
COMPLIANCE TEST REPORT
ANR PIPELINE-HAMILTON COMPRESSOR STATION #13
TURBINES EUHM015 (1311) AND EUHM016 (1312)

June 18, 2024

Prepared for:



TC Energy's ANR Pipeline Company
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PREFACE

I, Karl Mast, do hereby certify that the source emissions testing conducted at TC Energy's ANR Pipeline Company in Hamilton, MI was performed in accordance with the procedures set forth by the United States Environmental Protection Agency, and that the data and results submitted within this report are an exact representation of the testing.

A handwritten signature in black ink, reading "Karl Mast". The signature is written in a cursive style with a large, stylized "K" and "M".

Karl Mast
Test Supervisor

I, Karl Mast, do hereby attest that all work on this project was performed under my direct supervision, and that this report accurately and authentically presents the source emissions testing conducted at ANR Pipeline's Hamilton Compressor Station #13 in Hamilton, MI.

A handwritten signature in black ink, reading "Karl Mast". The signature is written in a cursive style with a large, stylized "K" and "M".

Karl Mast
Test Supervisor

**SUMMARY**

The compliance testing was performed on the Stationary Turbine systems in accordance with the requirements of the Title 40, Code of Federal Regulations, Part 60 (40 CFR 60, Subpart KKKK). The results of the testing are detailed in the following table.

EUHM015 (1311) - Test Results						
Parameter	Run 1	Run 2	Run 3	Average	Limit	Pass/Fail
NO _x ppmvd @ 15% O ₂	5.9920	6.1128	6.4105	6.1718	25	Pass
NO _x Lbs/Hr	2.5643	2.5915	2.7434	2.6331	9.8	Pass
CO Lbs/Hr	1.6987	1.5043	1.5122	1.5717	10	Pass

EUHM016 (1312) - Test Results						
Parameter	Run 1	Run 2	Run 3	Average	Limit	Pass/Fail
NO _x ppmvd @ 15% O ₂	5.2696	5.4847	5.5221	5.4254	25	Pass
NO _x Lbs/Hr	2.2973	2.3910	2.4074	2.3652	9.8	Pass
CO Lbs/Hr	1.6067	1.6986	1.6983	1.6679	10	Pass



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1. INTRODUCTION

This report presents the results of the source emissions testing conducted by Environmental Quality Management, Inc. (EQM) for TC Energy's ANR Pipeline (ANR) at Hamilton compressor station #13, near Hamilton, MI, which is located in Allegan County.

The primary purpose of this testing program was to conduct emissions testing that is required by Permit to Instal 98-20, FGTURBINES and in order to comply with [40 CFR 60, Subpart KKKK] for the Turbines EUHM015 (1311) and EUHM016 (1312) at ANR Pipeline's gas compressor facility.

EQM's responsibility was to conduct the compliance testing for the O₂, CO and NO_x emissions rates and perform data reduction for conformance evaluation. ANR Pipeline's responsibility was to maintain process operating parameters and to assist in providing process operating data per compliance test requirements.

The following report provides information pertaining to TC Energy's process operations, and compliance testing. The compliance testing conducted on the stationary Turbine EUHM015 (1311) was performed on June 18, 2024, from 9:25 A.M. to 10:24 A.M. The compliance testing conducted on the stationary Turbine EUHM016 (1312) was performed on June 18, 2024, from 11:35 A.M. to 12:34 P.M.

The following requirements were specific for the testing program:

1. Equipment calibrations performed and calibration data provided.
2. Three (3) twenty (20) -minute, minimum, O₂, CO, and NO_x test runs performed at the turbines at maximum achievable load and speed according to pipeline conditions pursuant to EPA, Title 40, Code of Federal Regulations, Part 60, Appendix A.
3. Process manufacturing operations maintained at 100% +/- 25% of capacities and production and fuel consumption rates recorded during the emissions testing periods.
4. All testing and analyses performed in accordance with current EPA test methodologies and analytical procedures for O₂, CO and NO_x emissions determinations.
5. Stratification was found to be less than 5% in the turbine exhaust(s).
6. Diluent corrected stratification test was performed in accordance with Subpart KKKK.



The testing program was approved by and/or coordinated with Pedro Amieva, TC Energy's ANR Pipeline Company. The emission testing was overseen. The emissions testing was performed by Karl Mast, Manager, Emission Measurement and Project Manager, EQM and Eli Mergle,, Test Technician I, EQM. The testing was not observed by Michigan EGLE.



