



Source Test Report

ExxonMobil Beaumont Refinery
1795 Burt Street
Beaumont, TX 77701

Sources Tested: Three (3)
Stationary Combustion Turbines
Test Dates: February 6-8, 2024

Project No. AST-2024-1096

Prepared By
Alliance Technical Group, LLC
5757 Genoa Red Bluff Road
Pasadena, TX 77507

Source Information

<i>Source Name</i>	<i>Source ID</i>	<i>Target Parameters</i>
Cogeneration Unit Train 41 Stack	EPN 61STK_001 / 61TRB#001	HCl, HF
Cogeneration Unit Train 42 Stack	EPN 61STK_002 / 61TRB#002	HCl, HF
Cogeneration Unit Train 43 Stack	EPN 61STK_003 / 61TRB#003	HCl, HF

Contact Information

<i>Test Location</i>	<i>Test Company</i>	<i>Analytical Laboratory</i>
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Alliance Technical Group, LLC (Alliance) has completed the source testing as described in this report. Results apply only to the source(s) tested and operating condition(s) for the specific test date(s) and time(s) identified within this report. All results are intended to be considered in their entirety, and Alliance is not responsible for use of less than the complete test report without written consent. This report shall not be reproduced in full or in part without written approval from the customer.

To the best of my knowledge and abilities, all information, facts and test data are correct. Data presented in this report has been checked for completeness and is accurate, error-free and legible. Onsite testing was conducted in accordance with approved internal Standard Operating Procedures. Any deviations or problems are detailed in the relevant sections in the test report.

This report is only considered valid once an authorized representative of Alliance has signed in the space provided below; any other version is considered draft. This document was prepared in portable document format (.pdf) and contains pages as identified in the bottom footer of this document.



Jason Myers, QI
Project Manager
Alliance Technical Group, LLC

3/25/2024

Date

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Introduction

1.0 Introduction

Alliance Technical Group, LLC (Alliance) was retained by ExxonMobil Beaumont Refinery (XOM) to conduct engineering testing at the Beaumont Refinery in Beaumont, Texas facility. Testing was conducted to determine the concentrations of hydrogen chloride (HCl) and hydrogen fluoride (HF) from the exhausts of the Cogeneration Unit Train 41 (Unit 41) Stack (EPN 61STK_001/FIN 61TRB#001), the Cogeneration Unit Train 42 (Unit 42) Stack (EPN 61STK_002/FIN 61TRB#002) and the Cogeneration Unit Train 43 (Unit 43) Stack (EPN 61STK_003/FIN 61TRB#003).

1.1 Facility Description

The cogeneration facility consists of three (3) cogeneration trains and ancillary equipment. Each cogeneration train consists of a combustion turbine generator (CTG) with a fired HRSG. Selective catalytic reduction (SCR) is installed on each cogeneration train to control NOx emissions.

1.2 Source and Control System Descriptions

Combustion Turbine Generators: The three (3) CTGs are General Electric PG7241FA turbines. Each CTG is fueled with pipeline quality natural gas. Combustion air is combined with natural gas and fed to the combustor. The combustion products and excess air will be expanded through the turbine to produce shaft horsepower, which is used to drive a direct-coupled electric power generator and to compress the combustion air. The exhaust gas exits the CTG and is routed to the HRSG for steam production.

Heat Recovery Steam Generators: The exhaust gas from each CTG will pass through an HRSG. Heat in the CTG exhaust is used to produce steam in the HRSG. The HRSGs are equipped with supplementary-fired duct burners to increase steam production. The duct burners are fueled with pipeline-quality natural gas and a mix of refinery fuel gas and are capable of producing high pressure steam and intermediate pressure steam. The HRSG for each unit are not covered sources for this rule (40 CFR §63.6092) and will not be in operation during the test.

Selective Catalytic Reduction System: A SCR unit is installed within each HRSG to reduce NOx emissions from the cogeneration trains. Ammonia is injected into the exhaust stream upstream of the catalyst bed. The ammonia reacts with the NOx over the catalyst, reducing the NOx to water and nitrogen. The final exhaust gases from each train will exit through a stack to the atmosphere. Oxidation catalyst is not installed on any of the units.

1.3 Project Team

Personnel involved in this project are identified in the following table.

Table 1-1: Project Team

XOM Personnel	Dena Gallow
Alliance Personnel	Andrew Christiansen Eric Tempest Seth Moore Charles Edwards Matther Brumley

Summary of Results

2.0 Summary of Results

Alliance conducted engineering testing at the XOM facility in Beaumont, Texas on February 6-8, 2024. Testing consisted of determining the concentration of HCl and HF at the exhausts of Unit 41, Unit 42 and Unit 43.

Tables 2-1 through 2-3 provide summaries of the emission testing results. Any difference between the summary results listed in the following tables and the detailed results contained in appendices is due to rounding for presentation.

Table 2-1: Summary of Results – Unit 41

Run Number	Run 1	Run 2	Run 3	Average
Date	2/8/24	2/8/24	2/8/24	--
Hydrogen Chloride Data				
Concentration, ppmvd	0.24	0.31	0.31	0.29
Emission Rate, lb/hr	1.3	1.8	1.7	1.6
Hydrogen Fluoride Data				
Concentration, ppmvd	0.028	0.040	0.046	0.038
Emission Rate, lb/hr	0.085	0.12	0.14	0.12

Table 2-2: Summary of Results – Unit 42

Run Number	Run 1	Run 2	Run 3	Average
Date	2/7/24	2/7/24	2/7/24	--
Hydrogen Chloride Data				
Concentration, ppmvd	0.074	0.21	0.12	0.13
Emission Rate, lb/hr	0.40	1.11	0.62	0.71
Hydrogen Fluoride Data				
Concentration, ppmvd	0.020	0.045	0.015	0.027
Emission Rate, lb/hr	0.060	0.13	0.044	0.078

Table 2-3: Summary of Results – Unit 43

Run Number	Run 1	Run 2	Run 3	Average
Date	2/6/24	2/6/24	2/6/24	--
Hydrogen Chloride Data				
Concentration, ppmvd	0.24	0.12	0.18	0.18
Emission Rate, lb/hr	1.4	0.69	1.03	1.03
Hydrogen Fluoride Data				
Concentration, ppmvd	0.049	0.036	0.043	0.043
Emission Rate, lb/hr	0.16	0.11	0.14	0.13

Testing Methodology

3.0 Testing Methodology

The emission testing program was conducted in accordance with the test methods listed in Table 3-1. Method descriptions are provided below while quality assurance/quality control data is provided in Appendix D.

Table 3-1: Source Testing Methodology

Parameter	U.S. EPA Reference Test Methods	Notes/Remarks
Volumetric Flow Rate	1 & 2	Full Velocity Traverses
Oxygen/Carbon Dioxide	3A	Instrumental Analysis
Moisture Content	4	Gravimetric Analysis
Hydrogen Chloride & Hydrogen Fluoride	26	Constant Rate Sampling
Moisture Content	320	FTIR – Continuous Sampling

3.1 U.S. EPA Reference Test Methods 1 and 2 – Sampling/Traverse Points and Volumetric Flow Rate

The sampling location and number of traverse (sampling) points were selected in accordance with U.S. EPA Reference Test Method 1. To determine the minimum number of traverse points, the upstream and downstream distances were equated into equivalent diameters and compared to Figure 1-2 in U.S. EPA Reference Test Method 1.

Full velocity traverses were conducted in accordance with U.S. EPA Reference Test Method 2 to determine the average stack gas velocity pressure, static pressure and temperature. The velocity and static pressure measurement system consisted of a pitot tube and inclined manometer. The stack gas temperature was measured with a K-type thermocouple and pyrometer.

3.2 U.S. EPA Reference Test Method 3A – Oxygen/Carbon Dioxide

The oxygen (O₂) and carbon dioxide (CO₂) testing was conducted in accordance with U.S. EPA Reference Test Method 3A. Data was collected online and reported in one-minute averages. The sampling system consisted of a stainless-steel probe, Teflon sample line(s), gas conditioning system and the identified gas analyzer. The gas conditioning system was a non-contact condenser used to remove moisture from the stack gas. If an unheated Teflon sample line was used, then a portable non-contact condenser was placed in the system directly after the probe. Otherwise, a heated Teflon sample line was used. The quality control measures are described in Section 3.6.

3.3 U.S. EPA Reference Test Method 4 – Moisture Content

The stack gas moisture content (BWS) was determined in accordance with U.S. EPA Reference Test Method 4. The gas conditioning train consisted of a series of chilled impingers. Prior to testing, each impinger was filled with a known quantity of water or silica gel. Each impinger was analyzed gravimetrically before and after each test run on the same balance to determine the amount of moisture condensed.

3.4 U.S. EPA Reference Test Method 26 – Hydrogen Chloride and Hydrogen Fluoride

The Hydrogen Chloride testing was conducted in accordance with U.S. EPA Reference Test Method 26. The complete sampling system consisted of a glass nozzle, heated glass-lined probe, heated Teflon filter, gas conditioning train, pump and calibrated dry gas meter. The gas conditioning train consisted of four (4) chilled impingers. The first and second impingers contained 100 mL of 0.1 N H₂SO₄, the third was initially empty and the fourth contained 200-300 grams of silica gel. The probe liner and filter heating systems were maintained at 248-273°F, and the impinger temperature was maintained at 20°C (68°F) or less throughout the testing.

Following the completion of each test run, the sampling train was leak checked at a vacuum pressure greater than or equal to the highest vacuum pressure observed during the run and the contents of the impingers were measured for moisture gain. The absorbing solution (0.1 N H₂SO₄) from the first and second impingers was placed into sample container 3. The back-half of the filter holder, first, second and third impingers and all glassware leading to the outlet of the third impinger were rinsed with de-ionized (DI) water. These rinses were also placed in container 3. All containers were sealed, labeled and liquid levels marked for transport to the identified laboratory for analysis.

3.5 U.S. EPA Reference Test Method 320 – Moisture Content

Moisture Content was determined in accordance with U.S. EPA Reference Test Method 320. Each source gas stream was extracted at a constant rate through a heated probe, heated filter and heated sample line and analyzed with a MKS MultiGas 2030 FTIR operated by a portable computer. The computer has FTIR spectra of calibration gases stored on the hard drive. These single component calibration spectra are used to analyze the measured sample spectra. The gas components to be measured were selected from the spectra library and incorporated into the analytical method. The signal amplitude, linearity, and signal to noise ratio were measured and recorded to document analyzer performance. A leak check was performed on the sample cell. The instrument path length was verified using ethylene as the Calibration Transfer Standard. Dynamic spiking was performed using a certified standard of the target compound or appropriate surrogate in nitrogen with sulfur hexafluoride blended as a tracer to calculate the dilution factor. All test spectra, interferograms, and analytical method information are recorded and stored with the calculated analytical results. The quality control measures are described in Section 3.7.

3.6 Quality Assurance/Quality Control – U.S. EPA Reference Test Method 3A

Cylinder calibration gases used met EPA Protocol 1 (+/- 2%) standards. Copies of all calibration gas certificates can be found in the Quality Assurance/Quality Control Appendix.

Low Level gas was introduced directly to the analyzer. After adjusting the analyzer to the Low-Level gas concentration and once the analyzer reading was stable, the analyzer value was recorded. This process was repeated for the High-Level gas. For the Calibration Error Test, Low, Mid, and High Level calibration gases were sequentially introduced directly to the analyzer. All values were within 2.0 percent of the Calibration Span or 0.5% absolute difference.

High or Mid-Level gas (whichever was closer to the stack gas concentration) was introduced at the probe and the time required for the analyzer reading to reach 95 percent or 0.5% (whichever was less restrictive) of the gas concentration was recorded. The analyzer reading was observed until it reached a stable value, and this value was recorded. Next, Low Level gas was introduced at the probe and the time required for the analyzer reading to decrease to a value within 5.0 percent or 0.5% (whichever was less restrictive) was recorded. If the Low-Level gas was zero gas, the response was 0.5% or 5.0 percent of the upscale gas concentration (whichever was less restrictive).

The analyzer reading was observed until it reached a stable value and this value was recorded. The measurement system response time and initial system bias were determined from these data. The System Bias was within 5.0 percent of the Calibration Span or 0.5% absolute difference.

High or Mid-Level gas (whichever was closer to the stack gas concentration) was introduced at the probe. After the analyzer response was stable, the value was recorded. Next, Low Level gas was introduced at the probe, and the analyzer value recorded once it reached a stable response. The System Bias was within 5.0 percent of the Calibration Span or 0.5% absolute difference or the data was invalidated and the Calibration Error Test and System Bias were repeated.

Drift between pre- and post-run System Bias was within 3 percent of the Calibration Span or 0.5% absolute difference. If the drift exceeded 3 percent or 0.5%, the Calibration Error Test and System Bias were repeated.

To determine the number of sampling points, a gas stratification check was conducted prior to initiating testing. The pollutant concentrations were measured at twelve traverse points (as described in Method 1). Each traverse point was sampled for a minimum of twice the system response time.

If the diluent concentration at each traverse point did not differ more than 5 percent or 0.3% (whichever was less restrictive) of the average pollutant concentration, then single point sampling was conducted during the test runs. If the pollutant concentration did not meet these specifications but differed less than 10 percent or 0.5% from the average concentration, then three (3) point sampling was conducted (stacks less than 7.8 feet in diameter - 16.7, 50.0 and 83.3 percent of the measurement line; stacks greater than 7.8 feet in diameter – 0.4, 1.0, and 2.0 meters from the stack wall). If the pollutant concentration differed by more than 10 percent or 0.5% from the average concentration, then sampling was conducted at a minimum of twelve (12) traverse points. Copies of stratification check data can be found in the Quality Assurance/Quality Control Appendix.

A Data Acquisition System with battery backup was used to record the instrument response in one (1) minute averages. The data was continuously stored as a *.CSV file in Excel format on the hard drive of a computer. At the completion of testing, the data was also saved to the Alliance server. All data was reviewed by the Field Team Leader before leaving the facility. Once arriving at Alliance's office, all written and electronic data was relinquished to the report coordinator and then a final review was performed by the Project Manager.

3.7 Quality Assurance/Quality Control – U.S. EPA Reference Method 320

EPA Protocol 1 Calibration Gases – Cylinder calibration gases used met EPA Protocol 1 (+/- 2%) standards. Copies of all calibration gas certificates can be found in the Quality Assurance/Quality Control Appendix.

After providing ample time for the FTIR to reach the desired temperature and to stabilize, zero gas (nitrogen) was introduced directly to the instrument sample port. While flowing nitrogen the signal amplitude was recorded, a background spectra was taken, a linearity check was performed and recorded, the peak to peak noise and the root mean square in the spectral region of interest was measured and a screenshot was recorded.

Following the zero gas checks, room air was pulled through the sample chamber and the line width and resolution was verified to be at 1879 cm⁻¹, the peak position was entered and the FWHH was recorded (screenshot). Following these checks, another background spectra was recorded and the calibration transfer standard (CTS) was

introduced directly to the instrument sample port. The CTS instrument recovery was recorded and the instrument mechanical response time was measured.

Next, stack gas was introduced to the FTIR through the sampling system and several scans were taken until a stable reading was achieved. The native concentration of our target/surrogate spiking analyte was recorded. Spike gas was introduced to the sampling system at a constant flow rate $\leq 10\%$ of the total sample flow rate and a corresponding dilution ratio was calculated along with a system response time. Matrix spike recovery spectra were recorded and were within the $\pm 30\%$ of the calculated value of the spike concentration that the method requires.

The matrix spike recovery was conducted once at the beginning of the testing and the CTS recovery procedures were repeated following each test run. The corresponding values were recorded.

Appendix A

Location: ExxonMobil - Beaumont, TX
Source: Cogen Unit 41
Project No.: AST-2024-1096
Run No. /Method Run 1 / Method 3A

O₂ - Outlet Concentration (C_{O₂}), % dry

$$C_{O_2} = (C_{obs} - C_0) \times \left(\frac{C_{MA}}{C_M - C_0} \right)$$

where,

C _{obs}	<u>13.79</u>	= average analyzer value during test, % dry
C ₀	<u>-0.01</u>	= average of pretest & posttest zero responses, % dry
C _{MA}	<u>10.97</u>	= actual concentration of calibration gas, % dry
C _M	<u>10.98</u>	= average of pretest & posttest calibration responses, % dry
C _{O₂}	<u>13.78</u>	= O ₂ Concentration, % dry

Location: ExxonMobil - Beaumont, TX
Source: Cogen Unit 41
Project No.: AST-2024-1096
Run No. /Method Run 1 / Method 3A

CO₂ - Outlet Concentration (C_{CO₂}), % dry

$$C_{CO_2} = (C_{obs} - C_0) \times \left(\frac{C_{MA}}{C_M - C_0} \right)$$

where,

C _{obs}	4.22	= average analyzer value during test, % dry
C ₀	0.07	= average of pretest & posttest zero responses, % dry
C _{MA}	10.96	= actual concentration of calibration gas, % dry
C _M	11.02	= average of pretest & posttest calibration responses, % dry
C _{CO₂}	4.16	= CO ₂ Concentration, % dry

Location ExxonMobil - Beaumont, TX
 Source Cogen Unit 41
 Project No. AST-2024-1096
 Run No. 1
 Parameter(s) HCl, HF

Meter Pressure (Pm), in. Hg

$$P_m = P_b + \frac{\Delta H}{13.6}$$

where,

P_b 30.03 = barometric pressure, in. Hg
 ΔH 2.200 = pressure differential of orifice, in H₂O
 P_m 30.19 = in. Hg

Absolute Stack Gas Pressure (Ps), in. Hg

$$P_s = P_b + \frac{P_g}{13.6}$$

where,

P_b 30.03 = barometric pressure, in. Hg
 P_g -0.50 = static pressure, in. H₂O
 P_s 29.99 = in. Hg

Standard Meter Volume (Vmstd), dsL

$$V_{mstd} = \frac{17.636 \times V_m \times P_m \times Y}{T_m}$$

where,

Y 0.989 = meter correction factor
 V_m 128.742 = meter volume, L
 P_m 30.19 = absolute meter pressure, in. Hg
 T_m 549.5 = absolute meter temperature, °R
 V_{mstd} 123.374 = dsL

Moisture Fraction (BWSsat), dimensionless (theoretical at saturated conditions)

$$BWS_{sat} = 10^{6.37 - \left(\frac{2,827}{T_s + 365} \right)}$$

where,

T_s 244.4 = stack temperature, °F
 P_s 30.0 = absolute stack gas pressure, in. Hg
 BWS_{sat} 1.000 = dimensionless

Moisture Fraction (BWS), dimensionless

$$BWS = BWS_{msd} \text{ unless } BWS_{sat} < BWS_{msd}$$

where,

BWS_{sat} 1.000 = moisture fraction (theoretical at saturated conditions)
 BWS_{msd} 0.061 = moisture fraction (measured)
 BWS 0.061

Molecular Weight (DRY) (Md), lb/lb-mole

$$M_d = (0.44 \times \% CO_2) + (0.32 \times \% O_2) + (0.28 (100 - \% CO_2 - \% O_2))$$

where,

CO_2 4.16 = carbon dioxide concentration, %
 O_2 13.78 = oxygen concentration, %
 M_d 29.22 = lb/lb mol

Molecular Weight (WET) (Ms), lb/lb-mole

$$M_s = M_d (1 - BWS) + 18.015 (BWS)$$

where,

M_d 29.22 = molecular weight (DRY), lb/lb mol
 BWS 0.061 = moisture fraction, dimensionless
 M_s 28.53 = lb/lb mol

Location ExxonMobil - Beaumont, TX
 Source Cogen Unit 41
 Project No. AST-2024-1096
 Run No. 1
 Parameter(s) HCl, HF

Average Velocity (Vs), ft/sec

where,
$$V_s = 85.49 \times C_p \times (\Delta P^{1/2})_{avg} \times \sqrt{\frac{T_s}{P_s \times M_s}}$$

C_p	<u>0.83</u>	= pitot tube coefficient
$\Delta P^{1/2}$	<u>1.144</u>	= average pre/post test velocity head of stack gas, (in. H ₂ O) ^{1/2}
T_s	<u>704.1</u>	= average pre/post test absolute stack temperature, °R
P_s	<u>29.99</u>	= absolute stack gas pressure, in. Hg
M_s	<u>28.53</u>	= molecular weight of stack gas, lb/lb mol
V_s	<u>73.3</u>	= ft/sec

Average Stack Gas Flow at Stack Conditions (Qa), acfm

$$Q_a = 60 \times V_s \times A_s$$

where,

V_s	<u>73.3</u>	= stack gas velocity, ft/sec
A_s	<u>314.16</u>	= cross-sectional area of stack, ft ²
Q_a	<u>1,381,559</u>	= acfm

Average Stack Gas Flow at Standard Conditions (Qs), dscfm

$$Q_{sd} = 17.636 \times Q_a \times (1 - BWS) \times \frac{P_s}{T_s}$$

where,

Q_a	<u>1,381,559</u>	= average stack gas flow at stack conditions, acfm
BWS	<u>0.061</u>	= moisture fraction, dimensionless
P_s	<u>29.99</u>	= absolute stack gas pressure, in. Hg
T_s	<u>704.1</u>	= average pre/post test absolute stack temperature, °R
Q_s	<u>974,585</u>	= dscfm

Hydrogen Chloride Concentration, ppmvd

$$C_{HCl} = \frac{M_{HCl} \times 24.04}{MW \times V_{mstd} \times 28.32}$$

where,

M_{HCl}	<u>45.50</u>	= Hydrogen Chloride Mass, ug
MW	<u>36.5</u>	= molecular weight, g/g mol
V_{mstd}	<u>4.356</u>	= standard meter volume, dscf
C_{HCl}	<u>0.24</u>	= ppmvd

Hydrogen Chloride Emission Rate, lb/hr

$$ER_{HCl} = \frac{M_{HCl} \times Q_s \times 60}{V_{mstd} \times 4.54E+08}$$

where,

M_{HCl}	<u>45.50</u>	= Hydrogen Chloride Mass, ug
Q_s	<u>974,585</u>	= average stack gas flow at standard conditions, dscfm
V_{mstd}	<u>4.356</u>	= standard meter volume, dscf
ER_{HCl}	<u>1.3</u>	= lb/hr

Location ExxonMobil - Beaumont, TX
 Source Cogen Unit 41
 Project No. AST-2024-1096
 Run No. 1
 Parameter(s) HCl, HF

Hydrogen Fluoride Concentration, ppmvd

$$C_{HF} = \frac{M_{HF} \times 24.04}{MW \times Vmstd \times 28.32}$$

where,

M_{HF} 2.86 = Hydrogen Fluoride Mass, ug
 MW 20.0 = molecular weight, g/g mol
 $Vmstd$ 4.356 = standard meter volume, dscf
 C_{HF} 0.028 = ppmvd

Hydrogen Fluoride Emission Rate, lb/hr

$$ER_{HF} = \frac{M_{HF} \times Qs \times 60}{Vmstd \times 4.54E+08}$$

where,

M_{HF} 2.86 = Hydrogen Fluoride Mass, ug
 Qs 974.585 = average stack gas flow at standard conditions, dscfm
 $Vmstd$ 4.356 = standard meter volume, dscf
 ER_{HF} 0.085 = lb/hr

Appendix B

Location ExxonMobil - Beaumont, TX
Source Cogen Unit 41
Project No. AST-2024-1096
Parameter(s) HCl, HF

Run Number		Run 1	Run 2	Run 3	Average
Date		2/8/24	2/8/24	2/8/24	--
Start Time		9:05	10:32	11:50	--
Stop Time		10:05	11:32	12:50	--
Input Data					
Volumetric Flow Rate, dscfm	(Qs)	974,585	982,519	982,516	979,873
Moisture Fraction	(BWS)	0.061	0.060	0.060	0.060
Standard Meter Volume, L	(Vmstd)	123.374	122.272	125.450	123.699
Standard Meter Volume, ft ³	(Vmstd)	4.356	4.318	4.430	4.368
Hydrogen Chloride Mass, ug	M _{HCl}	45.50	58.30	58.40	54.07
Hydrogen Fluoride Mass, ug	M _{HF}	2.86	4.11	4.79	3.92
Emissions Calculations					
Hydrogen Chloride Concentration, ppmvd	C _{HCl}	0.24	0.31	0.31	0.29
Hydrogen Chloride Emission Rate, lb/hr	ER _{HCl}	1.3	1.8	1.7	1.6
Hydrogen Fluoride Concentration, ppmvd	C _{HF}	0.028	0.040	0.046	0.038
Hydrogen Fluoride Emission Rate, lb/hr	ER _{HF}	0.085	0.12	0.14	0.12

Location ExxonMobil - Beaumont, TX

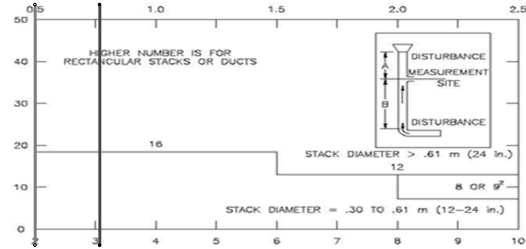
Source Cogen Unit 41

Project No. AST-2024-1096

Date 02/08/24

Stack Parameters

Duct Orientation: Vertical
Duct Design: Circular
Distance from Far Wall to Outside of Port: 251.50 in
Nipple Length: 11.50 in
Depth of Duct: 240.00 in
Cross Sectional Area of Duct: 314.16 ft²
No. of Test Ports: 4
Number of Readings per Point: 1
Distance A: 15.3 ft
Distance A Duct Diameters: 0.8 (must be > 0.5)
Distance B: 39.5 ft
Distance B Duct Diameters: 2.0 (must be > 2)
Minimum Number of Traverse Points: 16
Actual Number of Traverse Points: 16
Measurer (Initial and Date): DSR 2/8/2024
Reviewer (Initial and Date): SMM 2/8/2024



CIRCULAR DUCT

LOCATION OF TRAVERSE POINTS

Number of traverse points on a diameter

	2	3	4	5	6	7	8	9	10	11	12
1	14.6	--	6.7	--	4.4	--	3.2	--	2.6	--	2.1
2	85.4	--	25.0	--	14.6	--	10.5	--	8.2	--	6.7
3	--	--	75.0	--	29.6	--	19.4	--	14.6	--	11.8
4	--	--	93.3	--	70.4	--	32.3	--	22.6	--	17.7
5	--	--	--	--	85.4	--	67.7	--	34.2	--	25.0
6	--	--	--	--	95.6	--	80.6	--	65.8	--	35.6
7	--	--	--	--	--	--	89.5	--	77.4	--	64.4
8	--	--	--	--	--	--	96.8	--	85.4	--	75.0
9	--	--	--	--	--	--	--	--	91.8	--	82.3
10	--	--	--	--	--	--	--	--	97.4	--	88.2
11	--	--	--	--	--	--	--	--	--	--	93.3
12	--	--	--	--	--	--	--	--	--	--	97.9

*Percent of stack diameter from inside wall to traverse point.

Traverse Point	% of Diameter	Distance from inside wall	Distance from outside of port
1	3.2	7.68	19 3/16
2	10.5	25.20	36 11/16
3	19.4	46.56	58 1/16
4	32.3	77.52	89
5	--	--	--
6	--	--	--
7	--	--	--
8	--	--	--
9	--	--	--
10	--	--	--
11	--	--	--
12	--	--	--

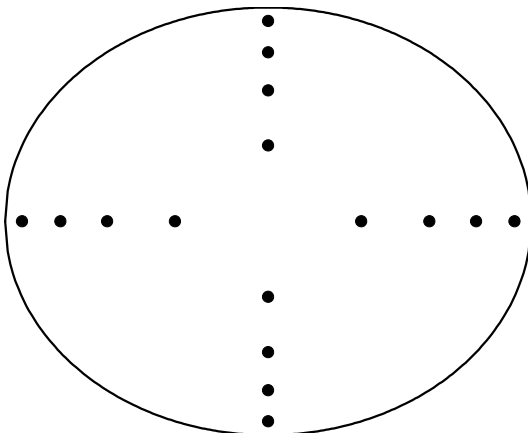
Stack Diagram

A = 15.25 ft.

B = 39.5 ft.

Depth of Duct = 240 in.

Cross Sectional Area



Downstream Disturbance

A

B

Upstream Disturbance

Cyclonic Flow Check

Location ExxonMobil - Beaumont, TX
Source Cogen Unit 41
Project No. AST-2024-1096
Date 2/8/24

Sample Point	Angle ($\Delta P=0$)
1	5
2	5
3	5
4	5
5	-10
6	-10
7	-10
8	5
9	5
10	-5
11	-5
12	-10
13	5
14	5
15	-5
16	-10
Average	6.6

Location ExxonMobil - Beaumont, TX

Source Cogen Unit 41

Project No. AST-2024-1096

Run No.	1	2	3
Date	2/8/24	2/8/24	2/8/24
Status	VALID	VALID	VALID
Start Time	9:05	10:32	11:50
Stop Time	10:05	11:32	12:50
Leak Check	Pass	Pass	Pass

Traverse Point	ΔP (in. WC)	Ts (°F)	ΔP (in. WC)	Ts (°F)	ΔP (in. WC)	Ts (°F)
A1	1.10	245	1.10	245	1.15	245
2	1.85	245	1.80	245	1.80	244
3	2.00	244	1.96	245	2.06	244
4	1.70	244	1.70	243	1.73	244
B1	0.41	243	0.40	245	0.44	245
2	0.85	245	0.90	245	0.89	245
3	1.54	244	1.49	245	1.51	245
4	1.71	245	1.66	245	1.69	246
C1	1.00	245	1.21	245	1.10	245
2	1.77	244	1.85	244	1.85	244
3	1.91	245	1.95	244	1.93	244
4	1.69	245	1.78	245	1.66	245
D1	0.44	245	0.40	245	0.40	245
2	0.91	243	0.88	245	0.92	245
3	1.50	244	1.61	244	1.54	245
4	1.48	245	1.51	244	1.50	244

						Average
Square Root of ΔP , (in. WC) ^{1/2}	(ΔP) ^{1/2}	1.144	1.153	1.153		1.150
Average ΔP , in. WC	(ΔP)	1.37	1.39	1.39		1.38
Pitot Tube Coefficient	(Cp)	0.826	0.826	0.826		0.826
Barometric Pressure, in. Hg	(Pb)	30.03	30.03	30.03		30.03
Static Pressure, in. WC	(Pg)	-0.50	-0.50	-0.50		-0.50
Stack Pressure, in. Hg	(Ps)	29.99	29.99	29.99		29.99
Average Temperature, °F	(Ts)	244.4	244.6	244.7		244.6
Average Temperature, °R	(Ts)	704.1	704.3	704.4		704.3
Measured Moisture Fraction	(BWSmsd)	0.061	0.060	0.060		0.060
Moisture Fraction @ Saturation	(BWSsat)	1.000	1.000	1.000		1.000
Moisture Fraction	(BWS)	0.061	0.060	0.060		0.060
O2 Concentration, %	(O2)	13.78	13.78	13.77		13.78
CO2 Concentration, %	(CO2)	4.16	4.14	4.14		4.15
Molecular Weight, lb/lb-mole (dry)	(Md)	29.22	29.21	29.21		29.21
Molecular Weight, lb/lb-mole (wet)	(Ms)	28.53	28.54	28.54		28.54
Velocity, ft/sec	(Vs)	73.3	73.8	73.8		73.7
VFR at stack conditions, acfm	(Qa)	1,381,559	1,391,696	1,391,814		1,388,357
VFR at standard conditions, scfh	(Qsw)	62,273,777	62,714,005	62,713,761		62,567,181
VFR at standard conditions, scfm	(Qsw)	1,037,896	1,045,233	1,045,229		1,042,786
VFR at standard conditions, dscfm	(Qsd)	974,585	982,519	982,516		979,873

Location ExxonMobil - Beaumont, TX
Source Cogen Unit 41
Project No. AST-2024-1096
Parameter(s) HCL, HF
Console Units / Method L M4

Run No.	1					2					3				
Date	2/8/24					2/8/24					2/8/24				
Status	VALID					VALID					VALID				
Start Time	9:05					10:32					11:50				
End Time	10:05					11:32					12:50				
Run Time, min (0)	60					60					60				
Meter ID	18					18					18				
Meter Correction Factor (Y)	0.9890					0.9890					0.9890				
Max Vacuum, in. Hg	3					2					2				
Post Leak Check, L/min (at max vac.)	0.000					0.000					0.000				
Meter Volume, L															
0	0.000					0.000					0.000				
5	11.200					10.870					10.630				
10	22.450					21.800					21.560				
15	32.750					32.000					32.390				
20	43.230					42.570					42.980				
25	53.810					53.070					53.740				
30	64.190					62.590					64.420				
35	74.650					73.050					75.040				
40	86.160					83.690					85.760				
45	96.910					94.390					96.430				
50	107.520					104.970					106.970				
55	118.120					115.480					117.550				
60	128.742					126.145					128.031				
Total Meter Volume, L (Vm)	128.742					126.145					128.031				
Temperature, °F	Meter	Probe	Filter	Vacuum	Imp. Exit	Meter	Probe	Filter	Vacuum	Imp. Exit	Meter	Probe	Filter	Vacuum	Imp. Exit
0	88	254	257	3	64	87	255	257	2	65	79	255	258	2	62
5	88	255	255	3	57	88	254	258	2	59	78	255	258	2	62
10	88	256	255	3	58	85	254	258	2	59	78	255	258	2	60
15	89	255	255	3	58	85	255	258	2	58	78	253	258	2	57
20	89	255	258	3	59	84	255	258	2	58	77	255	258	2	57
25	90	255	257	3	60	84	255	258	2	59	77	254	258	2	57
30	90	255	256	3	60	83	255	257	2	59	77	255	257	2	58
35	90	256	256	3	61	83	256	258	2	60	77	256	257	2	58
40	90	256	255	3	61	83	254	258	2	60	78	255	258	2	58
45	91	256	255	3	61	82	254	258	2	60	78	256	258	2	58
50	91	254	255	3	63	81	254	258	2	62	78	256	258	2	60
55	92	255	255	3	62	81	254	258	2	61	78	256	258	2	59
60	92	255	255	3	60	81	255	258	2	61	78	256	258	2	60
Average Temperature, °F (Tm)	90	255	256	3	60	84	255	258	2	60	78	255	258	2	59
Average Temperature, °R (Tm)	550	715	715	--	--	543	714	718	--	--	537	715	718	--	--
Minimum Temperature, °F	88	254	255	3	57	81	254	257	2	58	77	253	257	2	57
Maximum Temperature, °F	92	256	258	3	64	88	256	258	2	65	79	256	258	2	62
Barometric Pressure, in. Hg (Pb)	30.03					30.03					30.03				
Meter Orifice Pressure, in. WC (ΔH)	2.200					2.200					2.200				
Meter Pressure, in. Hg (Pm)	30.19					30.19					30.19				
Standard Meter Volume, L (Vmstd)	123.374					122.272					125.450				

Emissions Calculations



Location ExxonMobil - Beaumont, TX
Source Cogen Unit 41
Project No. AST-2024-1096

