Trinity Consultants

MEMORANDUM

To:

cc:

From: Trinity Consultants

Date: January 15, 2021

RE: Iroquois Gas Transmission System Athens Compressor Station – Update to Dispersion Modeling Analysis Dated April 13, 2020 – Revision 1

Background

On February 28, 2020, Iroquois Gas Transmission System, LP (Iroquois) submitted an application and associated modeling analysis to the New York State Department of Environmental Conservation (DEC) for a proposed upgrade to its existing Athens Compressor Station (Station) located in Greene County, New York related to Iroquois' proposed Enhancement by Compression Project (ExC Project). Following submission of the original application materials, Iroquois decided to equip the existing emergency generator at the Station with an oxidation catalyst and submitted an updated modeling analysis to DEC on April 13, 2020 (April 2020 Modeling Report).

As communicated to DEC by email dated October 30, 2020, Iroquois identified a discrepancy in the April 2020 Modeling Report regarding the calculation of sulfur dioxide (SO_2) emissions from the proposed turbine. These calculations have now been corrected and a revised dispersion modeling analysis has been prepared. This memorandum presents the updated SO_2 modeling results. It should be noted that no other revisions were made to the proposed emission units, stacks or modeling methodology. The updates presented in this memorandum will also be provided to the Federal Energy Regulatory Commission (FERC).

SO_2 Modeling Results

Using the procedures and methods discussed in the April 2020 Modeling Report, the following tables summarize the results from the revised modeling. From the original modeling report, the scenarios are defined as follows:

- Scenario 1 – Maximum Hourly "High Temperature" Operation at 100% load;
- Scenario 2 – Maximum Hourly "Normal Temperature" Operation at 100% load;
- Scenario 3 – Maximum Hourly "Low Temperature" Operation at 100% load;
- Scenario 4 – Maximum Hourly "High Temperature" Operation at 50% load;
- Scenario 5 – Maximum Hourly "Normal Temperature" Operation at 50% load; and
- Scenario 6 – Maximum Hourly "Low Temperature" Operation at 50% load;

In this analysis, the "normal temperature" operating condition represents an ambient air temperature of 47 degrees Fahrenheit (°F) which represents the annual average temperature at the Athens Compressor Station, "low temperature" operating conditions include an ambient air temperature of 0 °F and "high temperature" operating conditions include an ambient air temperature of 100 °F.

4 Springhurst Dr, Ste 107, East Greenbush, NY 12061
P 518.205.9000

As shown in the tables below, the results of the revised SO_2 modeling analyses indicate that the project's potential SO_2 emissions will be below Significant Impact Levels (SIL) as defined by EPA and, as a result, no further analysis is required. Revisions are highlighted in yellow in the tables below.

Table 4-1: SIL Analysis Results – 100% Load: Athens Compressor Station

Pollutant	Averaging Period	Class II Modeling Significance Level ($\mu g/m^3$)	Scenario 1 Max. Conc. For SIL Analysis ($\mu g/m^3$)	Scenario 2 Max. Conc. For SIL Analysis ($\mu g/m^3$)	Scenario 3 Max. Conc. For SIL Analysis ($\mu g/m^3$)	SIA[1] (m)
SO_2	1-hour	7.8	~~(7.40E-03)~~ 9.01E-02	~~(6.98E-03)~~ 1.00E-01	~~(7.12E-03)~~ 1.06E-01	N/A
	3-hour	25	~~(4.30E-03)~~ 5.24E-02	~~(4.10E-03)~~ 5.89E-02	~~(4.18E-03)~~ 6.19E-02	N/A
	24-hour	5	~~(1.68E-03)~~ 2.04E-02	~~(1.56E-03)~~ 2.24E-02	~~(1.59E-03)~~ 2.35E-02	N/A
	Annual	1	~~(1.60E-04)~~ 1.91E-03	~~(1.40E-04)~~ 2.07E-03	~~(1.50E-04)~~ 2.18E-03	N/A

Table 4-2: SIL Analysis Results – 50% Load: Athens Compressor Station

Pollutant	Averaging Period	Class II Modeling Significance Level ($\mu g/m^3$)	Scenario 4 Max. Conc. For SIL Analysis ($\mu g/m^3$)	Scenario 5 Max. Conc. For SIL Analysis ($\mu g/m^3$)	Scenario 6 Max. Conc. For SIL Analysis ($\mu g/m^3$)	SIA[1] (m)
SO_2	1-hour	7.8	~~(1.92E-02)~~ 1.66E-01	~~(7.89E-03)~~ 8.19E-02	~~(7.69E-03)~~ 8.59E-02	N/A
	3-hour	25	~~(3.03E-02)~~ 2.62E-01	~~(4.59E-03)~~ 4.77E-02	~~(4.46E-03)~~ 4.99E-02	N/A
	24-hour	5	~~(5.55E-03)~~ 4.79E-02	~~(1.83E-03)~~ 1.90E-02	~~(1.76E-03)~~ 1.97E-02	N/A
	Annual	1	~~(1.90E-04)~~ 1.62E-03	~~(1.70E-04)~~ 1.80E-03	~~(1.70E-04)~~ 1.85E-03	N/A

Conclusion

Based on these results, the potential SO_2 emissions from the project will remain below the SIL, demonstrating compliance with the NAAQS. Updated electronic input and output files will be submitted via secure file transfer.