

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

N763130417

FACILITY: Linn Energy - Clear Lake CPF		SRN / ID: N7631
LOCATION: NE NW NW Section 35, T32N, R2E, HILLMAN		DISTRICT: Gaylord
CITY: HILLMAN		COUNTY: MONTMORENCY
CONTACT: Diane Lundin , Senior Environmental Representative		ACTIVITY DATE: 07/24/2015
STAFF: Bill Rogers	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled inspection and record review		
RESOLVED COMPLAINTS:		

On July 24, 2015, I inspected the Linn Energy Clear lake CPF. Diane Lundin of Linn Energy had sent me records to review in response to an earlier email. I did not find any violations during my inspection.

I found one recordkeeping problem. As far as I can tell the records Linn Energy provided me do not include daily gas throughput for the glycol dehydrator. Linn Energy had chosen this method for showing exemption from the more stringent emission control requirements of 40 CFR 63 Subpart HH. However, review of the Michigan Air Emission Reporting System report for this facility for 2014 indicate VOC emissions from the dehydrator of 16 pounds. Benzene emissions of less than one ton per year would also exempt the dehydrator from the control requirements of Subpart HH.

I will use enforcement discretion to accept total VOC emissions of 16 pounds as proving benzene, which would be part of VOC emissions, is under one ton. I have explained my concerns about recordkeeping to Linn Energy personnel via an email.

Permit 199-06A, glycol dehydrator table EUDEHY, Special Condition VI.1 allows showing exemption from the more stringent control requirements of 40 CFR 63 Subpart HH by either demonstrating benzene emissions are less than one ton per year or by showing that the amount of natural gas processed is less than 85,000 cubic meters per day, measured as actual flow on each day. A Subpart HH determination letter, attached, says that Clear Lake processes less than 85,000 cubic meters per day. Monthly production numbers in the attached data would seem to support this, but the amount of gas produced each day was not included in the records I received. As discussed above this facility's annual emission report states the glycol dehydrator emits 16 pounds VOC per year. I have accepted this as demonstrating that benzene emissions are under one ton, and that therefore this facility is exempt from the control requirements of Subpart HH.

Table EUENGINE2, Condition I.1, sets a NOx limit of 14.9 tons per 12 month rolling time period. A sample data sheet for April, 2015, includes this value. It indicates 4.25 tons per 12 months. This meets the emission limit.

Condition I.2 sets a CO limit of 14.1 tons per 12 month rolling time period. A sample data sheet for April, 2015, includes this value. It indicates 4.44 tons per 12 months. This meets the emission limit.

Condition III.1 requires a Malfunction Abatement Plan. We have an approved MAP on file, dated January 6, 2012.

Condition III.2 requires no more than 200 hours operating without the catalytic oxidizer, per year. A record of operating without the catalytic oxidizer is attached. It indicates the compressor engine didn't operate without the catalytic oxidizer this year.

Condition IV.1 requires any add-on control device be installed and operating properly. The catalytic oxidizer is installed and, based on recorded outlet temperatures being higher than inlet, appears to be operating properly.

Condition IV.2 requires a device to monitor fuel gas flow to the engine. I found an electronics box on what seemed to be a fuel line; I thought this might be the required meter. Facility data, attached, includes fuel amounts to the engine, therefore indicating that those amounts are being measured.

Condition VI.2 requires recording natural gas usage for the engine. As noted above, this appears to be done.

Condition VI.3 requires a maintenance log. A sample field maintenance page is attached.

Conditions VI.6 and 7 require calculating NOx and CO emissions per 12 month rolling time period. Data sheets including this information are attached.

Condition VIII.1 requires the exhaust stack have maximum diameter of 14 inches and minimum height of 32 feet. The exhaust appeared to be 14 inches in diameter. I estimated the height as 36 feet, which would meet the requirement, but this was a fairly rough height estimate.

Table FGFACILITY, condition II.1, prohibits burning sour gas at the facility. I didn't see any evidence of sour gas processing on site. The facility processes Antrim Formation gas. Sour gas is very rare in the Antrim Formation.

**Comments:**

I did not notice any odors at the facility. I didn't notice any opacity except a bit of "steam" from the dehydrator still vent. I didn't see any stained soils which might indicate spills or leaks. Maintenance appeared good.

The facility includes one brine tank, marked "produced water," in a well-maintained lined berm. The brine tank is smaller than typical. I don't know its size but would guess about 100 barrels.

The facility had a three-light safety indicator system on the outside of the compressor shed, showing a green light at the time of my inspection.

The glycol dehydrator had a Sivalls flame arrested burner, rated at 125,000 BTU (per hour, presumably) according to its builder's plate. The still vent was at the building roof. The burner stack was about 6 inches diameter, perhaps 30 feet high, with a flat cap on top.

Near the dehydrator, outside the building, there was a 300 gallon drum on stilts tank labeled as triethylene glycol and a second one labeled methanol.

The compressor shed contains two engines, one medium-sized natural gas fired compressor engine and one very small engine. In a discussion with Diane Lundin after a previous inspection she told me the second engine on site is small enough that it is exempt from permit requirements. The second engine is small, perhaps even smaller than a pickup truck engine, so this is very likely to be true.

The medium-sized compressor engine is by Caterpillar. I looked for unit number markings on it but didn't see any. It was operating at 901 RPM. It had a digital readout indicating the Air to Fuel Ratio Controller was operating properly. It included a temperature readout for the catalytic oxidizer. "Position 2," presumably outlet temperature, was showing; it read 842 degrees f at the time of my inspection. There was a clipboard with engine data recorded on it hanging from the control panel. According to that, on 7/23 the catalytic oxidizer inlet temperature was 753 degrees f and outlet was 841 degrees f.

Oil pressure was 70 kpa, compressor oil pressure 55 kpa, aux coolant 105 degrees f, engine coolant 180 degrees f.

The second, much smaller engine was labeled as NGCS Unit 97. Its stack was about 6 inches diameter by 40 feet high, unobstructed vertically upward. There was no catalytic oxidizer. It was running at 1644 RPM. Engine oil pressure was 60 kpa, compressor oil pressure 15 kpa, engine coolant temperature 190 degrees f, compressor oil temperature 160 degrees f, engine oil temperature 200 degrees f.

Near the engines, there was one 300 gallon drum on stilts tank for Chevron HDAX NG Screw Compressor Oil and a smaller tank, maybe 100 gallons, labeled Chevron Conoco SAE 40 Oil.

NAME William J Rogers Jr.

DATE 7/31/15

SUPERVISOR 