

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

N339247249

<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> Robert Simmons , Sr. Engineer - Environmental Management and Resour		<b>ACTIVITY DATE:</b> 12/12/2018
<b>STAFF:</b> Chris Robinson	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> MAJOR
<b>SUBJECT:</b> FY '19 on-site inspection to determine the facility's compliance status with ROP MI-ROP-N3392-2015.		
<b>RESOLVED COMPLAINTS:</b>		

AQD staff, Chris Robinson (CR), arrived at DTE Gas Company Taggart Compressor Station (Taggart), located at 10450 Nevins Road in Six Lakes, Michigan on December 12, 2018 at approximately 10:30am to conduct a scheduled unannounced inspection. CR initially met with Mr. Rob Simmons, Environmental Management and Resources Senior Engineer, announcing intent to conduct an inspection of the facility in order to determine the facility's current compliance status with respect to Renewable Operating Permit (ROP) No. MI-ROP-N3392-2015. AQD identification was provided and Mr. Simmons generously provided a tour of the facility as well as pertinent information. CR later met with Mr. Mitch Steele, Transmission Operations Supervisor and Mr. David Slack, Transmission and Storage Operations Manager.

Weather conditions were mostly cloudy, approximately 32°F with east southeast winds at 8mph. No visible emissions or significant odors were observed at any time during this inspection.

#### **FACILITY DESCRIPTION**

The Detroit Energy Company owns and operates several facilities in Michigan used for natural gas transmission and storage. The Taggart facility is used to maintain pipeline pressure for transporting sweet natural gas to storage wells for temporary storage and for transporting natural gas to storage and/or distribution facilities throughout Michigan. This facility consists of several mechanical gas scrubbers (also considered separators or knock-out pots), a Sorbead dehydrator with process heater (non-glycol-based unit), twenty-one sweet natural gas fired only reciprocating engines and auxiliary equipment. The facility consists of two sections, "Plant 1" contains 11 engines (2-1,000hp and 9-2,000hp) built in approximately 1955 and "Plant 2" contains the remaining ten (10) 2,000hp engines built in approximately 1959. Taggart employs approximately 28 staff.

#### **REGULATORY REQUIREMENTS**

Montcalm County is currently designated by the USEPA as attainment/unclassified for all criteria pollutants. Taggart is considered a "Major" source of emissions because the facility's potential to emit exceeds 100 tons per year (tpy) of oxides of nitrogen (NOx) and 10tpy for a single HAP and/or 25tpy of all HAPs combined. Therefore, the facility is subject to Title V (40 CFR Part 70) and maintains Renewable Operating Permit (ROP) No. MI-ROP-N3392-2015.

The gas compressor engines and emergency generators were installed prior to August 15, 1967, therefore considered to be "grandfathered" from Michigan's New Source Review (NSR), Rule 201 permitting requirements.

Prevention of Significant Deterioration (PSD) regulations (Act 451 or 40 CFR 52.21), are not applicable, at this time, because the process equipment was either constructed/installed prior to June 19, 1978, which is the promulgation date of PSD regulations, or the "projects" did not exceed PSD thresholds. Any future modifications, reconstruction or construction may trigger an NSR or PSD review.

The facility's dehy process heater is subject to New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units (40 CFR Part 60 Subpart Dc) and the boilers are subject to National Emission Standards for Hazardous Air Pollutants (NESHAPS) for major sources with industrial, commercial, and institutional boilers and process heaters (40 CFR Part 63, Subparts A and DDDDD).

The gas compressor engines are subject to the federal NESHAP for Reciprocating Internal Combustion Engines (RICE MACT), 40 CFR Part 63, Subpart ZZZZ for existing sources, based on size (>500hp), although there are no applicable requirements, under this standard, because the compressor engines were installed prior to 12/19/2002 and are lean burn natural gas fired only.

Taggart has two emergency generators (EUAUX1 and EUAUX2), both greater than 500Hp. Both generators have an ROP install date listed as "Pre 1960", which would qualify them as being "grandfathered" from Rule 201 permitting requirements because installation occurred prior to August 15, 1967. Based on conversations with Mr. Simmons during the inspection, EUAUX1 was removed from another facility and installed at Taggart sometime in the last decade and the 2010 ROP renewal application provided install dates of 9/1/2007 for EUAUX1 and 7/1/2001 for EUAUX2. In order for a source to be considered "grandfathered" from Rule 201 permitting requirements, the source must have been installed, **NOT MANUFACTURED**, prior to August 15, 1967. Therefore, neither generator is considered to be "grandfathered", and are subject to Rule 201 permitting requirements. However, Rule 285(2)(g) exempts "internal combustion engines that have less than 10,000,000 Btu/hr maximum heat input" from Rule 201 permitting requirements.

