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

N557245570

| | | |
|---|---|---|
| **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:** 08/02/2018 |
| **STAFF:** Samantha Braman | **COMPLIANCE STATUS:** Compliance | **SOURCE CLASS:** MAJOR |
| **SUBJECT:** Scheduled inspection. | | |
| **RESOLVED COMPLAINTS:** | | |

**Safety Equipment Needed:** Fire-retardant coveralls, earplugs, safety glasses, safety-toe boots, hard hat.

**Purpose:** Unannounced, scheduled inspection for compliance with Renewable Operating Permit MI-ROP-N5572-2015.

**Location:** Howell Compressor Station, also known as Panhandle Eastern Pipe Line is in a light residential, rural area outside the town of Howell. The closest residence is approximately 350 feet and Three Fires Elementary is opposite corners from the facility.

**Facility Background/Regulatory Overview:** 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 Natural gas is re-injected into an underground gas reservoir for storage and is withdrawn as needed for pipeline transport.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 approximately April through October; also known as the withdrawal season.

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 NOx at greater than 100 tons per year; therefore, Howell Compressor Station is a "Major Source" of NOx emissions. The engine also has Major Source potential for formaldehyde making the station a Major Source of HAPS

A *major source* has the potential to emit (PTE) of 100 tons per year (TPY) or more, of one of the criteria pollutants. *Criteria pollutants* are those for which a National Ambient Air Quality Standard exists, and include carbon monoxide, nitrogen oxides, sulfur dioxide, volatile organic compounds (VOCs), lead, particulate matter smaller than 10 microns, and particulate matter smaller than 2.5 microns. It is also considered a minor area source for Hazardous Air Pollutants (HAPs), because it was not considered to have a PTE of 10 TPY or more for a single HAP, nor to have PTE of 25 TPY or more for combined HAPs.

**Fee Status:**

**Applicable Regulations:**

1. MI-ROP-N5572-2015
2. 40CFR63, Subpart DDDDD
3. 40CFR63, Subpart ZZZZ
4. R336.1284(n)
5. R336.1284(i)

**Previous Inspections:**

9/7/16 - Nathan Hude, no violations noted

3/17/15- Brian Culham, no violations noted

**Complaints within the last 2 Years:** None

**This Inspection Concerns:** Revisions to MI-ROP-N5572-2015 during renewal.

1. There is no Permit to Install for this facility, therefore the Source Wide Permit to Install table should be removed from the ROP.
2. Emission unit description EUKVS6ICENGINE-1601 & EUKVS6ICENGINE-1602 does not accurately depict the equipment.
    a. The 1965 Engine is a 12-cylinder, 2,000 BHP
    b. The 1967 Engine is a 12-cylinder, 2,000 BHP
3. EUPLANT-HTR-1 was replaced on 10/3/17 with a 4.0 MMBTU/hr (exempt under 282(b)(i)

**Inspection:**
Arrived: 9:27 AM
Departed: 12:30 PM
Weather 67°F; wind SW at <5 MPH; UV Index-low

There were no visible emissions from the facility upon arrival. No odors were identified.

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.

Julie Brunner and I were greeted by Mike Combs; Environmental, Health and Safety Coordinator. Scott Flesor, Operations Manager joined us for the preliminary and post inspection meetings. We met in the office and reviewed all the ROP emission unit record keeping requirements which were in a binder maintained by Mike. Scott informed us they have had no blowdown over the criteria limit at this facility. Mike then took us on a tour of the facility to look at the different Emission Units outline in Table 1-1.

**Table 1-1:** Emission Units covered under MI-ROP-N5572-2015 and their compliance status as of recent inspection date.

| No. | Emission Unit | Description | Comp. Status |
|---|---|---|---|
| 1 | EUKVS6ICENGINE-1601 | Model KV-6; 1000 BHP, natural gas-fired engine to compress natural gas for transport. Installed 1955-grandfathered. | C |
| 2 | EUKVS6ICENGINE-1602 | Model KV-6; 1000 BHP, natural gas-fired engine to compress natural gas for transport. Installed 1955-grandfathered. | C |
| 3 | EUKVS6ICENGINE-1603 | Model KV-12; 2000 BHP, natural gas-fired engine to compress natural gas for transport. Installed 1965-grandfathered. | C |
| 4 | EUKVS6ICENGINE-1604 | Model KV-12; 2000 BHP, natural gas-fired engine to compress natural gas for transport. Installed 1967-grandfathered. | C |
| 5 | EUCOLDCLEANER | Cold cleaner. Exempt 281(h) | C |
| 6 | EUWB-HTR-1 | 10 MMBTU/hr. natural gas fired, water bath heater for heating withdrawal gas. Exempt 282(b)(i) | C |
| 7 | EUWB-HTR-2 | 10 MMBTU/hr. natural gas fired, water bath heater for heating withdrawal gas. Exempt 282(b)(i) | C |
| 8 | EUWB-HTR-3 | 10 MMBTU/hr. natural gas fired, water bath heater for heating withdrawal gas. Exempt 282(b)(i) | C |
| 9 | EUPLANT-HTR-1 | 4.0 MMBTU/hr. natural gas fired horizontal heater used to heat the compressor building. Replaced 10/3/2017. Exempt 282(b)(i) | C |
| 10 | EUGEN-1626 | 465 HP, diesel fired, emergency generator. Manufacture Date: 10/2005. Exempt 285(g) | C |
| | | | |

