



REGION 5

CHICAGO, IL 60604

MEMORANDUM

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Great Lakes Gas Transmission Station #5, Cloquet, Minnesota

FROM: Emma Leeds, Environmental Engineer
AECAB (IL/IN)

THRU: Nathan Frank, Section Supervisor
AECAB (IL/IN)

TO: File

BASIC INFORMATION

Facility Name: Great Lakes Gas Transmission Station #5

Facility Location: 3471 Brandon Rd., Cloquet, Minnesota 55720. Within the Fond du Lac Band of Lake Superior Chippewa Reservation. (46.785811, -92.701318)

Date of Inspection: August 29, 2024

EPA Inspector(s):

1. Emma Leeds, Environmental Engineer
2. Jacob Herbers, Environmental Engineer

Other Attendees:

1. Mark Bonitz, Mechanical Technician, TC Energy
2. Chad Bandy, EIC Technician, TC Energy
3. Paige Huhta, Air Program Coordinator, Fond du Lac Band of Lake Superior Chippewa

Contact Email Address: mark.bonitz@tcenergy.com

Purpose of Inspection: Investigate compliance with the facility's Clean Air Act Title V Permit and perform full compliance evaluation of facility on Tribal lands.

Facility Type: Gas pipeline compressor station

Facility Name: Great Lakes Gas Transmission Station #5
Facility Location: 3471 Brandon Rd. Cloquet, Minnesota 55720
Date of Inspection: August 29, 2024

Regulations Central to Inspection: 40 CFR Part 63 Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE), 40 CFR Part 60 Subpart GG - Standards of Performance for Stationary Gas Turbines, and 40 CFR Part 71 - Federal Operating Permit Programs.

Arrival Time: 10:00 CDT

Departure Time: 11:40 CDT

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
- ☒ Stated authority and purpose of inspection
- ☒ Small Business Resource Information Sheet not provided. Reason: not a small business
- ☒ Provided CBI warning to facility

The following information was obtained verbally from Mark Bonitz and Chad Bandy unless otherwise noted.

Process Description:

TC Energy Corporation owns Great Lakes Gas Transmission (GLGT). GLGT operates two pipelines that deliver natural gas from the Canadian border in northwest Minnesota, to the Canadian border in southeast Michigan. GLGT operates a gas compressor station (Station #5) at the Cloquet, Minnesota location. Station #5 operates three gas-fired turbines/compressors: Turbine 501 with a rated capacity of approximately 25,000 horsepower (hp), Turbine 502 with a rated capacity of 14,000 hp, and Turbine 503 with a rated capacity of 16,000 hp. The turbines at the stations run as needed to provide motive force for 24/7 gas flow through the two pipelines simultaneously, although they can and do occasionally provide force to each pipeline separately (split lines). Usually only two turbine units operate at a time, with the 3rd acting as backup. There is a common header between the two pipelines right before the compressors. There is also one gas-fired standby emergency electrical generator on-site. All four of these units run with gas from the pipelines.

Staff Interview: GLGT Station #5 typically operates with 2 employees on-site from 7:00 AM – 3:30 PM. At the time of the inspection, the facility was undergoing upgrades to automate the facility with programmable logic controllers (PLCs). For this reason, the facility had a complete blowdown of all three units in May 2024, and Turbine 503 has not come online since. Additional maintenance and upgrades were performed during this shutdown, including installing a new suction valve on Turbine 502, installing a new check valve on Turbine 501, and certain preventative maintenance. Otherwise, there had been no emergency shutdowns since the previous CAA inspection in 2022. Last year, Turbines 502 and 503 mostly ran, with Turbine 501 used as backup.

TOUR INFORMATION

EPA Toured the Facility: Yes

Data Collected and Observations:

Natural gas in the pipelines was bypassing Station #5 entirely at the time of the tour. EPA toured the facility starting at Turbine 501, which was in the process of shutting down. Facility personnel stated that Turbine 501 had recently been refurbished, and EPA viewed the new PLC for Turbine 501 (Image 3) showing that all valves were closed. Next, EPA observed Turbine 503, which was also in the process of shutting down. EPA took a video of the Turbine 503 blowdown stack with a Forward-Looking Infrared Camera (FLIR) showing emissions from the shutdown process (Video 1).

Photos and/or Videos: were taken during the inspection and are listed in Appendix A.

Field Measurements: were not taken during this inspection.

RECORDS REVIEW

EPA reviewed the facility's NESHAP Subpart ZZZZ RICE emergency logs (Images 1 and 2).

CLOSING CONFERENCE

☒ Provided U.S. EPA point of contact to the facility.

Requested documents:

- Annual compliance certifications, semiannual reports, and any deviation reports.
- Annual emissions calculations.
- Most recent NOx performance test report.
- Records of nitrogen content monitoring in the fuel combusted in the turbines, and nitrogen content determinations of the fuel.
- Records specifying the maximum total sulfur content of the fuel.
- Records of maintenance conducted on the emergency stationary RICE.
- Hours of operation of the RICE, including how many hours were spent for non-emergency and emergency operations.

DIGITAL SIGNATURES

Report Author: Leeds, Emma  Digitally signed by Leeds, Emma
Date: 2024.10.25 12:48:01 -05'00'

Section Supervisor: Frank, Nathan  Digitally signed by Frank, Nathan
Date: 2024.10.25 16:22:38 -05'00'

Facility Name: Great Lakes Gas Transmission Station #5
Facility Location: 3471 Brandon Rd. Cloquet, Minnesota 55720
Date of Inspection: August 29, 2024

APPENDIX A: DIGITAL IMAGE LOG AND DIGITAL VIDEO LOG

Inspector Name: Emma Leeds

Archival Record Location: [EPA Electronic Files](#)

Image Number	File Name	Date and Time	Description of Image
1	IMG_0633	10:57 CDT	RICE NESHAP Subpart ZZZZ Emergency Log
2	IMG_0634	10:57 CDT	RICE NESHAP Subpart ZZZZ Emergency Log
3	IMG_0635	11:04 CDT	New PLC unit for Turbine 501
4	IMG_0636	11:14 CDT	Turbine 503 stack (left) and Turbine 502 stack (right)

Video Number	File Name	Date and Time	Description of Image
1	MOV_0025.mp4	11:10 AM CDT	Emissions from Turbine 503 blowdown stack