Run Number		Run 1	Run 2	Run 3	Average
Date		2/8/24	2/8/24	2/8/24	--
Start Time		9:05	10:32	11:50	--
Stop Time		10:05	11:30	12:50	--
Input Data - Outlet					
Moisture Fraction, dimensionless	BWS	0.061	0.060	0.060	0.060
Calculated Data - Outlet					
O ₂ Concentration, % dry	C _{O₂}	13.78	13.78	13.77	13.78
CO ₂ Concentration, % dry	C _{CO₂}	4.16	4.14	4.14	4.15

Location **ExxonMobil - Beaumont, TX**

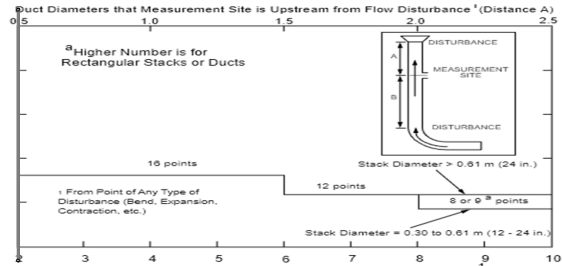
Source **Cogen Unit 41**

Project No. **AST-2024-1096**

Date: **02/07/24**

Stack Parameters

Duct Orientation: Vertical
 Duct Design: Circular
 Distance from Far Wall to Outside of Port: 252.13 in
 Nipple Length: 12.13 in
 Depth of Duct: 240.00 in
 Cross Sectional Area of Duct: 314.16 ft²
 No. of Test Ports: 1
 Distance A: 10.0 ft
 Distance A Duct Diameters: 0.5 (must be ≥ 0.5)
 Distance B: 40.0 ft
 Distance B Duct Diameters: 2.0 (must be ≥ 2)
 Actual Number of Traverse Points: 3
 Measurer (Initial and Date): CHE 2/6/24
 Reviewer (Initial and Date): EAT 2/6/24

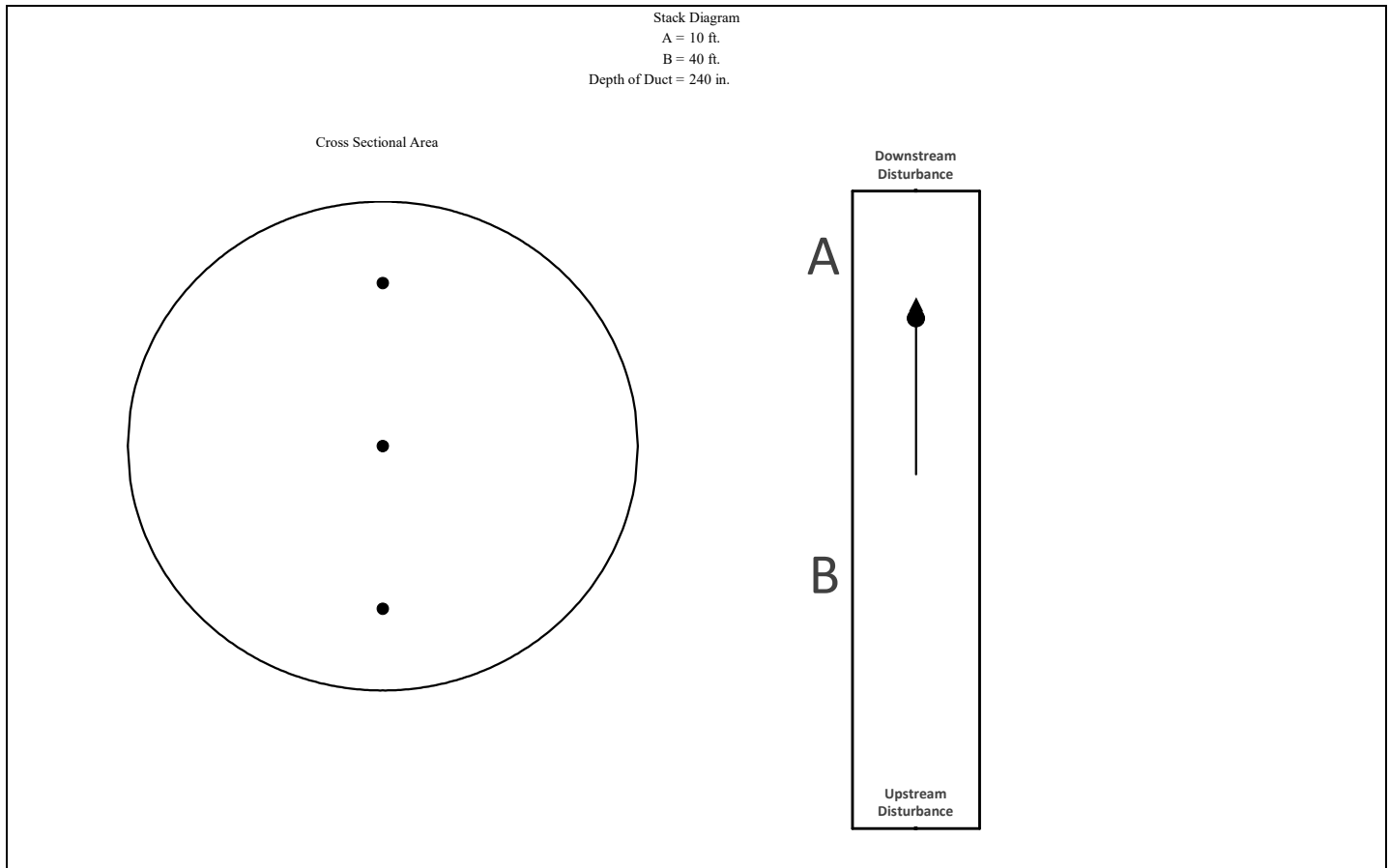


CIRCULAR DUCT

LOCATION OF TRAVERSE POINTS											
Number of traverse points on a diameter											
	2	3	4	5	6	7	8	9	10	11	12
1	14.6	16.7	6.7	--	4.4	--	3.2	--	2.6	--	2.1
2	85.4	50.0	25.0	--	14.6	--	10.5	--	8.2	--	6.7
3	--	83.3	75.0	--	29.6	--	19.4	--	14.6	--	11.8
4	--	--	93.3	--	70.4	--	32.3	--	22.6	--	17.7
5	--	--	--	--	85.4	--	67.7	--	34.2	--	25.0
6	--	--	--	--	95.6	--	80.6	--	65.8	--	35.6
7	--	--	--	--	--	--	89.5	--	77.4	--	64.4
8	--	--	--	--	--	--	96.8	--	85.4	--	75.0
9	--	--	--	--	--	--	--	--	91.8	--	82.3
10	--	--	--	--	--	--	--	--	97.4	--	88.2
11	--	--	--	--	--	--	--	--	--	--	93.3
12	--	--	--	--	--	--	--	--	--	--	97.9

Traverse Point	% of Diameter	Distance from inside wall	Distance from outside of port
1	16.7	40.08	52.21
2	50.0	120.00	132.13
3	83.3	199.92	212.05
4	--	--	--
5	--	--	--
6	--	--	--
7	--	--	--
8	--	--	--
9	--	--	--
10	--	--	--
11	--	--	--
12	--	--	--

*Percent of stack diameter from inside wall to traverse point.



Location: ExxonMobil - Beaumont, TX
Source: Cogen Unit 41
Project No.: AST-2024-1096
Date: 2/8/24

Time Unit Status	O ₂ - Outlet % dry Valid	CO ₂ - Outlet % dry Valid
Uncorrected Run Average (C _{obs})	13.79	4.22
Cal Gas Concentration (C _{MA})	10.97	10.96
Pretest System Zero Response	-0.03	0.07
Posttest System Zero Response	0.02	0.07
Average Zero Response (C ₀)	-0.01	0.07
Pretest System Cal Response	10.95	11.03
Posttest System Cal Response	11.00	11.00
Average Cal Response (C _M)	10.98	11.02
Corrected Run Average (Corr)	13.78	4.16
9:05	13.78	4.24
9:06	13.79	4.24
9:07	13.78	4.24
9:08	13.79	4.24
9:09	13.78	4.24
9:10	13.77	4.24
9:11	13.79	4.24
9:12	13.79	4.23
9:13	13.78	4.23
9:14	13.79	4.23
9:15	13.79	4.23
9:16	13.79	4.23
9:17	13.79	4.23
9:18	13.79	4.23
9:19	13.78	4.23
9:20	13.78	4.23
9:21	13.79	4.23
9:22	13.78	4.23
9:23	13.79	4.23
9:24	13.78	4.23
9:25	13.79	4.22
9:26	13.79	4.22
9:27	13.78	4.23
9:28	13.79	4.22
9:29	13.78	4.22
9:30	13.78	4.22
9:31	13.78	4.22
9:32	13.79	4.23
9:33	13.78	4.22
9:34	13.79	4.23
9:35	13.80	4.22
9:36	13.79	4.23
9:37	13.80	4.22
9:38	13.79	4.23
9:39	13.79	4.22
9:40	13.80	4.22
9:41	13.79	4.22
9:42	13.79	4.22
9:43	13.80	4.22
9:44	13.78	4.22
9:45	13.80	4.22
9:46	13.79	4.22
9:47	13.80	4.22
9:48	13.80	4.22
9:49	13.79	4.22
9:50	13.79	4.22
9:51	13.80	4.22
9:52	13.79	4.21
9:53	13.79	4.21
9:54	13.80	4.21
9:55	13.81	4.21
9:56	13.81	4.21
9:57	13.81	4.21
9:58	13.81	4.21
9:59	13.81	4.21
10:00	13.81	4.20
10:01	13.81	4.21
10:02	13.80	4.21
10:03	13.81	4.21
10:04	13.81	4.21

Location: ExxonMobil - Beaumont, TX
Source: Cogen Unit 41
Project No.: AST-2024-1096
Date: 2/8/24

Time Unit MDL Status	Temperature ° C -- Valid	Pressure atm -- Valid	BWS - Outlet % (wet) -- Valid
9:05	193.0	0.988	6.05
9:06	192.8	0.988	6.06
9:07	192.5	0.988	6.07
9:08	192.3	0.988	6.10
9:09	192.2	0.988	6.02
9:10	192.3	0.987	6.09
9:11	192.2	0.987	6.07
9:12	192.2	0.987	6.06
9:13	192.3	0.987	6.04
9:14	192.3	0.988	6.03
9:15	192.5	0.988	6.07
9:16	192.5	0.988	6.05
9:17	192.6	0.989	6.08
9:18	192.7	0.989	6.02
9:19	192.8	0.989	6.00
9:20	192.9	0.988	6.02
9:21	192.9	0.988	6.05
9:22	193.0	0.988	6.08
9:23	192.9	0.988	6.04
9:24	192.9	0.988	6.12
9:25	192.9	0.988	6.08
9:26	193.0	0.988	6.05
9:27	192.9	0.988	6.07
9:28	192.8	0.988	6.12
9:29	192.8	0.989	6.10
9:30	192.7	0.988	6.12
9:31	192.8	0.989	6.07
9:32	192.8	0.989	6.14
9:33	192.8	0.988	6.13
9:34	192.9	0.989	6.11
9:35	192.9	0.989	6.14
9:36	192.8	0.989	6.07
9:37	192.9	0.989	6.12
9:38	192.9	0.989	6.18
9:39	192.9	0.989	6.10
9:40	192.8	0.989	6.15
9:41	192.9	0.989	6.18
9:42	193.0	0.989	6.17
9:43	192.9	0.989	6.18
9:44	192.9	0.989	6.13
9:45	193.0	0.990	6.10
9:46	193.0	0.989	6.11
9:47	193.0	0.990	6.10
9:48	193.1	0.989	6.10
9:49	193.1	0.988	6.08
9:50	193.2	0.989	6.09
9:51	193.1	0.989	6.08
9:52	192.9	0.989	6.13
9:53	192.9	0.988	6.11
9:54	192.8	0.989	6.05
9:55	192.9	0.989	6.09
9:56	192.8	0.989	6.11
9:57	192.9	0.989	6.08
9:58	192.7	0.990	6.15
9:59	192.7	0.990	6.02
10:00	192.7	0.989	6.06
10:01	192.7	0.989	6.03
10:02	192.7	0.990	6.05
10:03	192.7	0.989	6.09
10:04	192.8	0.990	6.07
Parameter	Temperature	Pressure	BWS - Outlet
Run Average	192.8	0.989	6.09

Location: ExxonMobil - Beaumont, TX
Source: Cogen Unit 41
Project No.: AST-2024-1096
Date: 2/8/24

Time Unit Status	O ₂ - Outlet % dry Valid	CO ₂ - Outlet % dry Valid
Uncorrected Run Average (C _{obs})	13.83	4.19
Cal Gas Concentration (C _{MA})	10.97	10.96
Pretest System Zero Response	0.02	0.07
Posttest System Zero Response	-0.05	0.03
Average Zero Response (C ₀)	-0.02	0.05
Pretest System Cal Response	11.00	11.00
Posttest System Cal Response	11.01	11.01
Average Cal Response (C _M)	11.01	11.01
Corrected Run Average (Corr)	13.78	4.14
10:32	13.82	4.19
10:33	13.82	4.19
10:34	13.83	4.19
10:35	13.83	4.19
10:36	13.82	4.20
10:37	13.83	4.19
10:38	13.83	4.19
10:39	13.83	4.19
10:40	13.83	4.19
10:41	13.83	4.19
10:42	13.83	4.19
10:43	13.83	4.19
10:44	13.83	4.19
10:45	13.82	4.19
10:46	13.82	4.19
10:47	13.82	4.19
10:48	13.83	4.19
10:49	13.82	4.19
10:50	13.83	4.19
10:51	13.84	4.19
10:52	13.83	4.19
10:53	13.85	4.18
10:54	13.83	4.19
10:55	13.83	4.19
10:56	13.83	4.19
10:57	13.82	4.19
10:58	13.84	4.19
10:59	13.83	4.19
11:00	13.82	4.19
11:01	13.83	4.19
11:02	13.83	4.19
11:03	13.83	4.19
11:04	13.83	4.19
11:05	13.83	4.19
11:06	13.84	4.19
11:07	13.84	4.18
11:08	13.84	4.18
11:09	13.84	4.18
11:10	13.85	4.18
11:11	13.84	4.18
11:12	13.84	4.18
11:13	13.83	4.18
11:14	13.83	4.19
11:15	13.84	4.19
11:16	13.84	4.19
11:17	13.83	4.19
11:18	13.83	4.19
11:19	13.84	4.18
11:20	13.84	4.18
11:21	13.83	4.18
11:22	13.83	4.18
11:23	13.84	4.18
11:24	13.84	4.18
11:25	13.84	4.17
11:26	13.83	4.17
11:27	13.84	4.17
11:28	13.85	4.17
11:29	13.79	4.15

Location: ExxonMobil - Beaumont, TX

Source: Cogen Unit 41

Project No.: AST-2024-1096

Date: 2/8/24

Time Unit MDL Status	Temperature ° C -- Valid	Pressure atm -- Valid	BWS - Outlet % (wet) -- Valid
10:30	193.0	0.991	5.98
10:31	193.1	0.991	5.96
10:32	193.0	0.990	5.99
10:33	193.0	0.990	6.02
10:34	192.9	0.990	6.07
10:35	192.8	0.989	6.13
10:36	192.9	0.989	6.07
10:37	193.0	0.990	6.00
10:38	193.1	0.990	6.07
10:39	193.1	0.989	6.11
10:40	193.1	0.989	6.08
10:41	193.0	0.989	6.02
10:42	193.0	0.989	6.05
10:43	192.8	0.990	5.95
10:44	192.7	0.989	5.96
10:45	192.7	0.991	6.01
10:46	192.9	0.990	6.02
10:47	193.0	0.989	6.02
10:48	193.0	0.989	5.95
10:49	193.0	0.990	6.01
10:50	193.0	0.990	6.07
10:51	193.1	0.989	6.19
10:52	193.1	0.989	6.01
10:53	193.1	0.990	5.91
10:54	193.2	0.990	5.83
10:55	193.2	0.990	5.74
10:56	193.3	0.990	5.79
10:57	193.2	0.990	5.97
10:58	193.2	0.990	5.92
10:59	193.1	0.990	5.90
11:00	193.1	0.989	5.90
11:01	193.1	0.990	6.13
11:02	192.9	0.989	6.32
11:03	192.9	0.989	6.08
11:04	192.7	0.989	5.96
11:05	192.7	0.989	5.83
11:06	192.7	0.990	5.89
11:07	192.7	0.989	6.00
11:08	192.6	0.989	6.15
11:09	192.6	0.989	6.01
11:10	192.6	0.989	5.91
11:11	192.6	0.989	5.87
11:12	192.6	0.988	6.18
11:13	192.6	0.989	6.04
11:14	192.6	0.989	5.88
11:15	192.5	0.988	5.92
11:16	192.5	0.989	5.96
11:17	192.5	0.989	5.93
11:18	192.5	0.988	5.96
11:19	192.6	0.989	5.96
11:20	192.6	0.988	6.08
11:21	192.6	0.988	5.99
11:22	192.6	0.989	6.05
11:23	192.6	0.988	6.35
11:24	192.5	0.989	6.11
11:25	192.5	0.989	5.93
11:26	192.6	0.988	5.91
11:27	192.7	0.988	5.96
11:28	192.6	0.988	5.96
11:29	192.7	0.988	5.94
Parameter	Temperature	Pressure	BWS - Outlet
Run Average	192.8	0.989	6.00

Location: ExxonMobil - Beaumont, TX
Source: Cogen Unit 41
Project No.: AST-2024-1096
Date: 2/8/24

Time Unit Status	O ₂ - Outlet % dry Valid	CO ₂ - Outlet % dry Valid
Uncorrected Run Average (C _{obs})	13.84	4.19
Cal Gas Concentration (C _{MA})	10.97	10.96
Pretest System Zero Response	-0.05	0.03
Posttest System Zero Response	-0.06	0.04
Average Zero Response (C ₀)	-0.06	0.04
Pretest System Cal Response	11.01	11.01
Posttest System Cal Response	11.02	11.03
Average Cal Response (C _M)	11.02	11.02
Corrected Run Average (Corr)	13.77	4.14
11:50	13.84	4.20
11:51	13.84	4.20
11:52	13.84	4.20
11:53	13.83	4.20
11:54	13.84	4.20
11:55	13.84	4.20
11:56	13.84	4.19
11:57	13.85	4.20
11:58	13.84	4.20
11:59	13.85	4.20
12:00	13.84	4.20
12:01	13.85	4.20
12:02	13.84	4.20
12:03	13.84	4.20
12:04	13.84	4.20
12:05	13.85	4.20
12:06	13.85	4.20
12:07	13.85	4.20
12:08	13.85	4.20
12:09	13.85	4.19
12:10	13.85	4.19
12:11	13.85	4.19
12:12	13.86	4.18
12:13	13.86	4.18
12:14	13.86	4.17
12:15	13.85	4.17
12:16	13.86	4.17
12:17	13.85	4.17
12:18	13.86	4.17
12:19	13.85	4.17
12:20	13.85	4.17
12:21	13.85	4.17
12:22	13.85	4.17
12:23	13.86	4.17
12:24	13.84	4.17
12:25	13.85	4.17
12:26	13.85	4.17
12:27	13.86	4.17
12:28	13.84	4.17
12:29	13.84	4.17
12:30	13.85	4.17
12:31	13.84	4.17
12:32	13.85	4.18
12:33	13.85	4.17
12:34	13.85	4.18
12:35	13.84	4.18
12:36	13.85	4.18
12:37	13.85	4.18
12:38	13.85	4.18
12:39	13.85	4.18
12:40	13.83	4.19
12:41	13.84	4.19
12:42	13.84	4.19
12:43	13.82	4.19
12:44	13.83	4.19
12:45	13.84	4.20
12:46	13.82	4.20
12:47	13.82	4.20
12:48	13.83	4.20
12:49	13.77	4.18

Location: ExxonMobil - Beaumont, TX

Source: Cogen Unit 41

Project No.: AST-2024-1096

Date: 2/8/24

Time Unit MDL Status	Temperature ° C -- Valid	Pressure atm -- Valid	BWS - Outlet % (wet) -- Valid
11:50	193.1	0.989	5.94
11:51	193.1	0.989	6.10
11:52	193.1	0.989	5.85
11:53	192.9	0.990	5.89
11:54	193.0	0.990	5.90
11:55	193.0	0.989	6.21
11:56	192.9	0.989	6.03
11:57	192.8	0.989	5.90
11:58	192.8	0.989	5.86
11:59	192.8	0.988	5.91
12:00	192.8	0.988	6.19
12:01	192.8	0.988	5.92
12:02	192.8	0.989	5.89
12:03	193.0	0.989	5.94
12:04	193.0	0.989	5.94
12:05	193.0	0.988	6.09
12:06	193.1	0.988	5.94
12:07	193.1	0.988	5.94
12:08	193.1	0.988	5.86
12:09	193.1	0.987	5.91
12:10	193.2	0.988	6.05
12:11	193.3	0.988	6.05
12:12	193.3	0.988	5.97
12:13	193.3	0.988	5.94
12:14	193.3	0.988	5.95
12:15	193.3	0.988	5.93
12:16	193.3	0.988	5.96
12:17	193.2	0.988	6.03
12:18	193.2	0.987	5.97
12:19	193.1	0.987	5.92
12:20	193.1	0.988	5.98
12:21	193.1	0.987	5.94
12:22	193.1	0.987	6.01
12:23	193.1	0.987	5.93
12:24	193.0	0.987	5.98
12:25	193.0	0.987	5.92
12:26	193.1	0.987	5.88
12:27	193.1	0.987	5.87
12:28	193.0	0.987	5.92
12:29	193.0	0.987	5.98
12:30	193.0	0.987	6.12
12:31	192.8	0.988	5.89
12:32	192.8	0.988	5.83
12:33	192.6	0.988	5.97
12:34	192.7	0.988	5.81
12:35	192.8	0.987	6.14
12:36	192.7	0.988	5.85
12:37	192.9	0.987	5.98
12:38	193.0	0.988	5.89
12:39	193.0	0.987	5.82
12:40	192.9	0.987	5.97
12:41	192.8	0.987	5.96
12:42	192.9	0.986	6.00
12:43	192.9	0.986	6.12
12:44	193.0	0.986	6.31
12:45	193.0	0.987	6.09
12:46	193.0	0.986	6.16
12:47	193.0	0.987	6.04
12:48	193.1	0.987	6.12
12:49	193.0	0.986	6.13
Parameter	Temperature	Pressure	BWS - Outlet
Run Average	193.0	0.988	5.98

Location ExxonMobil - Beaumont, TX
Source Cogen Unit 42
Project No. AST-2024-1096
Parameter(s) HCl, HF

Run Number		Run 1	Run 2	Run 3	Average
Date		2/7/24	2/7/24	2/7/24	--
Start Time		8:55	10:21	11:45	--
Stop Time		9:55	11:21	12:45	--
Input Data					
Volumetric Flow Rate, dscfm	(Qs)	954,063	932,247	937,562	941,291
Moisture Fraction	(BWS)	0.052	0.052	0.053	0.052
Standard Meter Volume, L	(Vmstd)	129.097	123.342	124.200	125.546
Standard Meter Volume, ft ³	(Vmstd)	4.558	4.355	4.386	4.433
Hydrogen Chloride Mass, ug	M _{HCl}	14.41	39.30	22.06	25.26
Hydrogen Fluoride Mass, ug	M _{HF}	2.17	4.58	1.55	2.77
Emissions Calculations					
Hydrogen Chloride Concentration, ppmvd	C _{HCl}	0.074	0.21	0.12	0.13
Hydrogen Chloride Emission Rate, lb/hr	ER _{HCl}	0.40	1.11	0.62	0.71
Hydrogen Fluoride Concentration, ppmvd	C _{HF}	0.020	0.045	0.015	0.027
Hydrogen Fluoride Emission Rate, lb/hr	ER _{HF}	0.060	0.13	0.044	0.078

Location ExxonMobil - Beaumont, TX

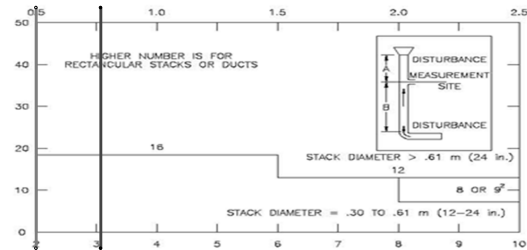
Source Cogen Unit 42

Project No. AST-2024-1096

Date 02/07/24

Stack Parameters

Duct Orientation: Vertical
Duct Design: Circular
Distance from Far Wall to Outside of Port: 251.50 in
Nipple Length: 11.50 in
Depth of Duct: 240.00 in
Cross Sectional Area of Duct: 314.16 ft²
No. of Test Ports: 4
Number of Readings per Point: 1
Distance A: 15.3 ft
Distance A Duct Diameters: 0.8 (must be > 0.5)
Distance B: 39.5 ft
Distance B Duct Diameters: 2.0 (must be > 2)
Minimum Number of Traverse Points: 16
Actual Number of Traverse Points: 16
Measurer (Initial and Date): DSR 2/7/2024
Reviewer (Initial and Date): SMM 2/7/2024



CIRCULAR DUCT

LOCATION OF TRAVERSE POINTS

Number of traverse points on a diameter

	2	3	4	5	6	7	8	9	10	11	12
1	14.6	--	6.7	--	4.4	--	3.2	--	2.6	--	2.1
2	85.4	--	25.0	--	14.6	--	10.5	--	8.2	--	6.7
3	--	--	75.0	--	29.6	--	19.4	--	14.6	--	11.8
4	--	--	93.3	--	70.4	--	32.3	--	22.6	--	17.7
5	--	--	--	--	85.4	--	67.7	--	34.2	--	25.0
6	--	--	--	--	95.6	--	80.6	--	65.8	--	35.6
7	--	--	--	--	--	--	89.5	--	77.4	--	64.4
8	--	--	--	--	--	--	96.8	--	85.4	--	75.0
9	--	--	--	--	--	--	--	--	91.8	--	82.3
10	--	--	--	--	--	--	--	--	97.4	--	88.2
11	--	--	--	--	--	--	--	--	--	--	93.3
12	--	--	--	--	--	--	--	--	--	--	97.9

*Percent of stack diameter from inside wall to traverse point.

Traverse Point	% of Diameter	Distance from inside wall	Distance from outside of port
1	3.2	7.68	19 3/16
2	10.5	25.20	36 11/16
3	19.4	46.56	58 1/16
4	32.3	77.52	89
5	--	--	--
6	--	--	--
7	--	--	--
8	--	--	--
9	--	--	--
10	--	--	--
11	--	--	--
12	--	--	--

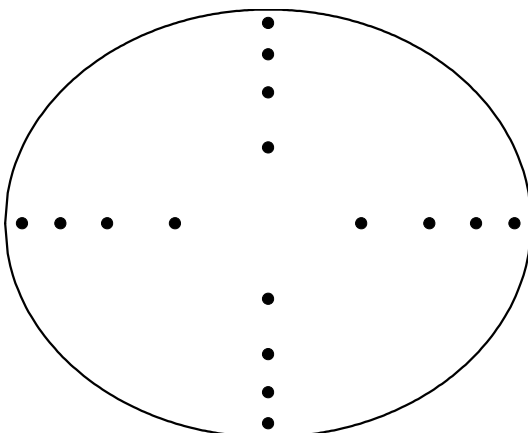
Stack Diagram

A = 15.25 ft.

B = 39.5 ft.

Depth of Duct = 240 in.

Cross Sectional Area



Downstream Disturbance

A

B

Upstream Disturbance

Cyclonic Flow Check

Location ExxonMobil - Beaumont, TX

Source Cogen Unit 42

Project No. AST-2024-1096

Date 2/7/24

Sample Point	Angle ($\Delta P=0$)
1	5
2	5
3	5
4	-10
5	-5
6	-10
7	5
8	5
9	5
10	5
11	-10
12	5
13	-10
14	-5
15	-10
16	5
Average	6.6

Location ExxonMobil - Beaumont, TX

Source Cogen Unit 42

Project No. AST-2024-1096

Run No.	1		2		3	
Date	2/7/24		2/7/24		2/7/24	
Status	VALID		VALID		VALID	
Start Time	8:55		10:21		11:45	
Stop Time	9:55		11:21		12:45	
Leak Check	Pass		Pass		Pass	
Traverse Point	Δ P (in. WC)	Ts (°F)	Δ P (in. WC)	Ts (°F)	Δ P (in. WC)	Ts (°F)
A1	1.16	269	1.40	267	1.42	270
2	1.69	270	1.65	269	1.66	271
3	1.87	270	1.80	270	1.85	271
4	1.55	269	1.00	268	1.23	269
B1	0.59	268	0.40	268	0.46	269
2	0.71	268	0.72	269	0.77	268
3	1.41	270	1.33	271	1.26	270
4	1.50	269	1.29	266	1.26	269
C1	1.20	267	1.45	271	1.44	268
2	1.55	269	1.69	270	1.73	270
3	1.91	269	1.77	270	1.75	269
4	1.47	268	1.25	269	1.20	267
D1	0.61	269	0.66	267	0.62	269
2	0.77	271	0.75	270	0.77	271
3	1.50	270	1.48	270	1.46	272
4	1.50	268	1.50	269	1.48	269
Average						
Square Root of ΔP, (in. WC) ^{1/2}	(ΔP) ^{1/2}	1.129	1.103	1.111	1.114	
Average ΔP, in. WC	(ΔP)	1.31	1.26	1.27	1.28	
Pitot Tube Coefficient	(Cp)	0.826	0.826	0.826	0.826	
Barometric Pressure, in. Hg	(Pb)	30.13	30.13	30.13	30.13	
Static Pressure, in. WC	(Pg)	-0.50	-0.50	-0.50	-0.50	
Stack Pressure, in. Hg	(Ps)	30.09	30.09	30.09	30.09	
Average Temperature, °F	(Ts)	269.0	269.0	269.5	269.2	
Average Temperature, °R	(Ts)	728.7	728.7	729.2	728.8	
Measured Moisture Fraction	(BWSmsd)	0.052	0.052	0.053	0.052	
Moisture Fraction @ Saturation	(BWSsat)	1.000	1.000	1.000	1.000	
Moisture Fraction	(BWS)	0.052	0.052	0.053	0.052	
O2 Concentration, %	(O2)	13.74	13.82	13.86	13.81	
CO2 Concentration, %	(CO2)	4.07	4.19	4.19	4.15	
Molecular Weight, lb/lb-mole (dry)	(Md)	29.20	29.22	29.22	29.22	
Molecular Weight, lb/lb-mole (wet)	(Ms)	28.62	28.64	28.63	28.63	
Velocity, ft/sec	(Vs)	73.3	71.6	72.2	72.4	
VFR at stack conditions, acfm	(Qa)	1,381,753	1,350,158	1,360,222	1,364,044	
VFR at standard conditions, scfh	(Qsw)	60,383,725	59,002,986	59,402,011	59,596,240	
VFR at standard conditions, scfm	(Qsw)	1,006,395	983,383	990,034	993,271	
VFR at standard conditions, dscfm	(Qsd)	954,063	932,247	937,562	941,291	

Location ExxonMobil - Beaumont, TX
Source Cogen Unit 42
Project No. AST-2024-1096
Parameter(s) HCL, HF
Console Units / Method L M4

Run No.	1					2					3				
Date	2/7/24					2/7/24					2/7/24				
Status	VALID					VALID					VALID				
Start Time	8:55					10:21					11:45				
End Time	9:55					11:21					12:45				
Run Time, min (0)	60					60					60				
Meter ID	18					18					18				
Meter Correction Factor (Y)	0.9890					0.9890					0.9890				
Max Vacuum, in. Hg	2					2					2				
Post Leak Check, L/min (at max vac.)	0.000					0.000					0.000				
Meter Volume, L															
0	0.000					0.000					0.000				
5	10.330					10.500					10.630				
10	20.880					20.740					20.950				
15	31.670					30.010					31.260				
20	42.900					40.290					41.670				
25	53.240					50.850					51.910				
30	63.830					61.390					62.340				
35	74.140					71.740					72.690				
40	84.750					82.070					83.000				
45	95.930					92.690					94.420				
50	107.200					103.120					104.780				
55	118.510					113.710					115.080				
60	129.269					124.045					125.397				
Total Meter Volume, L (Vm)	129.269					124.045					125.397				
Temperature, °F	Meter	Probe	Filter	Vacuum	Imp. Exit	Meter	Probe	Filter	Vacuum	Imp. Exit	Meter	Probe	Filter	Vacuum	Imp. Exit
0	65	255	258	2	59	69	255	254	2	60	72	255	258	2	60
5	66	256	258	2	52	70	255	256	2	53	72	255	258	2	60
10	67	254	258	2	53	70	256	256	2	58	72	256	258	2	60
15	68	254	258	2	54	70	255	256	2	57	73	257	258	2	59
20	68	253	259	2	54	71	254	257	2	55	74	257	258	2	58
25	68	254	258	2	54	71	254	257	2	55	74	257	257	2	57
30	69	255	258	2	56	71	256	257	2	57	74	258	258	2	55
35	69	254	257	2	58	71	255	257	2	58	74	258	258	2	55
40	71	255	257	2	58	75	254	258	2	58	74	256	259	2	56
45	72	256	256	2	58	72	254	258	2	58	75	256	257	2	58
50	73	256	256	2	59	73	254	257	2	59	75	256	257	2	58
55	73	255	257	2	59	74	255	255	2	59	75	255	257	2	59
60	73	255	255	2	59	75	255	256	2	59	75	256	258	2	58
Average Temperature, °F (Tm)	69	255	257	2	56	72	255	256	2	57	74	256	258	2	58
Average Temperature, °R (Tm)	529	714	717	--	--	531	714	716	--	--	533	716	717	--	--
Minimum Temperature, °F	65	253	255	2	52	69	254	254	2	53	72	255	257	2	55
Maximum Temperature, °F	73	256	259	2	59	75	256	258	2	60	75	258	259	2	60
Barometric Pressure, in. Hg (Pb)	30.13					30.13					30.13				
Meter Orifice Pressure, in. WC (ΔH)	2.200					2.200					2.200				
Meter Pressure, in. Hg (Pm)	30.29					30.29					30.29				
Standard Meter Volume, L (Vmstd)	129.097					123.342					124.200				

Emissions Calculations



Location ExxonMobil - Beaumont, TX
Source Cogen Unit 42
Project No. AST-2024-1096

Run Number		Run 1	Run 2	Run 3	Average
Date		2/7/24	2/7/24	2/7/24	--
Start Time		8:55	10:21	11:45	--
Stop Time		9:55	11:21	12:45	--
Input Data - Outlet					
Moisture Fraction, dimensionless	BWS	0.052	0.052	0.053	0.052
Calculated Data - Outlet					
O ₂ Concentration, % dry	C _{O₂}	13.74	13.82	13.86	13.81
CO ₂ Concentration, % dry	C _{CO₂}	4.07	4.19	4.19	4.15

