

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

N375838204

FACILITY: GREAT LAKES GAS TRANSMISSION STATION #10		SRN / ID: N3758
LOCATION: NAUBINWAY ROAD, NAUBINWAY		DISTRICT: Upper Peninsula
CITY: NAUBINWAY		COUNTY: MACKINAC
CONTACT: Brad Stermer , Sr. Environmental Specialist		ACTIVITY DATE: 12/06/2016
STAFF: Joe Scanlan	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled inspection of Title V-permitted gas transmission facility to ensure compliance with ROP# MI-ROP-N3758-2013.		
RESOLVED COMPLAINTS:		

FACILITY: Great Lakes Gas Transmission (GLGT) Naubinway Compressor Station #10, ROP# MI-ROP-N3758-2013

INSPECTION DATE: 12/06/2016

MDEQ-AQD STAFF:

- Joseph Scanlan, EQA

FACILITY REPRESENTATIVE:

- Sean Bennett, TransCanada

LOCATION:

The Naubinway Compressor Station #10 is located approximately 1.5 miles north of US-2 on Naubinway Road, north of the unincorporated community of Naubinway, in Garfield Township, Mackinaw County. The station and main vehicle ingress/egress are located on the east side of Naubinway Road just north of the Elbow Lake Road intersection. There is a 6' chain link security fence topped with barbed wire surrounding the property and a single gated entrance with an intercom system. The surrounding area is rural. The only developed property nearby is an active gravel pit approximately 800' to the west of Naubinway Road, accessed via Elbow Lake Road.

SUMMARY OF OPERATIONS:

Naubinway Compressor Station #10 is one of five stationary compressor stations in the Upper Peninsula used to maintain pressure in GLGT's mainline line to and from storage facilities located in the U.P. or to local distribution companies or other end users. These compressor stations ensure transportation and delivery of gas remains steady and uninterrupted. Station #10 operates two natural gas-fired turbines to recompress gas during transmission. The gas turbine/compressor assembly system is comprised of three components: a gas generator, a power turbine, and a gas compressor. The units receive the gas from the pipeline transmission system, compresses the gas, and then discharges it to the pipeline transmission system at a higher pressure. The station does not operate a natural gas storage field or dehydration system. Transmission/compressor station #10A in Brevort is unmanned and may be operated remotely from Station #10. In addition, all stations can be operated remotely from the main control facility located in Texas.

The facility also has a natural gas-fired generator used to produce electrical power to the station in the event of a power outage and auxiliary equipment including a natural gas-fired boiler, two natural gas-fired space heaters and six above-ground storage tanks.

HISTORY:

Naubinway Compressor Station #10 consists of two natural gas-fired turbines. Compressor Building 1001 houses EUUNIT1001 (Unit 1001) which was installed in 1969. EUUNIT1001 is a 16,000 horsepower Rolls Royce Avon 76G natural gas-fired turbine/compressor. Compressor Building 1002 houses EUUNIT1002 (Unit 1002) which was installed in 1971. EUUNIT1002 is also a 16,000 horsepower Rolls Royce Avon 76G natural gas-fired turbine/compressor.

The four-stroke rich burn emergency generator (EUGENERATOR) is a 201 horsepower Waukesha F1197G and was installed in 1968 to provide power to the station in the event of a power outage. EUGENERATOR operates exclusively on natural gas. No air use permits were required at the time of installation of the generator, however it is now subject to the MACT standards in 40 CFR part 63 subpart ZZZZ for stationary RICE emergency generators.

REGULATORY APPLICABILITY:

ROP# MI-ROP-N3758-2013

Naubinway Compressor Station #10 turbine compressors EUUNIT1001 and EUUNIT1002 are subject to 40 CFR, Part 70 because of the potential emissions of NOx and CO exceeds 100 tons per year. This source is not considered a major source of HAP emissions because the potential to emit of any single HAP regulated by the Clean Air Act, Section 112 is less than 10 tons per year and the potential to emit of all HAPs combined is less than 25 tons per year. This source is subject to Prevention of Significant Deterioration (PSD) regulations because the stationary source has the potential to emit NOx and CO greater than 100 tons per year.