| | | | |
|---|---|---|---|
| 11 | FG-RULE285(mm) | For permit exempt natural gas venting. | C |

**Table 1-2:** Other equipment reported to MAERS but not included in the ROP.

| No. | Emission Unit | Description | Comp. Status |
|---|---|---|---|
| 12 | EU-FUG | Equipment fugitive component emissions. | C |
| 13 | EU-METHANOL TNK-1 | Tank 1-1; Methanol tank. 750-gallon, double walled tank<br>Exempt 284(n) | C |
| 14 | EU-TRK-LD-1 | Tanks 5-1 through 5-5; Brine water and produced natural gas liquids. 8,400 gallons each.<br>Exempt 284(i) | C |
| 15 | EU-TRK-LD-2 | Tank 5-6; Brine water and produced natural gas liquids. 16,500 gallons. | C |

**1-4. Engines:** The four natural gas fired 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 the engines have electronic data collection systems, which records fuel usage and hours of operation. All four of the engines were 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.

Though stack restrictions are not included in the ROP, I did observe the stacks, and all are about 40-50' high and discharge unobstructed vertically upwards. There is one stack for each 1,000 HP engine, and 2 stacks per 2,000 HP engine.

**5. Cold Cleaner:** Cold cleaner lid was down and appears to meet exemption 281(h). I provided Mike with an Operations Procedures sticker. Safety Clean hauls the 15 gallons of used cleaner out and brings in new 15 gallons.

**6-9. 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 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. The 2017 Run Time Log notes a total of 3 hours and 10 minutes for the South heater, 2 hours and 10 minutes for the Center heater and 0 hours for the North heater. Mike stated that they only ever use the heaters at the beginning of the season and the most they would ever get used is about 10 hours per year. All three heaters were last tuned-up: 11/9/2017.

EUPLANT-HTR-1 was put in last year on 10/3/2017 to replace the 3.5 MMBTU/hr. heater. This is a 4.0 MMMBTU/hr. horizontal heater primarily used to heat the compressor building, but also secondarily heats the engine blocks. The last tune-up was 2/22/2018.

**10. Emergency Generator:** 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.The engine is subject to 40CFR63 ZZZZ and all applicable conditions from the regulation (Table 2C) are included in the ROP. Per ZZZZ; maintenance records were checked to determine compliance. Last service activity performed 9/20/16, at which time the unit hours were 360.

<u>The remainder of the report discusses Units included in MAERS but not in the ROP:</u>

**12. 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.

**13. Methanol Tank:** A double walled skid mounted horizontal storage tank rated at 792 gallons in capacity is used to store methanol. 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.

**14 and 15. EU-TRK-LD-1:** There are 5 storage tanks identified as 5-1, 5-2, 5-3, 5-4 and 5-5 with an estimated

capacity of 8,400 gallons per tank and 1 storage tank identified as 5-6 with the capacity of 16,500 gallons. The tanks contain 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.

**Recordkeeping:** We discussed the recordkeeping requirements of MI-ROP-N5572-2015.

Records received:

- 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.
- SDS for cold cleaner solvent.
- Maintenance records for emergency generator
- Tune-up records for Engines
- SDS for diesel fuel
- We were shown the daily maintenance log kept for maintenance on the engines.

We were also given a Facility Plot Plan which outlines where everything is located on the property. I inquired about what appeared to be another emergency generator in the warehouse building; however, Mike clarified that there was no other emergency generator in that building. We also discussed the upcoming ROP renewal application due date of April 29th, 2019 through April 29th, 2020.

**Summary:** Facility appeared to be in compliance with their permit and all applicable state air regulations. No violations were noted during this inspection.

NAME Samantha Brannen DATE 8/24/18 SUPERVISOR B. M.