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

B558740721

FACILITY: Merit Energy Company. - Mayfield 23		**SRN / ID:** B5587
LOCATION: Center Rd., KINGSLEY		**DISTRICT:** Cadillac
CITY: KINGSLEY		**COUNTY:** GRAND TRAVERSE
CONTACT:		**ACTIVITY DATE:** 07/13/2017
STAFF: Kurt Childs	**COMPLIANCE STATUS:** Non Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: 2017 FCE, Complaint.		
RESOLVED COMPLAINTS: C-17-01465		

2017 Full Compliance Evaluation: site inspection and records review

I conducted an inspection of the Merit Energy Company (MEC) Mayfield 23 facility to determine compliance with Permit to Install (PTI) 193-08 and the Air Pollution Control Rules as well as to address a complaint received by the AQD regarding black smoke from the flare. The plant operator Len was present at the time of the inspection, I informed him of the reason for the inspection and of the complaint. The complaint cited black smoke from the flare among other problems at the facility. The complaint was also referred to MDEQ Oil Gas and Minerals Division for follow up regarding the other issues. The Mayfield 23 CPF is an opt-out source, the CPF currently services 12 wells and has a separator building with separators for each well. There is one in-line heater (no longer used), a dehydrator, one stock tank, one in ground flare tank, one operating compressor engine and two engines that have been dismantled and are not operating. The dismantled engines have been removed from the PTI. The facility also includes a sulfinol gas sweetening plant that includes a sulfinol reboiler and a flare for H2S control.

The facility is surrounded by a fence that is properly marked with H2S warning signs. Throughout the inspection there was a flame at the flare and steady visible emissions. I conducted a 15 minute visible emissions observation and determined the highest 6 minute average opacity was 31%. PTI 193-08 does not contain a specific opacity limit so the 20% visible emission limit in General Condition 11 of the PTI and R 336.1301 is applicable. At the time of the inspection visible emissions from the flare were exceeding this limit. The plant operator stated that the plant had been shut down for two days to rebuild the compressor engine and just started operation again yesterday. According to him this resulted in the build-up of condensate in the plant that was now causing the excess opacity at the flare.

No odors were detectable off-site and I did not notice any significant odors on-site either except inside the building housing the dismantled Worthington compressor/engine. I mentioned this to the plant operator. The sweetening plant reboiler includes two 1.375 MMBTU heaters that were operating at the time of the inspection. There were no visible emissions from the heaters. The dehy was operating with no visible emissions or odors present. It is equipped with a condenser and is vented to the flare.

Only the Caterpillar 3408TA V-8 compressor engine is still operating at the site. This engine is not equipped with a catalytic converter. At the time of the inspection it was operating at 872 rpm which was consistent with past observations. The other two engines are a Waukesha V-12 and a Worthington 5LHC4 375hp that have been dismantled and have not operated in recent years. They have also been removed from the current permit.

This facility is an area source with regard to National Emission Standards for Hazardous Air Pollutant regulations for Reciprocating Internal Combustion Engines; Industrial, Commercial and Institutional Boilers and Process Heaters; and the Oil and Gas Production Facility MACT (subpart HH). The AQD does not currently have enforcement delegation for these regulations therefore no compliance determination was made. However, as previously determined, the dehydrator processes less than 85,000 cubic meters of natural gas and therefore has no applicable requirements under subpart HH.

Following the inspection I had requested records from MEC which were provided on July 25, 2017 and are attached to this report. The records include maintenance activities and monthly emission calculation sheets that include emissions and fuel use data. These records indicate the approximately 34 tons and 3 tons per 12-month rolling time period NOx and CO emissions are well below the 82.5 tpy limit for NOx and 20 tpy limits for CO.

Daily visible emissions records for May through the inspection date were included in the request. Specific daily records were not provided but a statement that there were no observed incidences of visible emissions "determined to be greater than normal visible emissions during routine operations" was. Special Condition 1.10 of EUMA23SGSP requires that visible emissions shall be observed and recorded at least once each day and that corrective actions shall be taken only if visible emissions are greater than normal visible emissions during routine operations. Visible emissions during "routine" operations should be minimal.

The PTI also requires that quarterly reports of the 24-hour time period mass flow rate of hydrogen sulfide (used to demonstrate compliance with the SO2 emission limit) and the volumetric gas flow rate are submitted to the AQD. Those reports have been reviewed as they are received and have not indicated any exceedences of the SO2 limit of 485 pounds per 24-hr period.

The 2016 MAERS report was not selected for audit.

As a result of my site inspection records review and reporting review it appears the Mayfield 23 CPF is in compliance with PTI 193-08 and the Air Pollution Control Rules at this time with the exception of the observed exceedence of the 20% opacity visible emissions limit in General Condition 11 of Permit to Install 193-08, and Rule 301. The excess opacity from the flare necessitates a Violation Notice to address the exceedance and initiate corrective actions to prevent reoccurrence.

NAME _____ DATE 7-25-17 SUPERVISOR SN