidizer, according to Lambda's reports. It is probably either EUENGINE1, EUENGINE2, or EUENGINE3.

Lambda's reports also include a Unit 16c. I did not find a unit number on the engine that is in its own

separate shed, but that is the only unit number unaccounted for. It was running at the time of my inspection. It had no catalytic oxidizer. Its instrument panel was also largely inoperable, but it did have a working tachometer indicating 632 RPM. There was no opacity in its exhaust..

According to Lambda's reports, Unit 16c is a Waukesha low emission engine without catalytic oxidizer. It had been "Just recently" temporarily shut in for testing purposes, at the time I asked for records.

NAME _____

DATE _____

SUPERVISOR _____

William J. Rogers
Jr.

Digitally signed by: William J. Rogers, Jr.
DN: CN = William J. Rogers, Jr. email =
wrogers@mi.state.gov, C = US, O = EGLE OU =
Air Quality Division
Date: 2020.11.19 14:07:37 -0500

Shane Nixon

Digitally signed by: Shane Nixon
DN: CN = Shane Nixon email =
snixon@mi.state.gov, C = US, O =
EGLE OU = Air Quality Division
Date: 2020.11.19 14:08:01 -0500