EUAUX1 = 3,500,000 Btu/hr (based on 2010 ROP renewal application)  
 EUAUX2 = 4,254,000 Btu/hr (based on 2010 ROP renewal application)

The emergency generators are also subject to the federal RICE MACT (40 CFR Part 63, Subpart ZZZZ) for existing sources, based on a horse power (hp) rating of greater than 500hp and the lack of obligation to operate for emergency demand response per 40 CFR63.6640(f)(2)(ii) and (iii). Engines constructed prior to 12/19/2002 have no applicable requirements, but are still subject to this standard, which includes EUAUX1 and EUAUX2. 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".

Taggart is subject to the NESHAP for "Natural Gas Transmission and Storage Facilities promulgated in 40 CFR Part 63 Subpart HHH. 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. The AQD received a NESHAP Subpart HHH Initial Notification on May 29, 2001.

**COMPLIANCE EVALUATION**

Although none of the NESHAP requirements for Subpart ZZZZ and HHH apply to Taggart, Taggart is still subject to these Federal Standards, which are not included in the facility's ROP. Special Conditions for these standards should be included in the next ROP renewal.

**A) ROP No. MI-ROP-N3392-2015**

Taggart submitted a 2017 Annual Certification as well as Semi-annual Reports on 9/10/2018 & 3/12/2018 as required in ROP special conditions, VII.1-3 of Flexible Groups FGINGERSOLLRAND, FGBOILERS and FGRULE285(mm). No deviations or issues were reported. All emission units located at this facility are natural gas fired only and records are maintained for a minimum of 5-years.

**FGINGERSOLLRAND**

The facility is required by their ROP to monitor and record the monthly natural gas consumption rate, which is continuously monitored for each engine. This is tracked daily by use of fuel meter readings. An example is included in **Attachment A**. Depending on demand for natural gas, Taggart will either "compress" or "free flow" inject natural gas into the underground reservoir, which is known as the 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. During this inspection engines 101, 104 and 111 in Plant 1 and engines 201, 203 and 210 in Plant 2 were operating.

Emission Unit ID	Emission Unit Description	Installation Date/Modification Date
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	9/1/2007
EUAUX2	Waukesha 758 HP natural gas fired emergency engine, 4SLB	7/1/2001

**FGBOILERS**

This facility has seven (7) natural gas-fired boilers (EUPLT1BLR1, EUPLT1BLR2, EUPLT2BLR1, EUPLT2BLR2, EUP2BLR, EUSHOPBLR and EUDEHYREGENHTR) exempt from Rule 201 permitting requirements per Rule 282(2)(b)(i) but subject to the NESHAPS for boilers/process heaters promulgated in 40 CFR Part 63, Subparts A and DDDDD.

Emission Unit ID	Emission Unit Description	Initial Notification Date	Initial Tune-up Date	Frequency of Tune-ups	Date of Most Recent Tune-up
EUPLT1BLR1 EUPLT1BLR2	Plant1 Boilers -0.375 MMBtu/hr	1/2/2013	12/7/2015	5 years (61 mths)	12/7/2015
EUPLT2BLR1 EUPLT2BLR2	Plant2 Boilers -0.375 MMBtu/hr				
EUP2BLR	Plant 2 Boiler - 2.51 MMBtu/hr		10/15/2015		10/15/2015
EUSHOPBLR	Shop Boiler - 2.51 MMBtu/hr				
EUDEHYREGENHTR	12.9 MMBtu/hr heater		9/9/2015	Annually (13 mths)	11/2018

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 MMBtus/hr and an outlet heat rating of 10.8MMBtu's/hr. This unit appears to have replaced De-Hy Burner DV044. This change was made prior to the incorporation of the NESHAP Subpart 5(D) conditions in the ROP. The AQD was not aware of this change because this unit is exempt per Rule 282(2)(b) and the facility did not provide a Rule 215 Notification of Change form (M-001) for the ROP.

Energy assessments and initial/subsequent tune-ups have been completed as required for the boilers/process heaters. With the exception of EUDEHYREGENHTR, tune-ups are required to be conducted every five (5) years because these boilers are rated at less than 5 MMBtu/hr. Process heater EUDEHYREGENHTR tune-up is conducted annually because it has a rating of greater than 10 MMBtu/hr. The last tune up conducted for EUDEHYREGENHTR occurred in November 2018. The report for this tune-up was reviewed on-site. Past energy assessments and tune-up reports have been completed and are on file. Boiler Maintenance is conducted as needed to ensure the units remain in good working order. Maintenance records are attached to each boiler.

