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

N803223687

FACILITY: WARD LAKE ENERGY (BEAR LAKE 28 CPF)		**SRN / ID:** N8032
LOCATION: NE NE NE SEC 28, BEAR LAKE TWP		**DISTRICT:** Cadillac
CITY: BEAR LAKE TWP		**COUNTY:** MANISTEE
CONTACT: Jeff Riling , Operations Manager		**ACTIVITY DATE:** 10/15/2013
STAFF: Caryn Owens	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Scheduled Field Inspection and Records Review		
RESOLVED COMPLAINTS:		

On Tuesday, October 15, 2013, Ms. Caryn E. Owens of the DEQ-AQD conducted a scheduled field inspection of the Ward Lake Energy – Bear Lake 28 CPF located in the northeast quarter of the northeast quarter of the southeast quarter of Section 28 in Bear Lake Township, Manistee County, Michigan (SRN: N8032). More specifically, the site was located on the west side of Anderson Road, approximately ½ mile south of 9 Mile Road in Bear Lake, Michigan. The field inspection and records review were to determine compliance with permit to install (PTI) 113-08A. The site [redacted] has opted out of being a major source by limiting the operational and/or production limits potential to emit (PTE) to be below the major source thresholds. An inspection brochure was not given to anyone at this facility. The site is an area source for NESHAP Part 63 Subpart HH, and NESHAP Part 63 Subpart ZZZZ. However, the State of Michigan does not have delegated authority of the area source NESHAPs, and thus these areas were not reviewed by the MDEQ.

During the field inspection it was cloudy and approximately 50°F, with calm winds. The windsock on the above ground storage tanks was limp. Duane of Enervest, a service contractor, arrived onsite during the DEQ field inspection. The site consisted of a small building containing two dehydrator systems (only one in operation), and a large building south of the glycol dehydrator building. The larger building contained separating equipment, a glycol dehydrator, a CAT 3516LE engine (EUENGINE01), and a small CAT3306 engine (EUENGINE03). EUENGINE02 is no longer located at the facility. During the field inspection EUENGINE01 was the only engine operating, and was at 1375 RPMs, with an average temperature of 130°F and 60 psi.

On the northern portion of the site was a jack pump that was not operating during the field inspection, and the western portion of the site contained a small jack pump that would operate intermittently during the field inspection. Additionally, an empty above ground storage tank with an opening at the bottom was located west of the large building, and a tank farm containing three above ground storage tanks south of the large building. The three above ground storage tanks on the southern portion of the site were within a lined barrier. A sludge-like substance was covering the bottom of the lined barrier. A slight petroleum-like odor was present just west of the tank farm. According to Duane with Enervest, the tanks spilled into the lined barrier and a company out of Kalkaska would be cleaning the sludge-like material on Wednesday October 16, 2013. DEQ staff mentioned the spilled material to Mr. Bob Versical of the DEQ-OOGM. Additionally, two iron sponges were onsite. One was located north of the building, and one was located south of the building. According to Duane, the southern iron sponge is no longer in use, and only the northern iron sponged is used. Duane also indicated that EUENGINE01 was down for maintenance on Monday October 14, 2013 to replace seals on the engine, and the pressure built up too much in the field; therefore, the smaller compressor engine (EUENGINE03) was not able to be started because it couldn't handle the pressure coming off the field. Duane was planning to operate EUENGINE03 on Wednesday, October 16, 2013 after EUENGINE01 took some of the pressure off the field. He also stated the eastern-most glycol dehydrator in the glycol dehydrator building was no longer used, and just the western glycol dehydrator and the glycol dehydrator located in the compressor building were in use. No heaters, flares, or natural gas liquid separation equipment was located at the site.

Compliance Evaluation:

FGDEHY: FGDEHY underlying applicable requirements are based off 40 CFR Part 63 Subpart HH requirements. The site is an area source and the State of Michigan has not been given delegated authority of 40 CFR Part 63 Subpart HH for area sources. Therefore, a compliance analysis of FGDEHY was not conducted for this site.

FGENGINES: Three natural gas fired engines with no pollution controls, consisting of a 1085 hp CAT 3516LE engine (EUENGINE01), a 637 hp CAT 3412 lean burn (EUENGINE02), and a small rich burn 145 hp CAT 3306 (EUENGINE03). It should be noted that EUENGINE02 has been removed from the site.

I. Emission Limits

I.1, 2, 5, & 6: Based on the records reviewed, for EUENGINE1 (CAT 3516 – 1085 hp) NOx was between 8.97 tpy – 19.93 tpy based on 12-month rolling time period and CO was between 8.20 tpy – 18.28 tpy based on 12-month rolling time period, which was less than the permitted limits of 21.5 tpy for NOx and 20 tpy for CO based on 12-month rolling time period.

