

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

B914949653

FACILITY: Lambda Energy Resources LLC - Frederic 2		SRN / ID: B9149
LOCATION: 11770 LYNN LAKE RD, GAYLORD		DISTRICT: Gaylord
CITY: GAYLORD		COUNTY: CRAWFORD
CONTACT: Vicki Kniss, Environmental Affairs Manager		ACTIVITY DATE: 06/28/2019
STAFF: Bill Rogers	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled inspection and record review		
RESOLVED COMPLAINTS:		

On June 28, 2019, I inspected the Lambda Frederic 2 CPF. In addition, Ms. Vicki Kniss of Lambda provided me with records to review to determine compliance with Permit to Install 201-97.

This facility is a sour gas sweetening facility. It disposes of hydrogen sulfide by compressing it and reinjecting it underground. It has a flare as a backup if the injection equipment should break down.

The first special condition in the permit is Special Condition 13.

Special Condition 13 limits CO, VOC, and NOx annual emission rates to no more than 89 tons per 12 month rolling time period. An emission estimate, attached, claims 13.30 tons NOx, 18.42 tons CO, 1.84 and tons VOC per 12 month rolling time period. This complies with the permit condition.

Special Condition 14 limits hazardous air pollutants to 9 tons of any individual HAP and 22.5 tons of all HAPs combined. The HAPs to be expected from this facility, barring a release of hydrogen sulfide, would be expected to be VOC. VOC emissions claimed on the attached report are 1.84 tons per 12 month rolling time period. Therefore HAP emissions cannot exceed 1.84 tons. This complies with the permit condition.

Special Condition 15 requires monthly emission calculations. This is included on the attached emissions estimate sheet. This complies with the permit condition.

Special Condition 16 requires monitoring and recording monthly fuel consumption, monthly crude/condensate throughput, monthly hydrocarbon liquid trucked, and monthly glycol circulation. This information is included in a Monthly Emission Summary. The Monthly Summary for February is attached. It indicates 4044 MMCF of gas was burned as fuel. Tank throughput was 751 barrels in the month. 60 barrels of crude oil was trucked. There was 0.53 gpm circulation in the glycol dehydrator.

Special Condition 17 requires monthly reports of oil and gas processed. Oil processed is included on the Monthly Emission Summary as noted above. Gas production is on a separate report. This report indicates a total production of 16.031 million cubic feet of gas in February, of which 12.031 million cubic feet were sales gas and 4 million cubic feet were fuel gas.

Special Condition 18 requires reporting emissions to the State annually using the AQD's emission reporting system. This was done as required. The emission report successfully passed its audit.

Special Condition 19 requires proper maintenance and a maintenance log. I was not able to tell by looking whether the equipment is maintained properly, although I did not see any obvious malfunctions. Example sheets of the maintenance log are attached.

Special Condition 20 applies to crude oil storage tanks with a capacity of 952 barrels or above. Tanks at this facility were 400 barrel size, therefore this condition does not apply.

Special Condition 21 allows operating up to 190 hours per year bypassing the pollution control devices on the sweet gas compressor engines. The maintenance log, attached, does not indicate any operation without the control devices.

Special Condition 24 requires processing only sweet gas in this part of the facility. I was not able to determine whether this was being done, but I did not see or smell anything that would make me believe this condition was being violated.

Special Condition 25 requires injecting "acid gas from the amine unit" into the ground so that no hydrogen sulfide or other toxics are emitted to the air in normal operation. The injection system was operating at the time of my inspection. I did not see, hear, or smell anything that would lead me to believe this condition was being violated.

Special Condition 26 specifies control measures to be taken in the event the acid gas compressor fails. It could be burned in a flare or absorbed in iron sponge. If the flare is used, it may not be used for more than 48 hours per incident or 192 hours per year.

According to the compressor malfunction log, attached, the compressor was down and the flare in use for 23 hours total in 2018 and 0 hours so far in 2019. This complies with the time limits in Special Condition 26.

Special Condition 27 limits hydrogen sulfide emissions to 0.31 pounds per hour and 0.03 tons per year. According to the malfunction log, attached, hydrogen sulfide emissions in 2018 were 0.4 pounds at a maximum rate of 0.02 pounds per hour. There are no emissions reported thus far in 2019. This complies with the permit condition.

Special Condition 27 also limits sulfur dioxide emissions to 11.2 pounds per hour and 1.13 tons per year. According to the malfunction log, attached, sulfur dioxide emissions during the three incidents listed in 2018 were 0.8, 0.7, and 0.7 pounds per hour. Total emissions in the three incidents were 18 pounds. There are no emissions reported thus far in 2019. This complies with the permit condition.

Special Condition 29 requires disposal of iron sponge media in a way which minimizes emissions to the ambient air. I did not observe these media being disposed of, but there was no apparent open storage of used media on site when I inspected.

COMMENTS

The entrance sign identifies the facility as Lambda Energy Resources LLC / Frederic 2 Central Production Facility / SE NE Sec-02 T28N-R04W / Crawford County / Emergency # 10=-800-328-7430.

There are four standard 400 barrel size storage tanks on site. Two are labeled "produced water" and two are labeled "crude oil." There is a truck load-out. I didn't see any oil transfer hoses, so I don't know whether the facility is using a vapor return hose or not. I didn't see any stained soils in the area that might have indicated past spills.

I saw a total of five devices that looked like heater treaters for crude oil or inline heaters for natural gas. Two of these were partly disassembled. Three seemed whole, and at least one of them was lit at the time of my inspection; based on heat shimmer visible in the exhaust stack, I believe only one was.

I saw an iron sponge. It was sealed and there were no odors near it. There was a flare with a pilot flame burning. It had occasional opacity of about 5%.

The amine plant had a burner stack perhaps 18 inches diameter and 30 or 35 feet high. There is a red-yellow-green safety light system on the building. The green light was on at the time of my inspection.

The two Waukesha compressor engines were operating. The stacks for the engines exit the shed horizontally to horizontal mufflers, then through pipe elbows to exhaust unobstructed vertically upward.

I noted several small drum on stilt tanks, generally over containment structures. Several were labeled as triethylene glycol, one as methanol. The rest were not labeled or I did not see their labels.

I didn't notice any leaks or see any stained soils which would indicate past leaks or spills.

The facility is old, with considerable rust and wear.

NAME William J Rogers Jr

DATE 7/24/19

SUPERVISOR SN