EUGENERATOR is subject to the stationary RICE emergency generator MACT standards, 40 CFR part 63 subpart ZZZZ.

INSPECTION:

*NOTE: Prior to entering the turbine buildings the facility's 'fire eyes' system must be disengaged in order to prevent the emergency shutdown system from coming online while taking photos (camera flash is a concern). Materials limits for turbines EUUNIT1001 and EUUNIT1002 require the units to burn only natural gas, which is the only fuel available. Both EUUNIT1001 and 1002 are identical stationary Rolls Royce Avon 76G turbine compressors and each unit is housed in individual buildings.

On 12/06/2016 I conducted a scheduled visit of GLGT Naubinway Compressor Station #10. PPE worn during this inspection included steel-toed boots, safety vest, safety glasses and hardhat, however due to the time of day there was no one at the facility.

TransCanda owns and operates this facility. The contact at the site is TransCanada employee Mr. Sean Bennett. The turbines do not operate often during the warmer seasons and rarely operate during these times to boost pressure in the system. During peak demand times when the outside temperature drops and there is a much higher need for natural gas (residential/commercial building heat, etc.) the turbines operate quite frequently--usually with one operating at all times. I did hear a low murmur from the facility indicating that one or both units were running at the time of my visit; both units operated in December, with EUUNIT1002 having the most hours.

EU DETAILS:

No.	Emission Unit	Description	Permit #	Comp. Status
1	EUUNIT1001	Rolls Royce Avon 76G natural gas-fired turbine/compressor	ROP-N3758-2013	C
2	EUUNIT1002	Rolls Royce Avon 76G natural gas-fired turbine/compressor	ROP-N3758-2013	C
3	EUGENERATOR	Waukesha Model F1197G natural gas-fired 201 hp	40 CFR part 63 subpart ZZZZ	C

Materials Limit

The turbine compressors EUUNIT1001 and EUUNIT1002 shall fire only natural gas to ensure compliance with the visible emission limitations of Rule 301.

- Both EUUNIT1001 and EUUNIT1002 continue to operate exclusively on natural gas.

Monitoring/Recordkeeping

Records of all fuel types fired in EUUNIT1001 and EUUNIT1002 shall be maintained on file for a period of five years. Mr. Bennett provided records when requested.

- EUUNIT1001 operated a total of 477.25 hours during the last 12 months (January 2016 – December 2016) consuming a total of 63.20 MMSCF of natural gas and was last operated December 2016 for 88.42 hours consuming 11.53 MMSCF of fuel; and
- EUUNIT1002 operated a total of 622.75 hours during the last 12 months (January 2016 – December 2016) consuming a total of 76.53 MMSCF of natural gas and was last operated December 2016 for 221.59 hours consuming 19.22 MMSCF of fuel.

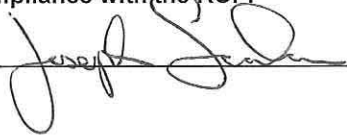
EUGENERATOR records shall be maintained on file for a period of five years. Records include hours of operation in emergency and non-emergency modes and any maintenance performed on the stationary emergency generator.

- EUGENERATOR operated a total of 5.4 hours in non-emergency mode and 5.2 hours in emergency mode over the last 12 months; and
- EUGENERATOR had the following maintenance performed over the last 12 months
 - 9/21/16 spark plug inspection--plugs were gapped and look good;
 - 9/21/16 air cleaner inspection--air cleaner looked good;
 - 9/21/16 belts and hoses inspection--belts and hoses in good shape;
 - 9/21/16 oil sample collected--OK; analyzed by Fluid Life; all tests performed were within specification.

SUMMARY:

No violations of ROP #MI-ROP-N3758-2013 were observed at the time of this inspection and the facility appears to be in compliance with the ROP.

NAME



DATE

1/10/17

SUPERVISOR