2. TEST RESULTS SUMMARY

The compliance testing was performed on the stationary EUHM015 and EUHM016 systems in accordance with the requirements of the Title 40, Code of Federal Regulations, Part 60 (40 CFR 60, Appendix A). A summary of the test results is given below:

Tble 1. EUHM015 (1311) - Test Results						
Parameter	Run 1	Run 2	Run 3	Average	Limit	Pass/Fail
NO _x ppmvd @ 15% O ₂	5.9920	6.1128	6.4105	6.1718	25	Pass
NO _x Lbs/Hr	2.5643	2.5915	2.7434	2.6331	9.8	Pass
CO Lbs/Hr	1.6987	1.5043	1.5122	1.5717	10	Pass

Table 2. EUHM016 (1312) - Test Results						
Parameter	Run 1	Run 2	Run 3	Average	Limit	Pass/Fail
NO _x ppmvd @ 15% O ₂	5.2696	5.4847	5.5221	5.4254	25	Pass
NO _x Lbs/Hr	2.2973	2.3910	2.4074	2.3652	9.8	Pass
CO Lbs/Hr	1.6067	1.6986	1.6983	1.6679	10	Pass

Based on the information provided above, the stationary turbines EUHM015 and EUHM016 met the acceptance criteria during the course of the testing. A complete list of performance parameters for each test run that was performed at the stack sampling locations can be found in Table 3-10. Additional testing information may be found in Appendix A.

**Table 3. Operating Parameters and Ambient Conditions-EUHM015 (1311)**

Run	1	2	3	
Date	06/18/24	06/18/24	06/18/24	
Time	9:25	9:45	10:05	
Engine Operating Conditions	High	High	High	Averages
Unit Horsepower from Control Panel	9,209.0	9,560.0	9,937.0	9,568.7
% Load	39.2	40.7	42.3	40.8
Unit Speed (rpm) CT/GG/GP/Jet	10,344.8	10,344.8	10,344.8	10,344.8
% CT Speed	92.2	92.2	92.2	92.2
Gas Compressor Speed (rpm) PT/Booster	5,712.1	5,729.8	5,791.8	5,744.6
% PT Speed	64.5	64.7	65.4	64.9
Turbine Exhaust Temp T5	1,335.0	1,335.0	1,335.0	1,335.0
Compressor Suction Pressure (PSIG)	687.0	679.0	674.0	680.0
Compressor Suction Temperature (°F)	59.0	60.0	66.0	61.7
Compressor Discharge Pressure (PSIG)	838.0	838.0	838.0	838.0
Compressor Discharge Temperature (°F)	87.0	91.0	98.0	92.0
Compressor Flow (MMSCF/D)	964.0	924.0	893.0	927.0
Heat Rate (BTU(LHV)/HP-hr)	11,402.3	10,881.0	10,566.9	10,950.0
Ambient Conditions				
Ambient Temperature (°F)	77.00	77.00	77.00	77.00
Barometric Pressure (psi)	14.45	14.41	14.41	14.42
Ambient Relative Humidity (%)	75.00	70.00	69.00	71.33
Absolute Humidity (grains/LB)	106.50	99.54	98.07	101.37



Table 4. Emissions Concentrations & Calculated Mass Emissions/Calculated Emissions Concentrations/Calculated Flows-EUHM015 (1311)

