

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

N593545251

<b>FACILITY:</b> DTE Gas Company - Alpena Compressor Station		<b>SRN / ID:</b> N5935
<b>LOCATION:</b> 8512 E. ARNOLD LAKE ROAD, HARRISON		<b>DISTRICT:</b> Saginaw Bay
<b>CITY:</b> HARRISON		<b>COUNTY:</b> CLARE
<b>CONTACT:</b> Phillis Rynne , Staff Engineer, Environmental Management & Resourc		<b>ACTIVITY DATE:</b> 07/10/2018
<b>STAFF:</b> Meg Sheehan	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> MAJOR
<b>SUBJECT:</b> FCE compliance inspection.		
<b>RESOLVED COMPLAINTS:</b>		

**On Tuesday, July 10, 2018, AQD District Staff conducted a scheduled site inspection of the DTE Gas Company Alpena Compressor Station in Harrison, Clare County, Michigan. DTE representatives Phillis Rynne (Staff Engineer) and Darin Cummings (Supervisor of Transmission Operations) provided a tour of the facility. The facility was not operating upon arrival and has not operated for several years.**

### FACILITY DESCRIPTION

One Renewable Operating Permit (MI-ROP-N5935-2014b) is associated with the facility, was effective on November 14, 2014, and revised on January 8, 2016 and April 5, 2016. Based on potential to emit, the facility is major for NOx and CO, and an area source of HAPs. The purpose of the visit was to confirm compliance with the referenced permit.

Historically, the facility was utilized to increase the pressure of the natural gas in the pipeline, allowing it to continue to move. The name "Alpena" reflects the location of the largest recipient/destination of the natural gas in the lines when the facility was in operation. When the Antrim gas fields came into production, there was no longer a need for the facility to push gas, so the facility (which is an unmanned station) was taken out of full-time operation. It is contractually obligated to remain on stand-by.

The Alpena Compressor Station consists of a:

- 2,000 horsepower, natural gas fired, spark ignition, 4 stroke lean burn, reciprocating internal combustion engine (EUWHITESUPERIOR) installed in 1975 and associated compressor – Subject to 40 CFR Part 63, Subpart ZZZZ: National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (reported to be grandfathered from NSR requirements)
- 259 horsepower (150 KW), natural gas fired emergency generator installed in the fall of 2015 (EUEMERGEN) – Subject to 40 CFR Part 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (reported to be exempt under R 336.1285(2)(g)). It should be noted that the Subpart JJJJ conditions will be added to the next ROP renewal, which is due November 14, 2019.
- 1.25 million BTU/hr natural gas fired boiler (reported to be exempt under R 336.1282(2)(b)(i))
- 37,000 BTU/hr natural gas fired water heater (reported to be exempt under R 336.1282(2)(b)(i))
- Enzymatic parts cleaner – bioremediating, non-hazardous, non-flammable, water based (reported to be exempt under R 336.1281(2)(k))
- Four above ground storage tanks which contain oil, used oil, and coolant (reported to be exempt under R 336.1284(2)(e))
- Above ground gas chillers, NGL separator and radiator, (reported to be exempt under R 336.1288(2)(d)), and two air compressors

### COMPLIANCE HISTORY

No compliance issues have been noted in previous inspections conducted on March 10, 2016, March 31, 2014 and March 22, 2012. There are no violation notices of record for the facility since the last site inspection.

### COMPLIANCE EVALUATION

DTE Staff reported that no changes have occurred since the last site inspection. Please see previous inspection reports for a discussion of historical changes at the facility.

### Material Limits

- There are no material limits in the ROP.

Process/Operational Restrictions

- EUWHITESUPERIOR and EUEMERGEN only fire sweet natural gas.
- The permittee maintains EUWHITESUPERIOR and the oxidation catalyst in a manner that minimizes emissions. No maintenance has been performed on EUWHITESUPERIOR since the March 10, 2016 inspection because it has been minimally run (34 hours in 2016, and 5 hours in 2017 according to MAERS). Regular calibration checks are performed on the oxidation catalyst (see Monitoring/Recordkeeping).
- A continuous parameter monitoring system has been installed and monitors the inlet temperature into the catalyst. A site-specific monitoring plan was submitted on July 5, 2016. Attached to this report are the thermocouple calibration reports which satisfy special condition III.6 and VI.5 of the ROP.
- EUWHITESUPERIOR is equipped with a display that continuously reads the temperature into the catalyst. Because it was not running at the time of our inspection, the temperatures on the readout were ambient.

Design/Equipment Parameters

- DTE staff reported that auto shutdown occurs if the catalyst inlet temperature exceeds 1,010 F. The permit limit is 1,350 F. Shutdown occurs at 1,010 F because the equipment will begin to melt if that temperature is exceeded.

Testing/Sampling

- DTE conducted initial performance testing for EUWHITESUPERIOR and EUEMERGEN on May 16, 2016. A summary of the stack testing can be found in the district file.
- Stack testing was also conducted on May 11, 2017 to meet the requirements of 40 CFR 63.6640. During the inspection Ms. Rynne indicated that the company may not be conducting stack testing on EUWHITESUPERIOR for 2018 because DTE anticipates the engine to run less than 24 hours this calendar year. If testing is conducted, it is expected to occur in October and the district office will be notified as appropriate.
- As previously stated, the engine is programmed to immediately shutdown if the catalyst inlet temperature exceeds 1,010 F. Therefore, the company does not collect the catalyst inlet temperature on a 4-hour rolling average.
- The catalyst has not been changed since it was installed.

Monitoring/Recordkeeping

- All notifications and reports submitted to comply with Subpart ZZZZ are kept at the DTE office in Kalkaska and are also on file at the DEQ district office.
- Due to the limited operation of EUWHITESUPERIOR, no malfunctions have occurred, and no maintenance has been necessary.

Reporting

- Annual and semi-annual ROP certifications have been submitted on time since 2013, with no deviations or emission exceedances reported.

EUEMERGEN

The hour meter for the emergency generator indicated a total operation of 98.2 hours. Per subpart JJJJ the unit may run up to 100 hours per year for maintenance checks and readiness testing up to 50 hours per year in non-emergency situations. Staff reported that the generator is run for 25 minutes every Monday to perform maintenance checks. Maintenance and testing records can be found attached to this report in the district file. Based on the limited number of hours operated, it appears that the unit still meets the emergency operation status requirements. Staff also reported that the unit is certified but does not operate in a certified manner. After the conditions for Subpart JJJJ are incorporated into the ROP, staff will conduct a follow-up inspection to determine compliance for EUEMERGEN.

COMPLIANCE DETERMINATION

At this time, the DTE Gas Company Alpena Compressor Station in Harrison, Michigan, appears to be in compliance with MI-ROP-N5935-2014b and all applicable rules and regulations.

NAME Maag Sheehan DATE 7/23/18 SUPERVISOR C. Haire