

**DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: On-site Inspection**

N339265750

|   |                                      |                                  |
|---|--------------------------------------|----------------------------------|
| <b>FACILITY:</b> DTE Gas Company - Taggart Compressor Station   |                                      | <b>SRN / ID:</b> N3392           |
| <b>LOCATION:</b> 10450 NEVINS ROAD, SIX LAKES   |                                      | <b>DISTRICT:</b> Grand Rapids    |
| <b>CITY:</b> SIX LAKES  |                                      | <b>COUNTY:</b> MONTCALM          |
| <b>CONTACT:</b> Tyler Gage , Transmission and Storage Manager   |                                      | <b>ACTIVITY DATE:</b> 12/13/2022 |
| <b>STAFF:</b> Chris Robinson  | <b>COMPLIANCE STATUS:</b> Compliance | <b>SOURCE CLASS:</b> MAJOR       |
| <b>SUBJECT:</b> FY '23 inspection to determine the facility's compliance status with respect to ROP MI-ROP-N3392-2020 and all other applicable air quality rules and regulations. |                                      |                                  |
| <b>RESOLVED COMPLAINTS:</b>   |                                      |                                  |

**A) INTRODUCTION**

DTE Gas Company's Taggart Compressor Station (Taggart, SRN N3392), located at 10450 Nevins Road in Six Lakes Michigan was inspected on December 13, 2022, by Michigan's Department of Environment, Great Lakes, and Energy (EGLE) Air Quality Division (AQD) staff Chris Robinson (CR). The purpose of this inspection was to determine Taggart's compliance status with respect to applicable air quality rules and regulations including Renewable Operating Permit (ROP) MI-ROP-N3392-2020.

CR met with Tyler Gage, Transmission and Storage Operations Manager. The ROP and current status/issues were discussed prior to the walkthrough of the station. After the walk-through observations were discussed and records were requested, which were provided onsite. During the pre-walkthrough meeting Mr. Gage indicated that there have been no equipment modifications or additions since the last inspection conducted in 2020 nor has there been any issues or major changes.

During this inspection weather conditions were cloudy, approximately 32°F with easterly winds at 15mph (www.weatherunderground.com). No visible emissions or significant odors were observed at any time.

**B) FACILITY DESCRIPTION**

DTE Gas Company owns and operates several compressor stations in Michigan including Taggart. Taggart is located in Six Lakes, Montcalm County in a rural area. The purpose of this station is to maintain pressure in the pipelines to allow for transporting sweet natural gas to both the underground storage field for temporary storage and for distribution to local facilities. This station consists of a sorbead gas-liquid separator, twenty-one sweet natural gas fired only lean burn reciprocating compressor engines used for maintaining pipeline pressure, and auxiliary equipment. Plant 1", which was constructed in approximately 1955, contains 11 engines (2-1,000 hp and 9-2,000 hp) and "Plant 2", which was constructed in approximately 1959, contains the remaining ten (10) engines (2,000 hp).

Depending on the demand for natural gas, Taggart will either "compress" or "free flow" inject natural gas into the underground reservoir (Michigan Stray formation) for storage and transmission. Free flow means that the pressure in the system creates the required differential pressure necessary to create flow naturally without having to operate the compressor engines. Typically, during the winter months this facility operates in compression, due to increased demand, requiring the use of the compressor engines. Although demand was low at the time of the inspection units 201, 203, and 205 were operating.

**C) APPLICABLE REGULATORY REQUIREMENTS**

**40 CFR Part 60, Subparts A & Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units**  
Will be discussed in the "Compliance Evaluation" section below under FGNSPDC.

**40 CFR Part 63, Subparts A and DDDDD - National Emission Standards for Hazardous Air Pollutants (NESHAP) for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters**  
Will be discussed in the "Compliance Evaluation" section below under FGBOILERS-SMALL, FGBOILERS-LARGE & FGNSPDC.

**40 CFR Part 63 Subpart ZZZZ - NESHAP for Stationary Reciprocating Internal Combustion Engines**  
Since All of the compressor engines at the facility are natural gas-fired lean burn engines greater than 500 hp that were constructed prior to December 19, 2002, these engines are subject to this regulation but have no applicable requirements.

