

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

B91644421

FACILITY: MERIT ENERGY CO. - PARADISE 19 CPF		SRN / ID: B9164
LOCATION: BLAIR TOWNHALL RD, KINGSLEY		DISTRICT: Cadillac
CITY: KINGSLEY		COUNTY: GRAND TRAVERSE
CONTACT: Vicki Kniss , Environmental Affairs Manager		ACTIVITY DATE: 05/16/2018
STAFF: Kurt Childs	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: 2017 FCE		
RESOLVED COMPLAINTS:		

Full Compliance Evaluation: B9161 MEC 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 clear, 68 degrees F with wind from the Southwest at 10 mph. At the time of the inspection the following equipment was observed on site:

- Four 400 bbl AST's with vapor recovery
- One V-12 compressor engine with no control
- Three heaters (two operating)
- One flare

Records regarding this source were requested on 5/17/2018 and received on 5/21/2018. The records were for the most recent 12-months rolling time-period and appeared complete.

EUDEHY

There is no glycol dehydrator. The unit has been replaced with an enclosed desiccant system that utilizes 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 195, a 500 hp. Waukesha L5108 GU V-12 model (SN 316160) with no add on control device. The engine listed in the PTI application, MAP and emission calculations is a 550 Waukesha L5790 G Model. Both engines are from the Waukesha VHP engine family and are normally aspirated, rich burn, and uncontrolled but with different engine displacement. The L5108 has a displacement of 5,108 liters and the L5790 has a displacement of 5,790 liters.

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 L5790 emission factors were 53.03 tons per year NOx based on a 12-month rolling time period as determined at the end of each calendar month as of December 2017. The emission data provided by Merit Energy indicates that the same emission factors are used for all VHP G, and GSI engines and that Merit is using the “Standard” carburetor setting (see attached engine emission data sheet).

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 15.1 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 PMMAP 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 2017 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 NOx 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 NOx 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 10/2014, NOx emissions were 53.85 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 H2S reduction and the wet gas analysis from 5/26/2017 (attached) indicates that the H2S concentration at the inlet to the Dehy (desiccant system) is non-detect at a detection level of 1 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 H2S and sulfur content of the gas. As indicated above, the attached analysis of processed gas it is non-detect for H2S.

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 PTI657-96A and the air pollution control rules.

NAME 

DATE 5-23-18 SUPERVISOR 