Location ExxonMobil - Beaumont, TX

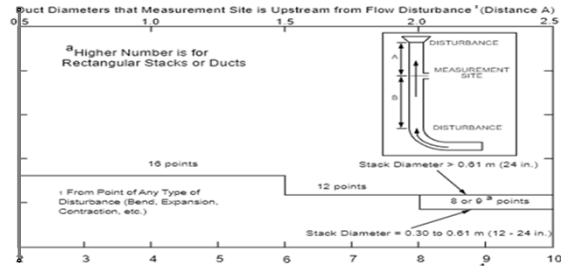
Source Cogen Unit 42

Project No. AST-2024-1096

Date: 02/07/24

Stack Parameters

Duct Orientation: Vertical
 Duct Design: Circular
 Distance from Far Wall to Outside of Port: 252.13 in
 Nipple Length: 12.13 in
 Depth of Duct: 240.00 in
 Cross Sectional Area of Duct: 314.16 ft²
 No. of Test Ports: 1
 Distance A: 10.0 ft
 Distance A Duct Diameters: 0.5 (must be ≥ 0.5)
 Distance B: 40.0 ft
 Distance B Duct Diameters: 2.0 (must be ≥ 2)
 Actual Number of Traverse Points: 3
 Measurer (Initial and Date): CHE 2/6/24
 Reviewer (Initial and Date): EAT 2/6/24

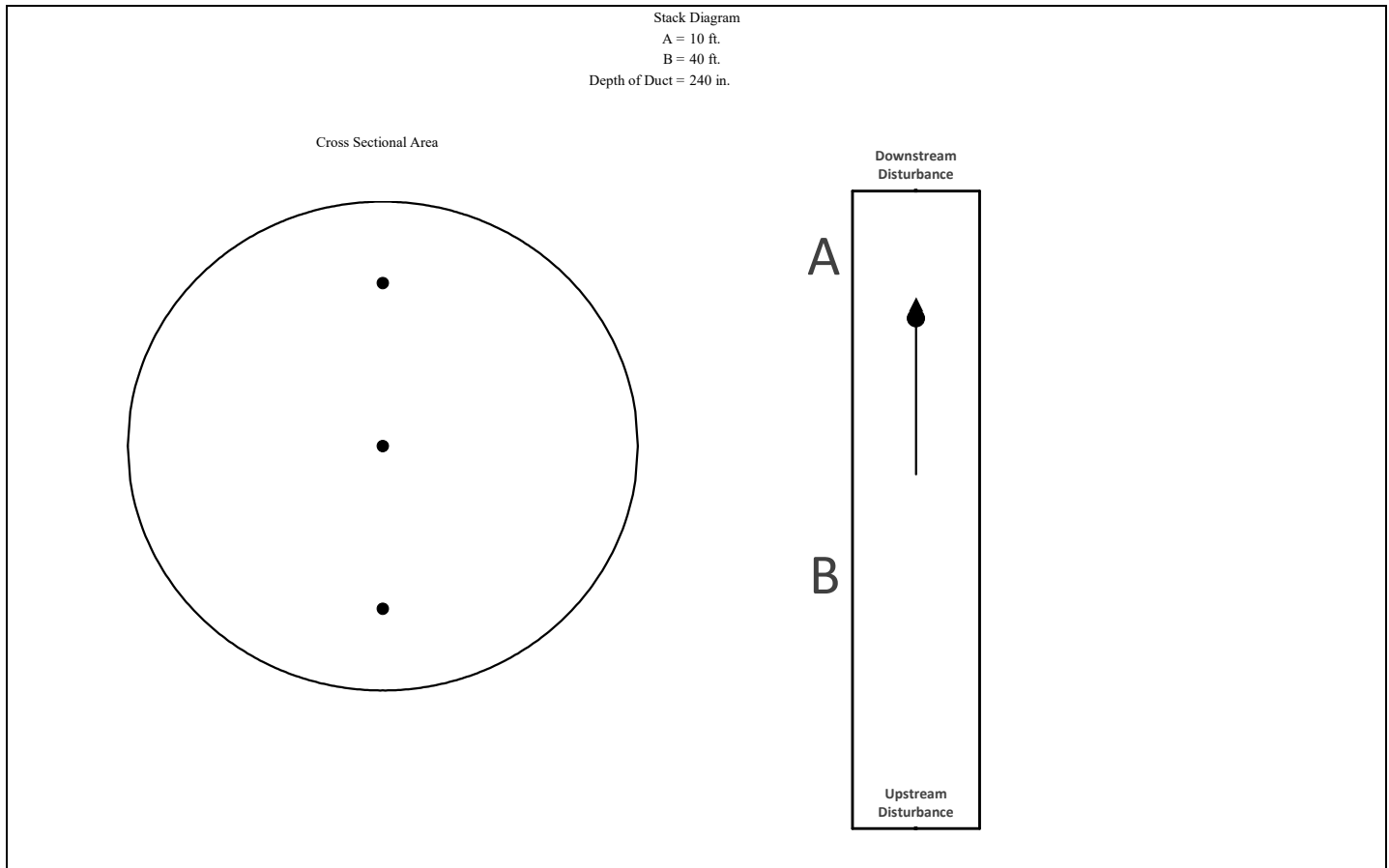


CIRCULAR DUCT

LOCATION OF TRAVERSE POINTS											
Number of traverse points on a diameter											
	2	3	4	5	6	7	8	9	10	11	12
1	14.6	16.7	6.7	--	4.4	--	3.2	--	2.6	--	2.1
2	85.4	50.0	25.0	--	14.6	--	10.5	--	8.2	--	6.7
3	--	83.3	75.0	--	29.6	--	19.4	--	14.6	--	11.8
4	--	--	93.3	--	70.4	--	32.3	--	22.6	--	17.7
5	--	--	--	--	85.4	--	67.7	--	34.2	--	25.0
6	--	--	--	--	95.6	--	80.6	--	65.8	--	35.6
7	--	--	--	--	--	--	89.5	--	77.4	--	64.4
8	--	--	--	--	--	--	96.8	--	85.4	--	75.0
9	--	--	--	--	--	--	--	--	91.8	--	82.3
10	--	--	--	--	--	--	--	--	97.4	--	88.2
11	--	--	--	--	--	--	--	--	--	--	93.3
12	--	--	--	--	--	--	--	--	--	--	97.9

*Percent of stack diameter from inside wall to traverse point.

Traverse Point	% of Diameter	Distance from inside wall	Distance from outside of port
1	16.7	40.08	52.21
2	50.0	120.00	132.13
3	83.3	199.92	212.05
4	--	--	--
5	--	--	--
6	--	--	--
7	--	--	--
8	--	--	--
9	--	--	--
10	--	--	--
11	--	--	--
12	--	--	--



Location: ExxonMobil - Beaumont, TX
Source: Cogen Unit 42
Project No.: AST-2024-1096
Date: 2/7/24

Time Unit Status	O ₂ - Outlet % dry Valid	CO ₂ - Outlet % dry Valid
Uncorrected Run Average (C_{obs})	13.78	4.13
Cal Gas Concentration (C_{MA})	10.97	10.96
Pretest System Zero Response	-0.03	0.06
Posttest System Zero Response	-0.05	0.04
Average Zero Response (C_0)	-0.04	0.05
Pretest System Cal Response	11.02	11.04
Posttest System Cal Response	10.97	11.03
Average Cal Response (C_M)	11.00	11.04
Corrected Run Average (Corr)	13.74	4.07
8:55	13.80	4.27
8:56	13.80	4.27
8:57	13.80	4.27
8:58	13.80	4.27
8:59	13.81	4.27
9:00	13.81	4.27
9:01	13.80	4.27
9:02	13.80	4.27
9:03	13.80	4.27
9:04	13.81	4.27
9:05	13.81	4.27
9:06	13.80	4.27
9:07	13.82	4.27
9:08	13.81	4.27
9:09	13.81	4.27
9:10	13.81	4.28
9:11	13.81	4.27
9:12	13.81	4.27
9:13	13.82	4.27
9:14	13.82	4.27
9:15	13.81	4.27
9:16	13.81	4.27
9:17	13.83	4.26
9:18	13.83	4.26
9:19	13.83	4.26
9:20	13.82	4.26
9:21	13.82	4.26
9:22	13.82	4.26
9:23	13.83	4.25
9:24	13.83	4.25
9:25	13.82	4.25
9:26	13.82	4.25
9:27	13.82	4.25
9:28	13.82	4.25
9:29	13.82	4.25
9:30	13.82	4.25
9:31	13.82	4.25
9:32	13.83	4.25
9:33	13.84	4.24
9:34	13.83	4.24
9:35	13.84	4.24
9:36	13.83	4.24
9:37	13.83	4.24
9:38	13.84	4.24
9:39	13.83	4.24
9:40	13.83	4.23
9:41	13.84	4.23
9:42	13.84	4.23
9:43	13.84	4.23
9:44	13.85	4.22
9:45	13.56	3.48
9:46	13.57	3.48
9:47	13.56	3.47
9:48	13.59	3.48
9:49	13.58	3.48
9:50	13.57	3.48
9:51	13.58	3.48
9:52	13.58	3.48
9:53	13.58	3.47
9:54	13.59	3.47

Location: ExxonMobil - Beaumont, TX

Source: Cogen Unit 42

Project No.: AST-2024-1096

Date: 2/7/24

Time Unit MDL Status	Temperature ° C -- Valid	Pressure atm -- Valid	BWS - Outlet % (wet) -- Valid
8:55	192.9	0.993	5.27
8:56	192.8	0.992	5.26
8:57	192.7	0.992	5.23
8:58	192.7	0.992	5.30
8:59	192.7	0.992	5.29
9:00	192.9	0.992	5.32
9:01	192.8	0.992	5.41
9:02	192.9	0.992	5.33
9:03	192.9	0.992	5.23
9:04	192.8	0.992	5.23
9:05	192.8	0.992	5.23
9:06	192.9	0.992	5.18
9:07	192.8	0.993	5.23
9:08	192.6	0.992	5.27
9:09	192.4	0.992	5.30
9:10	192.5	0.992	5.23
9:11	192.5	0.992	5.32
9:12	192.7	0.992	5.26
9:13	192.9	0.992	5.20
9:14	192.7	0.992	5.28
9:15	192.7	0.992	5.31
9:16	192.7	0.992	5.22
9:17	192.8	0.992	5.20
9:18	192.6	0.992	5.21
9:19	192.6	0.992	5.21
9:20	192.7	0.992	5.28
9:21	192.7	0.992	5.24
9:22	192.7	0.992	5.30
9:23	192.6	0.992	5.28
9:24	192.6	0.992	5.26
9:25	192.6	0.993	5.21
9:26	192.6	0.992	5.22
9:27	192.7	0.992	5.25
9:28	192.8	0.992	5.23
9:29	192.8	0.992	5.28
9:30	192.8	0.992	5.26
9:31	192.8	0.992	5.20
9:32	192.8	0.992	5.24
9:33	192.8	0.992	5.22
9:34	192.5	0.992	5.14
9:35	192.4	0.992	5.24
9:36	192.3	0.992	5.21
9:37	192.3	0.992	5.21
9:38	192.2	0.992	5.20
9:39	192.1	0.992	5.20
9:40	192.2	0.992	5.11
9:41	192.5	0.992	5.19
9:42	192.6	0.992	5.13
9:43	193.0	0.992	5.18
9:44	193.0	0.992	5.15
9:45	193.2	0.992	5.17
9:46	193.2	0.992	5.10
9:47	193.1	0.992	5.17
9:48	192.9	0.992	5.06
9:49	192.8	0.992	5.14
9:50	192.7	0.992	5.11
9:51	192.6	0.992	5.12
9:52	192.4	0.992	5.08
9:53	192.5	0.992	5.12
9:54	192.5	0.992	5.07

Parameter	Temperature	Pressure	BWS - Outlet
Run Average	192.7	0.992	5.22

Location: ExxonMobil - Beaumont, TX
 Source: Cogen Unit 42
 Project No.: AST-2024-1096
 Date: 2/7/24

Time Unit Status	O ₂ - Outlet % dry Valid	CO ₂ - Outlet % dry Valid
Uncorrected Run Average (C_{obs})	13.84	4.23
Cal Gas Concentration (C_{MA})	10.97	10.96
Pretest System Zero Response	-0.05	0.04
Posttest System Zero Response	-0.05	0.01
Average Zero Response (C_o)	-0.05	0.03
Pretest System Cal Response	10.97	11.03
Posttest System Cal Response	10.97	11.01
Average Cal Response (C_M)	10.97	11.02
Corrected Run Average (Corr)	13.82	4.19
10:21	13.84	4.22
10:22	13.85	4.22
10:23	13.85	4.22
10:24	13.85	4.22
10:25	13.86	4.22
10:26	13.86	4.23
10:27	13.85	4.23
10:28	13.85	4.22
10:29	13.84	4.23
10:30	13.85	4.23
10:31	13.85	4.23
10:32	13.85	4.23
10:33	13.85	4.23
10:34	13.85	4.23
10:35	13.85	4.23
10:36	13.84	4.23
10:37	13.84	4.23
10:38	13.84	4.24
10:39	13.84	4.24
10:40	13.85	4.24
10:41	13.84	4.24
10:42	13.84	4.24
10:43	13.84	4.24
10:44	13.83	4.24
10:45	13.84	4.24
10:46	13.83	4.24
10:47	13.84	4.24
10:48	13.83	4.24
10:49	13.84	4.24
10:50	13.83	4.24
10:51	13.84	4.24
10:52	13.84	4.24
10:53	13.82	4.24
10:54	13.84	4.24
10:55	13.84	4.24
10:56	13.83	4.24
10:57	13.83	4.24
10:58	13.83	4.25
10:59	13.83	4.25
11:00	13.83	4.25
11:01	13.82	4.25
11:02	13.83	4.25
11:03	13.83	4.24
11:04	13.82	4.24
11:05	13.83	4.24
11:06	13.82	4.24
11:07	13.83	4.23
11:08	13.82	4.23
11:09	13.84	4.22
11:10	13.83	4.22
11:11	13.82	4.21
11:12	13.83	4.21
11:13	13.84	4.20
11:14	13.83	4.20
11:15	13.83	4.20
11:16	13.83	4.20
11:17	13.83	4.19
11:18	13.83	4.19
11:19	13.84	4.19
11:20	13.84	4.19

Location: ExxonMobil - Beaumont, TX

Source: Cogen Unit 42

Project No.: AST-2024-1096

Date: 2/7/24

Time Unit MDL Status	Temperature ° C -- Valid	Pressure atm -- Valid	BWS - Outlet % (wet) -- Valid
10:21	192.9	0.992	5.13
10:22	192.8	0.992	5.09
10:23	192.7	0.992	5.15
10:24	192.8	0.993	5.08
10:25	193.0	0.992	5.12
10:26	192.9	0.992	5.15
10:27	192.8	0.992	5.23
10:28	192.8	0.992	5.15
10:29	192.9	0.992	5.12
10:30	192.8	0.992	5.10
10:31	192.9	0.993	5.13
10:32	192.8	0.992	5.10
10:33	192.9	0.993	5.22
10:34	193.0	0.992	5.13
10:35	193.2	0.992	5.15
10:36	193.2	0.992	5.12
10:37	193.1	0.992	5.18
10:38	193.1	0.992	5.18
10:39	193.2	0.992	5.17
10:40	193.2	0.992	5.21
10:41	193.0	0.993	5.17
10:42	192.8	0.992	5.10
10:43	192.6	0.992	5.17
10:44	192.5	0.992	5.13
10:45	192.4	0.992	5.17
10:46	192.6	0.992	5.20
10:47	192.7	0.992	5.12
10:48	192.8	0.992	5.19
10:49	192.9	0.992	5.15
10:50	193.1	0.992	5.17
10:51	193.1	0.993	5.25
10:52	193.1	0.992	5.16
10:53	193.0	0.992	5.25
10:54	192.9	0.992	5.24
10:55	192.9	0.992	5.23
10:56	192.9	0.992	5.22
10:57	192.9	0.992	5.22
10:58	192.8	0.992	5.20
10:59	192.9	0.992	5.17
11:00	193.1	0.992	5.21
11:01	193.0	0.992	5.31
11:02	192.7	0.992	5.33
11:03	192.9	0.992	5.26
11:04	192.7	0.992	5.20
11:05	192.7	0.992	5.20
11:06	192.7	0.992	5.29
11:07	192.8	0.992	5.30
11:08	192.9	0.992	5.19
11:09	192.9	0.992	5.28
11:10	192.8	0.992	5.28
11:11	192.7	0.992	5.26
11:12	192.7	0.992	5.28
11:13	192.6	0.992	5.27
11:14	192.6	0.992	5.24
11:15	192.7	0.992	5.21
11:16	192.6	0.992	5.27
11:17	192.7	0.992	5.17
11:18	192.6	0.992	5.24
11:19	192.6	0.992	5.19
11:20	192.6	0.992	5.24

Parameter	Temperature	Pressure	BWS - Outlet
Run Average	192.8	0.992	5.19

Location: ExxonMobil - Beaumont, TX
 Source: Cogen Unit 42
 Project No.: AST-2024-1096
 Date: 2/7/24

Time Unit Status	O ₂ - Outlet % dry Valid	CO ₂ - Outlet % dry Valid
Uncorrected Run Average (C_{obs})	13.84	4.22
Cal Gas Concentration (C_{MA})	10.97	10.96
Pretest System Zero Response	-0.05	0.01
Posttest System Zero Response	-0.05	0.06
Average Zero Response (C_o)	-0.05	0.04
Pretest System Cal Response	10.97	11.01
Posttest System Cal Response	10.92	10.99
Average Cal Response (C_M)	10.95	11.00
Corrected Run Average (Corr)	13.86	4.19
11:45	13.86	4.20
11:46	13.84	4.20
11:47	13.85	4.21
11:48	13.85	4.21
11:49	13.84	4.21
11:50	13.85	4.21
11:51	13.85	4.21
11:52	13.84	4.21
11:53	13.84	4.21
11:54	13.85	4.21
11:55	13.84	4.21
11:56	13.84	4.21
11:57	13.84	4.21
11:58	13.83	4.21
11:59	13.84	4.21
12:00	13.85	4.21
12:01	13.83	4.21
12:02	13.84	4.21
12:03	13.85	4.21
12:04	13.85	4.21
12:05	13.86	4.21
12:06	13.85	4.21
12:07	13.84	4.21
12:08	13.85	4.21
12:09	13.85	4.21
12:10	13.85	4.21
12:11	13.86	4.22
12:12	13.84	4.22
12:13	13.84	4.22
12:14	13.85	4.22
12:15	13.85	4.22
12:16	13.84	4.22
12:17	13.84	4.22
12:18	13.85	4.23
12:19	13.85	4.22
12:20	13.85	4.22
12:21	13.84	4.22
12:22	13.85	4.22
12:23	13.85	4.23
12:24	13.83	4.23
12:25	13.83	4.23
12:26	13.85	4.23
12:27	13.84	4.23
12:28	13.84	4.24
12:29	13.84	4.24
12:30	13.84	4.24
12:31	13.84	4.24
12:32	13.84	4.24
12:33	13.85	4.24
12:34	13.84	4.25
12:35	13.83	4.24
12:36	13.83	4.25
12:37	13.84	4.25
12:38	13.83	4.25
12:39	13.83	4.25
12:40	13.83	4.25
12:41	13.83	4.25
12:42	13.82	4.25
12:43	13.83	4.25
12:44	13.84	4.25

Location: ExxonMobil - Beaumont, TX

Source: Cogen Unit 42

Project No.: AST-2024-1096

Date: 2/7/24

Time Unit MDL Status	Temperature ° C -- Valid	Pressure atm -- Valid	BWS - Outlet % (wet) -- Valid
11:45	192.7	0.992	5.26
11:46	192.9	0.992	5.28
11:47	192.9	0.992	5.28
11:48	193.0	0.993	5.30
11:49	193.1	0.992	5.27
11:50	193.3	0.992	5.25
11:51	193.2	0.992	5.22
11:52	193.3	0.992	5.32
11:53	193.4	0.992	5.25
11:54	193.4	0.992	5.28
11:55	193.6	0.992	5.28
11:56	193.7	0.992	5.34
11:57	193.6	0.992	5.32
11:58	193.6	0.992	5.30
11:59	193.6	0.992	5.26
12:00	193.5	0.992	5.31
12:01	193.4	0.992	5.27
12:02	193.3	0.992	5.31
12:03	193.3	0.992	5.27
12:04	193.2	0.992	5.26
12:05	193.0	0.992	5.28
12:06	193.0	0.992	5.30
12:07	193.1	0.992	5.27
12:08	193.1	0.992	5.31
12:09	193.4	0.992	5.30
12:10	193.2	0.991	5.22
12:11	193.0	0.991	5.22
12:12	193.0	0.992	5.21
12:13	192.7	0.992	5.30
12:14	192.7	0.992	5.22
12:15	192.7	0.992	5.21
12:16	192.7	0.992	5.22
12:17	192.7	0.992	5.23
12:18	192.6	0.992	5.25
12:19	192.6	0.992	5.28
12:20	192.5	0.992	5.31
12:21	192.4	0.992	5.28
12:22	192.5	0.991	5.21
12:23	192.6	0.991	5.27
12:24	192.6	0.992	5.21
12:25	192.6	0.992	5.28
12:26	192.6	0.992	5.26
12:27	192.7	0.992	5.29
12:28	192.7	0.992	5.31
12:29	192.8	0.992	5.23
12:30	192.6	0.992	5.28
12:31	192.8	0.992	5.28
12:32	192.9	0.992	5.24
12:33	192.9	0.992	5.33
12:34	192.9	0.992	5.25
12:35	193.0	0.992	5.28
12:36	193.0	0.992	5.40
12:37	193.0	0.992	5.26
12:38	193.1	0.991	5.26
12:39	193.0	0.991	5.26
12:40	192.9	0.991	5.25
12:41	192.8	0.991	5.28
12:42	192.6	0.991	5.27
12:43	192.6	0.992	5.25
12:44	192.6	0.991	5.24
Parameter	Temperature	Pressure	BWS - Outlet
Run Average	193.0	0.992	5.27

Emissions Calculations

Location ExxonMobil - Beaumont, TX
Source Cogen Unit 43
Project No. AST-2024-1096
Parameter(s) HCl, HF

Run Number		Run 1	Run 2	Run 3	Average
Date		2/6/24	2/6/24	2/6/24	--
Start Time		9:37	10:57	12:18	--
Stop Time		10:37	11:57	13:18	--
Input Data					
Volumetric Flow Rate, dscfm	(Qs)	1,009,038	995,090	1,008,584	1,004,237
Moisture Fraction	(BWS)	0.052	0.052	0.052	0.052
Standard Meter Volume, L	(Vmstd)	122.343	120.978	120.157	121.159
Standard Meter Volume, ft ³	(Vmstd)	4.320	4.272	4.243	4.278
Hydrogen Chloride Mass, ug	M _{HCl}	44.30	22.31	32.90	33.17
Hydrogen Fluoride Mass, ug	M _{HF}	5.03	3.64	4.32	4.33
Emissions Calculations					
Hydrogen Chloride Concentration, ppmvd	C _{HCl}	0.24	0.12	0.18	0.18
Hydrogen Chloride Emission Rate, lb/hr	ER _{HCl}	1.4	0.69	1.03	1.03
Hydrogen Fluoride Concentration, ppmvd	C _{HF}	0.049	0.036	0.043	0.043
Hydrogen Fluoride Emission Rate, lb/hr	ER _{HF}	0.16	0.11	0.14	0.13

Location ExxonMobil - Beaumont, TX

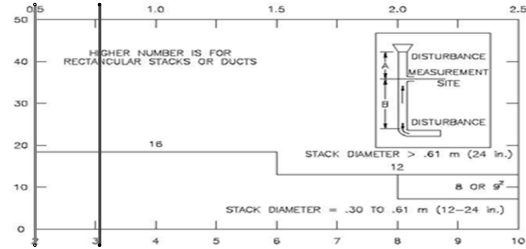
Source Cogen Unit 43

Project No. AST-2024-1096

Date 02/06/24

Stack Parameters

Duct Orientation: Vertical
Duct Design: Circular
Distance from Far Wall to Outside of Port: 251.50 in
Nipple Length: 11.50 in
Depth of Duct: 240.00 in
Cross Sectional Area of Duct: 314.16 ft²
No. of Test Ports: 4
Number of Readings per Point: 1
Distance A: 15.3 ft
Distance A Duct Diameters: 0.8 (must be > 0.5)
Distance B: 39.5 ft
Distance B Duct Diameters: 2.0 (must be > 2)
Minimum Number of Traverse Points: 16
Actual Number of Traverse Points: 16
Measurer (Initial and Date): DSR 2/6/2024
Reviewer (Initial and Date): SMM 2/6/2024



CIRCULAR DUCT

LOCATION OF TRAVERSE POINTS

Number of traverse points on a diameter

	2	3	4	5	6	7	8	9	10	11	12
1	14.6	--	6.7	--	4.4	--	3.2	--	2.6	--	2.1
2	85.4	--	25.0	--	14.6	--	10.5	--	8.2	--	6.7
3	--	--	75.0	--	29.6	--	19.4	--	14.6	--	11.8
4	--	--	93.3	--	70.4	--	32.3	--	22.6	--	17.7
5	--	--	--	--	85.4	--	67.7	--	34.2	--	25.0
6	--	--	--	--	95.6	--	80.6	--	65.8	--	35.6
7	--	--	--	--	--	--	89.5	--	77.4	--	64.4
8	--	--	--	--	--	--	96.8	--	85.4	--	75.0
9	--	--	--	--	--	--	--	--	91.8	--	82.3
10	--	--	--	--	--	--	--	--	97.4	--	88.2
11	--	--	--	--	--	--	--	--	--	--	93.3
12	--	--	--	--	--	--	--	--	--	--	97.9

*Percent of stack diameter from inside wall to traverse point.

Traverse Point	% of Diameter	Distance from inside wall	Distance from outside of port
1	3.2	7.68	19 3/16
2	10.5	25.20	36 11/16
3	19.4	46.56	58 1/16
4	32.3	77.52	89
5	--	--	--
6	--	--	--
7	--	--	--
8	--	--	--
9	--	--	--
10	--	--	--
11	--	--	--
12	--	--	--

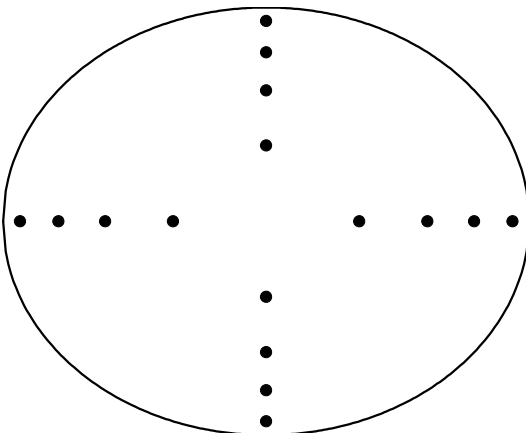
Stack Diagram

A = 15.25 ft.

B = 39.5 ft.

Depth of Duct = 240 in.

Cross Sectional Area



Downstream Disturbance

A

B

Upstream Disturbance

Cyclonic Flow Check

Location ExxonMobil - Beaumont, TX
Source Cogen Unit 43
Project No. AST-2024-1096
Date 2/6/24

Sample Point	Angle ($\Delta P=0$)
1	5
2	5
3	5
4	5
5	5
6	5
7	5
8	5
9	5
10	-10
11	-10
12	-10
13	-10
14	5
15	5
16	5
Average	6.3

Location ExxonMobil - Beaumont, TX

Source Cogen Unit 43

Project No. AST-2024-1096

Run No.	1		2		3	
Date	2/6/24		2/6/24		2/6/24	
Status	VALID		VALID		VALID	
Start Time	9:37		10:57		12:18	
Stop Time	10:37		11:57		13:18	
Leak Check	Pass		Pass		Pass	
Traverse Point	Δ P (in. WC)	Ts (°F)	Δ P (in. WC)	Ts (°F)	Δ P (in. WC)	Ts (°F)
A1	1.54	261	1.50	258	1.57	251
2	1.86	261	1.80	258	1.87	252
3	1.86	262	1.87	258	1.95	251
4	1.50	255	1.64	257	1.64	250
B1	0.83	258	0.50	258	0.50	257
2	0.80	260	0.71	258	0.80	257
3	1.33	259	1.32	255	1.45	253
4	1.85	255	1.76	253	1.78	250
C1	1.53	261	1.52	258	1.50	257
2	1.84	261	1.83	258	1.81	255
3	1.85	262	1.90	258	1.85	255
4	1.45	255	1.67	257	1.39	253
D1	0.80	258	0.57	258	0.77	258
2	0.77	260	0.80	258	0.83	258
3	1.30	259	1.37	255	1.40	254
4	1.80	255	1.75	253	1.78	251
Average						
Square Root of ΔP, (in. WC) ^{1/2}	(ΔP) ^{1/2}	1.183	1.165	1.178	1.175	
Average ΔP, in. WC	(ΔP)	1.43	1.41	1.43	1.42	
Pitot Tube Coefficient	(Cp)	0.826	0.826	0.826	0.826	
Barometric Pressure, in. Hg	(Pb)	30.17	30.17	30.17	30.17	
Static Pressure, in. WC	(Pg)	-0.50	-0.50	-0.50	-0.50	
Stack Pressure, in. Hg	(Ps)	30.13	30.13	30.13	30.13	
Average Temperature, °F	(Ts)	258.9	256.9	253.9	256.5	
Average Temperature, °R	(Ts)	718.5	716.5	713.5	716.2	
Measured Moisture Fraction	(BWSmsd)	0.052	0.052	0.052	0.052	
Moisture Fraction @ Saturation	(BWSsat)	1.000	1.000	1.000	1.000	
Moisture Fraction	(BWS)	0.052	0.052	0.052	0.052	
O2 Concentration, %	(O2)	13.60	13.71	13.71	13.67	
CO2 Concentration, %	(CO2)	3.50	3.57	3.58	3.55	
Molecular Weight, lb/lb-mole (dry)	(Md)	29.10	29.12	29.12	29.11	
Molecular Weight, lb/lb-mole (wet)	(Ms)	28.53	28.54	28.54	28.54	
Velocity, ft/sec	(Vs)	76.3	75.1	75.8	75.7	
VFR at stack conditions, acfm	(Qa)	1,439,154	1,415,310	1,428,497	1,427,654	
VFR at standard conditions, scfh	(Qsw)	63,863,175	62,980,388	63,834,437	63,559,333	
VFR at standard conditions, scfm	(Qsw)	1,064,386	1,049,673	1,063,907	1,059,322	
VFR at standard conditions, dscfm	(Qsd)	1,009,038	995,090	1,008,584	1,004,237	

Location ExxonMobil - Beaumont, TX
Source Cogen Unit 43
Project No. AST-2024-1096
Parameter(s) HCl, HF
Console Units / Method L M4

Run No.	1					2					3				
Date	2/6/24					2/6/24					2/6/24				
Status	VALID					VALID					VALID				
Start Time	9:37					10:57					12:18				
End Time	10:37					11:57					13:18				
Run Time, min	(0) 60					60					60				
Meter ID	18					18					18				
Meter Correction Factor	(Y) 0.9890					0.9890					0.9890				
Max Vacuum, in. Hg	2					2					2				
Post Leak Check, L/min (at max vac.)	0.000					0.000					0.000				
Meter Volume, L															
0	0.000					0.000					0.000				
5	10.500					10.520					10.520				
10	21.000					20.950					21.000				
15	31.250					31.180					31.360				
20	42.100					42.140					42.220				
25	51.450					52.100					51.370				
30	62.300					62.240					62.500				
35	73.400					73.200					73.250				
40	84.530					84.520					84.550				
45	95.270					95.300					95.390				
50	105.350					105.230					105.470				
55	116.250					116.280					116.290				
60	127.450					127.717					128.125				
Total Meter Volume, L	(Vm) 127.450					127.717					128.125				
Temperature, °F	Meter	Probe	Filter	Vacuum	Imp. Exit	Meter	Probe	Filter	Vacuum	Imp. Exit	Meter	Probe	Filter	Vacuum	Imp. Exit
0	84	255	257	1	64	98	250	253	2	57	102	251	258	2	64
5	87	250	257	2	64	98	254	253	2	54	102	251	258	2	63
10	87	255	257	2	63	98	254	254	2	54	102	253	258	2	63
15	87	250	257	2	63	98	255	255	2	55	102	255	257	2	61
20	88	253	256	2	63	98	255	255	2	56	103	254	257	2	61
25	90	251	255	2	63	98	256	255	2	56	103	254	257	2	60
30	92	255	258	2	63	98	255	256	2	58	103	254	259	2	60
35	94	257	256	2	65	99	256	256	2	58	105	254	258	2	60
40	94	257	256	2	64	99	255	256	2	59	105	252	258	2	58
45	95	257	257	2	57	99	256	256	2	59	106	253	257	2	58
50	96	258	258	2	56	100	257	256	2	60	108	253	256	2	58
55	97	258	253	2	55	100	257	257	2	60	108	252	257	2	61
60	98	258	250	2	54	102	256	257	2	60	109	251	257	2	62
Average Temperature, °F	(Tm) 91	255	256	2	61	99	255	255	2	57	104	253	257	2	61
Average Temperature, °R	(Tm) 551	715	716	--	--	559	715	715	--	--	564	713	717	--	--
Minimum Temperature, °F	84	250	250	1	54	98	250	253	2	54	102	251	256	2	58
Maximum Temperature, °F	98	258	258	2	65	102	257	257	2	60	109	255	259	2	64
Barometric Pressure, in. Hg	(Pb)	30.17				30.17				30.17					
Meter Orifice Pressure, in. WC	(ΔH)	2.200				2.200				2.200					
Meter Pressure, in. Hg	(Pm)	30.33				30.33				30.33					
Standard Meter Volume, L	(Vmstd)	122.343				120.978				120.157					

Emissions Calculations



Location ExxonMobil - Beaumont, TX
Source Cogen Unit 43
Project No. AST-2024-1096

Run Number		Run 1	Run 2	Run 3	Average
Date		2/6/24	2/6/24	2/6/24	--
Start Time		9:37	10:57	12:18	--
Stop Time		10:37	11:57	13:18	--
Input Data - Outlet					
Moisture Fraction, dimensionless	BWS	0.052	0.052	0.052	0.052
Calculated Data - Outlet					
O ₂ Concentration, % dry	C _{O₂}	13.60	13.71	13.71	13.68
CO ₂ Concentration, % dry	C _{CO₂}	3.50	3.57	3.58	3.55

Location **ExxonMobil - Beaumont, TX**

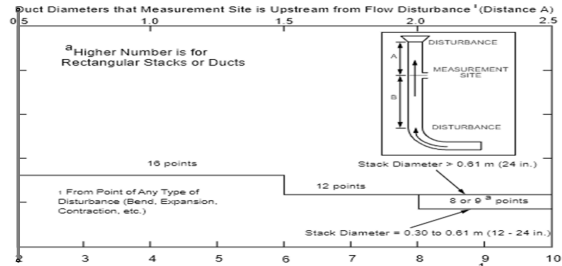
Source **Cogen Unit 43**

Project No. **AST-2024-1096**

Date: **02/06/24**

Stack Parameters

Duct Orientation: Vertical
Duct Design: Circular
Distance from Far Wall to Outside of Port: 252.13 in
Nipple Length: 12.13 in
Depth of Duct: 240.00 in
Cross Sectional Area of Duct: 314.16 ft²
No. of Test Ports: 1
Distance A: 10.0 ft
Distance A Duct Diameters: 0.5 (must be ≥ 0.5)
Distance B: 40.0 ft
Distance B Duct Diameters: 2.0 (must be ≥ 2)
Actual Number of Traverse Points: 3
Measurer (Initial and Date): CHE 2/6/24
Reviewer (Initial and Date): EAT 2/6/24