The emergency generators (EUAUX1 and EUAUX2) are subject to this standard also for existing sources, based on a horsepower (hp) rating of greater than 500 and the lack of obligation to operate for emergency demand response per 40 CFR 63.6640(f)(2)(ii) and (iii). Emergency Generators engines constructed prior to December 19, 2002, have no applicable requirements, but are still subject to this standard, which includes EUAUX1 and EUAUX2. EUAUX1 is an existing emergency stationary RICE with a site rating of more than 500 brake HP that was relocated to the site prior to December 19, 2002. Although EUAUX2 was not relocated to the site until August 2007, it is also considered an existing emergency stationary RICE under 40 CFR Part 63, Subpart ZZZZ. Per 40 CFR 63.6590(b)(3)(iii), neither EUAUX1 or EUAUX2 have to meet the requirements 40 CFR Part 63, Subpart ZZZZ or 40 CFR Part 63, Subpart A, including initial notification requirements. Both of these emergency generators were manufactured prior to 1967. The RICE MACT defines construction as *"the on-site fabrication, erection, or installation of an affected source"* specifying that *"construction does not include the removal of all equipment comprising an affected source from an existing location and reinstalling of such equipment at a new location."*

#### **40 CFR Part 63, Subpart HHH - NESHAP From Natural Gas Transmission and Storage Facilities**

Although Taggart is subject to this rule, the requirements only apply to facilities that utilize glycol dehydrators. Taggart's dehydration system is a Sorbead desiccant system that does not use glycol and, therefore, not subject to any requirements of Subpart HHH.

#### **40 CFR Part 70 - STATE OPERATING PERMIT PROGRAMS**

The potential to emit of nitrogen oxides, volatile organic compounds, and carbon monoxide exceeds 100 tons per year and the potential to emit of any single HAP regulated by Section 112 of the federal Clean Air Act, is equal to or more than 10 tons per year and/or the potential to emit of all HAPs combined is equal to or more than 25 tons per year.

#### **Rule 201 of Michigan's Air Pollution Control Rules (Permitting Requirements)**

All of the compressor engines were installed prior to August 15, 1967. As a result, this equipment is considered "grandfathered" and not subject.

Although EUAUX1 and EUAUX2 were manufactured prior to August 15, 1967, they were installed at this facility at later dates, which are unknown. During the 2020 ROP renewal, DTE notified EGLE that an internal study of the station was conducted in September 1995. The study noted that EUAUX1 had been "recently installed" at Taggart. Therefore, DTE is using an install date of January 1, 1995, for EUAUX1. Other documents indicate that EUAUX2 was removed from DTE's Belle River Mills Compressor Station and installed at the Taggart Compressor Station between August and December of 2007. Therefore, DTE is using an installation date of August 1, 2007, for EUAUX2. In order for a source to be considered "grandfathered" from Rule 201 permitting requirements, the emission unit must have been installed, not manufactured, prior to August 15, 1967. Therefore, neither generator is considered to be "grandfathered", and both are subject to permitting. However, Rule 285(2)(g) exempts "internal combustion engines that have a maximum heat input of less than 10 MMBTU/hour. The heat rating for both emission units was calculated to be less than 10 MMBTU/hr. (EUAUX1 ~3.5 MMBTU/hr. & EUAUX2 ~4.3 MMBTU/hr.). Based on those heat inputs, project emissions would have been well below significance levels. Therefore, EUAUX1 and EUAUX2 appears to be exempt from Rule 201 permitting requirements.

EUPLT1BLR1, EUPLT1BLR2, EUPLT2BLR1, EUPLT2BLR2, EUP2BLR, EUSHOPBLR, EUDEHYREGENHTR, EUSTORAGEHTR1 and EUSTORAGEHTR2 are exempt from NSR permitting since the facility is operating these emission units under permitting exemption Rule 282(2)(b)(i) for sweet natural gas-fired equipment with a heat input rating of less than 50 MMBTU/hr. being used for space heating, service water heating, or indirect heating.