EUENGINE2 (CAT 3412 – 637 hp) was removed from the site in January 2013. The records from September 2012 – January 2013 reported NOx between 5.18 tpy – 7.09 tpy based on 12-month rolling time period and CO was between 4.11 tpy – 5.62 tpy based on 12-month rolling time period, which was less than the permitted limits of 12.3 tpy for NOx and 10 tpy for CO based on 12-month rolling time period.

EUENGINE3 (CAT 3306 – 145 hp) reported NOx was between 12.41 tpy – 27.86 tpy based on 12-month rolling time period and CO was between 0.92 tpy – 2.06 tpy based on 12-month rolling time period, which was less than the permitted limits of 28.4 tpy for NOx and 5 tpy for CO based on 12-month rolling time period.

II. Material Limits: Not applicable for FGENGINES

III. Process/Operational Restrictions

III.1: A compliant PM/MAP has been submitted to the MDEQ dated June 5, 2008.

III.2: This condition is not applicable since the engines are not equipped with control devices.

IV. Design/Equipment Parameters

IV.1: As stated above, the engines have no controls, and the maintenance on the engines appears to be in accordance with the PM/MAP for the facility. The maintenance records are attached.

IV.2: The company has a device to continuously monitor natural gas usage for each engine at the facility. The natural gas usage is discussed further below in Section VI.2.

V. Testing/Sampling

V.1: No stack testing has been conducted at the site. Emissions are based off the engine specification sheets.

VI. Monitoring/Recordkeeping

VI.1: The permittee uses acceptable calculations, and the results are submitted to the DEQ on a monthly basis.

VI.2: Based on the records reviewed, the amount of gas used in EUENGINE1 ranged between 3,420 mcf - 6,787 mcf. The natural gas usage for EUENGINE2 prior to removal from the site ranged between, 1,974 mcf – 2,509 mcf. The natural gas usage for EUENGINE3 ranged between 476 mcf – 925 mcf.

VI.3: The maintenance logs for the facility are attached to the report.

VI.4: The engines at the facility have no control. This condition is not applicable.

VI.5 & VI.6: Monthly NOx emissions were reported between 0.992 tons – 1.968 tons for EUENGINE1, between 0.589 tons – 0.728 tons for EUENGINE2 (prior to removal off site), and between 1.373 tons – 2.743 tons for EUENGINE3. Monthly CO emissions were reported between 0.0.906 tons – 1.148 tons for EUENGINE1, between 0.454 tons – 0.577 tons for EUENGINE2 (prior to removal off site), and between 0.101 tons – 0.203 tons for EUENGINE3. The emissions were reported from September 2012 – September 2013. Refer to special condition I.1 – I.6 for the 12-month rolling NOX and CO emissions.

VII. Reporting

VII.1: Based on the field inspection and the descriptions of the engines, the engines do not appear to have been replaced with a different engine.

VIII. Stack/Vent Restrictions

VIII.1 &3: During the field inspection the stacks were vertically upwards approximately 40 feet above ground surface. Mufflers were observed on the stacks of EUENGINE01 and EUENGINE03. No odors or visible emissions were present. The stack heights and maximum diameters of the exhaust area appear to be within the permitted limits of 35 feet above ground surface with an 8 inch diameter for EUENGINE01, and 38 feet above ground surface with a 3 inch diameter for EUENGINE03. No stack was observed in the former location of EUENGINE02.

IX. Other Requirements: Not applicable for FGENGINES

FGFACILITY:

I. Emission limits: Not applicable to FGFACILTY.

II. Material Limits:

II.1: According to the records reviewed, no sour gas is burned at the facility. The gas flows through an iron sponge which absorbs the H_2S in the raw gas stream.

III. Process/Operational Restrictions

III.1: The DEQ doesn't have delegated authority on 40 CFR Part 63, Subpart HH, therefore compliance determination was not assessed at this time.

IV. Design/Equipment Parameters: Not applicable to FGFACILTY.

V. Testing/Sampling

V.1: According to an SPL Certificate of Analysis of the sales gas, no H_2S is burned at the facility.

VII. Reporting, VIII. Stack/Vent Restrictions, and IX. Other Requirements: Not applicable to FGFACILTY.

Evaluation Summary:

The activities covered durting this full compliance evaluation (FCE) appear to be in compliance with PTI 113-08A. No further actions are necessary at this time.

NAME Carryn Rowe DATE 11/25/13 SUPERVISOR