

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

B857331943

FACILITY: Great Lakes Gas Trans Station #11 (TransCanada #11)		SRN / ID: B8573
LOCATION: 10339 GREAT LAKES RD, BOYNE FALLS		DISTRICT: Gaylord
CITY: BOYNE FALLS		COUNTY: CHARLEVOIX
CONTACT: Tiffany Grady , Air Quality Specialist		ACTIVITY DATE: 10/27/2015
STAFF: Gloria Torello	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Fiscal Year 2016 Scheduled Inspection		
RESOLVED COMPLAINTS:		

**SRN: B8573 Name: Great Lakes Gas Transmission Station 11**

**Directions:** The facility is located in Charlevoix County. From Old-27 turn west onto Thumb Lake Road, turn north on Magee Road. Stay on Magee Road, do not go straight on Penfold Road instead follow Magee Road to the west, then turn onto Great Lakes Transmission Road.

**Facility:** This Great Lakes Gas Transmission facility serves to maintain pressure in pipelines to transport natural gas from the mainline to and from storage facilities or to local distributions companies.

**Permit.** On July 30, 2013 the AQD issued renewable operating permit (ROP) MI-ROP-B8573-2013 which expires on July 30, 2018. An administratively complete ROP renewal application is due to AQD between January 30, 2017 and January 30, 2018.

The permit includes, and found on site are, two 158.8 MMBtu/hr natural gas fired turbine engines rated at 16,000 hp, an emergency electrical generator, and a natural gas fired boiler.

**Malfunction Abatement Plan (MAP):** The ROP does not require a MAP.

**MAERS:** The 2014 MAERS reported from the natural gas fired turbine engines:

- NOx
  - Unit 1101 9.1 tpy (268 tpy permitted),
  - Unit 1102 12.5 tpy (268 tpy permitted).

**Records:** AQD requested and received these ROP required records for the period June 2015 to the present for FGAVONS (natural gas fired turbine engines) VI.1:

- a. Hours of operation during the month (the ROP does not limit the hours of operation);
- b. Fuel consumption (the ROP does not limit fuel consumption);
- c. NOx emissions in tons per month (there is not an ROP monthly NOx limit);
- d. NOx emissions in tons per year. (The ROP limits each natural gas fired turbine engine to 268 tpy NOx. The ROP does not have a 12-month rolling NOx limit.)
  - Unit 1101 1.81 tpy as of September 2015,
  - Unit 1102 13.43 tpy as of September 2015.

The permittee demonstrated ongoing compliance with the permit's record keeping requirements.

**MACTS:** The facility is minor for HAPs, making the facility an area source for these MACTS:

- 40 CFR, Part 63, Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources; and
- 40 CFR, Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines for Area Sources.

The EPA has not delegated these Subparts to MI AQD and the Subparts were not reviewed.

**MACES:**

- Facility Information was reviewed and no change was made.
- Regulatory Info, Regulatory Summary was reviewed and the following change was made:
  - HAPs was marked as Minor.

**Brochure:** At the site visit, an inspection brochure as given to Bruce Ellinwood. A brochure will also be forwarded to the permittee via email with the site inspection notes.

**Compliance:** A review of AQD files, and MACES report generator, show no outstanding violation.

**Inspection:** Mr. Bruce Ellinwood of Great Lakes Transmission met Gloria Torello and Bill Rogers of AQD at the facility for this unannounced site visit. Torello provided Bruce an inspection brochure. Bruce has worked with the organization for 40 years.

Natural gas fired turbine engine Unit 1102 operated during the site visit. Torello observed the turbine engine stack which had a maximum of 5 percent visible emissions. Only one of the turbine engines operates at a given time. These are jet engines.

The EUBOILER natural gas fired boiler, and EUAPU emergency electrical generator, are located in the basement of the office building. The EUBOILER operated during the site visit and no visible emission could be observed from any stack on the office building.

Per the ROP staff report, "Unit 1103" was dismantled and removed in 2010. Unit 1103 building is on site and labeled. In the building are the remains of Unit 1103 including a blind flanged pipe.

**Permit Conditions:**

EUAPU Emergency electrical generator. Special Condition (SC) IX.1. The emergency generator engine is subject to regulations under 40 CFR Part 63, Subpart ZZZZ. This is an area source. The EPA has not delegated this Subpart to MI AQD and the Subpart was not reviewed.

EUBOILER One Natural gas fired boiler. SC IX.1. The boiler is subject to regulations under 40 CFR Part 63, Subpart JJJJJJ. This is an area source. The EPA has not delegated this Subpart to MI AQD and the Subpart was not reviewed.

FGAVONS Two natural gas fired turbine engines.

SC I.3. The ROP permits 268 tpy NOx from each turbine engine. The submitted records and the 2014 MAERS reported NOx emissions below the permitted limit.

SC I.1, 2, 4, 5 and V.1, 2. These NOx and CO pollutant limits are in ppmv, and pph. Testing is the demonstration of compliance. April 2011 was the last time the facility was tested. Any issues would have been addressed when the test results were reviewed. In 2016 the next testing is required.

SC.VI.1 a-d. Records are made of hours of operation, fuel consumption, NOx emissions per month and per year.

SC VII. The permittee is up to date with reporting.

SC VIII Stack/Vent Restrictions. The ROP limits Units 1101 and 1102 stacks to: "Maximum Exhaust Dimensions (inches) 135.6."

The Stack/Vent Restrictions originated in Permit to Install (PTI) 438-87B condition 7, which includes in part:

"The exhaust gases from each Rolls Royce Avon-76G turbine shall be discharged unobstructed vertically upwards to the ambient air from a stack with a maximum equivalent diameter of 135.6 inches..."

When the ROP is renewed, it is suggest the SC VIII Stack/Vent Restrictions be written to more clearly reflect the original condition in PTI 438-87B.

In the ~~me~~ mean time, Torello asked Bruce if the stack vents on Units 1101 and 1102 were ever changed or modified since the structure was built. To Bruce's knowledge the stacks have not been changed or modified.

**Conclusions:**

When the ROP is renewed, it is suggest the FGAVONS, special conditions for VIII Stack/Vent Restrictions be written to more clearly reflect the original special condition number 7 in PTI 438-87B.

Via onsite inspection, review of records, discussion with Great Lakes Transmission staff, and review of PTI 438-87B, AQD determines the permittee demonstrates compliance with the conditions of ROP MI-ROP-B8573.

NAME Gavin Torello

DATE 10-27-15 SUPERVISOR



