

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

B915232389

FACILITY: Merit Energy Co.- Hayes 22 CPF		SRN / ID: B9152
LOCATION: MT FREDERIC RD, GAYLORD		DISTRICT: Cadillac
CITY: GAYLORD		COUNTY: OTSEGO
CONTACT: Sean Craven , Regulatory Analyst		ACTIVITY DATE: 11/10/2015
STAFF: Shane Nixon	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: On site inspection and records review		
RESOLVED COMPLAINTS:		

AQD staff traveled to Otsego County to perform an inspection of the Hayes 22 CPF. The purpose of the inspection was to determine the facility's compliance with Permit to Install No. 653-96B and applicable state and federal air pollution control regulations. The facility consists of four storage tanks equipped with a vapor recovery unit, two iron sponges, five process heaters, a glycol dehydrator, and a compressor engine equipped with a catalyst.

EU-HY22DEHY - Glycol dehydration system processing gas from the Niagaran formation.

1. **Emission Limits - There are no emission limits associated with this emission unit; therefore, this section is not applicable.**
2. **Material Limits - There are no material limits associated with this emission unit; therefore, this section is not applicable.**
3. **Process/Operational Limits - There are no process or operational restrictions associated with this emission unit; therefore, this section is not applicable.**
4. **Equipment Restrictions - The dehydrator is not allowed to operate unless a flash tank is installed and operating properly. AQD observed a flash tank and it appeared that recovered vapors were routed to the compressor.**
5. **Testing - Sampling and analysis of the wet gas stream is required at least once per calendar year. The most current analysis occurred in June 2015 and included the components listed in the PTI.**
6. **Monitoring - The natural gas processing rate and the glycol recirculation rate is monitored in a manner satisfactory to the AQD as per the requirements of the PTI.**
7. **Recordkeeping/Reporting/Notification - AQD review of records of the wet gas composition, monthly and 12 month rolling natural gas processing rate, and monthly glycol recirculation rate has determined the records to be adequate and complete.**
8. **Stack/Vent Restrictions - The dehydrator stack appeared to be constructed in accordance with the parameters listed in the PTI.**

EUENGINE1 - Caterpillar 398 compressor engine equipped with a catalyst. Operating parameters recorded by AQD staff at the time of the inspection are below:

Engine coolant temperature: 180°F

Engine oil pressure: 60 psi

Catalyst inlet temperature: 807°F

Catalyst outlet temperature: 860°F

1. **Emission Limits** - There are no emission limits associated with this emission unit; therefore, this section is not applicable.
2. **Material Limits** - There are no material limits associated with this emission unit; therefore, this section is not applicable.
3. **Process/Operational Limits** - A preventative maintenance/malfunction abatement plan (PM/MAP) is required to be implemented and maintained in order to operate the compressor engine. Review of facility files indicates a PM/MAP was submitted and approved by AQD in January 2009. AQD has no records of any updates to the PM/MAP.

The engine is limited to operating for no more than 200 hours per calendar year without the catalyst installed and operating properly. Records maintained by the company indicates the engine has operated with the catalyst installed at all times.

4. **Equipment Restrictions** - The engine is not allowed to operate unless the catalyst is installed and operating properly. Per the PM/MAP, proper operation of the catalyst includes a differential pressure of 0 inches to 2 inches of water column, an inlet temperature of 659°F to 1,100°F, and an outlet temperature greater than or equal to the inlet temperature. Records submitted by Merit Energy indicates the engine and catalyst operated within the specified ranges. AQD observations (cited previously) indicates the engine and catalyst were operating consistent with values listed in the PM/MAP.
5. **Testing** - Verification of NOx emission rates is required upon request by AQD. At this time, AQD has determined that testing is unnecessary.
6. **Monitoring** - Monitoring of natural gas on a continuous is performed via a Rockwell turbine meter.
7. **Recordkeeping/Reporting/Notification** - Records of significant maintenance activities, hours that the engine operated without the catalyst, and monthly fuel records submitted and reviewed by AQD staff. AQD review has determined the records to be adequate and complete.
8. **Stack/Vent Restrictions** - The stack associated with the compressor engine appeared to be inconsistent with the parameters listed in the PTI. AQD staff did not have the tools to measure the stack height and diameter but did bring the issue to Merit Energy's attention.

FGTANKS - Four storage tanks equipped with a vapor recovery unit.

1. **Emission Limits** - There are no emission limits associated with this flexible group; therefore, this section is not applicable.
2. **Material Limits** - There are no material limits associated with this flexible group; therefore, this section is not applicable.
3. **Process/Operational Limits** - There are no process or operational limits associated with this flexible group; therefore, this section is not applicable.
4. **Equipment Restrictions** - The tanks located on-site are required to be equipped with a vapor recovery unit (VRU). AQD staff observed a VRU during the inspection and noted that it was operating.
5. **Testing** - There are no testing requirements associated with this flexible group; therefore, this section is not applicable.
6. **Monitoring** - There are no monitoring requirements associated with this flexible group; therefore, this section is not applicable.
7. **Recordkeeping/Reporting/Notification** - There are no recordkeeping, reporting, or notification requirements associated with this flexible group; therefore, this section is not applicable.

8. Stack/Vent Restrictions - There are no stack or vent restrictions associated with this flexible group; therefore, this section is not applicable.

FGFACILITY - All process equipment at the facility including equipment covered by other permits, grandfathered equipment and exempt equipment.

1. Emission Limits - NOx emissions are limited to 89 tons per year, based on a 12 month rolling time period. Records indicate the highest emissions occurred in April and June 2015. During those months, NOx emissions were 3.29 tons per 12 month rolling time period.

2. Material Limits - Sweet gas is the only fuel allowed to be burned at the facility. The most recent gas analysis indicates the hydrogen sulfide concentration of the gas burned is non-detectable.

3. Process/Operational Limits - There are no process or operational limits associated with this flexible group; therefore, this section is not applicable.

4. Equipment Restrictions - There are no equipment restrictions associated with this flexible group; therefore, this section is not applicable.

5. Testing - Verification of the hydrogen sulfide concentration was conducted in June 2015. The records were submitted to AQD staff upon request.

6. Monitoring - There are no monitoring requirements associated with this flexible group; therefore, this section is not applicable.

7. Recordkeeping/Reporting/Notification - Monthly and 12 month rolling NOx emission calculations were submitted to AQD staff for review. The records were determined to be complete and adequate based upon the review.

8. Stack/Vent Restrictions - There are no stack or vent restrictions associated with this flexible group; therefore, this section is not applicable.

CONCLUSION - AQD staff has determined the facility to be in compliance with PTI No. 653-96B based on the on-site inspection and records review.

NAME Shane Dixon

DATE 12/7/15

SUPERVISOR 