The facility submitted a Notification of Compliance Status report on March 12, 2018, as required by special condition FGBOILERS VII.4. Records for November 2018 tune-up for EUDEHYREGNHTR will be provided along with the March 2019 Notification of Compliance Status Report. Per discussions with Mr. Simmons energy assessments and tune-up reports have been submitted to the EPA's Compliance and Emissions Data Reporting Interface (CEDRI) as required in FGBOILERS special condition VII.5. Although this condition only requires report submittals to EPA through CEDRI, general condition no. 23 of ROP MI-ROP-N3392-2015 requires all reports to also be submitted certified to the AQD.

As evaluated during the previous inspection, conducted on August 9, 2017, the facility appears to have met compliance with NESHAP Subpart 5(D) by January 31, 2016. Tune-ups are conducted as required by special condition FGBOILER IX.4.a-f of this Flexible Group to demonstrate continual compliance with this rule.

This unit is also subject to the NSPS for boilers between 10-100MMBtu/hr installed after June 9, 1989 promulgated in 40 CFR Part 60 Subpart Dc which requires an Initial Notification and fuel monitoring. The initial notification was received on September 27, 2017 and the facility tracks fuel usage daily.

**FGRULE285(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 and 285(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.

Mr. Steel and Mr. Simmons are aware of these reporting requirements. A log was provided (**Attachment B**) and with the exception of venting that occurred on September 26, 2018, none of the "blow down" events vented more than 1mmcf of natural gas. The log indicates that approximately 3.5mmcf was vented on September 26, 2018, which was not reported to the Pollution Emergency Alert System (PEAS) within 24 hours as required in ROP Flexible Group FGRULE285(mm) Special Condition VII.6. It was determined that the wrong pipe size and locations were used in calculating the amount of gas released. The facility engineers recalculated and determined that the amount of gas actually vented was approximately 240,000 cubic feet of gas, which is not required to be reported.

### B) Rule 201 Permitting Exemptions

The facility utilizes two (2) Smartwasher parts washing system, manufactured by Chemfree. Per Chemfree's website ([www.chemfree.com](http://www.chemfree.com)) the cleaner used in these units 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's used, eliminating hazardous waste. The facility provided an SDS during the previous inspection, no changes have been made since. Based on this SDS the vapor pressure is less than 0.1 mm Hg @ 20°C. Therefore, this system appears exempt per Rule 281(2)(e).

Taggart installed two (2) identical Schlumberger natural gas fired only gas heaters in 2018. Each unit has a maximum input heat rating of 19.4 MMBtus/hr and an output heat rating of 13 MMBtus/hr. Both of these units appear to be exempt from Rule 201 permitting requirements per Rule 282(2)(b)(i) for "fuel burning equipment used for indirect heating with a heat capacity of not more than 50 MMBtus/hr fired on sweet natural gas". However, these units do appear to be subject to the Boiler NESHAP for boilers/process heaters promulgated in 40 CFR Part 63, Subparts A and 5(D) as well as NSPS for "Small-Industrial-Commercial-Institutional Steam Generating Units" promulgated in 40 CFR Part 60 Subpart Dc. A notification of construction was received by the AQD in April 2018. The installation of these two heaters constitutes an "Off Permit Change" that involves new emission units exempt from a PTI but subject to an NSPS or MACT standard. Therefore, the facility is required to submit a Notification of Change Form (M-001) to both the AQD and the USEPA at the time of the change. As of 1/3/2019, an M-001 form has not been received by the AQD. CR notified Mr. Simmons of this requirement, by email, on 1/3/2019. Although the units are installed, they were not operational nor complete at the time of this inspection. Initial Notifications for both NESHAP Subpart 5(D) and NSPS Subpart Dc are required to be submitted no later than 15 days after the actual date of startup. CR informed Mr. Simmons of this requirement, by email, on December 19, 2018. Email correspondence is included in **Attachment C**.

### C) 2017 MAERS Submittal

Emission data for 2017 was submitted to MAERS on time and complete by the facility, with no issues noted. This data appears consistent with previous years data. A copy of Taggart's 2017 MAERS report is included in **Attachment D** and summarized below.

Pollutant	Amount
CO	114,824.63
NOx	816,525.26
PM10	10.15
PM2.5	5,854.23
SO2	180.03
VOC	36,084.75

### COMPLIANCE DETERMINATION

Based on observations, discussions and a records review, Taggart appears to be in compliance with ROP No. MI-ROP-N3392-2015.

#### Attachments

- A - Fuel Meter Records
- B - Venting Records
- C - Email Correspondence
- D - 2017 MAERS Report

NAME



DATE

1/3/2019

SUPERVISOR



