

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

N557236364

FACILITY: Howell Compressor Station		SRN / ID: N5572
LOCATION: 3990 Crooked Lake Rd, HOWELL		DISTRICT: Lansing
CITY: HOWELL		COUNTY: LIVINGSTON
CONTACT: Mike Combs , EHS Coordinator		ACTIVITY DATE: 09/07/2016
STAFF: Nathaniel Hude	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled inspection as part of FCE.		
RESOLVED COMPLAINTS:		

Inspection Report

N5572- Howell Compressor Station
3990 Crooked Lake Road, Howell, MI 48843

Inspection Date:

9/7/16

Facility Contacts:

Mike Combs– EHS, 517-546-4770, Michael.combs@energytransfer.com

MDEQ AQD Personnel:

Nathan Hude – 517-284-6779, huden@michigan.gov

Facility Description:

The Howell Compressor Station is part of the Panhandle Eastern Pipe Line. It is a natural gas transmission and storage facility located in Section 20 of Genoa Township, Livingston County, about one mile west of Crooked Lake. Natural gas is re-injected into an underground gas reservoir for storage and is withdrawn as needed for pipeline transport. The processes are seasonal, with injection activities starting in May.

Four reciprocating internal combustion engines (RICE) run the compressors that inject the gas into the reservoir. Two are rated at 2000 HP and two at 1000 HP. Additional processes at the source include withdrawal gas heaters, a 465 HP emergency generator, and liquid storage tanks for methanol, waste water, and petroleum distillates.

The compressor engines have the potential to emit NO_x at greater than 100 tons per year; therefore Howell Compressor Station is a “Major Source” of NO_x emissions. The engine also has Major Source potential for formaldehyde making the station a Major Source of HAPS

A glycol dehydrator is onsite yet is not used at the Howell Compressor Station. Water is removed from the pipe line by a drip separator (JT). The condensate removed from the gas is stored in liquid storage tanks. Distillates can be separated from the collected material and sold for refining. Because Howell Compressor Station does not use a glycol dehydrator (the affected source in Subpart HHH) they are not subject to the requirements under MACT subpart HHH National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities.

MACT subpart EEEE; NESHAP for Organic Liquids Distribution (Non-Gasoline) does not apply because organic liquid distribution operations do not include the activities and equipment, including product loading racks, used to process, store, or transfer organic liquids at natural gas transmission and storage facilities, as defined in Sec. 63.1271, of subpart HHH.

Howell Compressor Station has processes subject to 40 CFR 63 Subpart DDDDD - National Emission Standards for Major Sources: Industrial/Commercial/Institutional Boilers and Process Heaters. An Initial Notification was received on May 20, 2013. Howell Compressor Station also has processes subject to 40 CFR 63 Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

Applicable Regulations:

1. MI-ROP-N5572-2015
2. 40CFR63, Subpart DDDDD

3. 40CFR63, Subpart ZZZZ
4. R336.1284(n)
5. R336.1284(i)

Complaints within the last 5 Years:
none

Previous Inspections:
3/17/15- Brian Culham, no violations noted
6/18/13- Brian Culham, no violations noted
5/11/11- Brian Culham, no violations noted

This Inspection Key Concerns:
1. none

Emission Unit Summary Table and Compliance Determination

FG-ENGINES

EU-ENG-1601, 1,000 Hp Ingersoll Rand KVS-6 ng RICE, Installation 1/1/55- COMPLIANCE
EU-ENG-1602, 1,000 Hp Ingersoll Rand KVS-6 ng RICE, Installation 1/1/55- COMPLIANCE
EU-ENG-1603, 2,000 Hp Ingersoll Rand KVS-12 ng RICE, Installation 1/1/65- COMPLIANCE
EU-ENG-1604, 2,000 Hp Ingersoll Rand KVS-12 ng RICE, Installation 6/25/67- COMPLIANCE

FG-COLDCLEANERS

EU-COLDCLEANER, parts cleaner, Installation 11/1/99- COMPLIANCE

FG-RULE285(mm)

for permit exempt natural gas venting

FG-HEATERS

EUPLANT-HTR-1, 3.5 MMBTU/Hr ng comfort heater for compressor building, Installation 5/1/83- COMPLIANCE
EUWB-HTR-1, 10 MMBTU/Hr ng water bath heater for heating storage field withdrawal gas, Installation 4/1/68- COMPLIANCE
EUWB-HTR-1, 10 MMBTU/Hr ng water bath heater for heating storage field withdrawal gas, Installation 4/1/68- COMPLIANCE
EUWB-HTR-1, 10 MMBTU/Hr ng water bath heater for heating storage field withdrawal gas, Installation 4/1/68- COMPLIANCE

FG-EMERGEN_MACT

EUGEN-1626, 465 Hp CI emergency generator, Installation 5/1/05- COMPLIANCE

Other equipment reported to MAERS but not included in the ROP:

EU-FUG-1, equipment fugitive component emissions, Installation 1/1/71- COMPLIANCE
EU-METHANOLTNK-1, 792 gallon methanol tank, Installation 2/1/07- COMPLIANCE
EU-TRK-LD, condensate truck loading from TNK-7, TNK-8, TNK-9, TNK-10 and TNK-11, Installation 1/1/71- COMPLIANCE

Inspection Summary

Due to the facility being an ROP site, I contacted Ron Hughes the previous week and scheduled the inspection to ensure someone would be available to retrieve the records required by the permit.

