

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

N558155404

FACILITY: Great Lakes Gas - Farwell Compressor Station 12		SRN / ID: N5581
LOCATION: 3400 HICKORY RD, LAKE GEORGE		DISTRICT: Bay City
CITY: LAKE GEORGE		COUNTY: CLARE
CONTACT: Bruce Bendes , Environmental Specialist		ACTIVITY DATE: 09/17/2020
STAFF: Nathanael Gentle	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Inspection of MI-ROP-N5581-2018. Facility was in compliance.		
RESOLVED COMPLAINTS:		

An inspection at Great Lakes Gas - Farwell Compressor Station 12, N5581, was completed on 9/17/2020 by Nathanael Gentle, EGLE/AQD and Chris Hare, EGLE/AQD. Prior to arriving onsite, a records request was submitted. Ruth Jenson, Air Quality Specialist with TC Energy and Bruce Bendes, Senior Environmental Specialist- Great Lakes Region with TC Energy provided the requested records. We arrived onsite at 9 AM. Onsite we met with Bruce Bendes, Brian A. Day, Area Manager, and Ron Romanowski, Mechanical Technician, and toured the facility.

Source Description:

The Great Lakes Gas - Farwell Compressor Station 12, N5581, is a natural gas compression and transmission station that operates five reciprocating engines, a turbine, and three boilers. The reciprocating engines and turbines are used to drive six compressors which raise the pressure of gas in the pipeline and provide the force required to move gas through the pipeline. The three boilers are used for heating purposes.

The Great Lakes Gas- Farwell Compressor Station 12 consists of:

- EU-UNIT1206, a Solar Taurus 70 stationary natural gas fired turbine used to power a natural gas pipeline compressor. The original turbine was installed 4/30/1998. A replacement turbine was installed in July, 2018. The turbine has a rated capacity of 9,700 hp and a heat input of 25 MMBtu/hr.
- FG-ENGINES
 - o EU-UNIT1201, a Cooper Bessemer 10V-250 natural gas reciprocating engine with a rated capacity of 3,400hp and a heat input of 8.7 MMBtu/hr. Engine was installed 6/1/1968.
 - o EU-UNIT 1202, a Cooper Bessemer 10V-250 natural gas reciprocating engine with a rated capacity of 3,400hp and a heat input of 8.7 MMBtu/hr. Engine was installed 6/1/1968.
 - o EU-UNIT 1203, a Cooper Bessemer 10V-250 natural gas reciprocating engine with a rated capacity of 3,400hp and a heat input of 8.7 MMBtu/hr. Engine was installed 6/1/1968.
 - o EU-UNIT 1204, a Cooper Bessemer 10V-250 natural gas reciprocating engine with a rated capacity of 3,400hp and a heat input of 8.7 MMBtu/hr. Engine was installed 6/1/1969.
 - o EU-UNIT 1205, a Cooper Bessemer 16W330 natural gas reciprocating engine with a rated capacity of 8,000hp and a heat input of 20 MMBtu/hr. Engine was installed on 6/1/1975.
- FG-BOILERMACT
 - o EUBOILER1, a Hurst S3-G-150-15-W natural gas boiler with a heat input of 4.18 MMBtu/hr. Boiler was installed in 1998.
 - o EUBOILER2, a Hurst S3-G-150-15-W natural gas boiler with a heat input of 4.18 MMBtu/hr. Boiler was installed in 1999.
 - o EUBOILER3, a Weil-McLain PFG-7 natural gas boiler with a heat input of 0.39 MMBtu/hr. Boiler was installed in 1990.

In addition, the facility contains the following units listed as exempt:

- EU-SpaceHeaters, eleven natural gas fired space heaters with a total maximum heat rated capacity of 1.235 MMBtu/hr. PTI exemption rule citation: R 336.1282(2)(b)(i)
- EU-Separator, an 8400 gal condensate storage tank. PTI exemption rule citation: R 336.1284(2)(e)
- EU-Condensate, a 6500 gal condensate storage tank. PTI exemption rule citation: R 336.1284(2)(e)
- EU-LubeOil, a 10,000 gal lube oil storage tank. PTI exemption rule citation: R 336.1284(2)(c)
- EU-UsedOil, a 1,500 gal used oil storage tank. PTI exemption rule citation: R 336.1284(2)(c)
- EU-Antifreeze, Ambitrol FL50 storage tank, 8,000 gal (50% inhibitor, 50% glycol). PTI exemption rule citation: R 336.1284(2)(i)

