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

FACILITY: Great Lakes Gas	Trans Station #11 (TransCanada #11	SRN / ID: B8573
LOCATION: 10339 GREAT I	AKES RD, BOYNE FALLS	DISTRICT: Gaylord
CITY: BOYNE FALLS		COUNTY: CHARLEVOIX
CONTACT:		ACTIVITY DATE: 07/29/2020
STAFF: Bill Rogers	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
	tion and record review for FCE	
RESOLVED COMPLAINTS:		

On Wednesday, July 29, 2020, I inspected Great Lakes Gas Transmission's Boyne Falls Compressor Station near Boyne Falls. Mr. Dennis Beehler showed me around. Mr. Bruce Bendes provided records to review. The inspection and records review were to determine compliance with the facility's permit, MI-ROP-B8573-2019, reissued May 29, 2019.

The facility permit includes three emission units:

- EUUNIT1101 and EUUNIT1102, two natural gas fired Rolls-Royce Avon 76G gas turbine units rated at 16,000 horsepower each, driving natural gas compressors to move natural gas down a pipeline. These are combined into flexible group FGAVON in the permit.
- EUAPU, a 408 hp natural gas fired, spark ignition rich burn reciprocating internal combustion engine.

In previous inspections we also checked on a natural gas fired boiler in the control room-office-shop building. This is still in place, but is no longer covered in the ROP. While renewing the ROP we had determined it was exempt from permit requirements.

EUAPU

Table EUAPU, Condition IV.1, requires the engine be equipped with a non-resettable hour meter. The engine has a Hobbs brand hour meter with no reset button. It indicated 1630 total hours of operation. This number is consistent with facility engine use records GLGT provided us.

Condition VI.2 requires logging hours of operation once per calendar month. This is being done. The company provided us with copies of the engine use log. The log shows the company runs the engine about haif an hour to an hour most months. For the period covered by the log we have, the engine was only run for test and maintenance purposes.

Condition VI.3 requires a maintenance log. This is being kept. GLGT provided us with copies of recent pages of this log.

Condition IX.1 requires changing the oil and filter each year or 500 hours of operation. Condition IX.2 requires inspecting spark plugs. IX.3 requires inspecting hoses and belts. A compliance checklist GLGT provided us states all this was done. In addition maintenance receipts indicate several hoses, hose clamps, and gaskets were replaced in tracking down a coolant leak. Required inspections were performed most recently 7/10/2020.

FGAVONS

Table FGAVONS, Condition I.1, sets an emission limit of 82 parts per million of nitrogen oxides (NOx) by volume. During the stack test conducted on Wednesday, December 7, 2016, EUUNIT1101 emitted 56.72 PPM and EUUNIT1102 emitted 63.40 PPM of NOx. This complies with the permit condition.

Condition I.2 sets an emission limit of 61.2 pounds NOx per unit per hour. During the stack test EUUNIT1101 emitted 31.31 pounds per hour and EUUNIT1102 emitted 37.75 pounds per hour of NOx. This complies with the permit condition.

Condition I.3 sets an emission limit of 268 tons of NOx per unit per year. Emission data provided by Great Lakes Gas Transmission, shows that as of June of this year Unit 1101 had emitted 35.39 tons per 12 month rolling time period and Unit 1102 had emitted 13.19 tons of NOx per 12 month rolling time period. This complies with the permit condition.

Condition I.4 sets an emission limit of 200 parts per million of carbon monoxide (CO) by volume. During the stack test, EUUNIT1101 emitted 120.58 parts per million and EUUNIT1102 emitted 147.69 parts per million of CO. This complies with the permit limit.

Condition I.5 sets an emission limit of 140 pounds of CO per unit per hour. During the stack test, EUUNIT1101 emitted 80.24 pounds per hour and EUUNIT1102 emitted 87.86 pounds per hour of CO. This complies with the permit limit.

Conditions V.1 and V.2 require stack testing for NOx and CO, respectively, each 5 years. The most recent series of stack tests were completed Wednesday, December 7, 2017, less than 5 years before this inspection. This complies with the permit condition.

Condition VI.1 requires recording hours of operation, fuel consumption, NOx emissions in tons per month and NOx emissions in tons per year. Example records provided by Great Lakes Gas Transmission show all the information required by this permit condition.

Conditions VIII.1 and VIII.2 require stacks with a minimum height above the ground of 45 feet and "maximum exhaust dimensions" of 135.6 inches. We determined in past inspections that the stacks at this site complied with this condition. They have not changed, so they should still comply with it.

COMMENTS

The facility appears unchanged from previous inspections. Maintenance appears to be very good.

Due to the current pandemic, this was an announced inspection.

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Image 1(apu-maint1) : apu service receipt

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Facility: CS 11 Bayne Falls	Engine S/N: EUAPU - Kohler GV12-323IPG Generator Engine, 408 hp, 3-25 MMBin/hr
Engine Type: EUAPU - Kobler GV12-525IPG G	inerator Eugine, 408 dp, 3.26 MMBtu/hr

Activity	Date Completed	Terbaician	Rémistic Deficiencies:
Spark Plug Inspection (Natural Gas or Propane Fired Engines)	7-10-2020	KK.	Commins certified maintenance/ inspection performed
Air Cleaner Inspection (Diesel- Fired Engines)	7-10-2020	ĸĸ	Cummins certified maintenance/inspection performed
Bells and Hoses Inspection	7-10-2020	KK	Cummins certified maintenance/ inspection performed
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"An oil sample should be sent for analysis or changed."

Image 2(apu-maint2) : apu maintenance checklist

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Boyne	Falls	2	2020	Máy	170	22,086,24
(GL11) Boyne GL111	Falls	2	2020	Jana	632	82,122.32

Unit Monthly

Image 3(fueluse) : Fuel use and hours of operation

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Image 4(NOx table) : NOx per 12 month rolling time period

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Image 5(APU hours) : APU hours of operation log

William J. Digitally signed by William J. J. Rogers Jr. Date; 2020.08,14 12:25:04		Shane Nixon Digitally signed by Shane Nixon Date: 2020.08.14 12:25:38
NAME	DATE	SUPERVISOR