Run	1	2	3	
Date	06/18/24	06/18/24	06/18/24	
Time	9:25	9:45	10:05	
Emissions Concentrations & Calculated Mass Emissions				
NO _x ppm (BIAS Corrected)	5.210	5.170	5.400	5.260
NO _x LB/HR	2.5643	2.5915	2.7434	2.6331
NO _x (ppm @ 15% O ₂)	5.9920	6.1128	6.4105	6.1718
NO _x (ppm @ 15% O ₂ , ISO)	6.7842	6.8012	7.1035	6.8963
NO _x LB/MMBTU	0.0221	0.0226	0.0237	0.0228
NO _x Tons/Year	11.2316	11.3509	12.0159	11.5328
NO _x LB/SCF Fuel	2.40E-05	2.45E-05	2.57E-05	2.47E-05
NO _x LB/MMSCF Fuel	24.0143	24.4985	25.6913	24.7347
CO ppm (BIAS Corrected)	5.670	4.930	4.890	5.163
CO LB/HR	1.6987	1.5043	1.5122	1.5717
CO LB/MMBTU **	0.0146	0.0131	0.0130	0.0136
CO (ppm @ 15% O ₂)	6.5211	5.8291	5.8050	6.0517
CO (ppm @ 15% O ₂ , ISO)	7.3831	6.4855	6.4326	6.7671
CO Tons/Year	7.4404	6.5887	6.6234	6.8842
CO LB/SCF Fuel	1.59E-05	1.42E-05	1.42E-05	1.48E-05
CO LB/MMSCF Fuel	15.9084	14.2202	14.1616	14.7634
% O ₂ (BIAS Corrected)	15.770	15.910	15.930	15.870
Calculated Flows				
Fuel Flow - (SCFM)	1783.3333	1766.6667	1783.3333	1777.7778
Fuel Flow - (SCFH)	107000.0	106000.0	107000.0	106666.6667
Exhaust Flow (LB/HR)	260455.6707	264435.1588	267895.4808	264262.1034
Exhaust Flow (SCFM)	69893.7840	70706.9507	71592.1947	70730.9765
Exhaust Flow Method 19 (scfm)	68562.2587	69827.1029	70769.4944	69719.6187
Exhaust Flow Method 19 (lbm/min)	3301.0141	3360.3285	3405.3399	3355.5608
Exhaust Flow Carbon Balance (lbm/min)	5244.4768	5335.8247	5407.0485	5329.1167
Air flow Beshouri (scfm)	68234.2373	69422.7362	70349.4065	69335.4600
BSAC, #/BHP-hr	32.6474	32.0191	31.2186	31.9617
Fuel Flow Measurements				
Fuel Flow From Screen(MSCFH)	107.0	106.0	107.0	106.6667
** BASED ON FUEL SPECIFIC DRY F-FACTOR CALCULATION	Run 1	Run 2	Run 3	
* BASED ON CARBON BALANCE (STOICH. + O ₂)				
- A / F IS TOTAL MASS RATIO				

**Table 5. Operating Parameters and Ambient Conditions-EUHM016 (1312)**

Run	1	2	3	
Date	06/18/24	06/18/24	06/18/24	
Time	11:35	11:55	12:15	
Engine Operating Conditions	High	High	High	Averages
Unit Horsepower from Control Panel	10,156.0	10,094.0	9,983.0	10,077.7
% Load HP	43.3	43.0	42.5	42.9
Unit Speed (rpm) CT/GG/GP/Jet	10,344.8	10,344.8	10,344.8	10,344.8
% CT Speed	92.2	92.2	92.2	92.2
Gas Compressor Speed (rpm) PT/Booster	5,845.0	5,871.5	5,898.1	5,871.5
% PT Speed	66.0	66.3	66.6	66.3
Turbine Exhaust Temp T5	1,333.0	1,333.0	1,333.0	1,333.0
Compressor Suction Pressure (PSIG)	645.0	657.0	667.0	656.3
Compressor Suction Temperature (°F)	61.0	73.0	80.0	71.3
Compressor Discharge Pressure (PSIG)	838.0	838.0	838.0	838.0
Compressor Discharge Temperature (°F)	98.0	107.0	112.0	105.7
Compressor Flow (MMSCF/D)	796.0	834.0	870.0	833.3
Heat Rate (BTU/(LHV)/HP-hr)	10,532.3	10,597.0	10,714.8	10,614.7
Ambient Conditions				
Ambient Temperature (°F)	79.00	80.00	80.00	79.67
Barometric Pressure (psi)	14.41	14.41	14.41	14.41
Ambient Relative Humidity (%)	80.00	79.00	80.00	79.67
Absolute Humidity (grains/LB)	122.09	124.66	126.30	124.35



Table 6. Emissions Concentrations & Calculated Mass Emissions/Calculated Emissions Concentrations/Calculated Flows-EUHM016 (1312)