- EU-Diesel, a 300 gal diesel storage tank. PTI exemption rule citation: R 336.1284(2)(i)
- EU-Gasoline, a 300 gal gasoline storage tank. PTI exemption rule citation: R 336.1284(2)(g)(ii)
- EUGENERATOR1, Caterpillar G3516 SITA 1053hp four stroke lean burn natural gas-fired auxiliary power unit (APU) with a maximum heat capacity of 7,909,980 Btu/hr. PTI exemption rule citation: R 336.1285(2)(g)

EU-UNIT1206: Compliant

Records were requested for the last 12 months of monthly fuel usage and operating hours. The facility has proper records in place. Operating hours for the last 12 months total 195 hours, with maximum use in December 2019 at 118 hours. Fuel usage for the past 12 months totaled 14389.5695 MCF, with maximum use in December 2019 at 8695.6944 MCF. Verification of sulfur content within the natural gas used to power the turbine was provided by the facility. The natural gas being used is pipeline quality. Pursuant to R336.1213(3) emission testing for NOX and CO must be completed within the first 3-year period after issuance of the ROP; or a statistical demonstration must be completed. Facility personnel were reminded of this requirement during the inspection. They said testing will likely be completed in the spring, 2021. The stack height and width were visually verified to be in compliance with ROP requirements of minimum height of 45 ft and a maximum inside diameter of 66 inches.

FG-ENGINES: Compliant

Verification of sulfur content within the natural gas used to power the engines was provided by the facility. The natural gas being used is pipeline quality. EU-UNIT 1201 through UNIT 1203 are identical Cooper Bessemer engines capable of producing 3400 hp at 250 rpm. Pictures of the engine tags were taken and verified the permitted engines are in place. EU-UNIT 1202 is missing its tag resulting from previous maintenance in which the oil pump was replaced. EU-UNIT 1204 is also a Cooper Bessemer engine capable of producing 3400 hp. Facility personnel said the unit was rebuilt a few years prior and outfitted with auto balancing technology. The technology allows the unit to run more efficiently. EU-UNIT 1204 gets ran more than the other engines due to its increased efficiency. The engine tag was checked to verify information matched that listed in the ROP. EU-UNIT 1205 is a larger Cooper Bessemer engine capable of producing 8,000 hp. Due to its larger size, EU-UNIT 1205 is preferentially ran during periods in which more horsepower is needed. The engine tag on EU-UNIT 1205 was verified to match information listed in the permit. Because all the units were installed prior to June 12, 2006 they are not subject to 40 CFR Part 60, Subpart JJJJ. No modifications or reconstructions have been completed since this date. Stack heights and diameters for EU-UNIT 1201 through UNIT 1205 were visually verified while onsite to be in compliance with ROP requirements.

FG-BOILERMACT: Compliant

The facility operates three boilers used for heating purposes. The Weil-McLain Model PFG-7 is used to heat a concrete ramp to prevent ice buildup during the winter months. Two Hurst Model S-G-150-15-W are used to heat buildings. One is used to heat the engine room; the other is used to heat the building housing the turbine. Records were requested for the most recent tune-ups and burner inspections for EUBOILER1, EUBOILER2 and EUBOILER3. Tune-ups and burner inspections were completed on all 3 boilers on 7/22/2020. Proper documentation was maintained, demonstrating compliance with tune-up and burner inspection requirements. A Notification of Compliance Status received on 9/10/2015 indicated the facility complies with the required one-time energy assessment required to be completed by January 31, 2016 according to 40 CFR 63.7530(e). Tags on all three boilers were verified to match the information listed in the facility's permit.

Summary:

At the time of our 9/17/2020 scheduled compliance inspection, the Great Lakes Gas- Farwell Compressor Station No. 12 appeared to be in compliance with the requirements of ROP No. MI-ROP-N5581-2018.

NAME *Nathanael Dentel*

DATE 9/28/2020

SUPERVISOR *Chris Hare*