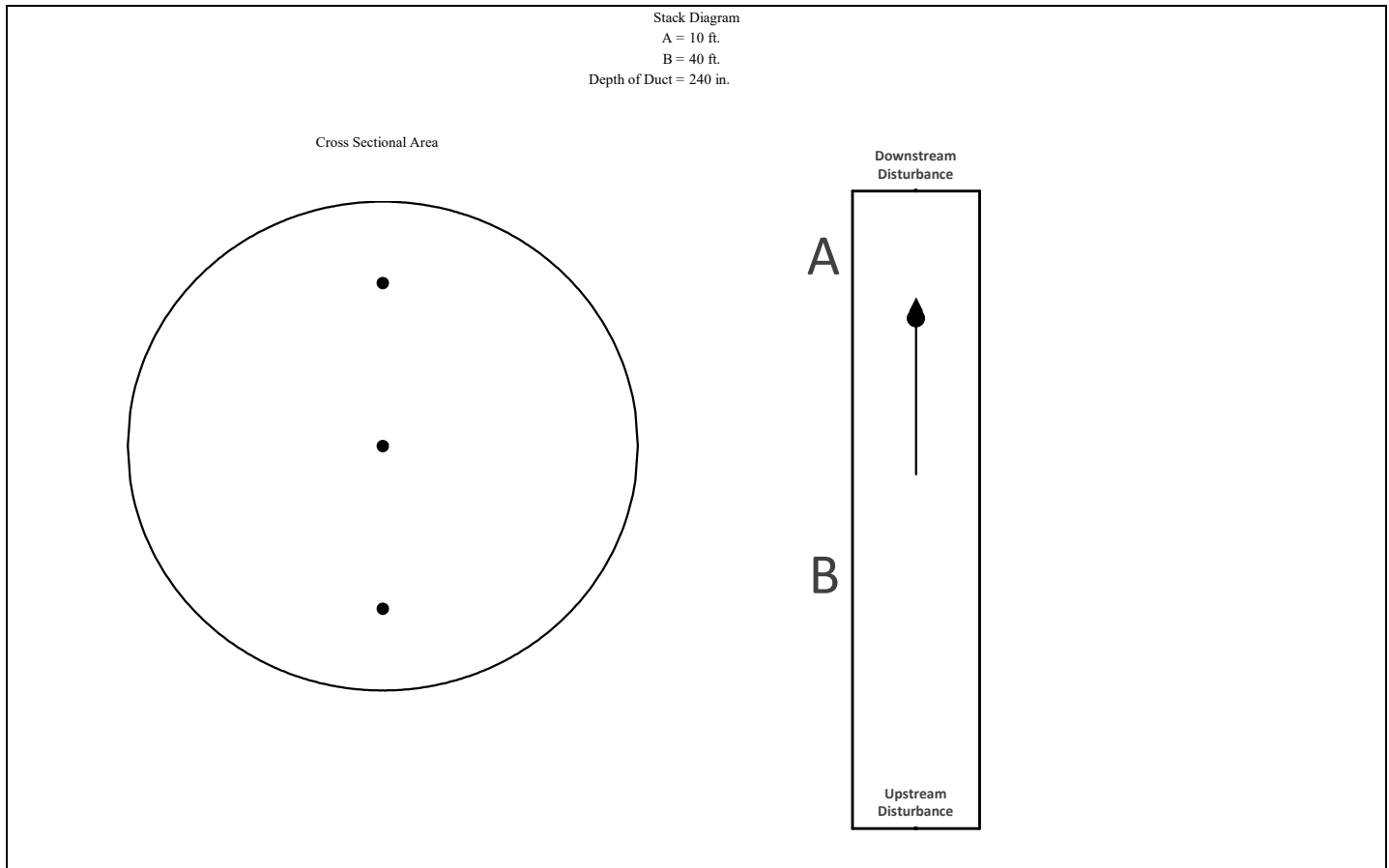


CIRCULAR DUCT

LOCATION OF TRAVERSE POINTS											
Number of traverse points on a diameter											
	2	3	4	5	6	7	8	9	10	11	12
1	14.6	16.7	6.7	--	4.4	--	3.2	--	2.6	--	2.1
2	85.4	50.0	25.0	--	14.6	--	10.5	--	8.2	--	6.7
3	--	83.3	75.0	--	29.6	--	19.4	--	14.6	--	11.8
4	--	--	93.3	--	70.4	--	32.3	--	22.6	--	17.7
5	--	--	--	--	85.4	--	67.7	--	34.2	--	25.0
6	--	--	--	--	95.6	--	80.6	--	65.8	--	35.6
7	--	--	--	--	--	--	89.5	--	77.4	--	64.4
8	--	--	--	--	--	--	96.8	--	85.4	--	75.0
9	--	--	--	--	--	--	--	--	91.8	--	82.3
10	--	--	--	--	--	--	--	--	97.4	--	88.2
11	--	--	--	--	--	--	--	--	--	--	93.3
12	--	--	--	--	--	--	--	--	--	--	97.9

Traverse Point	% of Diameter	Distance from inside wall	Distance from outside of port
1	16.7	40.08	52.21
2	50.0	120.00	132.13
3	83.3	199.92	212.05
4	--	--	--
5	--	--	--
6	--	--	--
7	--	--	--
8	--	--	--
9	--	--	--
10	--	--	--
11	--	--	--
12	--	--	--

*Percent of stack diameter from inside wall to traverse point.



Location: ExxonMobil - Beaumont, TX
Source: Cogen Unit 43
Project No.: AST-2024-1096
Date: 2/6/24

Time Unit Status	O ₂ - Outlet % dry Valid	CO ₂ - Outlet % dry Valid
Uncorrected Run Average (C _{obs})	13.57	3.46
Cal Gas Concentration (C _{MA})	10.97	10.96
Pretest System Zero Response	-0.02	0.03
Posttest System Zero Response	0.01	-0.14
Average Zero Response (C ₀)	-0.01	-0.06
Pretest System Cal Response	10.98	11.03
Posttest System Cal Response	10.90	10.91
Average Cal Response (C _M)	10.94	10.97
Corrected Run Average (Corr)	13.60	3.50
9:37	13.55	3.46
9:38	13.57	3.45
9:39	13.57	3.45
9:40	13.57	3.45
9:41	13.55	3.45
9:42	13.55	3.45
9:43	13.54	3.45
9:44	13.55	3.45
9:45	13.55	3.45
9:46	13.57	3.45
9:47	13.56	3.45
9:48	13.55	3.45
9:49	13.56	3.45
9:50	13.56	3.45
9:51	13.55	3.45
9:52	13.57	3.45
9:53	13.55	3.45
9:54	13.57	3.45
9:55	13.58	3.44
9:56	13.56	3.44
9:57	13.58	3.44
9:58	13.57	3.45
9:59	13.57	3.45
10:00	13.56	3.44
10:01	13.58	3.45
10:02	13.56	3.45
10:03	13.56	3.45
10:04	13.56	3.46
10:05	13.58	3.46
10:06	13.57	3.46
10:07	13.57	3.47
10:08	13.56	3.47
10:09	13.55	3.47
10:10	13.58	3.47
10:11	13.57	3.47
10:12	13.58	3.47
10:13	13.58	3.47
10:14	13.57	3.47
10:15	13.57	3.48
10:16	13.59	3.47
10:17	13.59	3.47
10:18	13.57	3.47
10:19	13.58	3.48
10:20	13.58	3.48
10:21	13.57	3.48
10:22	13.57	3.48
10:23	13.56	3.48
10:24	13.58	3.48
10:25	13.58	3.48
10:26	13.58	3.47
10:27	13.56	3.48
10:28	13.57	3.48
10:29	13.56	3.47
10:30	13.59	3.48
10:31	13.58	3.48
10:32	13.57	3.48
10:33	13.58	3.48
10:34	13.58	3.48
10:35	13.58	3.47
10:36	13.59	3.47

Location: ExxonMobil - Beaumont, TX

Source: Cogen Unit 43

Project No.: AST-2024-1096

Date: 2/6/24

Time Unit MDL Status	Temperature ° C -- Valid	Pressure atm -- Valid	BWS - Outlet % (wet) -- Valid
9:37	193.0	0.992	5.38
9:38	193.2	0.992	5.30
9:39	193.3	0.993	5.22
9:40	193.3	0.992	5.21
9:41	193.4	0.992	5.36
9:42	193.3	0.993	5.19
9:43	193.2	0.993	5.19
9:44	193.1	0.993	5.16
9:45	193.1	0.992	5.10
9:46	192.9	0.993	5.26
9:47	193.2	0.992	5.31
9:48	193.1	0.993	5.32
9:49	193.0	0.992	5.38
9:50	193.1	0.993	5.26
9:51	192.8	0.993	5.15
9:52	192.9	0.993	5.16
9:53	193.1	0.993	5.40
9:54	193.0	0.993	5.29
9:55	192.9	0.992	5.27
9:56	192.8	0.993	5.22
9:57	192.7	0.992	5.28
9:58	192.7	0.992	5.19
9:59	192.7	0.992	5.21
10:00	192.6	0.993	5.15
10:01	192.3	0.993	5.27
10:02	192.3	0.992	5.21
10:03	192.2	0.992	5.17
10:04	192.2	0.992	5.11
10:05	192.5	0.993	5.22
10:06	192.4	0.992	5.20
10:07	192.3	0.992	5.23
10:08	192.3	0.993	5.28
10:09	192.2	0.992	5.21
10:10	192.3	0.992	5.20
10:11	192.3	0.992	5.18
10:12	192.3	0.992	5.15
10:13	192.1	0.992	5.10
10:14	192.0	0.992	5.18
10:15	192.2	0.992	5.30
10:16	192.2	0.992	5.22
10:17	192.2	0.992	5.22
10:18	192.2	0.993	5.28
10:19	192.2	0.993	5.22
10:20	192.2	0.993	5.18
10:21	192.2	0.992	5.31
10:22	192.2	0.992	5.22
10:23	192.0	0.993	5.14
10:24	192.1	0.992	5.07
10:25	192.1	0.992	5.07
10:26	192.2	0.993	5.29
10:27	192.1	0.993	5.28
10:28	192.2	0.993	5.14
10:29	192.2	0.993	5.17
10:30	192.3	0.992	5.08
10:31	192.2	0.992	5.16
10:32	192.2	0.992	5.17
10:33	192.2	0.993	5.21
10:34	192.2	0.993	5.27
10:35	192.2	0.992	5.14
10:36	192.3	0.992	5.16
Parameter	Temperature	Pressure	BWS - Outlet
Run Average	192.5	0.993	5.22

Location: ExxonMobil - Beaumont, TX
 Source: Cogen Unit 43
 Project No.: AST-2024-1096
 Date: 2/6/24

Time Unit Status	O ₂ - Outlet % dry Valid	CO ₂ - Outlet % dry Valid
Uncorrected Run Average (C _{obs})	13.60	3.47
Cal Gas Concentration (C _{MA})	10.97	10.96
Pretest System Zero Response	0.01	-0.14
Posttest System Zero Response	0.02	-0.12
Average Zero Response (C ₀)	0.02	-0.13
Pretest System Cal Response	10.90	10.91
Posttest System Cal Response	10.87	10.92
Average Cal Response (C _M)	10.89	10.92
Corrected Run Average (Corr)	13.71	3.57
10:57	13.58	3.46
10:58	13.60	3.46
10:59	13.60	3.46
11:00	13.61	3.46
11:01	13.59	3.46
11:02	13.58	3.46
11:03	13.60	3.46
11:04	13.59	3.46
11:05	13.58	3.46
11:06	13.59	3.46
11:07	13.59	3.47
11:08	13.61	3.47
11:09	13.58	3.47
11:10	13.61	3.47
11:11	13.61	3.47
11:12	13.61	3.47
11:13	13.59	3.47
11:14	13.60	3.47
11:15	13.60	3.47
11:16	13.60	3.47
11:17	13.60	3.47
11:18	13.62	3.48
11:19	13.59	3.48
11:20	13.61	3.47
11:21	13.60	3.48
11:22	13.62	3.48
11:23	13.59	3.48
11:24	13.61	3.48
11:25	13.59	3.48
11:26	13.60	3.48
11:27	13.60	3.48
11:28	13.59	3.48
11:29	13.61	3.48
11:30	13.60	3.48
11:31	13.59	3.47
11:32	13.61	3.46
11:33	13.58	3.46
11:34	13.60	3.46
11:35	13.62	3.46
11:36	13.62	3.46
11:37	13.61	3.45
11:38	13.60	3.45
11:39	13.62	3.46
11:40	13.61	3.46
11:41	13.62	3.46
11:42	13.60	3.46
11:43	13.63	3.46
11:44	13.61	3.46
11:45	13.61	3.46
11:46	13.61	3.47
11:47	13.62	3.47
11:48	13.61	3.47
11:49	13.60	3.47
11:50	13.62	3.47
11:51	13.63	3.47
11:52	13.62	3.47
11:53	13.62	3.48
11:54	13.60	3.48
11:55	13.62	3.48
11:56	13.61	3.48

Location: ExxonMobil - Beaumont, TX

Source: Cogen Unit 43

Project No.: AST-2024-1096

Date: 2/6/24

Time Unit MDL Status	Temperature ° C -- Valid	Pressure atm -- Valid	BWS - Outlet % (wet) -- Valid
10:57	192.0	0.993	5.26
10:58	191.9	0.993	5.16
10:59	192.1	0.992	5.18
11:00	192.2	0.993	5.18
11:01	192.4	0.993	5.31
11:02	192.3	0.992	5.13
11:03	192.2	0.993	5.09
11:04	192.2	0.993	5.17
11:05	192.2	0.992	5.19
11:06	192.2	0.993	5.21
11:07	192.1	0.993	5.26
11:08	192.1	0.992	5.37
11:09	192.0	0.992	5.26
11:10	192.0	0.993	5.11
11:11	192.1	0.992	5.09
11:12	192.0	0.992	5.10
11:13	192.0	0.992	5.12
11:14	192.0	0.992	5.32
11:15	192.1	0.992	5.35
11:16	192.1	0.993	5.28
11:17	192.1	0.992	5.18
11:18	192.2	0.992	5.23
11:19	192.2	0.992	5.17
11:20	192.1	0.992	5.13
11:21	192.2	0.992	5.22
11:22	192.2	0.992	5.28
11:23	192.3	0.992	5.30
11:24	192.3	0.992	5.28
11:25	192.3	0.992	5.25
11:26	192.2	0.992	5.24
11:27	192.3	0.992	5.20
11:28	192.1	0.992	5.29
11:29	192.2	0.992	5.20
11:30	192.5	0.992	5.16
11:31	192.7	0.992	5.08
11:32	192.7	0.992	5.21
11:33	192.6	0.992	5.24
11:34	192.6	0.992	5.19
11:35	192.7	0.992	5.17
11:36	192.7	0.992	5.22
11:37	192.6	0.992	5.24
11:38	192.5	0.992	5.27
11:39	192.3	0.992	5.25
11:40	192.1	0.992	5.25
11:41	192.1	0.992	5.17
11:42	192.1	0.992	5.16
11:43	192.1	0.992	5.18
11:44	192.0	0.992	5.30
11:45	192.0	0.992	5.26
11:46	192.0	0.992	5.26
11:47	192.1	0.992	5.14
11:48	192.1	0.992	5.21
11:49	192.1	0.992	5.21
11:50	192.0	0.992	5.24
11:51	192.0	0.992	5.21
11:52	192.0	0.992	5.12
11:53	192.2	0.992	5.12
11:54	192.1	0.992	5.25
11:55	191.9	0.992	5.28
11:56	191.9	0.992	5.31
Parameter	Temperature	Pressure	BWS - Outlet
Run Average	192.2	0.992	5.21

Location: ExxonMobil - Beaumont, TX
Source: Cogen Unit 43
Project No.: AST-2024-1096
Date: 2/6/24

Time Unit Status	O ₂ - Outlet % dry Valid	CO ₂ - Outlet % dry Valid
Uncorrected Run Average (C_{obs})	13.61	3.49
Cal Gas Concentration (C_{MA})	10.97	10.96
Pretest System Zero Response	0.02	-0.12
Posttest System Zero Response	0.05	-0.10
Average Zero Response (C_o)	0.04	-0.11
Pretest System Cal Response	10.87	10.92
Posttest System Cal Response	10.92	10.92
Average Cal Response (C_M)	10.90	10.92
Corrected Run Average (Corr)	13.71	3.58
12:18	13.61	3.48
12:19	13.62	3.49
12:20	13.62	3.49
12:21	13.62	3.49
12:22	13.61	3.49
12:23	13.62	3.49
12:24	13.62	3.49
12:25	13.62	3.49
12:26	13.62	3.49
12:27	13.62	3.49
12:28	13.63	3.49
12:29	13.60	3.49
12:30	13.63	3.49
12:31	13.59	3.49
12:32	13.63	3.50
12:33	13.61	3.50
12:34	13.62	3.50
12:35	13.61	3.50
12:36	13.62	3.50
12:37	13.59	3.50
12:38	13.61	3.51
12:39	13.61	3.50
12:40	13.62	3.50
12:41	13.58	3.50
12:42	13.61	3.50
12:43	13.62	3.50
12:44	13.59	3.51
12:45	13.62	3.50
12:46	13.61	3.50
12:47	13.60	3.50
12:48	13.59	3.50
12:49	13.60	3.50
12:50	13.59	3.50
12:51	13.60	3.50
12:52	13.60	3.50
12:53	13.59	3.50
12:54	13.60	3.49
12:55	13.60	3.49
12:56	13.61	3.49
12:57	13.60	3.49
12:58	13.60	3.48
12:59	13.59	3.48
13:00	13.61	3.48
13:01	13.62	3.48
13:02	13.60	3.48
13:03	13.61	3.48
13:04	13.61	3.48
13:05	13.61	3.48
13:06	13.60	3.48
13:07	13.60	3.48
13:08	13.61	3.49
13:09	13.60	3.49
13:10	13.58	3.50
13:11	13.59	3.50
13:12	13.61	3.50
13:13	13.60	3.50
13:14	13.60	3.51
13:15	13.58	3.50
13:16	13.59	3.50
13:17	13.58	3.50

Location: ExxonMobil - Beaumont, TX

Source: Cogen Unit 43

Project No.: AST-2024-1096

Date: 2/6/24

Time Unit MDL Status	Temperature ° C -- Valid	Pressure atm -- Valid	BWS - Outlet % (wet) -- Valid
12:18	192.3	0.992	5.26
12:19	192.4	0.992	5.21
12:20	192.5	0.992	5.19
12:21	192.5	0.993	5.16
12:22	192.8	0.992	5.20
12:23	192.8	0.992	5.22
12:24	193.1	0.992	5.24
12:25	193.1	0.992	5.28
12:26	193.4	0.992	5.24
12:27	193.7	0.992	5.20
12:28	193.7	0.992	5.22
12:29	193.8	0.992	5.21
12:30	193.8	0.992	5.24
12:31	193.8	0.992	5.18
12:32	193.9	0.992	5.21
12:33	193.6	0.992	5.22
12:34	193.6	0.992	5.30
12:35	193.5	0.992	5.16
12:36	193.7	0.992	5.21
12:37	193.8	0.992	5.18
12:38	193.6	0.992	5.29
12:39	193.5	0.992	5.21
12:40	193.4	0.992	5.22
12:41	193.2	0.992	5.22
12:42	193.1	0.992	5.19
12:43	193.0	0.991	5.19
12:44	193.0	0.991	5.19
12:45	193.2	0.992	5.22
12:46	193.5	0.992	5.21
12:47	193.5	0.992	5.16
12:48	193.6	0.992	5.19
12:49	193.8	0.992	5.21
12:50	194.0	0.992	5.17
12:51	193.9	0.992	5.15
12:52	193.9	0.992	5.17
12:53	193.8	0.992	5.17
12:54	194.0	0.992	5.13
12:55	193.9	0.991	5.13
12:56	193.7	0.991	5.18
12:57	193.6	0.992	5.15
12:58	193.3	0.992	5.10
12:59	193.1	0.992	5.12
13:00	193.0	0.992	5.17
13:01	192.7	0.992	5.15
13:02	192.7	0.992	5.09
13:03	193.1	0.992	5.10
13:04	193.3	0.992	5.19
13:05	193.3	0.992	5.26
13:06	193.3	0.992	5.17
13:07	193.2	0.992	5.17
13:08	192.9	0.992	5.04
13:09	192.9	0.992	4.96
13:10	192.9	0.992	5.00
13:11	192.8	0.991	5.07
13:12	192.8	0.991	5.24
13:13	192.8	0.991	5.22
13:14	192.8	0.991	5.29
13:15	192.9	0.991	5.30
13:16	192.9	0.992	5.21
13:17	192.8	0.991	5.19
Parameter	Temperature	Pressure	BWS - Outlet
Run Average	193.3	0.992	5.19

Appendix C

ALLIANCE TECHNICAL GROUP

PROJECT # 2024-1096
EXXON BEAUMONT

CLIENT # A085
REPORT # 24-081

SUBMITTED BY:

CHESTER LabNet

12242 S.W. GARDEN PLACE

TIGARD, OR 97223

(503)624-2183/FAX (503)624-2653

www.ChesterLab.Net

CHESTER LabNet

12242 SW Garden Place ❖ Tigard, OR 97223-8246 ❖ USA
Telephone 503-624-2183 ❖ Fax 503-624-2653 ❖ www.chesterlab.net

Case Narrative


Date: February 22, 2024

General Information

Client: Alliance Technical Group
Client Number: A085
Report Number: 24-081
Sample Description: Impinger Solutions
Sample Numbers: 24-S262 – 24-S281

Analysis

Analytes: HF, HCl
Analytical Protocols: EPA Method 26 (10/7/20 version)
Analytical Notes: There was matrix interference that affected the F peaks. The HF values are likely biased high on most samples because of the interference. The samples were not diluted and reanalyzed since the results were all low enough that they would have dipped below the detection limit with dilutions. The results are not blank corrected.
QA/QC Review: All the data have been reviewed by the analysts performing the analyses and the project manager. All the quality control and sample-specific information in this package is complete and meets or exceeds the minimum requirements for acceptability.
Comments: If you have any questions or concerns regarding this analysis, please feel free to contact the project manager.
Disclaimer: This report shall not be reproduced, except in full, without the written approval of the laboratory. The results only represent those of the samples as received into the laboratory. All data are reported to the detection limit. Results <5x DL must be considered to have a higher degree of uncertainty associated with them. Due to the statistical process of detection limit determination, data in this report should not be used for statistical analysis as the data has been censored in such a manner as to bias statistical analyses high.

 2/22/24
Project Manager Date
Paul Duda

Client: A085 - Alliance Source Testing
Report Number: 24-081

Lab ID: 24-S262
Client ID: COGEN UNIT 41-R1 Imp1
Site: Exxon Beaumont
Sample Date: 2/ 8/24
Sample Volume: 30.0 mL

Analyte	mg/L		µg/sample	
	Conc.	DL	Conc.	DL
HF	0.0642	0.011	1.93	0.316
HCl	0.857	0.010	25.7	0.308

Lab ID: 24-S263
Client ID: COGEN UNIT 41-R1 Imp2
Site: Exxon Beaumont
Sample Date: 2/ 8/24
Sample Volume: 24.5 mL

Analyte	mg/L		µg/sample	
	Conc.	DL	Conc.	DL
HF	0.0379	0.011	0.929	0.258
HCl	0.807	0.010	19.8	0.252

Lab ID: 24-S264
Client ID: COGEN UNIT 41-R2 Imp1
Site: Exxon Beaumont
Sample Date: 2/ 8/24
Sample Volume: 27.0 mL

Analyte	mg/L		µg/sample	
	Conc.	DL	Conc.	DL
HF	0.125	0.011	3.38	0.284
HCl	1.56	0.010	42.0	0.278

Lab ID: 24-S265
Client ID: COGEN UNIT 41-R2 Imp2
Site: Exxon Beaumont
Sample Date: 2/ 8/24
Sample Volume: 23.0 mL

Analyte	mg/L		µg/sample	
	Conc.	DL	Conc.	DL
HF	0.0316	0.011	0.727	0.242
HCl	0.707	0.010	16.3	0.236

Lab ID: 24-S266
Client ID: COGEN UNIT 41-R3 Imp1
Site: Exxon Beaumont
Sample Date: 2/ 8/24
Sample Volume: 26.0 mL

Analyte	mg/L		µg/sample	
	Conc.	DL	Conc.	DL
HF	0.133	0.011	3.45	0.274
HCl	1.43	0.010	37.2	0.267

Client: A085 - Alliance Source Testing
Report Number: 24-081

Lab ID: 24-S267
Client ID: COGEN UNIT 41-R3 Imp2
Site: Exxon Beaumont
Sample Date: 2/ 8/24
Sample Volume: 22.4 mL

Analyte	mg/L		µg/sample	
	Conc.	DL	Conc.	DL
HF	0.0600	0.011	1.34	0.236
HCl	0.945	0.010	21.2	0.230

Lab ID: 24-S268
Client ID: COGEN UNIT 42-R1 Imp1
Site: Exxon Beaumont
Sample Date: 2/ 7/24
Sample Volume: 27.5 mL

Analyte	mg/L		µg/sample	
	Conc.	DL	Conc.	DL
HF	0.0548	0.011	1.51	0.290
HCl	0.326	0.010	8.96	0.283

Lab ID: 24-S269
Client ID: COGEN UNIT 42-R1 Imp2
Site: Exxon Beaumont
Sample Date: 2/ 7/24
Sample Volume: 26.0 mL

Analyte	mg/L		µg/sample	
	Conc.	DL	Conc.	DL
HF	0.0253	0.011	0.657	0.274
HCl	0.210	0.010	5.45	0.267

Lab ID: 24-S270
Client ID: COGEN UNIT 42-R2 Imp1
Site: Exxon Beaumont
Sample Date: 2/ 7/24
Sample Volume: 24.6 mL

Analyte	mg/L		µg/sample	
	Conc.	DL	Conc.	DL
HF	0.0558	0.011	1.37	0.259
HCl	0.492	0.010	12.1	0.253

Lab ID: 24-S271
Client ID: COGEN UNIT 42-R2 Imp2
Site: Exxon Beaumont
Sample Date: 2/ 7/24
Sample Volume: 23.6 mL

Analyte	mg/L		µg/sample	
	Conc.	DL	Conc.	DL
HF	0.136	0.011	3.21	0.249
HCl	1.15	0.010	27.2	0.243

Client: A085 - Alliance Source Testing
Report Number: 24-081

Lab ID: 24-S272
Client ID: COGEN UNIT 42-R3 Imp1
Site: Exxon Beaumont
Sample Date: 2/ 7/24
Sample Volume: 29.0 mL

Analyte	mg/L		µg/sample	
	Conc.	DL	Conc.	DL
HF	0.0400	0.011	1.16	0.305
HCl	0.467	0.010	13.5	0.298

Lab ID: 24-S273
Client ID: COGEN UNIT 42-R3 Imp2
Site: Exxon Beaumont
Sample Date: 2/ 7/24
Sample Volume: 21.8 mL

Analyte	mg/L		µg/sample	
	Conc.	DL	Conc.	DL
HF	0.0179	0.011	0.390	0.230
HCl	0.393	0.010	8.56	0.224

Lab ID: 24-S274
Client ID: COGEN UNIT 43-R1 Imp1
Site: Exxon Beaumont
Sample Date: 2/ 6/24
Sample Volume: 26.5 mL

Analyte	mg/L		µg/sample	
	Conc.	DL	Conc.	DL
HF	0.0569	0.011	1.51	0.279
HCl	0.780	0.010	20.7	0.272

Lab ID: 24-S275
Client ID: COGEN UNIT 43-R1 Imp2
Site: Exxon Beaumont
Sample Date: 2/ 6/24
Sample Volume: 25.5 mL

Analyte	mg/L		µg/sample	
	Conc.	DL	Conc.	DL
HF	0.138	0.011	3.52	0.269
HCl	0.924	0.010	23.6	0.262

Lab ID: 24-S276
Client ID: COGEN UNIT 43-R2 Imp1
Site: Exxon Beaumont
Sample Date: 2/ 6/24
Sample Volume: 27.0 mL

Analyte	mg/L		µg/sample	
	Conc.	DL	Conc.	DL
HF	0.0463	0.011	1.25	0.284
HCl	0.341	0.010	9.21	0.278

Client: A085 - Alliance Source Testing
Report Number: 24-081

Lab ID: 24-S277
Client ID: COGEN UNIT 43-R2 Imp2
Site: Exxon Beaumont
Sample Date: 2/ 6/24
Sample Volume: 31.5 mL

Analyte	mg/L		µg/sample	
	Conc.	DL	Conc.	DL
HF	0.0758	0.011	2.39	0.332
HCl	0.415	0.010	13.1	0.324

Lab ID: 24-S278
Client ID: COGEN UNIT 43-R3 Imp1
Site: Exxon Beaumont
Sample Date: 2/ 6/24
Sample Volume: 19.4 mL

Analyte	mg/L		µg/sample	
	Conc.	DL	Conc.	DL
HF	0.139	0.011	2.70	0.204
HCl	1.11	0.010	21.5	0.199

Lab ID: 24-S279
Client ID: COGEN UNIT 43-R3 Imp2
Site: Exxon Beaumont
Sample Date: 2/ 6/24
Sample Volume: 26.5 mL

Analyte	mg/L		µg/sample	
	Conc.	DL	Conc.	DL
HF	0.0611	0.011	1.62	0.279
HCl	0.429	0.010	11.4	0.272

Lab ID: 24-S280
Client ID: DI Water Blank
Site: Exxon Beaumont
Sample Volume: 32.0 mL

Analyte	mg/L		µg/sample	
	Conc.	DL	Conc.	DL
HF	< DL	0.011	< DL	0.337
HCl	< DL	0.010	< DL	0.329

Lab ID: 24-S281
Client ID: H2SO4 Reagent Blank
Site: Exxon Beaumont
Sample Volume: 29.0 mL

Analyte	mg/L		µg/sample	
	Conc.	DL	Conc.	DL
HF	< DL	0.011	< DL	0.305
HCl	0.320	0.010	9.27	0.298

QA/QC Report

Client Name: Alliance Source Testing
 Project Number: A085
 Analytical Technique: Ion Chromatography
 Instrument: Thermo ICS-5000
 Sample Description: Method 26A
 Report Number: 24-081

Blank Data

Analyte	Sample ID	Measured Conc. mg/L	DL Conc. mg/L
F	ICB	< DL	0.010
F	CCB	< DL	0.010
F	CCB	< DL	0.010
F	CCB	< DL	0.010
F	CCB	< DL	0.010
F	CCB	< DL	0.010
F	CCB	< DL	0.010
F	CCB	< DL	0.010
Cl	ICB	< DL	0.010
Cl	CCB	< DL	0.010
Cl	CCB	< DL	0.010
Cl	CCB	< DL	0.010
Cl	CCB	< DL	0.010
Cl	CCB	< DL	0.010
Cl	CCB	< DL	0.010
Cl	CCB	< DL	0.010
Cl	CCB	< DL	0.010

ICB: Initial Calibration Blank CCB: Continuing Calibration Blank

*: Sample Media Blank (SM_Blk) concentration in µg/filter

Method Blank is in control if Method Blank results are <10% of sample results

Calibration QC

Analyte	Sample ID	Standard Conc. mg/L	Measured Conc. mg/L	Percent Recovery
F	ICV	0.500	0.518	103.6
F	LL-LCS	0.030	0.031	103.3
F	CCV	0.500	0.532	106.4
F	CCV	0.500	0.515	103.0
F	CCV	0.500	0.522	104.4
F	CCV	0.500	0.516	103.2
F	CCV	0.500	0.530	106.0
F	CCV	0.500	0.517	103.4
F	CCV	0.500	0.537	107.4
Cl	ICV	0.500	0.530	106.0
Cl	LL-LCS	0.030	0.033	110.0
Cl	CCV	0.500	0.539	107.8
Cl	CCV	0.500	0.522	104.4

ICV: Initial Calibration Verification CCV: Continuing Calibration Verification

Calibration Verification Limits: 90% - 110% Recovery

Low Level-LCS Limits: 50% - 150% Recovery

LL-LCS results are insignificant if sample results are >10x LL-LCS concentration

QA/QC Report

Client Name: Alliance Source Testing
Project Number: A085
Analytical Technique: Ion Chromatography
Instrument: Thermo ICS-5000
Sample Description: Method 26A
Report Number: 24-081

Calibration QC (continued)

Analyte	Sample ID	Standard Conc. mg/L	Measured Conc. mg/L	Percent Recovery
Cl	CCV	0.500	0.534	106.8
Cl	CCV	0.500	0.517	103.4
Cl	CCV	0.500	0.527	105.4
Cl	CCV	0.500	0.526	105.2
Cl	CCV	0.500	0.530	106.0

ICV: Initial Calibration Verification CCV: Continuing Calibration Verification
Calibration Verification Limits: 90% - 110% Recovery
Low Level-LCS Limits: 50% - 150% Recovery
LL-LCS results are insignificant if sample results are >10x LL-LCS concentration

Duplicate Data

All samples analyzed in duplicate. The reported concentrations are the average of the two measurements.

Laboratory Control Sample/Matrix Spike Analysis

Analyte	Sample ID	Sample Conc. mg/L	Spike Conc. mg/L	Spike Amount mg/L	Percent Recovery
F	24-S262	0.061	0.589	0.500	106.
Cl	24-S262	0.834	1.36	0.500	105.

LCS Limit: 80% - 120% Recovery Spike Limit: 75% - 125% Recovery
*: per EPA CLP protocol, control limits do not apply if spike concentration is less than 25% of the sample concentration

CHESTER LABNET

SOURCE SAMPLE RECEIPT CHECKLIST

Client	Alliance Source Testing
--------	-------------------------

Date 2/13/2024

Runs 9 + blanks

Report # 24-081

☒[illegible]

CTM-027

	<input checked="" type="checkbox"/>
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	✓
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☒[illegible]

✓

None

Ambient

✓

n/a

None

☒

Corrective actions

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Items marked !! shall be addressed prior to any analytical work being started.

Items marked * shall be **noted in case narrative** upon reporting of results to client.

Signed

Notes

CHAIN-OF-CUSTODY RECORD

For use by Lab:
Report #: 24-081

CLIENT INFORMATION	
Company Name: EXXON	
Contact: <i>Dan Callow</i>	Email: <i>HOUreports@stacktest.com</i>
Phone #: <i>512 658 4211</i>	Office: <i>HOU</i>
Report To: <i>Jason Myers</i>	Billing Address: _____ _____ _____

Project Name: EXXON 2024-1096	
PO#:	

LabNet ID	Field Sample ID	Site	Sample Date	Volume (m ³)	Particle Size
44-S262, 263	COGEN UNIT-RUN1	Exxon Beaumont	2/8/24	1000	
24-S264, 265	COGEN UNIT-RUN2	"	2/8/24	1000	
24-S266, 267	COGEN UNIT-RUN3	"	2/8/24	1000	
	DI WATER BLANK	"	2/8/24		
	REAGENT BLANKS	"	2/8/24		
			2/		

Do the samples pose any potential hazards?

