

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

N339230727

FACILITY: DTE Gas Company-Taggart Compressor Station		SRN / ID: N3392
LOCATION: 10450 NEVINS ROAD, SIX LAKES		DISTRICT: Grand Rapids
CITY: SIX LAKES		COUNTY: MONTCALM
CONTACT: Mitch Steele , Supervisor - Transmission Operations		ACTIVITY DATE: 08/21/2015
STAFF: Steve Lachance	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Unannounced Scheduled Inspection for FY '015		
RESOLVED COMPLAINTS:		

SLachance (SL) of DEQ-AQD conducted an unannounced, scheduled inspection of the facility on August 21, 2015. *(SL did contact the facility via email as he was leaving the office so as to facilitate entry and make sure responsible personnel were available.)* The purpose of the inspection was to determine the facility's compliance with the requirements of Renewable Operating Permit No. MI-ROP-N3392-2015. The facility was represented during the inspection by the following personnel:

· Mr. Mitch Steele, On-site Supervisor; Transmission Operations

### Source Description

The Detroit Energy Company owns and operates several facilities in Michigan, including facilities used in both natural gas transmission and storage. The function of a compressor station is to maintain pressure in pipelines transporting sweet natural gas into storage wells for temporary storage and also for transporting the natural gas through main pipelines to storage facilities located in Michigan or to local distribution facilities. This facility consists of a gas-liquid separator, twenty-one reciprocating engines and auxiliary equipment. The facility was constructed from 1955 through 1959. The Taggart Compressor Station's twenty-one reciprocating compressor engines are fired on sweet natural gas.

### Regulatory Setting

The stationary source is located in Montcalm County, which is currently designated by the U.S. Environmental Protection Agency (USEPA) as attainment/unclassified for all criteria pollutants.

The stationary source is subject to Title 40 of the Code of Federal Regulations (CFR) Part 70, because the potential to emit oxides of nitrogen exceeds 100 tons per year; the potential to emit of any single HAP regulated by the federal Clean Air Act, Section 112, 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.

**All of the current, on-site regulated compressor engines {EUENGINE101, EUENGINE102, EUENGINE103, EUENGINE104, EUENGINE105, EUENGINE106, EUENGINE107, EUENGINE108, EUENGINE109, EUENGINE110, EUENGINE111, EUENGINE201, EUENGINE202, EUENGINE203, EUENGINE204, EUENGINE205, EUENGINE206, EUENGINE207, EUENGINE208, EUENGINE209, EUENGINE210, EUAUX1 and EUAUX2} were installed prior to August 15, 1967. As a result, this equipment is considered "grandfathered" and is not subject to New Source Review (NSR) permitting requirements. However, future modifications of this equipment may be subject to NSR.**

No emission units at the stationary source are currently subject to the Prevention of Significant Deterioration (PSD) regulations of Part 18, Prevention of Significant Deterioration of Air Quality of Act 451 or 40 CFR 52.21 because the process equipment was constructed/installed prior to June 19, 1978, the promulgation date of the PSD regulations. However, future modifications of this equipment may be subject to PSD.

At this time, there are no GHG applicable requirements to include in the ROP. The mandatory Greenhouse Gas Reporting Rule under 40 CFR Part 98 is not an ROP applicable requirement and is not included in the ROP.

Various natural gas-fired boilers and process heaters, including EUPLT1BLR1, EUPLT1BLR2, EUPLT2BLR1, EUPLT2BLR2, EUP2BLR, EUSHOPBLR and EUDEHYREGENHTR at the stationary source are subject to the National Emission Standard for Hazardous Air Pollutants for Major Source Industrial, Commercial and Institutional Boilers and Process Heaters promulgated in 40 CFR Part 63, Subparts A and DDDDD. All affected units at the source are "existing, Gas1" units utilizing natural gas only. Table FGBOILERS includes the applicable requirements (which do not include emission limits) for the affected sources. Note that this table does not include 40 CFR 63.7555(i) as an applicable requirement based on language in the January 21, 2015 proposed reconsideration of the rule. This requirement has been proposed to be deleted from the rule for units without emission limits based on impracticality of maintaining records of startup and shutdown for these units. The date of final incorporation of the reconsidered language is not known at this time.

None of the engines are subject to the federal "RICE MACT" (National Emissions Standards for Reciprocating Internal Combustion Engines, 40 CFR Part 63, Subpart ZZZZ) based on size (>500 hp) and vintage (installed before 2002) of each engine.

No emission units are subject to the federal Compliance Assurance Monitoring rule under 40 CFR Part 64, because all emission units at the stationary source either do not have a control device or those with a control device do not have potential pre-control emissions over the major source thresholds.

### **FCE Development**

This inspection is part of AQD's "Full Compliance Evaluation, i.e., FCE" of the facility for the current fiscal year. While this report focuses largely on the findings during the August 21, 2015 on-site inspection, the attached "FCE Summary Report" outlines the results of all Partial Compliance Evaluations completed in the past year as part of this FCE.

### **On-Site Inspection Activities**

SL arrived in the vicinity of the facility at about 10 AM, 8/21/15. Weather conditions were clear, generally calm and about 70 degrees F. No undue odors or visible emissions attributable to the facility were noted; but in fact, no facility operations (engines) were apparent.

The on-site inspection began with greetings and an entrance interview with Mr. Steele. SL stated his intention to complete a compliance inspection and shared DEQ's "Environmental Inspections: Rights and Responsibilities" brochure with Mr. Steele. Mr. Steele provided a quick overview of facility operations, functions and equipment; the 21 on-site engines compress, store and distribute natural gas. The facility operates on a "Last In First Out" principle for the regional storage and distribution of natural gas.

The facility consists of two "sections", "Plant 1" with 11 engines, built in about 1955 and "Plant 2" with 10 engines, built in about 1959.