I arrived at the facility at 8:10 am and did not detect any odors or visible emissions from the site as I drove up or entered the building. After signing in, I met with Mike and we reviewed the Inspection Brochure. We remained in the office and reviewed all of the ROP emission unit record keeping requirements which were located in a binder maintained by Mike. The records will be discussed by emission unit as appropriate in this report.

FGENGINES

The four compressor engines are used to place pipeline natural gas into the underground oil field / reservoir. The 4SLB engines do not have emission limits associated with the regulations tables per 63.6600(c). All of the engines have electronic data collection systems, which records fuel usage and hours of operation. EU-ENG-

1602 was operating when we entered the building. When complete, the field is pressurized at approx. 1000 psi. Due to this pressure, the withdrawal of gas during the winter months rarely requires engine operation.

All gas consumed is pipeline quality and the engines are not capable of operating on diesel nor is a diesel tank connected to the engines thus satisfying SC III1 and SC VI1. Records of gas consumption are being maintained, are submitted via MAERS, and were provided on site. The permit does not have a limit on consumption, just requires it to be recorded monthly. There is only one gas meter for the 4 engines; usage is calculated based on engine hours of operation. It appears that the 1000hp engines consume 19.85 mcf per hour and the 2000hp engines consume 46.05 mcf per hour.

Though stack restrictions are not included in the ROP, I did observe the stacks and all are muffled yet uncontrolled and discharged unobstructed vertically upwards.

FGCOLDCLEANERS

There is only one cold cleaner onsite and it is located in the engine building.

SCII1 requires the solvent to be <5% methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chloroform, or any combination thereof. The cleaning solvent used in the cleaner was Safety-Kleen 105 solvent supplied and disposed of by Safety-Kleen. Safety-Kleen 105 solvent is 99% recycled petroleum distillates with less than 0.2% tetrachloroethylene. The vapor pressure of the solvent is reported at 0.02 psia @ 100°F.

SCIII1 requires the parts to be drained no less than 15 seconds or until dripping ceases; I did not witness this device in use, but written instructions are posted on the hood and I did provide Mike with our orange stickers which has written instructions in accordance with R336.1611 and R336.1707 to post if he desired.

SCIII2 requires routine maintenance as recommended by the manufacturer; a records review via "Safety Clean" receipts showed the unit is serviced at least twice per year with the most recent service dates being 2/29/16 and 8/16/16

SCIV1a requires an air/vapor interface of less than 10 sq. ft. This device is approx. 6 sq. ft. (2ftx3ft).

SCIV1b requires the device vapor to be released to the general in plant environment; there was no hood or ventilation in the area for venting vapors to the outside air.

SCIV2 requires a device for draining parts; there is a tray inside the device to do so.

SCIV3 requires a cover and for it to be closed when not in use; the cover on the device I inspected was closed and had procedures posted on the outside.

SCIV4 and5 do not apply as there was no heating device.

SCVI1 does not apply as there was no heating device.

SCVI2 requires maintaining the following information which is done via records in the office and posted on the unit itself; the device was installed in 1999, model number is A300, and serial number is 1124175.

SCVI3 requires written procedures for use; as stated above, instructions are posted on the device.

SCVI4 requires determination of solvent as a safety hazard before being stored in other containers; all solvent is pumped out of the device and refilled by the Safety-Kleen contractor, additional solvent is not stored onsite.

SCVII4 is in regards to reporting requirements, these are all being met as required and logged in MACES under reports received.

FG-RULE285(mm)

This identifies conditions for the venting of NG.

SCIII1 requires the site to implement measures to assure safety of employees and the public and minimize impacts to the environment when venting gas > 1,000,000 scf; Mike stated that they have not vented in some time and that when they do vent, all of the neighbors are notified (as well as the DEQ) to inform them of the situation due to the noise it creates and odors.

SCVII-3 requires reporting per standard ROP requirements and SCVII-6 is our rules verbatim; no venting has been conducted onsite as stated by Mike. Our office has not received any notifications for this location.

FG-HEATERS

EUWB-HTR-1, EUWB-HTR-2, EUWB-HTR-3, are 10 MMBTU withdrawal gas heaters located outside on the west end of the facility. They are used due to a squeeze point from where the gas exits the field and enters the pipeline during withdrawal to prevent valve and pipeline condensation and frost-up on the exterior. These heaters are minimally used and the 2015 emissions estimate on CO was 100lbs.