Run	1	2	3	
Date	06/18/24	06/18/24	06/18/24	
Time	11:35	11:55	12:15	
Emissions Concentrations & Calculated Mass Emissions				
NO _x ppm (BIAS Corrected)	4.430	4.490	4.530	4.4833
NO _x LB/HR	2.2973	2.3910	2.4074	2.3652
NO _x (ppm @ 15% O ₂)	5.2696	5.4847	5.5221	5.4254
NO _x (ppm @ 15% O ₂ , ISO)	6.1971	6.4770	6.5508	6.4083
NO _x LB/MMBTU	0.0194	0.0202	0.0204	0.0200
NO _x Tons/Year	10.0620	10.4728	10.5442	10.3597
NO _x LB/SCF Fuel	2.11E-05	2.20E-05	2.21E-05	2.17E-05
NO _x LB/MMSCF Fuel	21.1189	21.9811	22.1311	21.7437
CO ppm (BIAS Corrected)	5.090	5.240	5.250	5.1933
CO LB/HR	1.6067	1.6986	1.6983	1.6679
CO LB/MMBTU **	0.0136	0.0144	0.0144	0.0141
CO (ppm @ 15% O ₂)	6.0546	6.4008	6.3998	6.2851
CO (ppm @ 15% O ₂ , ISO)	7.1204	7.5589	7.5920	7.4237
CO Tons/Year	7.0373	7.4397	7.4385	7.3052
CO LB/SCF Fuel	1.48E-05	1.56E-05	1.56E-05	1.53E-05
CO LB/MMSCF Fuel	14.7705	15.6151	15.6126	15.3327
% O ₂ (BIAS Corrected)	15.940	16.070	16.060	16.023
Calculated Flows				
Fuel Flow - (SCFM)	1816.7	1816.7	1816.7	1816.6667
Fuel Flow - (SCFH)	109000.0	109000.0	109000.0	109000.0000
Exhaust Flow Method 19 (scfm)	72237.6360	74181.9202	74028.6518	73482.7360
Exhaust Flow Method 19 (lbm/min)	3482.4858	3576.8328	3569.8353	3543.0513
Exhaust Flow Carbon Balance (lbm/min)	5518.8166	5661.9302	5650.6513	5610.4660
Air flow Beshouri (scfm)	71803.5863	73665.5912	73518.8460	72996.0078
BSAC, #/BHP-hr	31.1784	32.2045	32.4961	31.9597
Fuel Flow Measurements				
Fuel Flow From Screen(MSCFH)	109.0	109.0	109.0	109.0000
** BASED ON FUEL SPECIFIC DRY F-FACTOR CALCULATION	Run 1	Run 2	Run 3	
* BASED ON CARBON BALANCE (STOICH. + O2)				
- A/F IS TOTAL MASS RATIO				



3. PROCESS DESCRIPTION

TC Energy's ANR Hamilton Compressor Station is located in Hamilton, MI and operates two turbines that are rated 23,485 hp (according to one plate that was able to be located on the equipment), 181.21 MMBtu/hr at 32°F natural gas-fueled Solar Titan 130 turbine with dry-low-NO_x (SoLoNO_x) control. The plant is located at 4193 134th Avenue, Hamilton, MI.

The following tables provide a summary of the production rates for the EUHM015 and EUHM016 systems during the test:

Table 7. EUHM015 (1311) Production Data					
Parameter	Run 1	Run 2	Run 3	Average	Rated
CT RPM	10,344.8	10,344.8	10,344.8	10,344.8	11,220
CT Speed %	92.2	92.2	92.2	92.2	N/A
PT RPM	5,712.1	5,729.8	5,791.8	5,744.6	8,856
PT Speed %	64.5	64.7	65.4	64.9	N/A
Horsepower	9,209.0	9,560.0	9,937.0	9,568.7	23,465
HP Load %	39.2	40.7	42.3	40.8	N/A



Table 8. EUHM016 (1312) Production Data					
Parameter	Run 1	Run 2	Run 3	Average	Rated
CT RPM	10,344.8	10,344.8	10,344.8	10,344.8	11,220
CT Speed %	92.2	92.2	92.2	92.2	N/A
PT RPM	5,845.0	5,871.5	5,898.1	5,871.5	8,856
PT Speed %	66.0	66.3	66.6	66.3	N/A
Horsepower	10,156.0	10,094.0	9,983.0	10,077.7	23,465
HP Load %	43.3	43.0	42.5	42.9	N/A