☐ Yes ☒ No

If yes please explain:

Are samples for compliance? ☐ Yes ☒ No

Special Instructions/QC Requirements & Comments: HCL & HF

Relinquished by: Seth Moore	Date/Time: 2/12/24
-----------------------------	--------------------

Relinquished by:	Date/Time:
------------------	------------

Laboratory Receipt Comments:


[illegible]

Do the samples pose any potential hazards?
If yes please explain:

☐ Yes ☒ No

Are samples for compliance? ☐ Yes ☒ No

Special Instructions/QC Requirements & Comments: HCL & HF

Relinquished by: Seth Moore	Date/Time: 2/12/24	Received By: 	Date/Time/Temp: 2/13/24 10:00
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Relinquished by:	Date/Time:	Received By:	Date/Time/Temp:
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Laboratory Receipt Comments:	

CHAIN-OF-CUSTODY RECORD

For use by Lab:
Report #: 24-081

CLIENT INFORMATION	
Company Name: EXXON	
Contact: <i>Dave Galloway</i>	Email: <i>HOUreports@stacktest.com</i>
Phone #: <i>512 658 4211</i>	Office: <i>HOU</i>
Report To: <i>Jason Myers</i>	Billing Address: _____ _____ _____

Project Name: EXXON 2024-1096

PO#:

LabNet ID	Field Sample ID	Site	Sample Date	Volume (m ³)	Particle Size
24-S268, 269	COGEN UNIT-RUN1 <small>off</small>	Chon Bengant	2/7/24	Ven	
24-S270, 271	COGEN UNIT-RUN2 <small>off</small>	"	2/7/24	Vin	
24-S272, 273	COGEN UNIT-RUN3 <small>off</small>	"	2/7/24	Vun	
	DILUTED BLANK				
	REAGENT BLANKS				

Do the samples pose any potential hazards?
If yes please explain:

Are samples for compliance?

Special Instructions/QC Requirements & Comments: HCL & HF

Relinquished by: <i>Sarah Moore</i>	Date/Time: <i>2/12/24</i>	Received By: <i>[Signature]</i>	Date/Time/Temp: <i>2/13/24 10:00</i>
Relinquished by:	Date/Time:	Received By:	Date/Time/Temp:

Laboratory Receipt Comments:

[illegible]

Do the samples pose any potential hazards?
If yes please explain:

☐ Yes ☒ No

Are samples for compliance? ☐ Yes ☐ No

Special Instructions/QC Requirements & Comments: HCL & HF

Relinquished by: <i>Sarah Moore</i>	Date/Time: <i>2/12/24</i>	Received By: <i>[Signature]</i>	Date/Time/Temp: <i>2/13/24 10:00</i>
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Relinquished by:	Date/Time:	Received By:	Date/Time/Temp:
------------------	------------	--------------	-----------------

Laboratory Receipt Comments:

CHAIN-OF-CUSTODY RECORD

For use by Lab:
Report #: 24-081

CLIENT INFORMATION	
Company Name: EXXON	
Contact: Dave Galloway	Email: HOUreports@stacktest.com
Phone #: 512 658 4711	Office: HOU
Report To: Jason Myer	Billing Address:

Project Name: EXXON 2024-1096	
PO#:	

LabNet ID	Field Sample ID	Site	Sample Date	Volume (m ³)	Particle Size
24-S274, 275	COGEN UNIT-RUN1	Exxon Beaumont	2/6/24	1000	
24-S276, 277	COGEN UNIT-RUN2	"	2/6/24	1000	
24-S278, 279	COGEN UNIT-RUN3	"	2/6/24	1000	
24-S280	DI WATER BLANK				
24-S281	REAGENT BLANKS				

Do the samples pose any potential hazards?
If yes please explain:

Are samples for compliance? ☐ Yes ☒ No

Special Instructions/QC Requirements & Comments: HCL & HFReinquished by: _____ Date/Time: _____

Relinquished by:	Date/Time:
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<p>Laboratory Receipt Comments:</p>	
--	--

Requirements of Direct Payments

Analysis Requested						Page 3 of 3 COCs	
Turn Around Time Requested							
M26A-H2SO4 RINSE HCl HF	M26A-NAOH + RINSE H ₂ O					<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify) _____	
2	2					Sample Specific Notes: HCl & HF	
2	2						
2	2						
1	2					HCl & HF HCl & HF	

Do the samples pose any potential hazards?
If yes please explain:

Are samples for compliance? ☐ Yes ☒ No

Special Instructions/QC Requirements & Comments: HCL & HF[illegible]

Relinquished by: _____
Date/Time: _____
Received By: _____
Date/Time: 2/13/24
Temp: 10:00

Relinquished by:	Date/Time:	Received By: 	Date/Time/Temp:
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[illegible]

RAW DATA

Available upon request

Appendix D

Location ExxonMobil - Beaumont, TX

Source Cogen Unit 41

Project No. AST-2024-1096

Parameter(s) HCl, HF

Date	Pitot ID	Evidence of damage?	Evidence of mis-alignment?	Calibration or Repair required?	
2/8/24	PT 508-1	no	no	no	
Date	Probe or Thermocouple ID	Reference Temp. (°F)	Indicated Temp. (°F)	Difference	Criteria
2/8/24	PR-3-2	100.0	100.0	0.0%	± 1.5 % (absolute)
Date	Barometric Pressure	Evidence of damage?	Reading Verified	Calibration or Repair required?	Weather Station Location
2/8/24	Weather Station	NA	NA	NA	Beaumont, Texas
Date	Meter Box ID	Positive Pressure Leak Check			
2/8/24	18	Pass			
Reagent	Lot#	Field Prep performed	Field Lot	Date	By
0.1N NaOH	3082832	No	N/A	N/A	N/A
0.1N H2SO4	3062224	No	N/A	N/A	N/A

Location ExxonMobil - Beaumont, TX

Source Cogen Unit 42

Project No. AST-2024-1096

Parameter(s) HCl, HF

Date	Pitot ID	Evidence of damage?	Evidence of mis-alignment?	Calibration or Repair required?	
2/7/24	PT 508-1	no	no	no	
Date	Probe or Thermocouple ID	Reference Temp. (°F)	Indicated Temp. (°F)	Difference	Criteria
2/7/24	PR-3-2	100.0	100.0	0.0%	± 1.5 % (absolute)
Date	Barometric Pressure	Evidence of damage?	Reading Verified	Calibration or Repair required?	Weather Station Location
2/7/24	Weather Station	NA	NA	NA	Beaumont, Texas
Date	Meter Box ID	Positive Pressure Leak Check			
2/7/24	18	Pass			
Reagent	Lot#	Field Prep performed	Field Lot	Date	By
0.1N NaOH	3082832	No	N/A	N/A	N/A
0.1N H2SO4	3062224	No	N/A	N/A	N/A

Location ExxonMobil - Beaumont, TX

Source Cogen Unit 43

Project No. AST-2024-1096

Parameter(s) HCl, HF

Date	Pitot ID	Evidence of damage?	Evidence of mis-alignment?	Calibration or Repair required?	
2/6/24	PT 508-1	no	no	no	
Date	Probe or Thermocouple ID	Reference Temp. (°F)	Indicated Temp. (°F)	Difference	Criteria
2/6/24	PR-3-2	100.0	100.0	0.0%	± 1.5 % (absolute)
Date	Barometric Pressure	Evidence of damage?	Reading Verified	Calibration or Repair required?	Weather Station Location
2/6/24	Weather Station	NA	NA	NA	Beaumont, Texas
Date	Meter Box ID	Positive Pressure Leak Check			
2/6/24	18	Pass			
Reagent	Lot#	Field Prep performed	Field Lot	Date	By
0.1N NaOH	3082832	No	N/A	N/A	N/A
0.1N H2SO4	3062224	No	N/A	N/A	N/A

	Pitot Calibration-Wind Tunnel	Document ID	620.002
		Revision	20.1
		Effective Date	8/26/2020
Issuing Dept:	Tech Services	Page:	1 of 1

Equipment Detail

Model: Type S
ID: PT-508-1


Calibration Detail

Time: 11:00
T_s: 58 °F
Pb: 30.24 in. Hg
C_{pstd}: 0.990

Flow fps	ΔPstd			High Side - "A"			Low Side - "B"		
	Standard	Start	End	ΔPs	Cp(a)	σ	ΔPs	Cp(b)	σ
	in. WC	in. WC	in. WC	in. WC		Deviation	in. WC		Deviation
20	0.09	0.09	0.09	0.13	0.824	-0.002	0.13	0.824	-0.002
30	0.21	0.21	0.21	0.29	0.842	0.016	0.29	0.842	0.016
40	0.38	0.37	0.37	0.53	0.827	0.001	0.53	0.827	0.001
50	0.59	0.58	0.58	0.83	0.828	0.002	0.83	0.828	0.002
60	0.85	0.83	0.83	1.25	0.807	-0.019	1.25	0.807	-0.019
70	1.15	1.15	1.15	1.65	0.826	0.000	1.65	0.826	0.000
80	1.51	1.50	1.50	2.15	0.827	0.001	2.15	0.827	0.001
90	1.91	1.85	1.85	2.65	0.827	0.001	2.65	0.827	0.001
EPA Method 2 Section 10.1.3 QA/QC									
50	0.59	0.58	0.58	0.83	0.828	0.002	0.83	0.828	0.002
50	0.59	0.58	0.58	0.83	0.828	0.002	0.83	0.828	0.002
Average					0.826	0.005		0.826	0.005
Acceptability Criteria					--	≤ 0.01		--	≤ 0.01
					Cp(a)-Cp(b) ≤ 0.01			Cp(a)-Cp(b) = 0.000	

Personnel

Calibrated By: David Rouse
Calibration Date: 1/2/2024
Reviewd By: Seth Moore

	Low Volume DGM Calibration-Orifices	Document ID	620.005							
		Revision	23.0							
		Effective Date	8/29/23							
Issuing Department	Tech Services	Page	1 of 1							
Low Volume Dry Gas Meter Calibration										
Console ID	--	VOST 18								
Meter S/N	--	1620								
Critical Orifice S/N	--	CO2731								
Initial Barometric Pressure, in. Hg	(P _b)	30.02								
Final Barometric Pressure, in. Hg	(P _b _f)	29.97								
Average Barometric Pressure, in. Hg	(P _b)	29.995								
Orifice Nominal Flow, lpm	(Q)	0.57	1.00	1.52						
Run No.	--	1	2	3						
K' Factor, L·R ^{1/2} / in. WC·min	(K')	0.4343	0.4343	0.4343	0.7678	0.7678	0.7678	1.1686	1.1686	1.1686
Vacuum Pressure, in. Hg	(V _p)	15.0	15.0	15.0	14.0	14.0	14.0	17.0	17.0	17.0
Initial DGM Volume, L	(V _m)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Final DGM Volume, L	(V _m _f)	7.520	7.548	7.554	7.189	7.195	7.220	10.987	10.996	10.994
Total DGM Volume, L	(V _m)	7.520	7.548	7.554	7.189	7.195	7.220	10.987	10.996	10.994
Ambient Temperature, °F	(T _a)	75	83	87	89	90	90	90	94	94
Initial Inlet DGM Temperature, °F	(T _m) _i	76	81	84	89	90	90	90	93	94
Final Inlet DGM Temperature, °F	(T _m) _f	77	84	84	88	91	91	91	94	94
Initial Outlet DGM Temperature, °F	(T _m) _o	78	84	87	88	91	91	91	94	94
Final Outlet DGM Temperature, °F	(T _m) _o	79	85	87	89	92	91	91	94	94
Average Outlet DGM Temperature, °F	(T _m)	78	84	85.5	89	91	91	91	94	94
Elapsed Time	(Θ)	13.00	13.00	13.00	7.00	7.00	7.00	7.00	7.00	7.00
Meter Orifice Pressure, in. WC	(ΔH)	0.10	0.10	0.10	1.00	1.00	1.00	1.20	1.20	1.20
Standard Meter volume, L	(V _{mstd})	7.4087	7.3542	7.3330	6.9558	6.9300	6.9573	10.5923	10.5436	10.5369
Standard Critical Orifice Volume, L	(V _{cr})	7.3237	7.2695	7.2429	6.8823	6.8760	6.8760	10.4654	10.4275	10.4275
Meter Correction Factor	(Y)	0.9885	0.9885	0.9877	0.9894	0.9922	0.9883	0.9880	0.9890	0.9896
Tolerance	--	0.03%	0.03%	-0.05%	-0.06%	0.22%	-0.17%	-0.09%	0.01%	0.08%
Orifice Cal Check	--	0.18			0.18			0.11		
Average Meter Correction Factor	(Y)	0.9882			0.9900			0.9889		
Meter Correction Factor	(Y)	0.9890								

Reference Calibrator Make	OMEGA				
Reference Calibrator Model	CL3512A				
Reference Calibrator S/N	1800594				
Reference Temp.		Display Temp.		Accuracy	Absolute Difference
°F	°R	°F	°R	%	°F
0	460	0	460	0.0	0
68	528	66	526	0.4	2
100	560	98	558	0.4	2
223	683	222	682	0.1	1
248	708	248	708	0.0	0
273	733	273	733	0.0	0
300	760	300	760	0.0	0
400	860	398	858	0.2	2
500	960	497	957	0.3	3
600	1,060	599	1,059	0.1	1
700	1,160	700	1,160	0.0	0
800	1,260	799	1,259	0.1	1
900	1,360	899	1,359	0.1	1
1,000	1,460	999	1,459	0.1	1
1,100	1,560	1,100	1,560	0.0	0
1,200	1,660	1,200	1,660	0.0	0

Calibration Performed By: OMAR JOSEPH

Date Conducted: 11/7/23

Reviewed By: Stacey Cunningham

Location ExxonMobil - Beaumont, TX
Source Cogen Unit 41
Project No. AST-2024-1096

Parameter	O ₂ - Outlet	CO ₂ - Outlet
Make	CAI	CAI
Model	600	600
S/N	V03221-M	V03221-M
Operating Range	25	25
Cylinder ID		
Zero	NA	NA
Low	NA	NA
Mid	EB0057389	EB0057389
High	EB0080817	EB0080817
Cylinder Certified Values		
Zero	NA	NA
Low	NA	NA
Mid	10.97	10.96
High	22.00	21.9
Cylinder Expiration Date		
Zero	NA	NA
Low	NA	NA
Mid	11/26/31	11/26/31
High	9/12/31	9/12/31
Type of Sample Line	Unheated Sample Line	

Location: ExxonMobil - Beaumont, TX

Source: Cogen Unit 41

Project No.: AST-2024-1096

Response Times, seconds		
Parameter	O ₂ - Outlet	CO ₂ - Outlet
Zero	64	64
Low	NA	NA
Mid	64	64
Average	64.0	64.0

Calibration Data

Location: ExxonMobil - Beaumont, TX
Source: Cogen Unit 41
Project No.: AST-2024-1096
Date: 2/8/24

Parameter	O ₂ - Outlet	CO ₂ - Outlet
Expected Average Concentration	12.00	3.50
Span Between		
Low	12.00	3.50
High	60.00	20.00
Desired Span	22.00	21.90
Low Range Gas		
Low	NA	NA
High	NA	NA
Mid Range Gas		
Low	8.80	8.76
High	13.20	13.14
High Range Gas		
Low	NA	NA
High	NA	NA
Actual Concentration (% or ppm)		
Zero	0.00	0.00
Low	NA	NA
Mid	10.97	10.96
High	22.00	21.90
Upscale Calibration Gas (C_{MA})	Mid	Mid
Instrument Response (% or ppm)		
Zero	0.00	0.03
Low	NA	NA
Mid	10.96	11.00
High	21.96	22.05
Performance (% of Span or Cal. Gas Conc.)		
Zero	0.00	0.14
Low	NA	NA
Mid	0.05	0.18
High	0.18	0.68
Status		
Zero	PASS	PASS
Low	NA	NA
Mid	PASS	PASS
High	PASS	PASS

Location: ExxonMobil - Beaumont, TX

Source: Cogen Unit 41

Project No.: AST-2024-1096

Parameter	O ₂ - Outlet	CO ₂ - Outlet
Run 1		
Pretest System Zero Response	-0.03	0.07
Posttest System Zero Response	0.02	0.07
Pretest System Upscale Response	10.95	11.03
Posttest System Upscale Response	11.00	11.00
Run 2		
Pretest System Zero Response	0.02	0.07
Posttest System Zero Response	-0.05	0.03
Pretest System Upscale Response	11.00	11.00
Posttest System Upscale Response	11.01	11.01
Run 3		
Pretest System Zero Response	-0.05	0.03
Posttest System Zero Response	-0.06	0.04
Pretest System Upscale Response	11.01	11.01
Posttest System Upscale Response	11.02	11.03

Bias/Drift Determinations

Location: ExxonMobil - Beaumont, TX

Source: Cogen Unit 41

Project No.: AST-2024-1096

Parameter	O ₂ - Outlet	CO ₂ - Outlet
Run 1 Date 2/8/24		
Span Value	22.00	21.90
Initial Instrument Zero Cal Response	0.00	0.03
Initial Instrument Upscale Cal Response	10.96	11.00
Pretest System Zero Response	-0.03	0.07
Posttest System Zero Response	0.02	0.07
Pretest System Upscale Response	10.95	11.03
Posttest System Upscale Response	11.00	11.00
Bias (%)		
Pretest Zero	-0.14	0.18
Posttest Zero	0.09	0.18
Pretest Span	-0.05	0.14
Posttest Span	0.18	0.00
Drift (%)		
Zero	0.23	0.00
Mid	0.23	-0.14
Run 2 Date 2/8/24		
Span Value	22.00	21.90
Instrument Zero Cal Response	0.00	0.03
Instrument Upscale Cal Response	10.96	11.00
Pretest System Zero Response	0.02	0.07
Posttest System Zero Response	-0.05	0.03
Pretest System Upscale Response	11.00	11.00
Posttest System Upscale Response	11.01	11.01
Bias (%)		
Pretest Zero	0.09	0.18
Posttest Zero	-0.23	0.00
Pretest Span	0.18	0.00
Posttest Span	0.23	0.05
Drift (%)		
Zero	-0.32	-0.18
Mid	0.05	0.05
Run 3 Date 2/8/24		
Span Value	22.00	21.90
Instrument Zero Cal Response	0.00	0.03
Instrument Upscale Cal Response	10.96	11.00
Pretest System Zero Response	-0.05	0.03
Posttest System Zero Response	-0.06	0.04
Pretest System Upscale Response	11.01	11.01
Posttest System Upscale Response	11.02	11.03
Bias (%)		
Pretest Zero	-0.23	0.00
Posttest Zero	-0.27	0.05
Pretest Span	0.23	0.05
Posttest Span	0.27	0.14
Drift (%)		
Zero	-0.05	0.05
Mid	0.05	0.09

Location ExxonMobil - Beaumont, TX
Source Cogen Unit 42
Project No. AST-2024-1096

Parameter	O ₂ - Outlet	CO ₂ - Outlet
Make	CAI	CAI
Model	600	600
S/N	V03221-M	V03221-M
Operating Range	25	25
Cylinder ID		
Zero	NA	NA
Low	NA	NA
Mid	EB0057389	EB0057389
High	EB0080817	EB0080817
Cylinder Certified Values		
Zero	NA	NA
Low	NA	NA
Mid	10.97	10.96
High	22.00	21.9
Cylinder Expiration Date		
Zero	NA	NA
Low	NA	NA
Mid	11/26/31	11/26/31
High	9/12/31	9/12/31
Type of Sample Line	Unheated Sample Line	

Location: ExxonMobil - Beaumont, TX

Source: Cogen Unit 42

Project No.: AST-2024-1096

Response Times, seconds		
Parameter	O ₂ - Outlet	CO ₂ - Outlet
Zero	64	64
Low	NA	NA
Mid	64	64
Average	64.0	64.0

Calibration Data

Location: ExxonMobil - Beaumont, TX
Source: Cogen Unit 42
Project No.: AST-2024-1096
Date: 2/7/24

Parameter	O ₂ - Outlet	CO ₂ - Outlet
Expected Average Concentration	12.00	3.50
Span Between		
Low	12.00	3.50
High	60.00	20.00
Desired Span	22.00	21.90
Low Range Gas		
Low	NA	NA
High	NA	NA
Mid Range Gas		
Low	8.80	8.76
High	13.20	13.14
High Range Gas		
Low	NA	NA
High	NA	NA
Actual Concentration (% or ppm)		
Zero	0.00	0.00
Low	NA	NA
Mid	10.97	10.96
High	22.00	21.90
Upscale Calibration Gas (C _{MA})	Mid	Mid
Instrument Response (% or ppm)		
Zero	0.02	0.01
Low	NA	NA
Mid	10.99	11.08
High	21.98	21.98
Performance (% of Span or Cal. Gas Conc.)		
Zero	0.09	0.05
Low	NA	NA
Mid	0.09	0.55
High	0.09	0.37
Status		
Zero	PASS	PASS
Low	NA	NA
Mid	PASS	PASS
High	PASS	PASS

Location: ExxonMobil - Beaumont, TX

Source: Cogen Unit 42

Project No.: AST-2024-1096

Parameter	O ₂ - Outlet	CO ₂ - Outlet
Run 1		
Pretest System Zero Response	-0.03	0.06
Posttest System Zero Response	-0.05	0.04
Pretest System Upscale Response	11.02	11.04
Posttest System Upscale Response	10.97	11.03
Run 2		
Pretest System Zero Response	-0.05	0.04
Posttest System Zero Response	-0.05	0.01
Pretest System Upscale Response	10.97	11.03
Posttest System Upscale Response	10.97	11.01
Run 3		
Pretest System Zero Response	-0.05	0.01
Posttest System Zero Response	-0.05	0.06
Pretest System Upscale Response	10.97	11.01
Posttest System Upscale Response	10.92	10.99

Bias/Drift Determinations

Location: ExxonMobil - Beaumont, TX

Source: Cogen Unit 42

Project No.: AST-2024-1096

Parameter	O ₂ - Outlet	CO ₂ - Outlet
Run 1 Date 2/7/24		
Span Value	22.00	21.90
Initial Instrument Zero Cal Response	0.02	0.01
Initial Instrument Upscale Cal Response	10.99	11.08
Pretest System Zero Response	-0.03	0.06
Posttest System Zero Response	-0.05	0.04
Pretest System Upscale Response	11.02	11.04
Posttest System Upscale Response	10.97	11.03
Bias (%)		
Pretest Zero	-0.23	0.23
Posttest Zero	-0.32	0.14
Pretest Span	0.14	-0.18
Posttest Span	-0.09	-0.23
Drift (%)		
Zero	-0.09	-0.09
Mid	-0.23	-0.05
Run 2 Date 2/7/24		
Span Value	22.00	21.90
Instrument Zero Cal Response	0.02	0.01
Instrument Upscale Cal Response	10.99	11.08
Pretest System Zero Response	-0.05	0.04
Posttest System Zero Response	-0.05	0.01
Pretest System Upscale Response	10.97	11.03
Posttest System Upscale Response	10.97	11.01
Bias (%)		
Pretest Zero	-0.32	0.14
Posttest Zero	-0.32	0.00
Pretest Span	-0.09	-0.23
Posttest Span	-0.09	-0.32
Drift (%)		
Zero	0.00	-0.14
Mid	0.00	-0.09
Run 3 Date 2/7/24		
Span Value	22.00	21.90
Instrument Zero Cal Response	0.02	0.01
Instrument Upscale Cal Response	10.99	11.08
Pretest System Zero Response	-0.05	0.01
Posttest System Zero Response	-0.05	0.06
Pretest System Upscale Response	10.97	11.01
Posttest System Upscale Response	10.92	10.99
Bias (%)		
Pretest Zero	-0.32	0.00
Posttest Zero	-0.32	0.23
Pretest Span	-0.09	-0.32
Posttest Span	-0.32	-0.41
Drift (%)		
Zero	0.00	0.23
Mid	-0.23	-0.09

Location ExxonMobil - Beaumont, TX
Source Cogen Unit 43
Project No. AST-2024-1096

Parameter	O ₂ - Outlet	CO ₂ - Outlet
Make	CAI	CAI
Model	600	600
S/N	V03221-M	V03221-M
Operating Range	25	25
Cylinder ID		
Zero	NA	NA
Low	NA	NA
Mid	EB0057389	EB0057389
High	EB0080817	EB0080817
Cylinder Certified Values		
Zero	NA	NA
Low	NA	NA
Mid	10.97	10.96
High	22.00	21.9
Cylinder Expiration Date		
Zero	NA	NA
Low	NA	NA
Mid	11/26/31	11/26/31
High	9/12/31	9/12/31
Type of Sample Line	Unheated Sample Line	

Location: ExxonMobil - Beaumont, TX

Source: Cogen Unit 43

Project No.: AST-2024-1096

Response Times, seconds		
Parameter	O ₂ - Outlet	CO ₂ - Outlet
Zero	64	64
Low	NA	NA
Mid	64	64
Average	64.0	64.0

Calibration Data

Location: ExxonMobil - Beaumont, TX
Source: Cogen Unit 43
Project No.: AST-2024-1096
Date: 2/6/24

Parameter	O ₂ - Outlet	CO ₂ - Outlet
Expected Average Concentration	12.00	3.50
Span Between		
Low	12.00	3.50
High	60.00	20.00
Desired Span	22.00	21.90
Low Range Gas		
Low	NA	NA
High	NA	NA
Mid Range Gas		
Low	8.80	8.76
High	13.20	13.14
High Range Gas		
Low	NA	NA
High	NA	NA
Actual Concentration (% or ppm)		
Zero	0.00	0.00
Low	NA	NA
Mid	10.97	10.96
High	22.00	21.90
Upscale Calibration Gas (C_{MA})	Mid	Mid
Instrument Response (% or ppm)		
Zero	0.01	0.01
Low	NA	NA
Mid	10.97	11.02
High	21.99	21.99
Performance (% of Span or Cal. Gas Conc.)		
Zero	0.05	0.05
Low	NA	NA
Mid	0.00	0.27
High	0.05	0.41
Status		
Zero	PASS	PASS
Low	NA	NA
Mid	PASS	PASS
High	PASS	PASS

Location: ExxonMobil - Beaumont, TX

Source: Cogen Unit 43

Project No.: AST-2024-1096

Parameter	O ₂ - Outlet	CO ₂ - Outlet
Run 1		
Pretest System Zero Response	-0.02	0.03
Posttest System Zero Response	0.01	-0.14
Pretest System Upscale Response	10.98	11.03
Posttest System Upscale Response	10.90	10.91
Run 2		
Pretest System Zero Response	0.01	-0.14
Posttest System Zero Response	0.02	-0.12
Pretest System Upscale Response	10.90	10.91
Posttest System Upscale Response	10.87	10.92
Run 3		
Pretest System Zero Response	0.02	-0.12
Posttest System Zero Response	0.05	-0.10
Pretest System Upscale Response	10.87	10.92
Posttest System Upscale Response	10.92	10.92

Bias/Drift Determinations

Location: ExxonMobil - Beaumont, TX

Source: Cogen Unit 43

Project No.: AST-2024-1096

Parameter	O ₂ - Outlet	CO ₂ - Outlet
Run 1 Date 2/6/24		
Span Value	22.00	21.90
Initial Instrument Zero Cal Response	0.01	0.01
Initial Instrument Upscale Cal Response	10.97	11.02
Pretest System Zero Response	-0.02	0.03
Posttest System Zero Response	0.01	-0.14
Pretest System Upscale Response	10.98	11.03
Posttest System Upscale Response	10.90	10.91
Bias (%)		
Pretest Zero	-0.14	0.09
Posttest Zero	0.00	-0.68
Pretest Span	0.05	0.05
Posttest Span	-0.32	-0.50
Drift (%)		
Zero	0.14	-0.78
Mid	-0.36	-0.55
Run 2 Date 2/6/24		
Span Value	22.00	21.90
Instrument Zero Cal Response	0.01	0.01
Instrument Upscale Cal Response	10.97	11.02
Pretest System Zero Response	0.01	-0.14
Posttest System Zero Response	0.02	-0.12
Pretest System Upscale Response	10.90	10.91
Posttest System Upscale Response	10.87	10.92
Bias (%)		
Pretest Zero	0.00	-0.68
Posttest Zero	0.05	-0.59
Pretest Span	-0.32	-0.50
Posttest Span	-0.45	-0.46
Drift (%)		
Zero	0.05	0.09
Mid	-0.14	0.05
Run 3 Date 2/6/24		
Span Value	22.00	21.90
Instrument Zero Cal Response	0.01	0.01
Instrument Upscale Cal Response	10.97	11.02
Pretest System Zero Response	0.02	-0.12
Posttest System Zero Response	0.05	-0.10
Pretest System Upscale Response	10.87	10.92
Posttest System Upscale Response	10.92	10.92
Bias (%)		
Pretest Zero	0.05	-0.59
Posttest Zero	0.18	-0.50
Pretest Span	-0.45	-0.46
Posttest Span	-0.23	-0.46
Drift (%)		
Zero	0.14	0.09
Mid	0.23	0.00



Red Ball Technical Gas Service
555 Craig Kennedy Way
Shreveport, LA 71107
800-551-8150
PGVP Vendor ID # G12023

EPA PROTOCOL GAS CERTIFICATE OF ANALYSIS

Cylinder Number:	EB0080817	Certification Date:	09/14/2023
Product ID Number:	123956	Expiration Date:	09/12/2031
Cylinder Pressure:	1900 PSIG	MFG Facility:	- Shreveport - LA
COA #	EB0080817.20230821-0	Lot Number:	EB0080817.20230821
Customer PO. NO.:		Tracking Number:	084093471
Customer:		Previous Certification Dates:	

This calibration standard has been certified per the May 2012 EPA Traceability Protocol, Document EPA-600/R-12/531, using procedure G2.

Do Not Use This Cylinder Below 100 psig (0.7 Megapascal).

Certified Concentration(s)

Component	Concentration	Uncertainty	Analytical Principle	Assayed On
Carbon Dioxide	21.9 %	±0.12 %	FTIR	08/29/2023
Oxygen	22.00 %	±0.04 %	MPA	09/14/2023
Nitrogen	Balance			

Analytical Measurement Data Available Online.

Reference Standard(s)

Serial Number	Lot	Expiration	Type	Balance	Component	Concentration	Uncertainty(%)	NIST Reference
CC737012	CC737012.20230228	07/09/2031	GMIS	N2	O2	20 %	0.112	SRM 2659a
EB0004315	EB0004315.20201022	04/05/2030	GMIS	N2	CO2	24.75 %	0.237	C2190301.03

Analytical Instrumentation

Component	Principle	Make	Model	Serial	MPC Date
CO2	FTIR	MKS	MKS 2031DJG2EKVS13T	017146467	08/29/2023
O2	MPA	Thermo	410i	1162980025	09/13/2023

SMART-CERT



This is to certify the gases referenced have been calibrated/tested, and verified to meet the defined specifications. This calibration/test was performed using Gases or Scales that are traceable through National Institute of Standards and Technology (NIST) to the International System of Units (SI). The basis of compliance stated is a comparison of the measurement parameters to the specified or required calibration/testing process. The expanded uncertainties use a coverage factor of k=2 to approximate the 95% confidence level of the measurement, unless otherwise noted. This calibration certificate applies only to the item described and shall not be reproduced other than in full, without written approval from Red Ball Technical Gas Services. If not included, the uncertainty of calibrations are available upon request and were taken into account when determining pass or fail.

Jasmine Godfrey

Jasmine Godfrey
Analytical Chemist
Assay Laboratory: Red Ball TGS
Version 02-J, Revised on 2018-09-17



Red Ball Technical Gas Service
555 Craig Kennedy Way
Shreveport, LA 71107
800-551-8150
PGVP Vendor ID # G12023

EPA PROTOCOL GAS CERTIFICATE OF ANALYSIS

Cylinder Number:	EB0057389	Certification Date:	11/28/2023
Product ID Number:	125371	Expiration Date:	11/26/2031
Cylinder Pressure:	1900 PSIG	MFG Facility:	- Shreveport - LA
COA #	EB0057389.20231120-0	Lot Number:	EB0057389.20231120
Customer PO. NO.:		Tracking Number:	074329331
Customer:		Previous Certification Dates:	

This calibration standard has been certified per the May 2012 EPA Traceability Protocol, Document EPA-600/R-12/531, using procedure G1.

Do Not Use This Cylinder Below 100 psig (0.7 Megapascal).

Certified Concentration(s)

Component	Concentration	Uncertainty	Analytical Principle	Assayed On
Carbon Dioxide	10.96 %	±0.08 %	NDIR	11/27/2023
Oxygen	10.97 %	±0.02 %	MPA	11/28/2023
Nitrogen	Balance			

Analytical Measurement Data Available Online.

Reference Standard(s)

Serial Number	Lot	Expiration	Type	Balance	Component	Concentration	Uncertainty(%)	NIST Reference
CC716408	CC716408.20230109	07/09/2031	GMIS	N2	O2	12.003 %	0.122	SRM 2659a
CC749243	CC749243.20230228	07/09/2031	GMIS	N2	O2	20.01 %	0.112	SRM 2659a
EB0004315	EB0004315.20201022	04/05/2030	GMIS	N2	CO2	24.75 %	0.237	C2190301.03
EB0014830	EB0014830.20150605	10/03/2030	GMIS	N2	CO2	9.53 %	0.191	C2190301.03

Analytical Instrumentation

Component	Principle	Make	Model	Serial	MPC Date
CO2	NDIR	Thermo	410i	1162980025	11/13/2023
O2	MPA	Thermo	410i	1162980025	11/24/2023

SMART-CERT



This is to certify the gases referenced have been calibrated/tested, and verified to meet the defined specifications. This calibration/test was performed using Gases or Scales that are traceable through National Institute of Standards and Technology (NIST) to the International System of Units (SI). The basis of compliance stated is a comparison of the measurement parameters to the specified or required calibration/testing process. The expanded uncertainties use a coverage factor of k=2 to approximate the 95% confidence level of the measurement, unless otherwise noted. This calibration certificate applies only to the item described and shall not be reproduced other than in full, without written approval from Red Ball Technical Gas Services. If not included, the uncertainty of calibrations are available upon request and were taken into account when determining pass or fail.

