

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

N535427985

FACILITY: Lee8 Storage Facility		SRN / ID: N5354
LOCATION: 19110 V Drive N, PARTELLO		DISTRICT: Kalamazoo
CITY: PARTELLO		COUNTY: CALHOUN
CONTACT: Ronald Hughes , Senior Environmental Specialist		ACTIVITY DATE: 12/02/2014
STAFF: Rex Lane	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

On December 2, 2014, Air Quality Division (AQD) staff (Rex Lane) arrived at Lee 8 Storage Partnership (hereafter "Lee 8") located at 19110 V Drive North, Partello, Michigan at 1 pm to conduct an announced inspection. This was a scheduled inspection since Lee 8 facility personnel, Mr. Mac Wylie, Fieldman, has other area job responsibilities and may not be at the facility during normal business hours. Staff introduced themselves to Mr. Wylie and Mr. Ronald Hughes, Senior Environmental Specialist, based in Indianapolis. Staff provided Lee 8 personnel with their inspector credentials and a copy of MDEQ's Environmental Inspections brochure. The last air quality inspection was 3/2/11 and the facility was determined to be compliant at that time. The facility is permitted under Permit to Install (PTI) No. 258-94D and is considered to be a synthetic minor source for nitrogen oxides, carbon monoxide and hazardous air pollutants (HAPs). Required PPE is a hard hat, steel-toed boots, hearing protection and FR clothing (optional for visitors). Staff asked several questions prior to the site inspection related to facility operations.

According to plant personnel, the facility was constructed in 1995 and is an existing natural gas compressor station and storage facility. Non-odorized natural gas is received at the facility through a 12-inch pipeline between 600 – 700 psig and then is compressed further in one of two White Superior 2406G four-stroke lean-burn natural gas fired engines rated at 1200 HP prior to injection into one of three on-site producing wells (# 1, # 2 and # 4). The producing wells are depleted oil and natural gas wells that are drilled into the Niagaran formation and have a total storage capacity of approximately 3.5 billion cubic feet at a maximum pressure of 1783 psig. There is one observation well (# 3) on-site and four observation wells off-site that are used to monitor reservoir pressure. Typical natural gas injection season is April through November and the typical withdrawal season is December through April. Natural gas withdrawn from the reservoir is processed through a triethylene glycol dehydration unit on-site before the dried gas is injected back into the pipeline.

Mr. Wylie then gave staff a tour of the facility. Information provided below is based on observations and discussions during the inspection and records requested and provided following the inspection:

**Permit to Install Exempt Equipment:**

The facility has small natural gas fired space heaters in the engine building and maintenance shop and a small natural gas fired furnace and water heater in the office building. This equipment is exempt from PTI requirements pursuant to Rule 282(b)(i). The facility injects an odorant (methyl mercaptan) into the natural gas that is utilized on-site which is exempt from PTI requirements pursuant to Rule 288(a). The facility has a 12,600 gallon brine/condensate storage tank that is exempt per Rule 284(e) and stored material is periodically hauled away for disposal in an exempt ENP injection disposal well. The facility has a 4,200 gallon used oil storage tank that is maintained by Safety Kleen and a 300 gallon lube oil tank that are exempt per Rule 284(c). A 500 gallon methanol storage tank was removed from the facility in September 2014 that was exempt from permitting per Rule 284(n). The facility has a 134 HP natural gas fired emergency generator that was installed in 1995 and is exempt from permitting pursuant to Rule 285 (g). The emergency generator is equipped with a non-resettable hour meter (current reading – 1,854 hours) and automatically runs for ½ hour each week for readiness testing. Mr. Wylie stated that the emergency generator is maintained by an outside vendor. Mr. Hughes stated that the emergency generator has operated 65.6 hours to date in 2014. The emergency generator is subject to 40 CFR Part 63, Subpart ZZZZ (i.e. RICE MACT) based on its installation date. The AQD has not taken delegation authority from USEPA for this federal regulation at area sources of HAPs, therefore, staff did not evaluate the emergency generator's compliance with 40 CFR Part 63, Subpart ZZZZ.

**PTI No. 258-94D:****EU-DEHY:**

Special Condition (SC) I.1 through I.2 – Facility provided emission records (attached) requested by staff for the past twenty four months which demonstrate compliance with the 12-month rolling time period limit for VOC and Benzene.

SC II.1 – Mr. Hughes stated that the facility does not use stripping gas in the glycol dehydration unit.