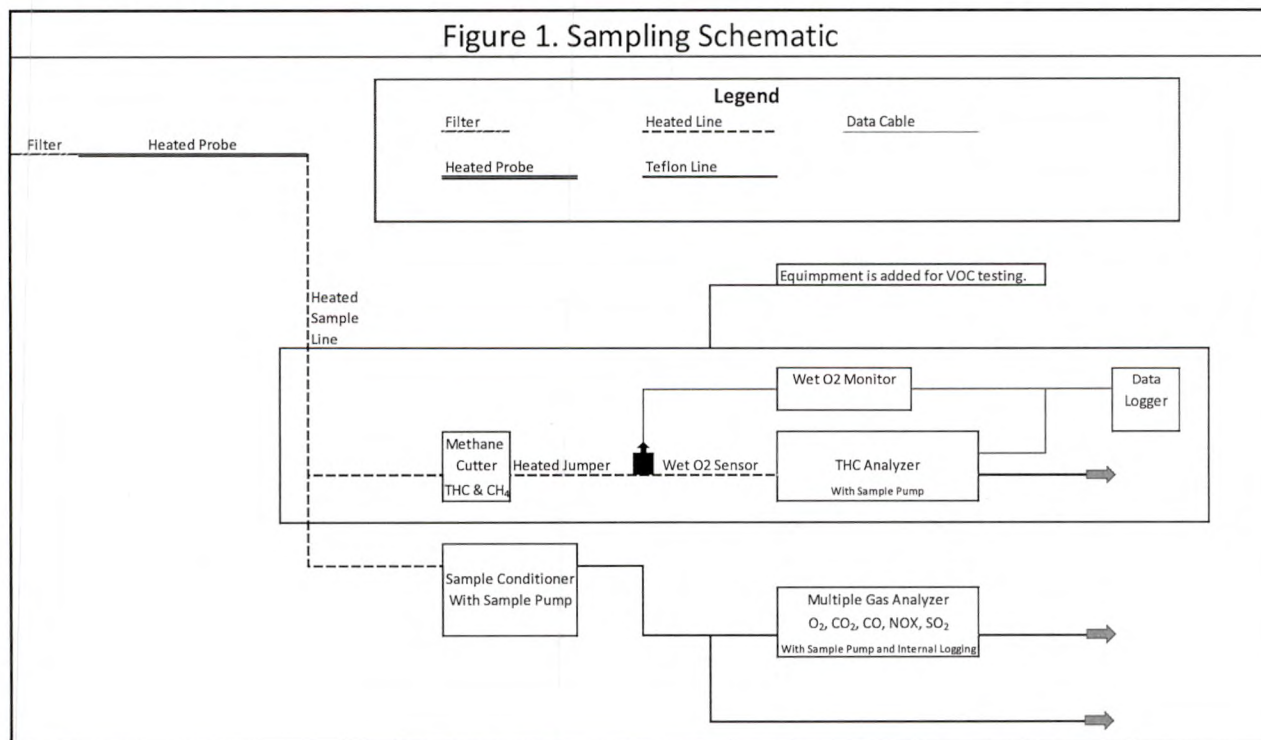
Additional information may be found in Appendix B.

Table 9. EUHM015 General Information

General Information		Permit Limits																													
Date:	18-Jun-24																														
Company:	TC Energy																														
Station:	Hamilton																														
Unit:	1311																														
Engine Type:	Titan 130																														
CT Rated RPM:	11220	RPM																													
PT Rated RPM:	8856	RPM																													
Plate Rated BHP:	23465	BHP																													
		Limits are actually listed as average values																													
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>ppmv@d15%</th> <th>g/Bhp-Hr</th> <th>lb/hr</th> <th>TPY</th> </tr> </thead> <tbody> <tr> <td>NOx:</td> <td>25</td> <td></td> <td>9.8</td> <td>113.0</td> </tr> <tr> <td>CO:</td> <td></td> <td></td> <td>10</td> <td>127.0</td> </tr> <tr> <td>VOC:</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>H2CO:</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>						ppmv@d15%	g/Bhp-Hr	lb/hr	TPY	NOx:	25		9.8	113.0	CO:			10	127.0	VOC:					H2CO:				
	ppmv@d15%	g/Bhp-Hr	lb/hr	TPY																											
NOx:	25		9.8	113.0																											
CO:			10	127.0																											
VOC:																															
H2CO:																															
Fuel Gas Analysis		Fuel Meter Type																													
Constituent	Mole Percent	Enter Type from List Below																													
Nitrogen	1.430	2																													
Carbon Dioxide	0.567																														
Methane	86.488																														
Ethane	11.016																														
Propane	0.463																														
I-Butane	0.007																														
N-Butane	0.020																														
I-Pentane	0.006																														
N-Pentane	0.000																														
Hexane +	0.001																														
Total	100.00																														
		Orifice Meter (upstream pressure tap): 1 Orifice Meter (downstream pressure tap): 2 Electronic Flow Meter (EFM): 3 Venturi (Nozzle) Meter: 4 Roots Meter w/ Accumulator: 5																													
		Pipe I.D.: 3.068																													
		Orifice I.D.: 1.5																													