Gabriel Ouma

Gabriel Ouma
Analytical Chemist
Assay Laboratory: Red Ball TGS
Version 02-J, Revised on 2018-09-17

Location: ExxonMobil - Beaumont, TX
Source: Cogen Unit 41
Project No.: AST-2024-1096
Date: 2/8/2024

Traverse Point	Time	O ₂ (%)
A-1	7:27	13.67
2	7:29	13.68
3	7:31	13.69
4	7:33	13.69
5	7:35	13.69
6	7:37	13.68
B-1	7:39	13.68
2	7:41	13.68
3	7:43	13.69
4	7:45	13.69
5	7:47	13.69
6	7:49	13.69
Average		13.69
Criteria Met		Single Point

Location: ExxonMobil - Beaumont, TX
Source: Cogen Unit 42
Project No.: AST-2024-1096
Date: 2/7/2024

Traverse Point	Time	O ₂ (%)
A-1	10:30	13.73
2	10:32	13.72
3	10:34	13.72
4	10:36	13.72
5	10:38	13.72
6	10:40	13.72
B-1	10:42	13.72
2	10:44	13.72
3	10:46	13.72
4	10:48	13.71
5	10:50	13.71
6	10:52	13.71
Average		13.72
Criteria Met		Single Point

Location: ExxonMobil - Beaumont, TX
Source: Cogen Unit 43
Project No.: AST-2024-1096
Date: 2/6/2024

Traverse Point	Time	O ₂ (%)
A-1	8:52	13.53
2	8:54	13.59
3	8:56	13.60
4	8:58	13.61
5	9:00	13.60
6	9:02	13.60
B-1	9:04	13.59
2	9:06	13.60
3	9:08	13.60
4	9:10	13.60
5	9:12	13.60
6	9:14	13.60
Average		13.59
Criteria Met		Single Point

Appendix E

XOM - Beaumont, TX
Unit 41 - 1-minute CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/8/24 6:25	18.31	0.01	
2/8/24 6:26	18.22	0.02	
2/8/24 6:27	18.39	0.02	
2/8/24 6:28	18.13	0.03	
2/8/24 6:29	18.10	0.04	
2/8/24 6:30	19.04	0.04	
2/8/24 6:31	17.64	0.05	
2/8/24 6:32	18.60	0.06	
2/8/24 6:33	18.04	0.07	
2/8/24 6:34	18.20	0.08	
2/8/24 6:35	18.53	0.09	
2/8/24 6:36	18.71	0.09	
2/8/24 6:37	18.54	0.10	
2/8/24 6:38	19.12	0.10	
2/8/24 6:39	18.63	0.11	
2/8/24 6:40	17.40	0.11	
2/8/24 6:41	18.72	0.11	
2/8/24 6:42	18.36	0.12	
2/8/24 6:43	18.09	0.12	
2/8/24 6:44	17.58	0.12	
2/8/24 6:45	17.95	0.12	
2/8/24 6:46	18.55	0.12	
2/8/24 6:47	17.99	0.12	
2/8/24 6:48	18.01	0.13	
2/8/24 6:49	17.82	0.14	
2/8/24 6:50	18.66	0.14	
2/8/24 6:51	18.51	0.13	
2/8/24 6:52	17.90	0.14	
2/8/24 6:53	18.61	0.13	
2/8/24 6:54	19.18	0.13	
2/8/24 6:55	19.07	0.12	
2/8/24 6:56	18.23	0.12	
2/8/24 6:57	18.63	0.13	
2/8/24 6:58	18.37	0.13	
2/8/24 6:59	18.69	0.13	
2/8/24 7:00	17.86	0.13	
2/8/24 7:01	17.68	0.13	
2/8/24 7:02	17.96	0.13	
2/8/24 7:03	18.79	0.13	
2/8/24 7:04	17.85	0.13	
2/8/24 7:05	17.72	0.12	
2/8/24 7:06	18.37	0.11	
2/8/24 7:07	18.41	0.11	
2/8/24 7:08	18.95	0.11	
2/8/24 7:09	17.54	0.11	
2/8/24 7:10	18.32	0.11	
2/8/24 7:11	17.80	0.11	
2/8/24 7:12	17.83	0.11	
2/8/24 7:13	18.20	0.11	
2/8/24 7:14	17.74	0.11	
2/8/24 7:15	17.74	0.11	
2/8/24 7:16	18.01	0.11	
2/8/24 7:17	17.87	0.10	
2/8/24 7:18	17.98	0.11	
2/8/24 7:19	17.85	0.11	
2/8/24 7:20	17.79	0.10	
2/8/24 7:21	17.99	0.10	

XOM - Beaumont, TX
Unit 41 - 1-minute CSV Data

2/8/24 7:22	18.36	0.10
2/8/24 7:23	17.99	0.11
2/8/24 7:24	17.59	0.11
2/8/24 7:25	18.20	0.11
2/8/24 7:26	18.00	0.12
2/8/24 7:27	17.96	0.11
2/8/24 7:28	17.96	0.12
2/8/24 7:29	18.02	0.12
2/8/24 7:30	18.31	0.12
2/8/24 7:31	18.01	0.12
2/8/24 7:32	19.00	0.12
2/8/24 7:33	18.69	0.12
2/8/24 7:34	18.95	0.13
2/8/24 7:35	19.02	0.13
2/8/24 7:36	18.16	0.13
2/8/24 7:37	18.21	0.13
2/8/24 7:38	17.86	0.13
2/8/24 7:39	18.17	0.13
2/8/24 7:40	17.89	0.13
2/8/24 7:41	18.11	0.13
2/8/24 7:42	17.77	0.13
2/8/24 7:43	16.85	0.13
2/8/24 7:44	19.33	0.13
2/8/24 7:45	17.26	0.13
2/8/24 7:46	17.90	0.13
2/8/24 7:47	13.16	0.43
2/8/24 7:48	10.92	3.38
2/8/24 7:49	13.60	4.15
2/8/24 7:50	12.11	3.67
2/8/24 7:51	1.86	0.60
2/8/24 7:52	0.08	0.06
2/8/24 7:53	8.58	6.76
2/8/24 7:54	26.30	25.69
2/8/24 7:55	25.32	25.36
2/8/24 7:56	22.19	22.28
2/8/24 7:57	18.25	18.35
2/8/24 7:58	7.67	7.76
2/8/24 7:59	10.64	10.68
2/8/24 8:00	10.97	11.02
2/8/24 8:01	5.43	5.50
2/8/24 8:02	0.28	0.41
2/8/24 8:03	-0.02	0.09
2/8/24 8:04	4.66	4.91
2/8/24 8:05	9.82	9.95
2/8/24 8:06	10.84	10.92
2/8/24 8:07	10.99	11.04
2/8/24 8:08	12.22	7.99
2/8/24 8:09	13.65	4.56
2/8/24 8:10	13.76	4.25
2/8/24 8:11	13.79	4.24
2/8/24 8:12	13.78	4.23
2/8/24 8:13	13.78	4.23
2/8/24 8:14	13.78	4.23
2/8/24 8:15	13.77	4.23
2/8/24 8:16	13.78	4.24
2/8/24 8:17	13.77	4.24
2/8/24 8:18	13.88	4.17
2/8/24 8:19	13.26	3.99
2/8/24 8:20	12.91	3.98
2/8/24 8:21	12.87	3.97

XOM - Beaumont, TX
Unit 41 - 1-minute CSV Data

2/8/24 8:22	12.88	3.97
2/8/24 8:23	12.98	4.00
2/8/24 8:24	13.09	4.03
2/8/24 8:25	13.10	4.03
2/8/24 8:26	13.10	4.03
2/8/24 8:27	13.09	4.02
2/8/24 8:28	13.10	4.02
2/8/24 8:29	13.10	4.02
2/8/24 8:30	13.08	4.02
2/8/24 8:31	13.10	4.01
2/8/24 8:32	13.10	4.02
2/8/24 8:33	13.10	4.02
2/8/24 8:34	13.10	4.02
2/8/24 8:35	13.09	4.02
2/8/24 8:36	13.10	4.02
2/8/24 8:37	13.10	4.02
2/8/24 8:38	13.10	4.02
2/8/24 8:39	13.10	4.03
2/8/24 8:40	13.10	4.03
2/8/24 8:41	12.94	3.97
2/8/24 8:42	5.88	1.88
2/8/24 8:43	11.97	3.72
2/8/24 8:44	13.65	4.20
2/8/24 8:45	13.77	4.23
2/8/24 8:46	13.77	4.23
2/8/24 8:47	13.16	4.03
2/8/24 8:48	2.75	0.90
2/8/24 8:49	0.11	0.11
2/8/24 8:50	-0.05	0.06
2/8/24 8:51	-0.06	0.05
2/8/24 8:52	-0.06	0.05
2/8/24 8:53	-0.06	0.05
2/8/24 8:54	-0.03	0.07
2/8/24 8:55	0.47	0.23
2/8/24 8:56	0.67	0.29
2/8/24 8:57	0.65	0.29
2/8/24 8:58	0.61	0.27
2/8/24 8:59	0.69	0.31
2/8/24 9:00	9.37	2.98
2/8/24 9:01	13.46	4.14
2/8/24 9:02	13.77	4.23
2/8/24 9:03	13.79	4.24
2/8/24 9:04	13.78	4.24
2/8/24 9:05	13.78	4.24
2/8/24 9:06	13.79	4.24
2/8/24 9:07	13.78	4.24
2/8/24 9:08	13.79	4.24
2/8/24 9:09	13.78	4.24
2/8/24 9:10	13.77	4.24
2/8/24 9:11	13.79	4.24
2/8/24 9:12	13.79	4.23
2/8/24 9:13	13.78	4.23
2/8/24 9:14	13.79	4.23
2/8/24 9:15	13.79	4.23
2/8/24 9:16	13.79	4.23
2/8/24 9:17	13.79	4.23
2/8/24 9:18	13.79	4.23
2/8/24 9:19	13.78	4.23
2/8/24 9:20	13.78	4.23
2/8/24 9:21	13.79	4.23

Run 1

XOM - Beaumont, TX
Unit 41 - 1-minute CSV Data

2/8/24 9:22	13.78	4.23
2/8/24 9:23	13.79	4.23
2/8/24 9:24	13.78	4.23
2/8/24 9:25	13.79	4.22
2/8/24 9:26	13.79	4.22
2/8/24 9:27	13.78	4.23
2/8/24 9:28	13.79	4.22
2/8/24 9:29	13.78	4.22
2/8/24 9:30	13.78	4.22
2/8/24 9:31	13.78	4.22
2/8/24 9:32	13.79	4.23
2/8/24 9:33	13.78	4.22
2/8/24 9:34	13.79	4.23
2/8/24 9:35	13.80	4.22
2/8/24 9:36	13.79	4.23
2/8/24 9:37	13.80	4.22
2/8/24 9:38	13.79	4.23
2/8/24 9:39	13.79	4.22
2/8/24 9:40	13.80	4.22
2/8/24 9:41	13.79	4.22
2/8/24 9:42	13.79	4.22
2/8/24 9:43	13.80	4.22
2/8/24 9:44	13.78	4.22
2/8/24 9:45	13.80	4.22
2/8/24 9:46	13.79	4.22
2/8/24 9:47	13.80	4.22
2/8/24 9:48	13.80	4.22
2/8/24 9:49	13.79	4.22
2/8/24 9:50	13.79	4.22
2/8/24 9:51	13.80	4.22
2/8/24 9:52	13.79	4.21
2/8/24 9:53	13.79	4.21
2/8/24 9:54	13.80	4.21
2/8/24 9:55	13.81	4.21
2/8/24 9:56	13.81	4.21
2/8/24 9:57	13.81	4.21
2/8/24 9:58	13.81	4.21
2/8/24 9:59	13.81	4.21
2/8/24 10:00	13.81	4.20
2/8/24 10:01	13.81	4.21
2/8/24 10:02	13.80	4.21
2/8/24 10:03	13.81	4.21
2/8/24 10:04	13.81	4.21
2/8/24 10:05	8.05	2.45
2/8/24 10:06	0.51	0.22
2/8/24 10:07	-0.03	0.05
2/8/24 10:08	1.85	2.07
2/8/24 10:09	9.27	9.38
2/8/24 10:10	10.83	10.85
2/8/24 10:11	10.99	11.00
2/8/24 10:12	8.63	8.16
2/8/24 10:13	1.98	1.53
2/8/24 10:14	0.32	0.21
2/8/24 10:15	-0.03	0.05
2/8/24 10:16	-0.06	0.04
2/8/24 10:17	-0.06	0.04
2/8/24 10:18	-0.06	0.04
2/8/24 10:19	-0.06	0.03
2/8/24 10:20	-0.01	0.05
2/8/24 10:21	0.41	0.19

Run 1 end

XOM - Beaumont, TX
Unit 41 - 1-minute CSV Data

2/8/24 10:22	0.54	0.22	
2/8/24 10:23	0.54	0.23	
2/8/24 10:24	0.56	0.23	
2/8/24 10:25	0.58	0.24	
2/8/24 10:26	8.88	2.79	
2/8/24 10:27	13.44	4.08	
2/8/24 10:28	13.79	4.18	
2/8/24 10:29	13.82	4.19	
2/8/24 10:30	13.82	4.19	
2/8/24 10:31	13.83	4.19	
2/8/24 10:32	13.82	4.19	Run 2
2/8/24 10:33	13.82	4.19	
2/8/24 10:34	13.83	4.19	
2/8/24 10:35	13.83	4.19	
2/8/24 10:36	13.82	4.20	
2/8/24 10:37	13.83	4.19	
2/8/24 10:38	13.83	4.19	
2/8/24 10:39	13.83	4.19	
2/8/24 10:40	13.83	4.19	
2/8/24 10:41	13.83	4.19	
2/8/24 10:42	13.83	4.19	
2/8/24 10:43	13.83	4.19	
2/8/24 10:44	13.83	4.19	
2/8/24 10:45	13.82	4.19	
2/8/24 10:46	13.82	4.19	
2/8/24 10:47	13.82	4.19	
2/8/24 10:48	13.83	4.19	
2/8/24 10:49	13.82	4.19	
2/8/24 10:50	13.83	4.19	
2/8/24 10:51	13.84	4.19	
2/8/24 10:52	13.83	4.19	
2/8/24 10:53	13.85	4.18	
2/8/24 10:54	13.83	4.19	
2/8/24 10:55	13.83	4.19	
2/8/24 10:56	13.83	4.19	
2/8/24 10:57	13.82	4.19	
2/8/24 10:58	13.84	4.19	
2/8/24 10:59	13.83	4.19	
2/8/24 11:00	13.82	4.19	
2/8/24 11:01	13.83	4.19	
2/8/24 11:02	13.83	4.19	
2/8/24 11:03	13.83	4.19	
2/8/24 11:04	13.83	4.19	
2/8/24 11:05	13.83	4.19	
2/8/24 11:06	13.84	4.19	
2/8/24 11:07	13.84	4.18	
2/8/24 11:08	13.84	4.18	
2/8/24 11:09	13.84	4.18	
2/8/24 11:10	13.85	4.18	
2/8/24 11:11	13.84	4.18	
2/8/24 11:12	13.84	4.18	
2/8/24 11:13	13.83	4.18	
2/8/24 11:14	13.83	4.19	
2/8/24 11:15	13.84	4.19	
2/8/24 11:16	13.84	4.19	
2/8/24 11:17	13.83	4.19	
2/8/24 11:18	13.83	4.19	
2/8/24 11:19	13.84	4.18	
2/8/24 11:20	13.84	4.18	
2/8/24 11:21	13.83	4.18	

XOM - Beaumont, TX
Unit 41 - 1-minute CSV Data

2/8/24 11:22	13.83	4.18	
2/8/24 11:23	13.84	4.18	
2/8/24 11:24	13.84	4.18	
2/8/24 11:25	13.84	4.17	
2/8/24 11:26	13.83	4.17	
2/8/24 11:27	13.84	4.17	
2/8/24 11:28	13.85	4.17	
2/8/24 11:29	13.79	4.15	Run 2 end
2/8/24 11:30	4.44	1.34	
2/8/24 11:31	0.20	0.10	
2/8/24 11:32	-0.04	0.03	
2/8/24 11:33	-0.06	0.02	
2/8/24 11:34	-0.06	0.02	
2/8/24 11:35	-0.06	0.02	
2/8/24 11:36	-0.04	0.03	
2/8/24 11:37	0.32	0.15	
2/8/24 11:38	0.46	0.19	
2/8/24 11:39	0.46	0.19	
2/8/24 11:40	0.44	0.19	
2/8/24 11:41	0.45	0.19	
2/8/24 11:42	0.26	0.13	
2/8/24 11:43	6.06	6.28	
2/8/24 11:44	10.44	10.47	
2/8/24 11:45	10.97	10.97	
2/8/24 11:46	11.15	10.63	
2/8/24 11:47	13.12	5.89	
2/8/24 11:48	13.80	4.29	
2/8/24 11:49	13.84	4.20	
2/8/24 11:50	13.84	4.20	Run 3
2/8/24 11:51	13.84	4.20	
2/8/24 11:52	13.84	4.20	
2/8/24 11:53	13.83	4.20	
2/8/24 11:54	13.84	4.20	
2/8/24 11:55	13.84	4.20	
2/8/24 11:56	13.84	4.19	
2/8/24 11:57	13.85	4.20	
2/8/24 11:58	13.84	4.20	
2/8/24 11:59	13.85	4.20	
2/8/24 12:00	13.84	4.20	
2/8/24 12:01	13.85	4.20	
2/8/24 12:02	13.84	4.20	
2/8/24 12:03	13.84	4.20	
2/8/24 12:04	13.84	4.20	
2/8/24 12:05	13.85	4.20	
2/8/24 12:06	13.85	4.20	
2/8/24 12:07	13.85	4.20	
2/8/24 12:08	13.85	4.20	
2/8/24 12:09	13.85	4.19	
2/8/24 12:10	13.85	4.19	
2/8/24 12:11	13.85	4.19	
2/8/24 12:12	13.86	4.18	
2/8/24 12:13	13.86	4.18	
2/8/24 12:14	13.86	4.17	
2/8/24 12:15	13.85	4.17	
2/8/24 12:16	13.86	4.17	
2/8/24 12:17	13.85	4.17	
2/8/24 12:18	13.86	4.17	
2/8/24 12:19	13.85	4.17	
2/8/24 12:20	13.85	4.17	
2/8/24 12:21	13.85	4.17	

XOM - Beaumont, TX
Unit 41 - 1-minute CSV Data

2/8/24 12:22	13.85	4.17	
2/8/24 12:23	13.86	4.17	
2/8/24 12:24	13.84	4.17	
2/8/24 12:25	13.85	4.17	
2/8/24 12:26	13.85	4.17	
2/8/24 12:27	13.86	4.17	
2/8/24 12:28	13.84	4.17	
2/8/24 12:29	13.84	4.17	
2/8/24 12:30	13.85	4.17	
2/8/24 12:31	13.84	4.17	
2/8/24 12:32	13.85	4.18	
2/8/24 12:33	13.85	4.17	
2/8/24 12:34	13.85	4.18	
2/8/24 12:35	13.84	4.18	
2/8/24 12:36	13.85	4.18	
2/8/24 12:37	13.85	4.18	
2/8/24 12:38	13.85	4.18	
2/8/24 12:39	13.85	4.18	
2/8/24 12:40	13.83	4.19	
2/8/24 12:41	13.84	4.19	
2/8/24 12:42	13.84	4.19	
2/8/24 12:43	13.82	4.19	
2/8/24 12:44	13.83	4.19	
2/8/24 12:45	13.84	4.20	
2/8/24 12:46	13.82	4.20	
2/8/24 12:47	13.82	4.20	
2/8/24 12:48	13.83	4.20	
2/8/24 12:49	13.77	4.18	Run 3 end
2/8/24 12:50	7.32	2.26	
2/8/24 12:51	2.45	0.78	
2/8/24 12:52	0.55	0.21	
2/8/24 12:53	0.32	0.13	
2/8/24 12:54	0.50	0.18	
2/8/24 12:55	1.25	0.38	
2/8/24 12:56	0.02	0.06	
2/8/24 12:57	-0.05	0.04	
2/8/24 12:58	-0.06	0.04	FTIR Background
2/8/24 12:59	-0.06	0.04	
2/8/24 13:00	-0.06	0.04	
2/8/24 13:01	0.04	0.16	
2/8/24 13:02	6.63	6.85	
2/8/24 13:03	10.26	10.37	
2/8/24 13:04	10.91	11.01	
2/8/24 13:05	11.02	11.10	
2/8/24 13:06	16.02	3.13	
2/8/24 13:07	18.09	0.19	
2/8/24 13:08	18.20	0.19	
2/8/24 13:09	18.34	0.19	
2/8/24 13:10	17.95	0.14	
2/8/24 13:11	17.77	0.12	
2/8/24 13:12	17.87	0.12	
2/8/24 13:13	18.27	0.10	
2/8/24 13:14	18.47	0.09	
2/8/24 13:15	18.86	0.08	END

XOM - Beaumont, TX
Unit 41 - 10-second CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/8/24 7:50	13.68	4.17	
2/8/24 7:50	13.72	4.18	
2/8/24 7:50	13.75	4.19	
2/8/24 7:50	13.76	4.19	
2/8/24 7:50	13.76	4.20	
2/8/24 7:50	13.77	4.20	
2/8/24 7:51	13.61	4.13	
2/8/24 7:51	10.76	3.18	
2/8/24 7:51	6.99	2.11	
2/8/24 7:51	4.50	1.39	Calibration Error
2/8/24 7:51	2.75	0.87	
2/8/24 7:51	1.67	0.55	
2/8/24 7:52	1.08	0.36	
2/8/24 7:52	0.68	0.25	
2/8/24 7:52	0.45	0.17	
2/8/24 7:52	0.25	0.11	
2/8/24 7:52	0.15	0.08	
2/8/24 7:52	0.08	0.06	
2/8/24 7:53	0.02	0.04	
2/8/24 7:53	0.00	0.03	Zero
2/8/24 7:53	0.00	0.04	
2/8/24 7:53	1.89	0.71	
2/8/24 7:53	4.92	1.58	
2/8/24 7:53	5.76	3.30	
2/8/24 7:54	10.00	8.43	
2/8/24 7:54	13.25	11.94	
2/8/24 7:54	15.64	14.57	
2/8/24 7:54	17.50	16.58	
2/8/24 7:54	18.85	18.03	
2/8/24 7:54	19.38	19.20	
2/8/24 7:55	37.04	36.10	
2/8/24 7:55	34.07	33.56	
2/8/24 7:55	30.93	30.64	
2/8/24 7:55	28.58	28.43	
2/8/24 7:55	26.85	26.83	
2/8/24 7:55	25.33	25.38	
2/8/24 7:56	24.44	24.54	
2/8/24 7:56	23.71	23.82	
2/8/24 7:56	23.00	23.14	
2/8/24 7:56	22.58	22.69	
2/8/24 7:56	22.28	22.39	
2/8/24 7:56	22.15	22.25	
2/8/24 7:57	22.07	22.17	
2/8/24 7:57	22.03	22.13	
2/8/24 7:57	22.00	22.08	
2/8/24 7:57	21.98	22.06	
2/8/24 7:57	21.96	22.05	High
2/8/24 7:57	21.95	22.04	
2/8/24 7:58	21.95	22.04	
2/8/24 7:58	19.77	19.86	
2/8/24 7:58	1.89	2.03	
2/8/24 7:58	4.40	4.53	
2/8/24 7:58	6.21	6.32	
2/8/24 7:58	7.62	7.74	
2/8/24 7:59	8.59	8.67	
2/8/24 7:59	9.35	9.43	
2/8/24 7:59	9.83	9.90	
2/8/24 7:59	10.24	10.29	
2/8/24 7:59	10.47	10.51	

XOM - Beaumont, TX
Unit 41 - 10-second CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/8/24 7:59	10.63	10.67	
2/8/24 8:00	10.75	10.79	
2/8/24 8:00	10.84	10.88	
2/8/24 8:00	10.90	10.93	
2/8/24 8:00	10.93	10.97	
2/8/24 8:00	10.96	11.00	Mid
2/8/24 8:00	10.97	11.01	
2/8/24 8:01	10.98	11.03	
2/8/24 8:01	10.99	11.04	
2/8/24 8:01	11.00	11.05	
2/8/24 8:01	10.99	11.04	
2/8/24 8:01	8.97	8.81	Run 1 Pre-Bias
2/8/24 8:01	5.58	5.62	
2/8/24 8:02	3.31	3.42	
2/8/24 8:02	2.27	2.44	
2/8/24 8:02	1.48	1.66	
2/8/24 8:02	0.73	0.88	
2/8/24 8:02	0.40	0.55	
2/8/24 8:02	0.25	0.38	
2/8/24 8:03	0.16	0.28	
2/8/24 8:03	0.10	0.21	
2/8/24 8:03	0.05	0.17	
2/8/24 8:03	0.02	0.13	
2/8/24 8:03	0.00	0.11	
2/8/24 8:03	-0.02	0.09	
2/8/24 8:04	-0.03	0.07	Zero
2/8/24 8:04	-0.04	0.06	
2/8/24 8:04	-0.05	0.06	
2/8/24 8:04	0.03	0.16	
2/8/24 8:04	2.37	2.72	
2/8/24 8:04	4.26	4.55	
2/8/24 8:05	5.93	6.20	
2/8/24 8:05	7.20	7.43	
2/8/24 8:05	8.18	8.38	
2/8/24 8:05	8.92	9.09	
2/8/24 8:05	9.48	9.64	
2/8/24 8:05	9.82	9.94	
2/8/24 8:06	10.02	10.12	
2/8/24 8:06	10.20	10.30	
2/8/24 8:06	10.48	10.58	
2/8/24 8:06	10.65	10.73	
2/8/24 8:06	10.77	10.85	
2/8/24 8:06	10.84	10.92	
2/8/24 8:07	10.89	10.97	
2/8/24 8:07	10.93	11.00	
2/8/24 8:07	10.95	11.03	Span
2/8/24 8:07	10.97	11.04	
2/8/24 8:07	10.98	11.05	
2/8/24 8:07	11.00	11.06	
2/8/24 8:08	11.00	11.06	
2/8/24 8:08	11.00	11.03	
2/8/24 8:08	11.00	11.02	
2/8/24 8:08	11.00	11.01	
2/8/24 8:08	11.36	9.98	
2/8/24 8:08	12.18	8.01	
2/8/24 8:09	12.64	7.00	
2/8/24 8:09	12.93	6.29	
2/8/24 8:09	13.20	5.62	

XOM - Beaumont, TX
Unit 41 - 10-second CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/8/24 8:09	13.43	5.09	
2/8/24 8:09	13.57	4.73	
2/8/24 8:09	13.68	4.51	
2/8/24 9:01	10.99	3.45	
2/8/24 9:01	11.94	3.71	
2/8/24 9:01	12.54	3.88	
2/8/24 9:01	13.01	4.02	
2/8/24 9:01	13.29	4.10	
2/8/24 9:01	13.47	4.14	
2/8/24 9:02	13.61	4.18	
2/8/24 9:02	13.66	4.20	
2/8/24 9:02	13.72	4.21	
2/8/24 9:02	13.74	4.22	
2/8/24 9:02	13.75	4.23	
2/8/24 9:02	13.78	4.23	
2/8/24 9:03	13.77	4.23	
2/8/24 9:03	13.79	4.23	
2/8/24 9:03	13.79	4.23	
2/8/24 9:03	13.78	4.23	
2/8/24 9:03	13.79	4.24	
2/8/24 9:03	13.78	4.24	
2/8/24 9:04	13.79	4.24	
2/8/24 9:04	13.78	4.24	
2/8/24 9:04	13.80	4.24	
2/8/24 9:04	13.78	4.24	
2/8/24 9:04	13.78	4.23	
2/8/24 9:04	13.79	4.24	
2/8/24 10:05	13.82	4.21	
2/8/24 10:05	13.81	4.21	
2/8/24 10:05	13.82	4.21	
2/8/24 10:05	13.81	4.21	
2/8/24 10:05	12.86	3.85	Run 1 Post-Bias
2/8/24 10:05	9.31	2.81	
2/8/24 10:06	6.28	1.93	
2/8/24 10:06	3.86	1.21	
2/8/24 10:06	2.19	0.72	
2/8/24 10:06	1.35	0.48	
2/8/24 10:06	0.81	0.31	
2/8/24 10:06	0.47	0.21	
2/8/24 10:07	0.25	0.14	
2/8/24 10:07	0.13	0.11	
2/8/24 10:07	0.07	0.09	
2/8/24 10:07	0.02	0.07	Zero
2/8/24 10:07	-0.01	0.06	
2/8/24 10:07	-0.03	0.05	
2/8/24 10:08	-0.04	0.05	
2/8/24 10:08	-0.05	0.05	
2/8/24 10:08	-0.05	0.04	
2/8/24 10:08	-0.06	0.04	
2/8/24 10:08	-0.06	0.04	
2/8/24 10:08	-0.06	0.04	
2/8/24 10:09	1.37	1.75	
2/8/24 10:09	3.97	4.34	
2/8/24 10:09	5.96	6.23	
2/8/24 10:09	7.48	7.69	
2/8/24 10:09	8.50	8.64	
2/8/24 10:09	9.23	9.34	
2/8/24 10:10	9.80	9.88	

XOM - Beaumont, TX
Unit 41 - 10-second CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/8/24 10:10	10.18	10.24	
2/8/24 10:10	10.45	10.48	
2/8/24 10:10	10.64	10.67	
2/8/24 10:10	10.75	10.77	
2/8/24 10:10	10.84	10.85	
2/8/24 10:11	10.90	10.91	
2/8/24 10:11	10.93	10.94	
2/8/24 10:11	10.95	10.96	
2/8/24 10:11	10.97	10.98	
2/8/24 10:11	10.99	11.00	
2/8/24 10:11	11.00	11.00	Span
2/8/24 10:12	11.00	11.01	
2/8/24 10:12	11.00	11.02	
2/8/24 10:12	11.01	11.01	
2/8/24 10:12	11.00	11.03	
2/8/24 10:12	11.00	11.02	
2/8/24 10:12	10.82	10.43	
2/8/24 10:13	8.07	6.96	
2/8/24 10:13	6.22	5.47	
2/8/24 10:13	4.68	4.08	
2/8/24 10:13	3.46	2.92	
2/8/24 10:13	2.60	2.14	
2/8/24 10:13	2.02	1.58	
2/8/24 10:14	1.57	1.15	
2/8/24 10:14	1.21	0.77	
2/8/24 10:14	1.01	0.60	
2/8/24 10:14	0.77	0.42	
2/8/24 10:14	0.50	0.30	
2/8/24 10:14	0.31	0.21	
2/8/24 10:15	0.19	0.15	
2/8/24 10:15	0.10	0.11	
2/8/24 11:32	0.09	0.07	
2/8/24 11:32	0.03	0.05	
2/8/24 11:32	0.00	0.04	Run 2 Post-Bias
2/8/24 11:32	-0.02	0.04	
2/8/24 11:32	-0.04	0.03	
2/8/24 11:32	-0.04	0.03	
2/8/24 11:33	-0.05	0.03	
2/8/24 11:33	-0.05	0.03	
2/8/24 11:33	-0.06	0.02	
2/8/24 11:33	-0.06	0.02	
2/8/24 11:33	-0.06	0.02	
2/8/24 11:33	-0.06	0.02	
2/8/24 11:34	-0.06	0.02	
2/8/24 11:34	-0.06	0.03	
2/8/24 11:34	-0.06	0.02	
2/8/24 11:34	-0.06	0.02	
2/8/24 11:34	-0.06	0.03	
2/8/24 11:34	-0.06	0.02	
2/8/24 11:35	-0.06	0.02	
2/8/24 11:35	-0.06	0.02	
2/8/24 11:35	-0.05	0.02	
2/8/24 11:35	-0.06	0.03	
2/8/24 11:35	-0.06	0.03	
2/8/24 11:35	-0.06	0.03	
2/8/24 11:36	-0.06	0.02	
2/8/24 11:36	-0.06	0.02	
2/8/24 11:36	-0.05	0.02	

XOM - Beaumont, TX
Unit 41 - 10-second CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/8/24 11:36	-0.05	0.02	
2/8/24 11:36	-0.06	0.02	
2/8/24 11:36	-0.05	0.02	
2/8/24 11:37	-0.05	0.02	
2/8/24 11:37	-0.05	0.03	Zero
2/8/24 11:37	0.03	0.06	
2/8/24 11:37	0.17	0.10	
2/8/24 11:37	0.26	0.12	
2/8/24 11:37	0.32	0.15	
2/8/24 11:38	0.37	0.16	
2/8/24 11:38	0.40	0.17	
2/8/24 11:38	0.43	0.18	
2/8/24 11:38	0.44	0.18	
2/8/24 11:38	0.46	0.19	
2/8/24 11:38	0.46	0.19	
2/8/24 11:39	0.46	0.19	
2/8/24 11:39	0.46	0.19	
2/8/24 11:39	0.46	0.19	
2/8/24 11:39	0.46	0.19	
2/8/24 11:39	0.46	0.19	
2/8/24 11:39	0.46	0.19	
2/8/24 11:40	0.46	0.19	
2/8/24 11:40	0.46	0.19	
2/8/24 11:40	0.45	0.19	
2/8/24 11:40	0.45	0.19	
2/8/24 11:40	0.45	0.19	
2/8/24 11:40	0.45	0.19	
2/8/24 11:41	0.44	0.19	
2/8/24 11:41	0.44	0.19	
2/8/24 11:41	0.43	0.18	
2/8/24 11:41	0.44	0.18	
2/8/24 11:41	0.46	0.20	
2/8/24 11:41	0.47	0.20	
2/8/24 11:42	0.46	0.19	
2/8/24 11:42	0.45	0.19	
2/8/24 11:42	0.45	0.19	
2/8/24 11:42	0.54	0.22	
2/8/24 11:42	0.44	0.18	
2/8/24 11:42	0.28	0.13	
2/8/24 11:43	0.17	0.09	
2/8/24 11:43	0.08	0.07	
2/8/24 11:43	0.03	0.06	
2/8/24 11:43	1.28	1.59	
2/8/24 11:43	4.01	4.35	
2/8/24 11:43	6.00	6.25	
2/8/24 11:44	7.42	7.60	
2/8/24 11:44	8.45	8.58	
2/8/24 11:44	9.21	9.31	
2/8/24 11:44	9.78	9.85	
2/8/24 11:44	10.17	10.22	
2/8/24 11:44	10.44	10.47	
2/8/24 11:45	10.61	10.64	
2/8/24 11:45	10.76	10.77	
2/8/24 11:45	10.85	10.86	
2/8/24 11:45	10.90	10.91	
2/8/24 11:45	10.94	10.95	
2/8/24 11:45	10.97	10.97	
2/8/24 11:46	10.99	10.99	
2/8/24 11:46	11.00	11.00	

XOM - Beaumont, TX
Unit 41 - 10-second CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/8/24 11:46	11.01	11.01	Span
2/8/24 11:46	11.01	11.01	
2/8/24 11:46	11.01	11.03	
2/8/24 11:46	11.00	11.02	
2/8/24 11:47	11.01	11.02	
2/8/24 11:47	11.07	10.81	
2/8/24 11:47	11.81	8.87	
2/8/24 11:47	12.40	7.57	
2/8/24 11:47	12.79	6.66	
2/8/24 11:47	13.08	5.99	
2/8/24 11:48	13.30	5.44	
2/8/24 11:48	13.50	4.99	
2/8/24 11:48	13.63	4.66	
2/8/24 11:48	13.74	4.45	
2/8/24 11:48	13.77	4.34	
2/8/24 11:48	13.81	4.28	
2/8/24 11:49	13.80	4.25	
2/8/24 11:49	13.83	4.23	
2/8/24 11:49	13.82	4.22	
2/8/24 11:49	13.83	4.21	
2/8/24 11:49	13.86	4.21	
2/8/24 11:49	13.80	4.20	
2/8/24 12:50	13.83	4.20	Run 3 Post-Bias
2/8/24 12:50	13.81	4.20	
2/8/24 12:50	13.48	4.07	
2/8/24 12:50	11.37	3.41	
2/8/24 12:50	8.97	2.71	
2/8/24 12:50	7.18	2.22	
2/8/24 12:51	6.06	1.90	
2/8/24 12:51	5.38	1.71	
2/8/24 12:51	4.98	1.59	
2/8/24 12:51	4.42	1.39	
2/8/24 12:51	3.44	1.08	
2/8/24 12:51	2.51	0.79	
2/8/24 12:52	1.85	0.60	
2/8/24 12:52	1.41	0.47	
2/8/24 12:52	1.07	0.37	
2/8/24 12:52	0.83	0.30	
2/8/24 12:52	0.67	0.25	
2/8/24 12:52	0.56	0.21	
2/8/24 12:53	0.47	0.18	
2/8/24 12:53	0.41	0.17	
2/8/24 12:53	0.37	0.15	
2/8/24 12:53	0.35	0.14	
2/8/24 12:53	0.33	0.14	
2/8/24 12:53	0.32	0.14	
2/8/24 12:54	0.31	0.13	
2/8/24 12:54	0.31	0.13	
2/8/24 12:54	0.31	0.13	
2/8/24 12:54	0.30	0.13	
2/8/24 12:54	0.30	0.13	
2/8/24 12:54	0.30	0.13	
2/8/24 12:55	0.30	0.13	
2/8/24 12:55	0.31	0.13	
2/8/24 12:55	1.48	0.44	
2/8/24 12:55	2.43	0.70	
2/8/24 12:55	2.01	0.58	
2/8/24 12:55	1.39	0.42	

