

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

B914432276

FACILITY: Merit Energy Company - CHARLTON 4		SRN / ID: B9144
LOCATION: 0000 LOST CABIN TR, JOHANNESBURG		DISTRICT: Cadillac
CITY: JOHANNESBURG		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 Charlton 4 CPF. The purpose of the inspection was to determine the facility's compliance with Permit to Install (PTI) No. 52-04A and applicable state and federal air pollution control regulations. Equipment at the site included six heaters, five storage tanks equipped with a vapor recovery unit, and a Waukesha 12-cylinder compressor engine.

EUDEHY - Glycol dehydrator used to remove water from the natural gas.

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 - As per the requirements of the PTI, the dehydrator was equipped with a condenser. The condenser was observed to be operating properly as the inlet temperature was 160°F and the outlet temperature was 70°F; resulting in a differential temperature of 90°F. The large temperature differential is indicative of proper condenser performance and demonstrates the condenser was properly sized to the application.
4. Equipment Restrictions - There are no equipment restrictions associated with this emission unit; therefore, this section is not applicable.
5. Testing - There are no testing requirements associated with this emission unit; therefore, this section is not applicable.
6. Monitoring - There are no monitoring requirements associated with this emission unit; therefore, this section is not applicable.
7. Recordkeeping\Reporting\Notification - Records of the glycol circulation rate were available upon request for AQD review.
8. Stack/Vent Restrictions - The stack dimensions for the dehydrator appeared to be consistent with the parameters listed in the PTI.

EUCH4COMP1 - Waukesha 7042GSI compressor engine with catalytic control (four stroke, rich burn). The engine was operating at the time of the inspection. Operating information recorded by AQD staff at the time of the inspection follows:

Engine operating rate: 906 rpm

Engine oil pressure: 40 psi

Engine coolant temperature: 200°F

Inlet catalyst temperature (from operator's log sheet): 1,118°F

Outlet catalyst temperature (from operator's log sheet): 1,173°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** - The engine is not allowed to operate unless a preventative maintenance/malfunction abatement plan (PM/MAP) is implemented and maintained. The PM/MAP was previously submitted and reviewed/approved by AQD staff. Records indicate that regular maintenance is performed on the compressor engine and catalyst in accordance with the PM/MAP. Records also indicate that there were zero hours in which the engine operated without the catalyst.
4. **Equipment Restrictions** - The compressor engine is not allowed to operate unless the catalyst is installed and operating in a satisfactory manner, with the exception that it may operate for 200 hours per calendar year without the catalyst. Records indicate the engine operated at all times with the catalyst. The catalyst inlet and outlet temperatures are consistent with the range specified in the PM/MAP. Based on those temperatures and the differential pressure checks which were included in the records, AQD staff has determined the engine is operating in a satisfactory manner.
5. **Testing** - Testing to verify emission rates is only required upon AQD request. At this time, AQD staff does not consider testing is necessary.
6. **Monitoring** - Per the requirements of the PTI, a device to monitor the natural gas usage of the engine was installed.
7. **Recordkeeping/Reporting/Notification** - Monthly fuel use records and maintenance records were made available to AQD staff upon request. Staff review has determined the records to be complete and maintenance of the engine is consistent with the PM/MAP.
8. **Stack/Vent Restrictions** - The stack parameters observed at the time of the inspection appeared to be consistent with the requirements contained in the PTI.

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

1. **Emission Limits** - NOx, CO, and VOC emissions are each limited to 40 tons per year, based on a 12-month rolling time period. Calculations performed by the company indicate the highest NOx and CO emissions occurred in May 2015 and June 2015. At that time, NOx emissions was 7.94 tons per 12 month rolling time period and CO emissions was 10.86 tons per 12-month rolling time period. The highest VOC emissions was 2.67 tons per 12-month rolling time period, which occurred in January 2015. As evidence by the records submitted by the company, the facility is currently in compliance with the emission limits.
2. **Material Limits** - Sweet natural gas is the only fuel allowed to be burned at the facility. A gas analysis conducted in July 2015 indicates the hydrogen sulfide concentration is 1 ppm. Therefore, the gas is considered sweet.
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 - There are no testing requirements applicable to the 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 - NOx, CO, and VOC calculations were made available to AQD staff upon request (attached). AQD staff review has determined the records to be adequate.

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 Permit to Install No. 52-04A based upon the on-site inspection and review of records.**

NAME Shane Wilson

DATE 12/3/15

SUPERVISOR 