SCI and SCII There are no emission limits or material limits for these heaters, but they are subject to the Boiler MACT with detailed requirements in the following paragraphs.

SCIII1 requires the units to only burn NG; there are not any other sort of fuel tanks hooked up to these devices and the site has an abundant supply of NG.

SCV1-4 has requirements for maintenance practices and reporting for Boiler MACT for major HAP sources (40CFR63 DDDDD); all of the requirements for the regulation are include in the ROP Testing/Sampling and the Monitoring/Recordkeeping sections. These requirements were confirmed to be met via records and report review. Notifications required for tune-ups and energy assessments were due 1/31/16 and were received 1/25/16.

The 3.5 MMBTU gas fired furnace for supplying comfort heat in the compressor building is only required an initial tune-up and confirmation of completion was also received 1/25/16.

SCVII-3 requires reporting per standard ROP requirements and SCVII-8 details Boiler MACT reporting requirements; these conditions are being met or have been met and are logged in MACES under reports received.

FG-EMERGEN MACT

The site has an emergency generator for power outages. The Katolight generator is diesel fired or is a compression ignition (CI) rated 465 HP (about 1.2 MMBtu/hr) with an output of 300kW, and 5/1/05 (pre 6/12/2006). The engine is subject to 40CFR63 ZZZZ and all applicable conditions from the regulation (Table 2C) are included in the ROP.

SCI and SCII There are no emission limits or material limits for this engine.

SCIII1 requires specific maintenance practices per ZZZZ table 2c; a records check determined these requirements were fulfilled 8/25/15 and the most recent service was performed on 9/20/16 (record attached). The 8/25/16 service denoted 329.9 hours.

SCIII2 does not apply because they do not use oil analysis.

SCIII3 does not apply because there is not a control device.

SCIII4 requires minimal time spent at idle during startup; other than when conducting maintenance, the engine is automatic and programmed to go to full throttle.

SCIII5 and SCIII6 discusses hour amounts, the engine has a maximum of 100 hours per calendar year for maintenance checks and readiness testing (not including use for emergencies); thus far, the total hours operated for calendar year 2016 (Jan 1 – Aug 31) was 26.5 hours. During the inspection, the hour meter had 360.2 hours.

SCIII7 requires operation in a manner consistent with safety and good air pollution control practices for minimizing emissions; based on the condition of the engine and the maintenance records, I believe this is being met.

SCV1 does not apply because they do not use oil analysis.

SCVI-3 has record keeping requirements for malfunctions and to demonstrate continuous compliance; based on the condition of the engine and the maintenance records, I believe this is being met.

SCVI4 discusses records for control device maintenance; there is not a control device installed or required, thus this doesn't apply.

SCVI5 requires records of the hours of operation using a non-resettable meter; there is a non-resettable meter installed and the hours are being recorded. These records were provided via email and are attached.

SCVI6 does not apply because they do not use oil analysis.

SCVII1-3 requires reporting per standard ROP requirements and per 40CFR63 ZZZZ; these conditions are being met or have been met and are logged in MACES under reports received.

The remainder of the report discusses Units included in MAERS but not in the ROP:

EU-FUG-1

Is a name given for fugitive emissions from the entire plant. The entire area of the station is either paved, stone, or grass; so PM emissions from vehicle traffic is very minimal. The estimated MAERS emission for the facility in 2015 was 280 lbs of VOC.

EUMETHANOLTNK-1

A double walled skid mounted horizontal storage tank rated at 792 gallons in capacity is used to store methanol. A second tank (identified as EUMETHANOLTNK-2 in previous reports) is mounted on a truck (not stationary) and used as a delivery vessel and is stated to be 520 gallons. A third tank rate at 790 gallons is maintained off-site at Lucy Rd. which is not considered a part of this stationary source. The methanol is transported off site and injected into the pipeline as part of a repair procedure. It is used to keep water from freezing while it is removed from the pipeline. Rule 284(n) exempts methanol tanks less than 30,000 gallons in size from the Rule 201 requirement to obtain an air use permit. The estimated MAERS emission for the facility in 2015 was 10.2 lbs of VOC.

FG-TRK-LD

This FG includes 5 storage tanks identified as TNK-7, TNK-8, TNK-9, TNK-10 and TNK-11 with an estimated capacity of 10,000 gallons. The tanks contained the condensate from the pipeline drip separator, waste water, or the separated distillates from the condensate. The separated distillates are sold for refining and the waste water (brine) is disposed of by injection well. The vessels are exempt from the Rule 201 air use permit requirement by the Rule 284(i) exemption based on the contents.

I did not identify any violations as a result of the inspection and subsequent record review. Howell Compressor Station appears to be in compliance with all applicable conditions or the ROP and regulations. I left Howell Compressor Station at approx. 10:20 am.

NAME



DATE

9/22/16

SUPERVISOR