XOM - Beaumont, TX
Unit 41 - 10-second CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/8/24 12:56	0.88	0.28	
2/8/24 12:56	0.51	0.19	
2/8/24 12:56	0.25	0.12	
2/8/24 12:56	0.09	0.08	
2/8/24 12:56	0.05	0.07	
2/8/24 12:56	0.02	0.06	
2/8/24 12:57	0.00	0.05	
2/8/24 12:57	-0.02	0.05	
2/8/24 12:57	-0.03	0.05	
2/8/24 12:57	-0.04	0.05	
2/8/24 12:57	-0.04	0.04	
2/8/24 12:57	-0.05	0.04	
2/8/24 12:58	-0.05	0.04	
2/8/24 12:58	-0.05	0.04	
2/8/24 12:58	-0.05	0.04	
2/8/24 12:58	-0.06	0.04	
2/8/24 12:58	-0.06	0.04	
2/8/24 12:59	-0.06	0.04	
2/8/24 12:59	-0.06	0.04	
2/8/24 12:59	-0.06	0.04	
2/8/24 12:59	-0.06	0.04	
2/8/24 12:59	-0.06	0.04	
2/8/24 12:59	-0.06	0.04	
2/8/24 12:59	-0.06	0.04	
2/8/24 13:00	-0.06	0.04	
2/8/24 13:00	-0.06	0.04	
2/8/24 13:00	-0.06	0.04	
2/8/24 13:00	-0.06	0.04	
2/8/24 13:00	-0.06	0.04	
2/8/24 13:00	-0.06	0.04	
2/8/24 13:01	-0.06	0.04	
2/8/24 13:01	-0.06	0.04	
2/8/24 13:01	-0.06	0.04	
2/8/24 13:01	-0.06	0.04	
2/8/24 13:01	-0.06	0.04	
2/8/24 13:01	-0.06	0.04	
2/8/24 13:01	-0.06	0.04	
2/8/24 13:01	-0.06	0.04	
2/8/24 13:02	-0.06	0.04	
2/8/24 13:02	-0.06	0.04	
2/8/24 13:02	-0.06	0.04	
2/8/24 13:02	0.56	0.77	
2/8/24 13:02	3.18	3.48	
2/8/24 13:02	4.97	5.24	
2/8/24 13:02	6.44	6.67	
2/8/24 13:03	7.62	7.82	
2/8/24 13:03	8.47	8.64	
2/8/24 13:03	9.07	9.23	
2/8/24 13:03	9.60	9.75	
2/8/24 13:03	9.95	10.08	
2/8/24 13:03	10.23	10.34	
2/8/24 13:04	10.44	10.54	
2/8/24 13:04	10.60	10.70	
2/8/24 13:04	10.71	10.80	
2/8/24 13:04	10.80	10.90	
2/8/24 13:04	10.86	10.95	
2/8/24 13:04	10.91	11.00	
2/8/24 13:05	10.93	11.05	
2/8/24 13:05	10.96	11.07	
2/8/24 13:05	10.99	11.08	
2/8/24 13:05	11.00	11.09	
2/8/24 13:05	11.01	11.11	

Zero

XOM - Beaumont, TX
Unit 41 - 10-second CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/8/24 13:05	11.02	11.11	
2/8/24 13:06	11.02	11.11	
2/8/24 13:06	11.02	11.10	
2/8/24 13:06	11.02	11.05	O2 Span
2/8/24 13:06	11.01	11.03	CO2 Span
2/8/24 13:06	13.80	6.91	
2/8/24 13:06	17.24	0.24	
2/8/24 13:07	17.84	0.21	
2/8/24 13:07	18.58	0.20	
2/8/24 13:07	17.63	0.20	
2/8/24 13:07	17.69	0.18	
2/8/24 13:07	18.65	0.19	
2/8/24 13:07	17.74	0.18	
2/8/24 13:08	17.51	0.19	
2/8/24 13:08	18.46	0.20	
2/8/24 13:08	18.50	0.19	
2/8/24 13:08	17.37	0.20	
2/8/24 13:08	17.86	0.19	
2/8/24 13:08	19.36	0.19	
2/8/24 13:09	19.04	0.19	
2/8/24 13:09	17.97	0.19	
2/8/24 13:09	17.61	0.19	
2/8/24 13:09	17.68	0.22	
2/8/24 13:09	18.05	0.21	
2/8/24 13:09	18.30	0.18	
2/8/24 13:10	18.60	0.19	
2/8/24 13:10	18.72	0.17	
2/8/24 13:10	18.68	0.16	
2/8/24 13:10	18.28	0.15	
2/8/24 13:10	17.52	0.15	
2/8/24 13:10	17.70	0.14	
2/8/24 13:11	18.51	0.14	
2/8/24 13:11	18.33	0.14	
2/8/24 13:11	17.35	0.14	
2/8/24 13:11	17.43	0.14	
2/8/24 13:11	18.30	0.13	
2/8/24 13:11	18.39	0.13	
2/8/24 13:12	17.40	0.12	
2/8/24 13:12	16.70	0.12	
2/8/24 13:12	18.37	0.11	
2/8/24 13:12	19.45	0.12	
2/8/24 13:12	18.42	0.13	
2/8/24 13:12	17.41	0.11	
2/8/24 13:13	17.15	0.11	
2/8/24 13:13	17.31	0.11	
2/8/24 13:13	17.47	0.11	
2/8/24 13:13	17.71	0.11	
2/8/24 13:13	17.94	0.10	
2/8/24 13:13	18.25	0.10	
2/8/24 13:14	18.42	0.11	
2/8/24 13:14	18.55	0.10	
2/8/24 13:14	18.76	0.09	
2/8/24 13:14	18.55	0.10	
2/8/24 13:14	18.03	0.09	
2/8/24 13:14	18.19	0.09	
2/8/24 13:15	18.60	0.09	
2/8/24 13:15	18.66	0.09	
2/8/24 13:15	18.78	0.08	
2/8/24 13:15	19.04	0.09	

XOM - Beaumont, TX
Unit 41 - 10-second CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/8/24 13:15	18.89	0.08	
2/8/24 13:15	19.06	0.08	
2/8/24 13:16	18.94	0.08	
2/8/24 13:16	18.72	0.08	
2/8/24 13:16	18.53	0.08	
2/8/24 13:16	18.18	0.08	
2/8/24 13:16	17.93	0.08	
2/8/24 13:16	17.54	0.08	
2/8/24 13:17	17.43	0.07	

XOM - Beaumont, TX
Unit 42 - 1-minute CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/7/24 5:51	18.35	-0.28	
2/7/24 5:52	18.49	-0.28	
2/7/24 5:53	18.60	-0.28	
2/7/24 5:54	18.07	-0.28	
2/7/24 5:55	18.16	-0.27	
2/7/24 5:56	17.95	-0.27	
2/7/24 5:57	17.83	-0.27	
2/7/24 5:58	18.62	-0.27	
2/7/24 5:59	18.13	-0.26	
2/7/24 6:00	17.86	-0.26	
2/7/24 6:01	18.13	-0.26	
2/7/24 6:02	17.77	-0.25	
2/7/24 6:03	17.99	-0.25	
2/7/24 6:04	17.73	-0.25	
2/7/24 6:05	18.03	-0.25	
2/7/24 6:06	17.84	-0.25	
2/7/24 6:07	17.96	-0.25	
2/7/24 6:08	18.03	-0.25	
2/7/24 6:09	18.01	-0.25	
2/7/24 6:10	17.83	-0.25	
2/7/24 6:11	17.96	-0.25	
2/7/24 6:12	17.88	-0.25	
2/7/24 6:13	17.76	-0.25	
2/7/24 6:14	18.03	-0.25	
2/7/24 6:15	17.92	-0.25	
2/7/24 6:16	17.99	-0.25	
2/7/24 6:17	17.76	-0.25	
2/7/24 6:18	18.05	-0.25	
2/7/24 6:19	17.31	-0.25	
2/7/24 6:20	18.18	-0.25	
2/7/24 6:21	18.27	-0.25	
2/7/24 6:22	17.68	-0.25	
2/7/24 6:23	17.37	-0.25	
2/7/24 6:24	17.43	-0.25	
2/7/24 6:25	18.10	-0.25	
2/7/24 6:26	17.70	-0.25	
2/7/24 6:27	18.19	-0.25	
2/7/24 6:28	17.55	-0.25	
2/7/24 6:29	18.32	-0.25	
2/7/24 6:30	17.57	-0.25	
2/7/24 6:31	17.71	-0.25	
2/7/24 6:32	18.14	-0.24	
2/7/24 6:33	17.97	-0.24	
2/7/24 6:34	18.31	-0.23	
2/7/24 6:35	17.62	-0.22	
2/7/24 6:36	17.68	-0.23	
2/7/24 6:37	17.52	-0.22	
2/7/24 6:38	18.23	-0.23	
2/7/24 6:39	18.01	-0.23	
2/7/24 6:40	17.71	-0.23	
2/7/24 6:41	17.04	-0.22	
2/7/24 6:42	17.88	-0.22	
2/7/24 6:43	18.46	-0.20	
2/7/24 6:44	17.19	-0.19	
2/7/24 6:45	18.14	-0.19	
2/7/24 6:46	18.05	-0.21	
2/7/24 6:47	16.99	-0.21	
2/7/24 6:48	18.51	-0.22	

XOM - Beaumont, TX
Unit 42 - 1-minute CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/7/24 6:49	18.37	-0.21	
2/7/24 6:50	18.10	-0.20	
2/7/24 6:51	18.51	-0.21	
2/7/24 6:52	18.34	-0.21	
2/7/24 6:53	17.36	-0.21	
2/7/24 6:54	17.44	-0.20	
2/7/24 6:55	18.15	-0.19	
2/7/24 6:56	18.52	-0.19	
2/7/24 6:57	18.79	-0.18	
2/7/24 6:58	18.45	-0.18	
2/7/24 6:59	18.29	-0.16	
2/7/24 7:00	17.91	-0.16	
2/7/24 7:01	18.03	-0.15	
2/7/24 7:02	18.01	-0.16	
2/7/24 7:03	17.93	-0.15	
2/7/24 7:04	17.76	-0.15	
2/7/24 7:05	18.04	-0.15	
2/7/24 7:06	17.40	-0.14	
2/7/24 7:07	17.95	-0.14	
2/7/24 7:08	18.02	-0.14	
2/7/24 7:09	17.98	-0.14	
2/7/24 7:10	17.88	-0.13	
2/7/24 7:11	17.89	-0.14	
2/7/24 7:12	18.70	-0.13	
2/7/24 7:13	18.04	-0.14	
2/7/24 7:14	17.88	-0.15	
2/7/24 7:15	18.11	-0.14	
2/7/24 7:16	17.88	-0.14	
2/7/24 7:17	18.15	-0.14	
2/7/24 7:18	18.22	-0.14	
2/7/24 7:19	17.98	-0.15	
2/7/24 7:20	17.61	-0.16	
2/7/24 7:21	17.71	-0.16	
2/7/24 7:22	18.04	-0.16	
2/7/24 7:23	18.09	-0.15	
2/7/24 7:24	18.23	-0.15	
2/7/24 7:25	17.92	-0.16	
2/7/24 7:26	17.96	-0.15	
2/7/24 7:27	17.98	-0.16	
2/7/24 7:28	16.99	-0.16	
2/7/24 7:29	18.15	-0.16	
2/7/24 7:30	15.80	-0.20	
2/7/24 7:31	10.63	-0.22	
2/7/24 7:32	17.21	-0.21	
2/7/24 7:33	5.58	-0.26	
2/7/24 7:34	0.37	-0.01	
2/7/24 7:35	-0.02	0.01	
2/7/24 7:36	11.53	9.13	
2/7/24 7:37	18.10	18.11	
2/7/24 7:38	17.77	17.87	
2/7/24 7:39	23.64	23.59	
2/7/24 7:40	23.21	23.40	
2/7/24 7:41	22.13	22.17	
2/7/24 7:42	18.81	18.86	
2/7/24 7:43	7.13	7.46	
2/7/24 7:44	10.49	10.75	
2/7/24 7:45	10.95	11.07	
2/7/24 7:46	8.70	8.65	
2/7/24 7:47	1.24	1.34	

XOM - Beaumont, TX
Unit 42 - 1-minute CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/7/24 7:48	0.03	0.13	
2/7/24 7:49	1.09	1.29	
2/7/24 7:50	9.30	7.95	
2/7/24 7:51	10.86	10.65	
2/7/24 7:52	11.01	11.02	
2/7/24 7:53	10.06	7.92	
2/7/24 7:54	8.61	1.31	
2/7/24 7:55	17.96	0.18	
2/7/24 7:56	18.23	0.18	
2/7/24 7:57	17.81	0.17	
2/7/24 7:58	17.87	0.17	
2/7/24 7:59	18.34	0.17	
2/7/24 8:00	17.81	0.17	
2/7/24 8:01	18.05	0.17	
2/7/24 8:02	14.98	1.24	
2/7/24 8:03	13.44	3.87	
2/7/24 8:04	13.75	4.22	
2/7/24 8:05	13.77	4.24	
2/7/24 8:06	13.78	4.25	
2/7/24 8:07	13.77	4.25	
2/7/24 8:08	13.77	4.25	
2/7/24 8:09	13.77	4.25	
2/7/24 8:10	13.78	4.25	
2/7/24 8:11	13.77	4.25	
2/7/24 8:12	13.77	4.25	
2/7/24 8:13	13.77	4.25	
2/7/24 8:14	13.77	4.25	
2/7/24 8:15	13.77	4.25	
2/7/24 8:16	13.77	4.25	
2/7/24 8:17	13.77	4.25	
2/7/24 8:18	13.78	4.25	
2/7/24 8:19	13.78	4.25	
2/7/24 8:20	13.80	4.24	
2/7/24 8:21	12.43	3.72	
2/7/24 8:22	12.43	3.83	
2/7/24 8:23	12.61	3.90	
2/7/24 8:24	12.98	4.00	
2/7/24 8:25	13.01	4.02	
2/7/24 8:26	13.02	4.03	
2/7/24 8:27	13.02	4.03	
2/7/24 8:28	13.02	4.03	
2/7/24 8:29	13.02	4.04	
2/7/24 8:30	13.01	4.04	
2/7/24 8:31	13.01	4.04	
2/7/24 8:32	13.01	4.04	
2/7/24 8:33	13.01	4.04	
2/7/24 8:34	13.01	4.05	
2/7/24 8:35	14.19	3.08	
2/7/24 8:36	18.25	0.26	
2/7/24 8:37	18.77	0.26	
2/7/24 8:38	18.14	0.26	
2/7/24 8:39	17.97	0.26	
2/7/24 8:40	18.05	0.26	
2/7/24 8:41	18.80	0.26	
2/7/24 8:42	17.64	0.27	
2/7/24 8:43	17.54	0.26	
2/7/24 8:44	18.64	0.26	
2/7/24 8:45	17.74	0.26	
2/7/24 8:46	18.18	0.26	

XOM - Beaumont, TX
Unit 42 - 1-minute CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/7/24 8:47	17.72	0.26	
2/7/24 8:48	17.91	0.25	
2/7/24 8:49	18.23	0.25	
2/7/24 8:50	17.78	0.25	
2/7/24 8:51	17.90	0.25	
2/7/24 8:52	7.72	2.10	
2/7/24 8:53	13.13	4.07	
2/7/24 8:54	13.78	4.25	
2/7/24 8:55	13.80	4.27	Run 1
2/7/24 8:56	13.80	4.27	
2/7/24 8:57	13.80	4.27	
2/7/24 8:58	13.80	4.27	
2/7/24 8:59	13.81	4.27	
2/7/24 9:00	13.81	4.27	
2/7/24 9:01	13.80	4.27	
2/7/24 9:02	13.80	4.27	
2/7/24 9:03	13.80	4.27	
2/7/24 9:04	13.81	4.27	
2/7/24 9:05	13.81	4.27	
2/7/24 9:06	13.80	4.27	
2/7/24 9:07	13.82	4.27	
2/7/24 9:08	13.81	4.27	
2/7/24 9:09	13.81	4.27	
2/7/24 9:10	13.81	4.28	
2/7/24 9:11	13.81	4.27	
2/7/24 9:12	13.81	4.27	
2/7/24 9:13	13.82	4.27	
2/7/24 9:14	13.82	4.27	
2/7/24 9:15	13.81	4.27	
2/7/24 9:16	13.81	4.27	
2/7/24 9:17	13.83	4.26	
2/7/24 9:18	13.83	4.26	
2/7/24 9:19	13.83	4.26	
2/7/24 9:20	13.82	4.26	
2/7/24 9:21	13.82	4.26	
2/7/24 9:22	13.82	4.26	
2/7/24 9:23	13.83	4.25	
2/7/24 9:24	13.83	4.25	
2/7/24 9:25	13.82	4.25	
2/7/24 9:26	13.82	4.25	
2/7/24 9:27	13.82	4.25	
2/7/24 9:28	13.82	4.25	
2/7/24 9:29	13.82	4.25	
2/7/24 9:30	13.82	4.25	
2/7/24 9:31	13.82	4.25	
2/7/24 9:32	13.83	4.25	
2/7/24 9:33	13.84	4.24	
2/7/24 9:34	13.83	4.24	
2/7/24 9:35	13.84	4.24	
2/7/24 9:36	13.83	4.24	
2/7/24 9:37	13.83	4.24	
2/7/24 9:38	13.84	4.24	
2/7/24 9:39	13.83	4.24	
2/7/24 9:40	13.83	4.23	
2/7/24 9:41	13.84	4.23	
2/7/24 9:42	13.84	4.23	
2/7/24 9:43	13.84	4.23	
2/7/24 9:44	13.85	4.22	
2/7/24 9:45	13.85	4.21	

XOM - Beaumont, TX
Unit 42 - 1-minute CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/7/24 9:46	13.85	4.20	
2/7/24 9:47	13.85	4.19	
2/7/24 9:48	13.85	4.19	
2/7/24 9:49	13.84	4.19	
2/7/24 9:50	13.86	4.19	
2/7/24 9:51	13.86	4.19	
2/7/24 9:52	13.85	4.19	
2/7/24 9:53	13.85	4.20	
2/7/24 9:54	13.86	4.20	Run 1 end
2/7/24 9:55	13.84	4.20	
2/7/24 9:56	7.69	2.44	
2/7/24 9:57	0.47	0.21	
2/7/24 9:58	-0.02	0.05	
2/7/24 9:59	-0.05	0.04	
2/7/24 10:00	-0.05	0.04	
2/7/24 10:01	3.28	3.46	
2/7/24 10:02	9.85	9.95	
2/7/24 10:03	10.91	10.97	
2/7/24 10:04	11.03	11.01	
2/7/24 10:05	16.38	2.04	
2/7/24 10:06	18.04	0.21	
2/7/24 10:07	18.35	0.21	
2/7/24 10:08	17.49	0.21	
2/7/24 10:09	17.98	0.20	
2/7/24 10:10	17.75	0.20	
2/7/24 10:11	17.96	0.20	
2/7/24 10:12	18.00	0.19	
2/7/24 10:13	18.09	0.19	
2/7/24 10:14	16.78	0.19	
2/7/24 10:15	18.18	0.19	
2/7/24 10:16	17.41	0.19	
2/7/24 10:17	8.59	1.79	
2/7/24 10:18	13.01	3.97	
2/7/24 10:19	13.78	4.20	
2/7/24 10:20	13.85	4.21	
2/7/24 10:21	13.84	4.22	Run 2
2/7/24 10:22	13.85	4.22	
2/7/24 10:23	13.85	4.22	
2/7/24 10:24	13.85	4.22	
2/7/24 10:25	13.86	4.22	
2/7/24 10:26	13.86	4.23	
2/7/24 10:27	13.85	4.23	
2/7/24 10:28	13.85	4.22	
2/7/24 10:29	13.84	4.23	
2/7/24 10:30	13.85	4.23	
2/7/24 10:31	13.85	4.23	
2/7/24 10:32	13.85	4.23	
2/7/24 10:33	13.85	4.23	
2/7/24 10:34	13.85	4.23	
2/7/24 10:35	13.85	4.23	
2/7/24 10:36	13.84	4.23	
2/7/24 10:37	13.84	4.23	
2/7/24 10:38	13.84	4.24	
2/7/24 10:39	13.84	4.24	
2/7/24 10:40	13.85	4.24	
2/7/24 10:41	13.84	4.24	
2/7/24 10:42	13.84	4.24	
2/7/24 10:43	13.84	4.24	
2/7/24 10:44	13.83	4.24	

XOM - Beaumont, TX
Unit 42 - 1-minute CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/7/24 10:45	13.84	4.24	
2/7/24 10:46	13.83	4.24	
2/7/24 10:47	13.84	4.24	
2/7/24 10:48	13.83	4.24	
2/7/24 10:49	13.84	4.24	
2/7/24 10:50	13.83	4.24	
2/7/24 10:51	13.84	4.24	
2/7/24 10:52	13.84	4.24	
2/7/24 10:53	13.82	4.24	
2/7/24 10:54	13.84	4.24	
2/7/24 10:55	13.84	4.24	
2/7/24 10:56	13.83	4.24	
2/7/24 10:57	13.83	4.24	
2/7/24 10:58	13.83	4.25	
2/7/24 10:59	13.83	4.25	
2/7/24 11:00	13.83	4.25	
2/7/24 11:01	13.82	4.25	
2/7/24 11:02	13.83	4.25	
2/7/24 11:03	13.83	4.24	
2/7/24 11:04	13.82	4.24	
2/7/24 11:05	13.83	4.24	
2/7/24 11:06	13.82	4.24	
2/7/24 11:07	13.83	4.23	
2/7/24 11:08	13.82	4.23	
2/7/24 11:09	13.84	4.22	
2/7/24 11:10	13.83	4.22	
2/7/24 11:11	13.82	4.21	
2/7/24 11:12	13.83	4.21	
2/7/24 11:13	13.84	4.20	
2/7/24 11:14	13.83	4.20	
2/7/24 11:15	13.83	4.20	
2/7/24 11:16	13.83	4.20	
2/7/24 11:17	13.83	4.19	
2/7/24 11:18	13.83	4.19	
2/7/24 11:19	13.84	4.19	
2/7/24 11:20	13.84	4.19	Run 2 end
2/7/24 11:21	6.10	1.97	
2/7/24 11:22	0.31	0.14	
2/7/24 11:23	-0.03	0.02	
2/7/24 11:24	2.04	2.22	
2/7/24 11:25	9.40	9.50	
2/7/24 11:26	10.86	10.90	
2/7/24 11:27	11.01	11.05	
2/7/24 11:28	10.27	8.56	
2/7/24 11:29	18.17	0.19	
2/7/24 11:30	18.02	0.15	
2/7/24 11:31	17.81	0.15	
2/7/24 11:32	18.43	0.15	
2/7/24 11:33	17.63	0.15	
2/7/24 11:34	17.94	0.15	
2/7/24 11:35	17.72	0.15	
2/7/24 11:36	17.98	0.15	
2/7/24 11:37	18.28	0.14	
2/7/24 11:38	17.91	0.14	
2/7/24 11:39	18.28	0.14	
2/7/24 11:40	17.98	0.14	
2/7/24 11:41	7.16	2.00	
2/7/24 11:42	13.17	4.00	
2/7/24 11:43	13.80	4.19	

XOM - Beaumont, TX
Unit 42 - 1-minute CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/7/24 11:44	13.84	4.20	Run 3
2/7/24 11:45	13.86	4.20	
2/7/24 11:46	13.84	4.20	
2/7/24 11:47	13.85	4.21	
2/7/24 11:48	13.85	4.21	
2/7/24 11:49	13.84	4.21	
2/7/24 11:50	13.85	4.21	
2/7/24 11:51	13.85	4.21	
2/7/24 11:52	13.84	4.21	
2/7/24 11:53	13.84	4.21	
2/7/24 11:54	13.85	4.21	
2/7/24 11:55	13.84	4.21	
2/7/24 11:56	13.84	4.21	
2/7/24 11:57	13.84	4.21	
2/7/24 11:58	13.83	4.21	
2/7/24 11:59	13.84	4.21	
2/7/24 12:00	13.85	4.21	
2/7/24 12:01	13.83	4.21	
2/7/24 12:02	13.84	4.21	
2/7/24 12:03	13.85	4.21	
2/7/24 12:04	13.85	4.21	
2/7/24 12:05	13.86	4.21	
2/7/24 12:06	13.85	4.21	
2/7/24 12:07	13.84	4.21	
2/7/24 12:08	13.85	4.21	
2/7/24 12:09	13.85	4.21	
2/7/24 12:10	13.85	4.21	
2/7/24 12:11	13.86	4.22	
2/7/24 12:12	13.84	4.22	
2/7/24 12:13	13.84	4.22	
2/7/24 12:14	13.85	4.22	
2/7/24 12:15	13.85	4.22	
2/7/24 12:16	13.84	4.22	
2/7/24 12:17	13.84	4.22	
2/7/24 12:18	13.85	4.23	
2/7/24 12:19	13.85	4.22	
2/7/24 12:20	13.85	4.22	
2/7/24 12:21	13.84	4.22	
2/7/24 12:22	13.85	4.22	
2/7/24 12:23	13.85	4.23	
2/7/24 12:24	13.83	4.23	
2/7/24 12:25	13.83	4.23	
2/7/24 12:26	13.85	4.23	
2/7/24 12:27	13.84	4.23	
2/7/24 12:28	13.84	4.24	
2/7/24 12:29	13.84	4.24	
2/7/24 12:30	13.84	4.24	
2/7/24 12:31	13.84	4.24	
2/7/24 12:32	13.84	4.24	
2/7/24 12:33	13.85	4.24	
2/7/24 12:34	13.84	4.25	
2/7/24 12:35	13.83	4.24	
2/7/24 12:36	13.83	4.25	
2/7/24 12:37	13.84	4.25	
2/7/24 12:38	13.83	4.25	
2/7/24 12:39	13.83	4.25	
2/7/24 12:40	13.83	4.25	
2/7/24 12:41	13.83	4.25	
2/7/24 12:42	13.82	4.25	

XOM - Beaumont, TX
Unit 42 - 1-minute CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/7/24 12:43	13.83	4.25	Run 3 end
2/7/24 12:44	13.84	4.25	
2/7/24 12:45	9.04	2.78	
2/7/24 12:46	0.64	0.28	
2/7/24 12:47	-0.01	0.07	
2/7/24 12:48	-0.05	0.06	
2/7/24 12:49	-0.06	0.06	
2/7/24 12:50	-0.06	0.06	
2/7/24 12:51	-0.06	0.05	
2/7/24 12:52	0.36	0.41	
2/7/24 12:53	7.91	7.81	
2/7/24 12:54	10.68	10.74	
2/7/24 12:55	10.98	11.07	
2/7/24 12:56	11.02	11.09	
2/7/24 12:57	11.43	6.49	
2/7/24 12:58	17.75	0.27	
2/7/24 12:59	18.19	0.24	
2/7/24 13:00	17.59	0.24	
2/7/24 13:01	17.59	0.24	
2/7/24 13:02	17.12	0.23	
2/7/24 13:03	17.63	0.23	
2/7/24 13:04	17.42	0.23	
2/7/24 13:05	18.02	0.22	
2/7/24 13:06	18.74	0.23	
2/7/24 13:07	17.83	0.23	
2/7/24 13:08	18.24	0.23	
2/7/24 13:09	17.60	0.23	
2/7/24 13:10	18.04	0.23	
2/7/24 13:11	17.63	0.22	
2/7/24 13:12	17.92	0.22	
2/7/24 13:13	18.14	0.21	
2/7/24 13:14	18.10	0.21	
2/7/24 13:15	17.77	0.20	
2/7/24 13:16	17.95	0.20	
2/7/24 13:17	18.18	0.20	
2/7/24 13:18	17.84	0.20	
2/7/24 13:19	17.97	0.21	
2/7/24 13:20	17.90	0.21	
2/7/24 13:21	17.91	0.21	
2/7/24 13:22	17.86	0.22	
2/7/24 13:23	17.91	0.22	
2/7/24 13:24	17.83	0.22	
2/7/24 13:25	18.39	0.22	
2/7/24 13:26	18.46	0.22	
2/7/24 13:27	17.60	0.22	
2/7/24 13:28	18.62	0.21	
2/7/24 13:29	17.87	0.21	
2/7/24 13:30	17.45	0.21	
2/7/24 13:31	17.45	0.21	
2/7/24 13:32	18.04	0.21	
2/7/24 13:33	18.11	0.21	
2/7/24 13:34	18.00	0.21	
2/7/24 13:35	17.74	0.21	
2/7/24 13:36	17.99	0.21	
2/7/24 13:37	18.01	0.21	
2/7/24 13:38	18.16	0.20	
2/7/24 13:39	18.11	0.20	
2/7/24 13:40	18.25	0.19	
2/7/24 13:41	17.80	0.19	

XOM - Beaumont, TX
Unit 42 - 1-minute CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/7/24 13:42	18.31	0.19	
2/7/24 13:43	18.17	0.18	
2/7/24 13:44	18.10	0.18	
2/7/24 13:45	17.93	0.18	
2/7/24 13:46	18.08	0.17	
2/7/24 13:47	18.22	0.17	
2/7/24 13:48	17.86	0.17	
2/7/24 13:49	18.43	0.16	
2/7/24 13:50	17.44	0.15	
2/7/24 13:51	17.81	0.12	
2/7/24 13:52	17.76	0.10	
2/7/24 13:53	18.68	0.09	
2/7/24 13:54	18.12	0.09	
2/7/24 13:55	17.86	0.09	
2/7/24 13:56	17.94	0.09	
2/7/24 13:57	17.75	0.09	
2/7/24 13:58	17.90	0.08	
2/7/24 13:59	17.45	0.08	
2/7/24 14:00	18.33	0.08	
2/7/24 14:01	18.22	0.08	
2/7/24 14:02	17.95	0.09	
2/7/24 14:03	17.62	0.09	
2/7/24 14:04	18.08	0.08	
2/7/24 14:05	18.96	0.09	
2/7/24 14:06	18.01	0.09	
2/7/24 14:07	17.74	0.09	
2/7/24 14:08	17.14	0.10	
2/7/24 14:09	18.13	0.10	
2/7/24 14:10	18.06	0.10	
2/7/24 14:11	17.83	0.10	
2/7/24 14:12	18.16	0.10	
2/7/24 14:13	18.02	0.11	
2/7/24 14:14	18.06	0.11	
2/7/24 14:15	17.92	0.11	
2/7/24 14:16	18.15	0.11	
2/7/24 14:17	18.26	0.11	
2/7/24 14:18	17.95	0.11	
2/7/24 14:19	18.04	0.12	
2/7/24 14:20	18.13	0.12	
2/7/24 14:21	18.01	0.12	
2/7/24 14:22	18.26	0.12	
2/7/24 14:23	18.03	0.13	
2/7/24 14:24	18.27	0.12	
2/7/24 14:25	18.93	0.11	
2/7/24 14:26	18.87	0.11	
2/7/24 14:27	17.72	0.11	
2/7/24 14:28	17.73	0.11	
2/7/24 14:29	18.04	0.11	
2/7/24 14:30	18.00	0.11	
2/7/24 14:31	18.10	0.11	
2/7/24 14:32	18.08	0.11	
2/7/24 14:33	18.27	0.10	
2/7/24 14:34	18.09	0.10	
2/7/24 14:35	17.95	0.10	
2/7/24 14:36	18.02	0.10	
2/7/24 14:37	18.23	0.10	
2/7/24 14:38	18.13	0.09	
2/7/24 14:39	18.05	0.09	
2/7/24 14:40	18.01	0.09	

XOM - Beaumont, TX
Unit 42 - 1-minute CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/7/24 14:41	18.21	0.09	
2/7/24 14:42	18.13	0.09	
2/7/24 14:43	18.17	0.09	
2/7/24 14:44	18.00	0.09	
2/7/24 14:45	18.33	0.09	
2/7/24 14:46	18.20	0.09	
2/7/24 14:47	18.50	0.09	
2/7/24 14:48	18.57	0.09	
2/7/24 14:49	18.44	0.09	
2/7/24 14:50	18.36	0.08	
2/7/24 14:51	18.57	0.08	
2/7/24 14:52	18.29	0.08	
2/7/24 14:53	18.26	0.08	
2/7/24 14:54	18.48	0.08	
2/7/24 14:55	17.59	0.08	
2/7/24 14:56	18.23	0.08	
2/7/24 14:57	18.76	0.08	
2/7/24 14:58	18.45	0.08	
2/7/24 14:59	18.55	0.08	
2/7/24 15:00	18.72	0.08	
2/7/24 15:01	18.59	0.08	
2/7/24 15:02	18.63	0.08	
2/7/24 15:03	18.50	0.08	
2/7/24 15:04	18.48	0.08	
2/7/24 15:05	18.67	0.09	
2/7/24 15:06	18.53	0.09	
2/7/24 15:07	18.65	0.10	
2/7/24 15:08	18.42	0.11	
2/7/24 15:09	18.37	0.12	
2/7/24 15:10	18.57	0.13	
2/7/24 15:11	18.69	0.13	
2/7/24 15:12	18.34	0.13	
2/7/24 15:13	18.56	0.14	
2/7/24 15:14	18.64	0.15	
2/7/24 15:15	18.68	0.15	
2/7/24 15:16	18.47	0.15	
2/7/24 15:17	18.66	0.16	
2/7/24 15:18	18.73	0.16	
2/7/24 15:19	18.57	0.16	
2/7/24 15:20	18.71	0.16	
2/7/24 15:21	18.73	0.16	
2/7/24 15:22	18.59	0.16	
2/7/24 15:23	18.64	0.16	
2/7/24 15:24	18.62	0.16	
2/7/24 15:25	18.72	0.15	
2/7/24 15:26	18.64	0.14	
2/7/24 15:27	18.70	0.14	
2/7/24 15:28	18.59	0.14	
2/7/24 15:29	18.57	0.14	
2/7/24 15:30	18.84	0.14	
2/7/24 15:31	18.52	0.14	
2/7/24 15:32	18.65	0.13	
2/7/24 15:33	18.78	0.13	
2/7/24 15:34	19.15	0.13	
2/7/24 15:35	18.80	0.13	
2/7/24 15:36	18.53	0.13	
2/7/24 15:37	18.78	0.13	
2/7/24 15:38	18.57	0.12	
2/7/24 15:39	18.71	0.11	