Table 10. EUHM016 General Information

General Information		Permit Limits			
Date:	18-Jun-24				
Company:	TC Energy				
Station:	Hamilton				
Unit:	1312				
Engine Type:	Titan 130				
CT Rated RPM:	11220	RPM			
PT Rated RPM:	8856	RPM			
Plate Rated BHP:	23465	BHP			
		Limits are actually listed as average values			
Fuel Gas Analysis		Fuel Meter Type			
Constituent	Mole Percent	Enter Type from List Below			
Nitrogen	1.430	2			
Carbon Dioxide	0.567				
Methane	86.488	1			
Ethane	11.016	2			
Propane	0.463	3			
I-Butane	0.007	4			
N-Butane	0.020	5			
I-Pentane	0.006				
N-Pentane	0.000				
Hexane +	0.001				
Total	100.00				
		Pipe I.D.: 3.068			
		Orifice I.D.: 1.5			



Additional Information pertaining to the Fuel Flows may be found in Appendix B.



4. TEST PROCEDURES

EQM and EQM's affiliates and subcontractors use current U.S. EPA accepted testing methodologies in their Air Quality Programs as listed in the U.S. Code of Federal Regulations, Title 40, Part 60, Appendix A. For this testing program, the following specific methodologies were utilized:

- U.S. EPA Method 3A – Determination of Oxygen and Carbon Dioxide Concentrations in Emissions From Stationary Sources (Instrumental Analyzer Procedure)
- U.S. EPA Method 7E – Determination of Nitrogen Oxides Emissions From Stationary Sources (Instrumental Analyzer Procedure)
- U.S. EPA Method 10 – Determination of Carbon Monoxide Emissions From Stationary Sources (Instrumental Analyzer Procedure)
- U.S. EPA Method 19 – Determination of Volumetric Flow Rate from Stationary Sources

USEPA Methods 3A, 7E and 19 were performed at the Exhaust Stack sampling location by continuously extracting a gas sample from the stack through a single point stainless steel sample probe. The extracted sample was pulled through a series of filters to remove any particulate matter. Directly after the probe, the sample was conditioned by a series of refrigeration dryers to remove moisture from the gas stream. After the refrigeration dryers, the sample was transported through a Teflon® line to the analyzers. The flow of the stack gas sample was regulated at a constant rate to minimize drift.

At the start of the day, each monitor was checked for calibration error by introducing zero, mid-range and high-range EPA Protocol 1 gases to the measurement system at a point upstream of the analyzers. In this report, the calibration error test is referred to as instrument calibration. The gas was injected into the sampling valve located at the outlet of the sampling probe. The bias test was conducted before and after each consecutive test run by introducing zero and upscale calibration gases for each monitor. The upscale calibration gases used for each monitor were the high calibration gases.

Measurement System Performance Specifications were as follows:

- Analyzer Calibration Error - Less than +/- 2% of the span of the zero, mid-range and high-range calibration gases.
- Sampling System Bias - Less than +/-5% of the span for the zero, mid-range and high-range calibration gases.
- Zero Drift - Less than +/-3% of the span over the period of each test run.



- Calibration Drift - Less than +/-3% of the span over the period of each set of runs.

