

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

N783237494

FACILITY: MUSKEGON DEVELOPMENT, Pigeon River Facility		SRN / ID: N7832
LOCATION: SW 1/4 NW 1/4 SE 1/4 SEC 17, DOVER TWP		DISTRICT: Cadillac
CITY: DOVER TWP		COUNTY: OTSEGO
CONTACT: MICHAEL MESBERGEN, ENGINEER		ACTIVITY DATE: 11/03/2016
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 Muskegon Development's Pigeon River facility. The purpose of the inspection was to determine the facility's compliance with Permit to Install (PTI) No. 226-07 and applicable state and federal air pollution control regulations. The facility consisted of a compressor engine. The triethylene glycol dehydrator which was present during an inspection in 2013 has since been removed. The dehydrator was replaced by a desiccant dryer, which has no emissions to the ambient air.

**EUENGINE1** – Caterpillar Model 3406TA (Skid No. NGCS 211) compressor engine. This engine replaced a Caterpillar Model 398 TA HCR and notification of the engine swing was submitted by Muskegon Development on March 11, 2015. Muskegon Development adequately demonstrated that the replacement engine was lower-emitting than the existing engine. The engine is a rich burn engine and is not equipped with a catalytic converter. Operational parameters at the time of the inspection were:  
Engine operating rate: 1,297 revolutions per minute  
Engine oil pressure: 55 pounds per square inch

**Emission Limits** – The NO<sub>x</sub> emission limit for the compressor engine is 80 tons per year based upon a 12 month rolling time period. Based upon records submitted by the company, the highest emissions for the time period between September 2015 and August 2016 occurred in September 2015. At that time, NO<sub>x</sub> emissions were 50.16 tons and is in compliance with the emission limit.

**Material Limits** – The heat input for the compressor engine is restricted to 40 billion Btus per 12 month rolling time period. Records submitted by the company demonstrates the highest heat input, which occurred in September 2015, for the previous 12 months was 0.02 billion Btu (16.61 MMBtu).

**Process/Operational Restrictions** – As per the requirements of the PTI, Muskegon Development submitted a revision to the Malfunction Abatement Plan (MAP) upon replacement of the compressor engine. Based upon AQD review of records, maintenance on the compressor engine was performed in accordance with the MAP.

**Equipment Restrictions** – There are currently no equipment restrictions associated with this emission unit; therefore, this section is not applicable.

**Testing** – There are currently no testing requirements associated with this emission unit; therefore, this section is not applicable.

**Monitoring and Recordkeeping** – At the time of the inspection, a monitor to measure the natural gas fuel consumed by the compressor engine was installed and operating. Monthly fuel usage records, monthly heat input records, and NO<sub>x</sub> emission calculations were maintained and made available upon request.

**Stack/Vent Restrictions** – The stack appeared to be constructed in accordance with the diameter listed in the PTI; however, it did not appear to be constructed in accordance with the minimum height requirement. AQD staff had no means in which to measure the stack height and has since notified Muskegon Development to verify height and raise the stack, if necessary.

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

**Emission Limits** – NO<sub>x</sub> emissions from the flexible group are limited to 89.9 tons per 12 month rolling time period. Records indicate the facility is well below the limit listed in the PTI.

**Material Limits** – There are no material limits associated with this flexible group; therefore, this section is not applicable.

**Process/Operational Restrictions** – There are no process or operational restrictions associated with this flexible group; therefore, this section is not applicable.

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

**Testing** – There are no testing requirements associated with this flexible group; therefore, this section is not applicable.

**Monitoring and Recordkeeping** – Monthly and 12 month rolling time period NO<sub>x</sub> emission calculations, as required by the PTI, were available upon request.

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

NAME Shawn Moran

DATE 11/4/16

SUPERVISOR 