SC II.2 – A review of daily gas flow rates through EU-DEHY for the previous 24-month period indicates compliance with the maximum 50 MMCF/day limit. Highest throughput rate noted was 46.373 MMCF/day which occurred on 1/8/14. The total compressor engine suction capacity is approximately 15 MMCF/engine/day or 30 MMCF/day for the facility. Higher natural gas throughputs to EU-DEHY are possible without utilizing the compressor engines based on the allowed reservoir storage pressure.

SC IV.1 – Flash tank is installed on EU-DEHY and the flash tank exhaust gas is routed back to the re-boiler burner for control purposes.

SC IV.2 – EU-DEHY is equipped with condensers and exhaust gas is routed through a BTEX buster and then to the re-boiler burner for control purposes.

SC V.1 – Facility provided a copy of the annual wet gas stream analysis results for February 2014 that includes concentration values for all required constituents.

SC VI.1 and VI.3 – Facility is completing all required calculations and maintaining wet gas composition results, daily natural gas flow rates, and VOC and Benzene emission rates on a calendar month and 12-month rolling time period as required by the air use permit.

SC VI.2 – Gas flow rate meters are installed at various locations at the facility and gas flow rate to the EU-DEHY is monitored on a continuous basis.

EU-DEHY is not subject to 40 CFR Part 63, Subpart HHH because this regulation only applies at storage facilities that are a major source of HAPs.

**FG-ENGINES:**

FG-ENGINES consist of two 1200 HP White Superior Model 2406G 4-stroke lean-burn engines, EU-ENGINE1 (Engine 1801 –North Bay of engine compressor building) and EU-ENGINE2 (Engine 1802 – South Bay). Engine maintenance is performed primarily by corporate staff with an engine overhaul schedule of every 20,000 hours and maintenance records are maintained at the MI corporate location in Howell, Michigan. The engines are equipped with electronic hour meters. The instrument control panels were replaced in 2008 and the hour meter reading reset to zero at that time with total run hours written on the panel for continuity. Current hour meter readings were as follows: Engine 1801 (14,192 hours; hours reset at 21, 186 hours) and Engine 1802 (7,529 hours; hours reset at 23,914 hours). The engines were not running at the time of the inspection.

SC III.1 – Facility provided hours of operations for FG-ENGINES for previous 24 month period which shows compliance with the combined total of not more than 9,600 hours per 12-month rolling time period. Highest value observed during the period of records reviewed was 4,082 hours in November 2014.

SC VI.1 and VI.2 – Facility is maintaining monthly and 12-month rolling time period records of total operating hours for the compressor engines as required by the permit.

SC IX.1 - The AQD received an initial notification for FG-ENGINES under 40 CFR Part 63, Subpart ZZZZ on 2/22/11. In January 2013, the RICE MACT was amended to allow owners and operators of existing stationary 4-stroke spark ignition engines above 500 HP that are area sources of HAP emissions and where the engines are "remote" from human activity to use established management practices for these sources rather than having to meet numeric emission limits and conduct associated testing and monitoring. Under the RICE MACT, a remote area is defined as either a DOT Class 1 pipeline location, or, if the engine is not on a pipeline, if within a 0.25 mile radius of the facility there are 5 or fewer

buildings intended for human occupancy. Prior to the 2013 amendments, the facility had intended to install oxidation catalysts on these engines prior to October 19, 2013 to meet numeric emission standards. The facility updates their "remote area" determination on an annual basis and the most recent evaluation is attached to this inspection report. The AQD has not taken delegation authority from USEPA for this federal regulation at area sources of HAPs, therefore, staff did not evaluate the emergency generator's compliance with 40 CFR Part 63, Subpart ZZZZ.

**FG-FACILITY:**

SC I.1 through I.3 -- Facility provided emission records requested by staff for the past twenty four months which demonstrate compliance with the 12-month rolling time period limit for NOx, CO and HAPs.

SC VI.1 through VI.2 -- Facility is maintaining monthly and 12-month rolling time period emission records for NOx, CO and HAPs as required by the permit.

**Administrative Consent Order No. 21-2007:**

In October 2007, Lee 8 entered into administrative consent order No. 21-2007 with the MDEQ, Air Quality Division to resolve alleged testing and recordkeeping violations. The administrative consent order was required to remain in effect for a minimum of three years and is still active at this time. On 12/2/14, staff (Rex Lane) emailed Mr. Ronald Hughes a copy of the consent order and directed him to paragraph # 25 which identifies the procedural steps the facility must take to request termination of this consent order.

At the time of the inspection, it appears that Lee 8 was in compliance with PTI No. 258-94D and all applicable state air quality rules and regulations. -RIL

NAME RIL DATE 12/10/14 SUPERVISOR MD 12/10/2014