Calculations that were used in this testing event for the TR01 is as follows:

Calibration Correction

$$C_{GAS} = (C_R - C_O) \frac{C_{MA}}{C_M - C_O}$$

Where:

C_{GAS} :	Corrected flue gas concentration (ppmvd)
C_R :	Flue gas concentration (ppmvd)
C_O :	Average of initial and final zero checks (ppmvd)
C_M :	Average of initial and final span checks (ppmvd)
C_{MA} :	Actual concentration of span gas (ppmvd)

EPA F-Factor

Mass emissions calculations: the F-Factor Method and guidance from Part 75 was used to calculate the mass emissions rates

$$EM = Cd \times Fd \times \frac{20.9}{(20.9 - \%O_2)} \times Qh \times \frac{GCV}{10^6}$$

Where:

EM :	Pollutant emission rate, lb/hr
CD :	Pollutant concentration, lb/scf
Fd :	Fuel specific F-Factor, dscf/MMBtu
$\%O_2$:	Oxygen concentration, dry basis
Qh :	Fuel rate from calibrated AGA specified Meter, scfh
GVC :	Heating value of the fuel, Btu/scf

Mass Emissions (g/bhp-hr)

$$Em = Cd \times Fd \times \frac{20.9}{(20.9 - \%O_2)} \times Qh \times \frac{GCV}{10^6} \times \frac{4536}{BHP}$$

Where:

E_m :	Pollutant concentration NO_x (g/bhp-hr)
Cd :	Pollutant concentration NO_x lb/scf
$\%O_2$:	Oxygen concentration in percent, measured on a dry basis
F_d :	Fuel specific F-factor, dscf/MMBtu
Qh :	Fuel rate, scf/hr
GCV :	Heating value of the fuel, BTU/dscf

To convert from ppmvd NO_x to lb/scf NO_x , multiply the ppmvd value by 1.194×10^{-6}

To convert from ppmvd CO to lb/scf CO, multiply the ppmvd value by 7.268×10^{-8}

Lbs/MMBTU Factor

The lbs/MMBtu factor will be calculated using the pollutant concentration and the fuel specific F-factor as shown

$$Em = Cd \times Fd \times \frac{20.9}{(20.9 - \%O_2)}$$

Where:

E_m :	Pollutant concentration (lb/MMBtu)
Cd :	Pollutant concentration lb/scf
$\%O_2$:	Oxygen concentration in percent, measured on a dry basis
F_d :	Fuel specific F-factor, dscf/MMBtu

Mass Emissions Calculations lb/hr

$$NO_{x_{lb}} = C_d \times F_d \times \frac{209}{209 - \%O_2} \times Q_h \times \frac{GCV}{10^6}$$

Where:

C_d : Pollutant concentration lb/scf
 F_d : Fuel specific F-factor, dscf/MMBtu
 Q_h : Fuel flow, scf/hr
 $\%O_2$: Oxygen concentration in percent, measured on a dry basis
 GCV : Heating value of the fuel, BTU/dscf

NOx Corrected to 15% O2

$$Em = NO_x \left(\frac{5.9}{20.9 - \%O_2} \right)$$

Where:

Em : Pollutant concentration corrected to 15% O2, ppm
 NO_x : Pollutant concentration, ppm
 $\%O_2$: Oxygen concentration in percent, measured on a dry basis



5. QUALITY ASSURANCE PROCEDURES

Each reference method presented in the U.S. Code of Federal Regulations details the instrument calibration requirements, sample recovery and analysis, data reduction and verification, types of equipment required, and the appropriate sampling and analytical procedures to ensure maximum performance and accuracy. EQM and EQM's affiliates and subcontractors adhere to the guidelines for quality control set forth by the United States Environmental Protection Agency. These procedures are outlined in the following documents:

- Code of Federal Regulations, Title 40, Part 51
- Code of Federal Regulations, Title 40, Part 60
- Quality Assurance Handbook, Volume 1, EPA 600/9-76-005
- Quality Assurance Handbook, Volume 2, EPA 600/4-77-027a
- Quality Assurance Handbook, Volume 3, EPA 600/4-77-027b



6. CONCLUSIONS

An Emissions Test was conducted on the Turbines EUHM015 and EUHM016 at TC Energy's ANR Pipeline Company's Hamilton Compressor Station located in Hamilton, MI. The testing was conducted on June 18, 2024 on the EUHM015 and EUHM016.

During the course of the testing, the Turbine EUHM015 and Turbine EUHM016 conformed to the requirements of Code of Federal Regulations, Title 40, Part 60, Appendix A.

The usefulness and/or significance of the emissions values presented in this document as they relate to the compliance status of the Turbines EUHM015 and EUHM016 emissions shall be determined by others. For additional information pertaining to the testing program see Appendix E of this report.