\*\* Since the emission units installed at this facility have either been claimed grandfathered or exempt from Rule 201 permitting requirements a Permit to Install has never been required. Project significance would not have been factored in since the installation of the emission units that would have exceeded significance were installed prior to when rules pertaining to significance thresholds were developed and the equipment installed afterwards does not appear to have exceeded those thresholds. Modifications to this equipment may make them subject to Rule 201 permitting requirements.

## **D) COMPLIANCE EVALUATION**

### **1) ROP No. MI-ROP-N3392-2020**

Annual Certifications and semi-annual reports, as required in Special Conditions (SC) VII.1-3 of Flexible Groups FGINGERSOLLRAND, FGBOILERS-SMALL, FGBOILERS-LARGE, FGNSPDC and FGRULE285 (mm), have been submitted on time and complete with no deviations or issues reported. All emission units located at this facility are only natural gas fired and records are maintained for a minimum of 5 years.

**FGINGERSOLLRAND**

Taggart is required to monitor and record the monthly natural gas consumption rate. Fuel use is continuously monitored for each engine and tracked daily; records are attached.

| Emission Unit ID  | Emission Unit Description  | Install/Mod Dates |
|-------------------|--|-------------------|
| EUENGINE101 & 102 | Two (2) Ingersoll Rand Compressor Engines 1,000 HP natural gas fired reciprocating engines used to drive natural gas pipeline compressors        | 1955/NA           |
| EUENGINE103 - 111 | Nineteen (19) Ingersoll Rand Compressor Engines, 2,000 HP natural gas fired reciprocating engines used to drive natural gas pipeline compressors |                   |
| EUENGINE201 - 210 |  | 1959/NA           |
| EUAUX1            | Waukesha 925 HP natural gas fired emergency engine, 4SLB   | *01-01-1995/NA    |
| EUAUX2            | Waukesha 758 HP natural gas fired emergency engine, 4SLB   | *08-01-2007/NA    |

\* These engines were manufactured prior to 1967 but installed at Taggart at a later date.

**FGBOILERS-SMALL, FGBOILERS-LARGE & FGNSPDC**

This facility operates nine (9) natural gas-fired boilers (see table below) all of which appear exempt from Rule 201 permitting requirements.

Process heater EUDEHYREGENHTR was installed in 2001 and is used for regenerating (drying) the sorbead desiccant used for removing moisture from the natural gas stream. This process heater is natural gas fired only, uses no glycol, and has an inlet heat rating of 12.9 MMBtu's/hr. and an outlet heat rating of 10.8MMBtu's/hour. Two (2) Schlumberger natural gas fired only gas heaters (EUSTORAGEHTR1 & EUSTORAGEHTR2) were installed in 2018. Each unit has a maximum input heat rating of 19.4 MMBtu's/hr. and an output heat rating of 13 MMBtu's/hour.

| Emission Unit ID              | Emission Unit Description   | Required Frequency of Inspection & Tune-ups | Date of Most Recent Inspection & Tune-up                                   |
|-------------------------------|---|---|--|
| EUPLT1BLR1 & EUPLT1BLR2       | Plant 1 Boilers -- existing 0.375 MMBTU/hr. natural gas fired boiler  | 5 years (61 mths)                           | 12/4/2020  |
| EUPLT2BLR1 & EUPLT2BLR2       | Plant 2 Boilers -- existing 0.375 MMBTU/hr. natural gas fired boiler  |   |  |
| EUP2BLR                       | Plant 2 Boiler -- existing 2.51 MMBTU/hr. natural gas fired boiler  |   |  |
| EUSHOPBLR                     | Shop Boiler -- existing 2.51 MMBTU/hr. natural gas fired boiler   |   |  |
| EUDEHYREGENHTR                | Existing 12.9 MMBTU/hr. natural gas-fired heating unit used to heat the natural gas that is used in the dehydration regeneration process. | Annually (13 mths)                          | Inspection conducted on 10/7/2021 & the Tune up was conducted on 12/3/2021 |
| EUSTORAGEHTR1 & EUSTORAGEHTR2 | Line Heaters -- new 19.4 MMBTU/hr. natural gas fired indirect water bath heaters  |   | 1/5/2021   |