SL noted that actual source emissions of NOx are reported as about 500 tons per year; and two engines had reported increases in emissions of over 40 tons between 2013 and 2014. Mr. Steele stated that the engines are appropriately maintained, but the engines have reportedly not ever been modified or reconstructed. SL did lead a discussion on the potential significance of these emissions and meaning of these terms with respect to Prevention of

Significant Deterioration (PSD)/ New Source Review (NSR). Specifically, non-routine maintenance activities or reconstruction of a unit with associated reclamation of potential or otherwise increased emissions could require permitting activities. Mr. Steele explained that increases in emissions of a given unit are just based on increased use of that unit; this could be based on system needs, engine availability, or just ongoing performance of a given engine.

DTE personnel had previously demonstrated awareness of the National Emissions Standards for Hazardous Air Pollutants from Reciprocating Internal Combustion Engines ("RICE MACT") and SL had concurred that large (>500 hp), existing (prior to 2002) stationary engines operating on natural gas were not subject to this rule.

"Boiler MACT" requirements per 40 CFR 63 Subpart DDDDD for several small natural gas-fired boilers have been incorporated into the new ROP. The compliance date is January 31, 2016, and SL has dealt extensively with DTE on Boiler MACT issues. As such, these requirements were not further reviewed during this site visit.

Prior to walking through the facility, Mr. Steele confirmed that there were no issues on-site today, and that no engines were operating. Gas was flowing, but just based on differential pressures between the different storage fields; no compression was required this day.

## PLANT 1

Plant 1 consists of two "small"; i.e., 1000 hp engines and 9 "large", i.e., 2000 hp engines. Mr. Steele confirmed that all operate on natural gas, only. None were in service, but all were clean and apparently kept in good repair.

The facility's Control Room is in Plant 1, and SL met with the day's Operator. SL confirmed the origin and path of engine use and fuel consumption records. (See discussion of records, below.)

## PLANT 2

SL observed the 10 engines. None were in use at this time. Again, equipment appeared to be well maintained and "ready to go." One engine was undergoing routine maintenance and unavailable. There were no indications of current non-routine maintenance activities.

## **ROP REVIEW**

### **ENGINES; FGINGERSOLLRAND**

Includes nineteen 2,000 horsepower, and two 1,000 horsepower natural gas fired reciprocating engines used to run compressors that move natural gas through the pipeline and storage system. Per Mr. Steele, all function identically, and can be used interchangeably in the system.

This requires **use of natural gas only** (SC III.1) as fuel; and maintenance of **monthly natural gas usage and hours of operation for each engine** (SC VI.1.) The facility appears to comply; all requested records were readily available, current, and well-organized. From most broad use, refining down to origin of the records, please see:

- Attachment A; Taggart Field and Fuel Use for July 2015; Compressor fuel used = 4,234 mcf
- Attachment B; Data Input Sheet for July 2015; hours of operation for each engine and monthly fuel use; totaling 4,234 mcf
- Attachment C; Daily Engine Logs & Fuel Usage for July 2015; shows which days these hours were accumulated, fuel use per engine per month and a total engine fuel use of 4,234 mcf
- Attachment D; Fuel Meter Reads/Engine Reads for July 2015 shows the hand-recorded ending fuel meter reading for the month for each engine; and is consistent with the values on Attachment C
- Attachment D'; Fuel Meter Reads/Engine Reads for July 2015 shows the administratively entered (i.e., typed) values for these records, and these are the same as the values in Attachment D
- Attachment E; Daily Dispatch Report for Plants 1 and 2 shows no operations of the engines on the day prior to the inspection;
- Attachment F; Daily Dispatch Repoort for Plants 1 and 2 for the date of last operation (August 10, 2015) shows which engines operated on that date
- Attachment G; Daily Operating Report for Plant 1 or 2; provides detailed operations for the last day of operation (August 10, 2015): which engines, how many hours, etc.;

And:

- SL confirmed that the "Engine Reads" as depicted in Attachment D have appropriately changed for the engines known to have operated in August; and have not changed for engines that have not operated this month.

Following this path, SL confirmed the origin, management and consistency of each of these required monitoring elements to his satisfaction.

### **BLOW-DOWNS; FGRULE285(mm)**

Includes any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278 and 285(mm).

Mr. Steele indicated that internal communications and responsibilities have been clarified and reinforced, and that all such events will be handled properly in the future. Note that Compliance Activity CA\_N339227120 (9/29/14) documents a failed reporting incident and subsequent issuance of a Violation Notice (VN); but SL considers the VN to have been addressed and the violation resolved. There have been no other instances of this type since; SL considers the facility to currently be in compliance with these requirements.

### **Exit Interview**

No other air issues were noted on this day but SL identified the following topics for further discussion;

- Use of emission factors from 1994 tests as the basis for emissions reporting; pending a request from AQD for further testing, this is acceptable. SL stated that he thought such

a test (or set of tests) is warranted based on the magnitude of facility emissions and time elapsed since the last test.

- SL intends to conduct Visible Emissions assessments of operating engines; most operations are in the colder months. SL will re-visit the site as time allows during these cold-weather periods.
- Mr. Steele mentioned Leak Detection and Repair (LDAR), but SL was unaware of any applicable Air Quality (Clean Air Act (CAA)) requirements for such. Mr. Steele was not positive of the underlying applicable requirement (UAR) for LDAR. If the UAR for LDAR is from the CAA, then these will need to be addressed in the ROP.

SL will explore these internally and then discuss with DTE as appropriate.

### Summary

SL finds the facility to be in compliance with ROP No. MI-ROP-N3392-2015 at the time of the inspection.

NAME



DATE

8/24/15

SUPERVISOR