The emission units listed in the table above are subject to the Boiler NESHAP (40 CFR Part 63, Subparts A and 5(D)). Energy assessments and initial/subsequent tune-ups have been completed as required for the boilers/process heaters. With the exception of EUDEHYREGENHTR, EUSTORAGEHTR1 and EUSTORAGEHTR2, tune-ups are required to be conducted every five (5) years because these boilers are rated at less than 5 MMBtu's/hr. EUDEHYREGENHTR, EUSTORAGEHTR1 and EUSTORAGEHTR2 tune-ups are conducted annually because the heat ratings are greater than 10 MMBtu's/hour. The 2022 annual inspections and tune-ups were wrapping up during the December 13<sup>th</sup> inspection. The 2021 annual tune-up for EUSTORAGEHTR1 and EUSTORAGEHTR2 were conducted on January 5, 2022. Although these did not occur during the 2021 calendar year, they were conducted within the 13-month window allowed by 40 CFR Part 63, Subpart 5(D).

Maintenance records are attached to each boiler and were reviewed onsite. Since the inspections and tune-ups were recently completed a certified Notification of Compliance Status report (FGBOILERS-SMALL SC VII.4 and FGBOILERS-LARGE SC VII.5) has not yet been received by the AQD. DTE plans on submitting this along with the Title V certifications due March 15, 2023. The facility submits these reports electronically, as required, using EPA's Compliance and Emissions Data Reporting Interface (CEDRI).

EUDEHYREGENHTR, EUSTORAGEHTR1, and EUSTORAGEHTR2 are also subject to the NSPS for "Small-Industrial-Commercial-Institutional Steam Generating Units" promulgated in 40 CFR Part 60 Subpart Dc for boilers rated between 10-100MMBtu's/hr. installed after June 9, 1989. Under this standard the facility is required to submit an Initial Notification and conduct fuel monitoring. The Initial Notification for EUDEHYREGENHTR was received on September 27, 2017, and the Initial Notifications for EUSTORAGEHTR1, and EUSTORAGEHTR2 were received on April 16, 2018. Fuel usage is tracked daily.

**FGRULE285(2)(mm)**

This flexible group includes any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278, 278a and 285(2)(mm). This rule requires the facility to report venting of natural gas as follows:

- Notify the AQD prior to scheduled venting if amount is greater than 1MMcf due to maintenance or relocation of transmission and distribution systems.
- Notify the pollution emergency alert system within 24 hours per emergency event if amount is greater than 1MMcf.

A venting log is attached indicating that there were 12 "blow-down" events in 2022 with only one being over 1 MMCF. This occurred on January 2, 2022, with a calculated release of approximately 35.5 MMCF of natural gas. The facility notified the AQD the same day the event occurred.

**2) Rule 201 Permitting Exemptions**

The facility utilizes two (2) Smart washer parts washing systems, manufactured by Chemfree. Per Chemfree's website ([www.chemfree.com](http://www.chemfree.com)) the cleaner is an aqueous based degreasing solution called "Ozzyjuice" with little VOC's and contains safe, naturally occurring microbes. The microbes bioremediate the cleaner, as it is used, eliminating hazardous waste. The vapor pressure is less than 0.1 mm Hg @ 20°C. Therefore, this system appears exempt per Rule 281(2)(e).

During the walk through a newer parts washer was identified that uses a powdered alkaline cleaner. A Safety Data Sheet and manufacturer's bulletin was provided indicating no VOCs were present. Therefore, this washer appears to be exempt per Rule 281(2)(k) for aqueous based parts washers.

**3) 2021 MAERS Submittal**

Emissions data for 2021 was submitted on time and complete. AQD reviewed and accepted the submission on May 10, 2022. This data is summarized in the table below.

| Pollutant | Amount (tons) |
|-----------|---------------|
| CO        | 94.07         |
| NOx       | 669.19        |
| PM10      | 0.007         |
| PM2.5     | 4.75          |
| SO2       | 0.14          |
| VOC       | 33.88         |

**E) COMPLIANCE DETERMINATION**

Based on observations, discussions and a records review, Taggart appears to be in compliance with ROP No. MI-ROP-N3392-2020 and all other applicable air quality rules and regulations.

**Attachments**

- Fuel Records & Operating Hours
- Venting Records
- Detergent Safety Data Sheet and Bulletin

NAME 

DATE 12/20/2022

SUPERVISOR 