XOM - Beaumont, TX
Unit 42 - 1-minute CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/7/24 15:40	18.60	0.12	
2/7/24 15:41	18.70	0.12	
2/7/24 15:42	18.62	0.12	
2/7/24 15:43	18.52	0.12	
2/7/24 15:44	18.62	0.12	
2/7/24 15:45	18.51	0.12	
2/7/24 15:46	18.67	0.12	
2/7/24 15:47	18.67	0.12	
2/7/24 15:48	18.67	0.12	
2/7/24 15:49	18.39	0.11	
2/7/24 15:50	18.94	0.11	
2/7/24 15:51	18.71	0.10	
2/7/24 15:52	18.68	0.10	
2/7/24 15:53	18.73	0.09	
2/7/24 15:54	18.41	0.09	
2/7/24 15:55	18.70	0.09	
2/7/24 15:56	18.45	0.08	
2/7/24 15:57	18.86	0.08	
2/7/24 15:58	18.61	0.08	
2/7/24 15:59	18.67	0.08	
2/7/24 16:00	18.49	0.08	
2/7/24 16:01	18.17	0.08	
2/7/24 16:02	18.68	0.07	
2/7/24 16:03	18.53	0.08	
2/7/24 16:04	18.70	0.08	
2/7/24 16:05	18.69	0.08	
2/7/24 16:06	18.65	0.08	
2/7/24 16:07	18.56	0.08	
2/7/24 16:08	18.60	0.08	
2/7/24 16:09	18.58	0.08	
2/7/24 16:10	18.68	0.08	
2/7/24 16:11	18.65	0.08	
2/7/24 16:12	18.69	0.07	
2/7/24 16:13	18.64	0.07	
2/7/24 16:14	18.60	0.07	
2/7/24 16:15	18.65	0.07	
2/7/24 16:16	18.51	0.07	
2/7/24 16:17	18.83	0.07	
2/7/24 16:18	18.51	0.07	
2/7/24 16:19	18.65	0.07	
2/7/24 16:20	18.64	0.06	
2/7/24 16:21	18.76	0.07	
2/7/24 16:22	18.62	0.06	
2/7/24 16:23	18.54	0.06	
2/7/24 16:24	18.74	0.06	
2/7/24 16:25	18.55	0.06	
2/7/24 16:26	18.79	0.06	
2/7/24 16:27	18.59	0.06	
2/7/24 16:28	18.59	0.06	
2/7/24 16:29	18.58	0.05	
2/7/24 16:30	18.52	0.06	
2/7/24 16:31	18.69	0.05	
2/7/24 16:32	18.61	0.06	
2/7/24 16:33	16.16	0.85	
2/7/24 16:34	11.64	4.07	
2/7/24 16:35	14.36	3.58	
2/7/24 16:36	18.66	0.07	
2/7/24 16:37	18.60	0.07	
2/7/24 16:38	18.60	0.07	

XOM - Beaumont, TX
Unit 42 - 1-minute CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/7/24 16:39	18.70	0.07	
2/7/24 16:40	18.61	0.06	
2/7/24 16:41	18.45	0.06	
2/7/24 16:42	18.81	0.06	
2/7/24 16:43	18.53	0.05	
2/7/24 16:44	18.50	0.05	
2/7/24 16:45	18.44	0.05	
2/7/24 16:46	18.58	0.04	
2/7/24 16:47	18.59	0.04	
2/7/24 16:48	18.53	0.04	
2/7/24 16:49	18.52	0.03	
2/7/24 16:50	18.59	0.03	
2/7/24 16:51	18.89	0.03	
2/7/24 16:52	18.34	0.03	
2/7/24 16:53	18.56	0.02	
2/7/24 16:54	18.40	0.02	
2/7/24 16:55	18.90	0.03	
2/7/24 16:56	18.56	0.03	
2/7/24 16:57	18.73	0.03	
2/7/24 16:58	17.94	0.04	
2/7/24 16:59	18.77	0.04	
2/7/24 17:00	18.80	0.04	
2/7/24 17:01	18.66	0.05	
2/7/24 17:02	18.79	0.04	
2/7/24 17:03	18.76	0.05	
2/7/24 17:04	18.95	0.05	
2/7/24 17:05	18.59	0.05	
2/7/24 17:06	17.96	0.05	
2/7/24 17:07	18.63	0.05	
2/7/24 17:08	18.68	0.05	
2/7/24 17:09	18.85	0.04	
2/7/24 17:10	18.53	0.04	
2/7/24 17:11	18.67	0.05	
2/7/24 17:12	18.67	0.04	
2/7/24 17:13	18.81	0.05	
2/7/24 17:14	18.71	0.05	
2/7/24 17:15	18.80	0.05	
2/7/24 17:16	19.07	0.05	
2/7/24 17:17	18.91	0.05	
2/7/24 17:18	19.06	0.05	
2/7/24 17:19	18.88	0.05	
2/7/24 17:20	18.78	0.05	
2/7/24 17:21	18.93	0.05	
2/7/24 17:22	18.70	0.06	
2/7/24 17:23	18.66	0.06	
2/7/24 17:24	18.81	0.06	
2/7/24 17:25	18.73	0.06	
2/7/24 17:26	18.65	0.06	
2/7/24 17:27	18.69	0.07	
2/7/24 17:28	18.76	0.07	
2/7/24 17:29	18.53	0.07	
2/7/24 17:30	18.44	0.07	
2/7/24 17:31	18.87	0.07	
2/7/24 17:32	18.62	0.07	
2/7/24 17:33	19.14	0.07	
2/7/24 17:34	18.59	0.08	
2/7/24 17:35	18.81	0.08	
2/7/24 17:36	18.71	0.08	
2/7/24 17:37	19.21	0.08	

XOM - Beaumont, TX
Unit 42 - 1-minute CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/7/24 17:38	19.05	0.08	
2/7/24 17:39	18.92	0.08	
2/7/24 17:40	18.84	0.08	
2/7/24 17:41	18.93	0.07	
2/7/24 17:42	19.07	0.07	
2/7/24 17:43	19.25	0.07	
2/7/24 17:44	19.07	0.06	
2/7/24 17:45	18.85	0.05	
2/7/24 17:46	19.05	0.03	
2/7/24 17:47	18.81	0.02	
2/7/24 17:48	18.89	0.02	
2/7/24 17:49	18.66	0.01	
2/7/24 17:50	19.05	0.01	
2/7/24 17:51	18.70	0.00	END

XOM - Beaumont, TX
Unit 42 - 10-second CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/7/24 7:34	0.91	-0.10	Calibration Error
2/7/24 7:34	0.57	0.02	
2/7/24 7:35	0.36	0.02	
2/7/24 7:35	0.22	0.01	
2/7/24 7:35	0.12	0.01	
2/7/24 7:35	0.06	0.01	Zero
2/7/24 7:35	0.02	0.01	
2/7/24 7:35	-0.01	0.01	
2/7/24 7:36	-0.03	0.01	
2/7/24 7:36	-0.04	0.01	
2/7/24 7:36	-0.05	0.01	
2/7/24 7:36	-0.03	0.01	
2/7/24 7:36	2.30	0.02	
2/7/24 7:36	7.07	2.75	
2/7/24 7:37	11.46	8.41	
2/7/24 7:37	14.32	11.93	
2/7/24 7:37	16.39	14.76	
2/7/24 7:37	17.66	16.92	
2/7/24 7:37	17.56	17.59	
2/7/24 7:37	17.42	17.31	
2/7/24 7:38	17.72	17.74	
2/7/24 7:38	18.54	18.53	
2/7/24 7:38	19.25	19.23	
2/7/24 7:38	18.14	18.28	
2/7/24 7:38	16.61	16.64	
2/7/24 7:38	17.90	17.92	
2/7/24 7:39	18.70	18.83	
2/7/24 7:39	18.41	18.59	
2/7/24 7:39	17.68	17.79	
2/7/24 7:39	17.36	17.46	
2/7/24 7:39	18.21	18.18	
2/7/24 7:39	31.65	31.67	
2/7/24 7:40	40.20	39.94	
2/7/24 7:40	33.43	33.27	
2/7/24 7:40	10.57	10.58	
2/7/24 7:40	7.77	7.88	
2/7/24 7:40	18.88	19.06	
2/7/24 7:40	25.91	26.13	
2/7/24 7:41	24.75	24.98	
2/7/24 7:41	23.90	24.08	
2/7/24 7:41	23.13	23.28	
2/7/24 7:41	22.71	22.88	
2/7/24 7:41	22.38	22.50	
2/7/24 7:41	22.21	22.27	
2/7/24 7:42	22.12	22.14	
2/7/24 7:42	22.07	22.07	
2/7/24 7:42	22.02	22.02	
2/7/24 7:42	22.00	22.00	
2/7/24 7:42	21.98	21.98	High
2/7/24 7:42	21.97	21.96	
2/7/24 7:43	21.96	21.95	
2/7/24 7:43	21.96	21.94	
2/7/24 7:43	21.95	21.94	
2/7/24 7:43	3.03	3.37	
2/7/24 7:43	3.62	4.03	
2/7/24 7:43	5.51	5.88	
2/7/24 7:44	7.04	7.39	
2/7/24 7:44	8.13	8.43	
2/7/24 7:44	8.95	9.23	

XOM - Beaumont, TX
Unit 42 - 10-second CSV Data

2/7/24 7:44	9.52	9.81	
2/7/24 7:44	9.95	10.22	
2/7/24 7:44	10.27	10.53	
2/7/24 7:45	10.48	10.74	
2/7/24 7:45	10.66	10.90	
2/7/24 7:45	10.76	11.01	
2/7/24 7:45	10.83	11.08	
2/7/24 7:45	10.89	11.06	
2/7/24 7:45	10.92	11.07	
2/7/24 7:46	10.96	11.04	
2/7/24 7:46	10.98	11.06	
2/7/24 7:46	10.99	11.08	Mid
2/7/24 7:46	10.99	11.08	
2/7/24 7:46	11.00	11.08	
2/7/24 7:46	11.00	11.10	
2/7/24 7:47	10.95	10.94	
2/7/24 7:47	8.66	8.30	Run 1 Pre-Bias
2/7/24 7:47	6.26	6.16	
2/7/24 7:47	4.33	4.32	
2/7/24 7:47	2.94	3.00	
2/7/24 7:47	1.92	2.02	
2/7/24 7:48	1.26	1.38	
2/7/24 7:48	0.69	0.80	
2/7/24 7:48	0.40	0.50	
2/7/24 7:48	0.23	0.34	
2/7/24 7:48	0.13	0.23	
2/7/24 7:48	0.07	0.17	
2/7/24 7:49	0.03	0.12	
2/7/24 7:49	0.00	0.10	
2/7/24 7:49	-0.02	0.08	
2/7/24 7:49	-0.03	0.06	Zero
2/7/24 7:49	-0.04	0.05	
2/7/24 7:49	-0.04	0.04	
2/7/24 7:50	-0.05	0.04	
2/7/24 7:50	-0.01	0.11	
2/7/24 7:50	2.20	2.68	
2/7/24 7:50	4.44	4.82	
2/7/24 7:50	6.28	6.03	
2/7/24 7:50	8.74	6.37	
2/7/24 7:51	9.73	7.62	
2/7/24 7:51	10.10	8.55	
2/7/24 7:51	10.37	9.29	
2/7/24 7:51	10.57	9.83	
2/7/24 7:51	10.68	10.16	
2/7/24 7:51	10.78	10.45	
2/7/24 7:52	10.87	10.66	
2/7/24 7:52	10.91	10.77	
2/7/24 7:52	10.95	10.89	
2/7/24 7:52	10.96	10.95	
2/7/24 7:52	10.98	10.99	
2/7/24 7:52	11.01	11.03	
2/7/24 7:53	11.02	11.00	
2/7/24 7:53	11.02	11.04	
2/7/24 7:53	11.02	11.04	Span
2/7/24 7:53	11.01	11.04	
2/7/24 7:53	11.02	11.05	
2/7/24 7:53	11.02	11.05	
2/7/24 7:54	11.74	10.09	
2/7/24 7:54	12.16	6.99	

XOM - Beaumont, TX
Unit 42 - 10-second CSV Data

2/7/24 7:54	8.68	4.93
2/7/24 7:54	5.76	3.41
2/7/24 7:54	4.04	2.47
2/7/24 7:54	3.26	2.03
2/7/24 7:55	4.00	1.72
2/7/24 7:55	6.09	1.14
2/7/24 7:55	15.95	0.32
2/7/24 7:55	18.35	0.18
2/7/24 7:55	18.68	0.18
2/7/24 7:55	17.52	0.18
2/7/24 7:56	17.63	0.19
2/7/24 7:56	18.68	0.18
2/7/24 7:56	17.55	0.18
2/7/24 7:56	17.72	0.18
2/7/24 7:56	18.62	0.18
2/7/24 7:56	18.10	0.18
2/7/24 7:57	17.31	0.18
2/7/24 7:57	17.44	0.17
2/7/24 7:57	18.56	0.18
2/7/24 7:57	19.37	0.17
2/7/24 7:57	17.30	0.18
2/7/24 7:57	17.08	0.17
2/7/24 7:58	18.97	0.17
2/7/24 7:58	17.65	0.17
2/7/24 7:58	17.37	0.18
2/7/24 7:58	18.49	0.17
2/7/24 7:58	18.46	0.17
2/7/24 7:58	17.39	0.17
2/7/24 7:59	17.69	0.17
2/7/24 7:59	18.60	0.17
2/7/24 7:59	17.70	0.17
2/7/24 7:59	17.38	0.17
2/7/24 7:59	18.02	0.17
2/7/24 7:59	18.46	0.18
2/7/24 8:50	17.50	0.25
2/7/24 8:50	17.70	0.25
2/7/24 8:50	18.68	0.25
2/7/24 8:50	18.37	0.25
2/7/24 8:50	17.50	0.25
2/7/24 8:50	16.53	0.25
2/7/24 8:51	16.86	0.25
2/7/24 8:51	18.26	0.25
2/7/24 8:51	19.26	0.25
2/7/24 8:51	18.24	0.25
2/7/24 8:51	17.57	0.24
2/7/24 8:51	17.29	0.24
2/7/24 8:52	17.41	0.24
2/7/24 8:52	17.78	0.25
2/7/24 8:52	18.53	0.25
2/7/24 8:52	18.79	0.25
2/7/24 8:52	7.85	0.19
2/7/24 8:52	2.89	1.00
2/7/24 8:53	5.77	1.93
2/7/24 8:53	8.22	2.67
2/7/24 8:53	10.20	3.24
2/7/24 8:53	11.41	3.57
2/7/24 8:53	12.20	3.80
2/7/24 8:53	12.80	3.97
2/7/24 8:54	13.16	4.08
2/7/24 8:54	13.40	4.15

XOM - Beaumont, TX
Unit 42 - 10-second CSV Data

2/7/24 8:54	13.57	4.19	
2/7/24 8:54	13.64	4.21	
2/7/24 8:54	13.71	4.23	
2/7/24 8:54	13.76	4.24	
2/7/24 9:56	13.84	4.20	
2/7/24 9:56	13.86	4.21	
2/7/24 9:56	12.31	3.85	
2/7/24 9:57	8.56	2.73	Run 1 Post-Bias
2/7/24 9:57	5.65	1.86	
2/7/24 9:57	3.56	1.20	
2/7/24 9:57	2.22	0.78	
2/7/24 9:57	1.27	0.47	
2/7/24 9:57	0.70	0.28	
2/7/24 9:58	0.41	0.19	
2/7/24 9:58	0.24	0.14	
2/7/24 9:58	0.14	0.10	
2/7/24 9:58	0.07	0.08	
2/7/24 9:58	0.03	0.06	
2/7/24 9:58	0.00	0.05	
2/7/24 9:59	-0.02	0.05	
2/7/24 9:59	-0.04	0.04	
2/7/24 9:59	-0.04	0.04	
2/7/24 9:59	-0.05	0.04	
2/7/24 9:59	-0.05	0.04	
2/7/24 9:59	-0.05	0.04	
2/7/24 10:00	-0.05	0.04	
2/7/24 10:00	-0.05	0.04	
2/7/24 10:00	-0.05	0.03	
2/7/24 10:00	-0.05	0.04	
2/7/24 10:00	-0.05	0.04	
2/7/24 10:00	-0.05	0.04	
2/7/24 10:01	-0.05	0.04	
2/7/24 10:01	-0.05	0.04	
2/7/24 10:01	-0.05	0.04	
2/7/24 10:01	-0.05	0.04	Zero
2/7/24 10:01	-0.05	0.04	
2/7/24 10:01	-0.02	0.06	
2/7/24 10:02	1.69	1.97	
2/7/24 10:02	4.33	4.58	
2/7/24 10:02	6.17	6.39	
2/7/24 10:02	7.55	7.72	
2/7/24 10:02	8.57	8.72	
2/7/24 10:02	9.30	9.42	
2/7/24 10:03	9.88	9.98	
2/7/24 10:03	10.24	10.32	
2/7/24 10:03	10.47	10.55	
2/7/24 10:03	10.64	10.73	
2/7/24 10:03	10.77	10.84	
2/7/24 10:03	10.85	10.91	
2/7/24 10:04	10.91	10.97	
2/7/24 10:04	10.95	11.01	
2/7/24 10:04	10.97	11.03	Span
2/7/24 10:04	10.98	11.05	
2/7/24 10:04	11.00	11.06	
2/7/24 10:04	11.00	11.07	
2/7/24 10:05	11.01	11.07	
2/7/24 10:05	11.02	11.09	
2/7/24 10:05	11.02	11.07	
2/7/24 10:05	11.15	10.68	

XOM - Beaumont, TX
Unit 42 - 10-second CSV Data

2/7/24 10:05	11.18	8.26	
2/7/24 10:05	13.87	3.10	
2/7/24 10:19	13.32	4.06	
2/7/24 10:19	13.52	4.11	
2/7/24 10:19	13.63	4.15	
2/7/24 10:19	13.73	4.17	
2/7/24 10:19	13.76	4.19	
2/7/24 10:20	13.79	4.20	
2/7/24 10:20	13.81	4.20	
2/7/24 10:20	13.82	4.21	
2/7/24 10:20	13.81	4.21	
2/7/24 10:20	13.85	4.21	
2/7/24 10:20	13.83	4.21	
2/7/24 11:21	13.84	4.19	
2/7/24 11:21	13.85	4.19	
2/7/24 11:21	13.86	4.19	
2/7/24 11:21	13.84	4.19	
2/7/24 11:21	12.89	3.85	
2/7/24 11:21	9.45	2.98	Run 2 Post-Bias
2/7/24 11:22	6.51	2.21	
2/7/24 11:22	3.91	1.38	
2/7/24 11:22	2.42	0.88	
2/7/24 11:22	1.43	0.54	
2/7/24 11:22	0.83	0.33	
2/7/24 11:22	0.48	0.20	
2/7/24 11:23	0.29	0.14	
2/7/24 11:23	0.16	0.09	
2/7/24 11:23	0.08	0.06	
2/7/24 11:23	0.03	0.04	
2/7/24 11:23	0.00	0.03	
2/7/24 11:23	-0.02	0.02	
2/7/24 11:24	-0.03	0.01	
2/7/24 11:24	-0.04	0.02	
2/7/24 11:24	-0.05	0.02	
2/7/24 11:24	-0.05	0.01	
2/7/24 11:24	-0.05	0.01	
2/7/24 11:24	-0.05	0.01	Zero
2/7/24 11:25	-0.03	0.03	
2/7/24 11:25	1.82	2.16	
2/7/24 11:25	4.30	4.59	
2/7/24 11:25	6.28	6.51	
2/7/24 11:25	7.71	7.88	
2/7/24 11:25	8.65	8.79	
2/7/24 11:26	9.40	9.51	
2/7/24 11:26	9.87	9.96	
2/7/24 11:26	10.26	10.33	
2/7/24 11:26	10.49	10.54	
2/7/24 11:26	10.67	10.72	
2/7/24 11:26	10.79	10.83	
2/7/24 11:27	10.87	10.90	
2/7/24 11:27	10.92	10.96	
2/7/24 11:27	10.95	10.99	
2/7/24 11:27	10.97	11.01	Span
2/7/24 11:27	10.99	11.04	
2/7/24 11:27	11.01	11.04	
2/7/24 11:28	11.01	11.05	
2/7/24 11:28	11.01	11.05	
2/7/24 11:28	11.02	11.06	
2/7/24 11:28	11.02	11.06	

XOM - Beaumont, TX
Unit 42 - 10-second CSV Data

2/7/24 11:28	11.02	11.06
2/7/24 11:28	11.02	11.06
2/7/24 11:29	11.20	10.51
2/7/24 11:29	11.90	8.32
2/7/24 11:29	9.54	6.08
2/7/24 11:29	6.97	4.33
2/7/24 11:29	18.56	0.34
2/7/24 11:29	18.33	0.16
2/7/24 11:30	17.46	0.16
2/7/24 11:30	17.36	0.16
2/7/24 11:30	18.46	0.16
2/7/24 11:30	18.81	0.16
2/7/24 11:30	18.26	0.16
2/7/24 11:30	17.42	0.15
2/7/24 11:31	17.20	0.15
2/7/24 11:31	18.11	0.15
2/7/24 11:31	18.61	0.15
2/7/24 11:31	18.49	0.15
2/7/24 11:31	17.68	0.15
2/7/24 11:31	17.10	0.15
2/7/24 11:32	17.59	0.15
2/7/24 11:32	18.68	0.14
2/7/24 11:32	18.60	0.14
2/7/24 11:32	17.20	0.15
2/7/24 11:32	17.71	0.15
2/7/24 11:32	19.27	0.14
2/7/24 11:33	19.15	0.15
2/7/24 11:33	18.50	0.15
2/7/24 11:33	18.11	0.15
2/7/24 11:33	17.83	0.15
2/7/24 11:33	17.40	0.15
2/7/24 11:33	17.28	0.15
2/7/24 11:34	16.98	0.15
2/7/24 11:34	17.88	0.15
2/7/24 11:34	18.51	0.15
2/7/24 11:34	17.73	0.14
2/7/24 11:34	17.07	0.15
2/7/24 11:34	17.64	0.15
2/7/24 11:35	18.40	0.14
2/7/24 11:35	18.61	0.15
2/7/24 11:35	18.42	0.15
2/7/24 11:35	17.48	0.14
2/7/24 11:35	17.58	0.15
2/7/24 11:35	19.24	0.15
2/7/24 11:36	18.58	0.15
2/7/24 11:36	16.79	0.15
2/7/24 11:36	16.84	0.14
2/7/24 11:36	17.32	0.14
2/7/24 11:36	17.46	0.15
2/7/24 11:36	17.67	0.15
2/7/24 11:37	17.78	0.14
2/7/24 11:37	17.98	0.15
2/7/24 11:37	18.30	0.15
2/7/24 11:37	18.69	0.14
2/7/24 11:37	18.82	0.14
2/7/24 11:37	18.75	0.14
2/7/24 11:38	18.38	0.15
2/7/24 11:38	17.43	0.14
2/7/24 12:45	13.86	4.25

XOM - Beaumont, TX
Unit 42 - 10-second CSV Data

2/7/24 12:45	13.83	4.25	
2/7/24 12:45	13.82	4.25	
2/7/24 12:45	13.86	4.25	
2/7/24 12:45	13.83	4.25	
2/7/24 12:45	13.73	4.21	
2/7/24 12:46	11.26	3.40	Run 3 Post-Bias
2/7/24 12:46	7.76	2.38	
2/7/24 12:46	4.74	1.49	
2/7/24 12:46	2.93	0.96	
2/7/24 12:46	1.68	0.59	
2/7/24 12:46	0.99	0.39	
2/7/24 12:47	0.54	0.25	
2/7/24 12:47	0.33	0.18	
2/7/24 12:47	0.18	0.14	
2/7/24 12:47	0.10	0.11	
2/7/24 12:47	0.04	0.09	
2/7/24 12:47	0.01	0.08	
2/7/24 12:48	-0.02	0.07	
2/7/24 12:48	-0.03	0.07	
2/7/24 12:48	-0.04	0.06	
2/7/24 12:48	-0.04	0.06	
2/7/24 12:48	-0.05	0.06	
2/7/24 12:48	-0.05	0.06	
2/7/24 12:49	-0.06	0.06	
2/7/24 12:49	-0.05	0.06	
2/7/24 12:49	-0.05	0.06	
2/7/24 12:49	-0.06	0.06	
2/7/24 12:49	-0.06	0.06	
2/7/24 12:49	-0.06	0.06	
2/7/24 12:49	-0.06	0.06	
2/7/24 12:50	-0.06	0.06	
2/7/24 12:50	-0.06	0.06	
2/7/24 12:50	-0.05	0.06	
2/7/24 12:50	-0.06	0.06	
2/7/24 12:50	-0.06	0.06	
2/7/24 12:50	-0.06	0.06	
2/7/24 12:51	-0.05	0.06	
2/7/24 12:51	-0.06	0.06	
2/7/24 12:51	-0.05	0.06	
2/7/24 12:51	-0.05	0.05	
2/7/24 12:51	-0.06	0.05	
2/7/24 12:51	-0.06	0.06	
2/7/24 12:52	-0.06	0.05	
2/7/24 12:52	-0.05	0.05	
2/7/24 12:52	-0.05	0.06	Zero
2/7/24 12:52	-0.05	0.05	
2/7/24 12:52	-0.05	0.05	
2/7/24 12:52	-0.05	0.05	
2/7/24 12:53	-0.05	0.05	
2/7/24 12:53	-0.06	0.05	
2/7/24 12:53	-0.04	0.06	
2/7/24 12:53	2.44	2.17	
2/7/24 12:53	4.77	4.47	
2/7/24 12:53	6.63	6.47	
2/7/24 12:54	7.89	7.80	
2/7/24 12:54	8.81	8.76	
2/7/24 12:54	9.43	9.43	
2/7/24 12:54	9.91	9.93	
2/7/24 12:54	10.29	10.33	
2/7/24 12:54	10.53	10.58	
2/7/24 12:55	10.68	10.73	

XOM - Beaumont, TX
Unit 42 - 10-second CSV Data

2/7/24 12:55	10.80	10.86	
2/7/24 12:55	10.87	10.94	
2/7/24 12:55	10.92	10.99	Span
2/7/24 12:55	10.95	11.03	
2/7/24 12:55	10.97	11.05	
2/7/24 12:56	10.99	11.07	
2/7/24 12:56	11.00	11.07	
2/7/24 12:56	11.00	11.09	
2/7/24 12:56	11.01	11.09	
2/7/24 12:56	11.01	11.09	
2/7/24 12:56	11.01	11.10	
2/7/24 12:57	11.02	11.10	
2/7/24 12:57	11.02	11.10	
2/7/24 12:57	11.02	11.09	
2/7/24 12:57	11.02	11.08	
2/7/24 12:57	11.54	9.61	
2/7/24 12:57	12.25	7.96	
2/7/24 12:58	12.65	7.06	
2/7/24 12:58	12.90	6.24	
2/7/24 12:58	10.99	4.78	
2/7/24 12:58	8.27	3.26	
2/7/24 12:58	17.55	0.36	
2/7/24 12:58	17.40	0.25	
2/7/24 12:59	17.80	0.25	
2/7/24 12:59	18.71	0.24	
2/7/24 12:59	17.76	0.24	
2/7/24 12:59	17.30	0.24	
2/7/24 12:59	18.52	0.24	
2/7/24 12:59	18.02	0.25	

XOM - Beaumont, TX
Unit 43 - 1-minute CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/6/24 7:00	17.56	0.18	
2/6/24 7:01	17.78	0.18	
2/6/24 7:02	18.47	0.18	
2/6/24 7:03	17.87	0.18	
2/6/24 7:04	18.73	0.18	
2/6/24 7:05	17.47	0.18	
2/6/24 7:06	17.66	0.18	
2/6/24 7:07	17.56	0.19	
2/6/24 7:08	17.83	0.20	
2/6/24 7:09	15.24	0.19	
2/6/24 7:10	0.20	0.08	
2/6/24 7:11	0.02	0.04	
2/6/24 7:12	8.47	8.23	
2/6/24 7:13	18.77	18.87	
2/6/24 7:14	9.58	12.22	
2/6/24 7:15	21.99	22.03	
2/6/24 7:16	11.80	13.23	
2/6/24 7:17	6.68	6.72	
2/6/24 7:18	-0.02	0.11	
2/6/24 7:19	9.12	8.99	
2/6/24 7:20	10.63	8.14	
2/6/24 7:21	10.32	6.56	
2/6/24 7:22	10.27	6.53	
2/6/24 7:23	10.24	6.50	
2/6/24 7:24	10.23	6.47	
2/6/24 7:25	10.22	6.45	
2/6/24 7:26	10.23	6.44	
2/6/24 7:27	10.23	6.43	
2/6/24 7:28	10.24	6.41	
2/6/24 7:29	10.25	6.40	
2/6/24 7:30	10.27	6.39	
2/6/24 7:31	10.28	6.39	
2/6/24 7:32	10.30	6.39	
2/6/24 7:33	10.31	6.40	
2/6/24 7:34	10.34	6.40	
2/6/24 7:35	10.37	6.41	
2/6/24 7:36	10.38	6.41	
2/6/24 7:37	10.41	6.41	
2/6/24 7:38	10.44	6.41	
2/6/24 7:39	10.46	6.41	
2/6/24 7:40	10.49	6.42	
2/6/24 7:41	10.51	6.43	
2/6/24 7:42	10.54	6.44	
2/6/24 7:43	10.57	6.44	
2/6/24 7:44	10.57	6.19	
2/6/24 7:45	10.51	5.92	
2/6/24 7:46	15.52	0.92	
2/6/24 7:47	17.39	0.01	
2/6/24 7:48	17.78	0.00	
2/6/24 7:49	17.73	0.00	
2/6/24 7:50	17.11	0.00	
2/6/24 7:51	17.78	0.00	
2/6/24 7:52	17.42	0.01	
2/6/24 7:53	17.97	0.01	
2/6/24 7:54	17.63	0.01	
2/6/24 7:55	17.70	0.02	
2/6/24 7:56	17.35	0.01	
2/6/24 7:57	17.48	0.00	
2/6/24 7:58	17.18	0.00	

XOM - Beaumont, TX
Unit 43 - 1-minute CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/6/24 7:59	17.70	0.01	
2/6/24 8:00	17.55	-0.01	
2/6/24 8:01	17.91	-0.04	
2/6/24 8:02	18.00	-0.06	
2/6/24 8:03	17.48	-0.07	
2/6/24 8:04	18.58	-0.06	
2/6/24 8:05	17.90	-0.06	
2/6/24 8:06	17.23	-0.06	
2/6/24 8:07	18.52	-0.06	
2/6/24 8:08	18.32	-0.06	
2/6/24 8:09	17.38	-0.06	
2/6/24 8:10	18.09	-0.06	
2/6/24 8:11	17.61	-0.06	
2/6/24 8:12	17.35	-0.05	
2/6/24 8:13	18.08	-0.05	
2/6/24 8:14	17.18	-0.06	
2/6/24 8:15	17.74	-0.08	
2/6/24 8:16	16.99	-0.08	
2/6/24 8:17	18.15	-0.09	
2/6/24 8:18	17.22	-0.09	
2/6/24 8:19	10.90	1.78	
2/6/24 8:20	12.95	3.41	
2/6/24 8:21	13.46	3.52	
2/6/24 8:22	13.49	3.53	
2/6/24 8:23	13.50	3.53	
2/6/24 8:24	13.51	3.53	
2/6/24 8:25	13.50	3.53	
2/6/24 8:26	13.50	3.53	
2/6/24 8:27	13.49	3.52	
2/6/24 8:28	13.50	3.52	
2/6/24 8:29	13.50	3.52	
2/6/24 8:30	13.50	3.52	
2/6/24 8:31	13.50	3.53	
2/6/24 8:32	13.48	3.53	
2/6/24 8:33	13.52	3.53	
2/6/24 8:34	13.51	3.52	
2/6/24 8:35	13.50	3.52	
2/6/24 8:36	13.50	3.52	
2/6/24 8:37	13.50	3.52	
2/6/24 8:38	13.50	3.52	
2/6/24 8:39	13.50	3.52	
2/6/24 8:40	13.52	3.51	
2/6/24 8:41	13.51	3.51	
2/6/24 8:42	13.50	3.51	
2/6/24 8:43	13.51	3.51	
2/6/24 8:44	13.51	3.51	
2/6/24 8:45	13.52	3.51	
2/6/24 8:46	13.55	3.43	
2/6/24 8:47	12.69	3.23	
2/6/24 8:48	12.37	3.20	
2/6/24 8:49	12.36	3.20	
2/6/24 8:50	12.35	3.20	
2/6/24 8:51	12.35	3.20	
2/6/24 8:52	12.36	3.20	
2/6/24 8:53	12.50	3.24	
2/6/24 8:54	12.65	3.28	
2/6/24 8:55	12.67	3.28	
2/6/24 8:56	12.66	3.28	
2/6/24 8:57	12.67	3.29	

XOM - Beaumont, TX
Unit 43 - 1-minute CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/6/24 8:58	12.67	3.29	
2/6/24 8:59	12.67	3.29	
2/6/24 9:00	12.67	3.29	
2/6/24 9:01	12.67	3.29	
2/6/24 9:02	12.68	3.29	
2/6/24 9:03	12.68	3.29	
2/6/24 9:04	12.67	3.29	
2/6/24 9:05	12.68	3.29	
2/6/24 9:06	12.68	3.29	
2/6/24 9:07	12.69	3.29	
2/6/24 9:08	13.12	3.44	
2/6/24 9:09	13.49	3.51	
2/6/24 9:10	13.53	3.51	
2/6/24 9:11	13.52	3.52	
2/6/24 9:12	13.52	3.52	
2/6/24 9:13	13.51	3.52	
2/6/24 9:14	13.53	3.52	
2/6/24 9:15	13.53	3.52	
2/6/24 9:16	13.53	3.53	
2/6/24 9:17	13.53	3.53	
2/6/24 9:18	12.77	3.15	
2/6/24 9:19	15.55	0.14	
2/6/24 9:20	17.73	0.04	
2/6/24 9:21	17.69	0.03	
2/6/24 9:22	17.70	0.03	
2/6/24 9:23	17.39	0.03	
2/6/24 9:24	17.73	0.02	
2/6/24 9:25	17.53	0.03	
2/6/24 9:26	17.78	0.02	
2/6/24 9:27	17.61	0.02	
2/6/24 9:28	17.09	0.01	
2/6/24 9:29	17.70	0.02	
2/6/24 9:30	17.12	0.02	
2/6/24 9:31	17.66	0.01	
2/6/24 9:32	17.56	-0.05	
2/6/24 9:33	14.99	0.67	
2/6/24 9:34	11.92	3.13	
2/6/24 9:35	13.47	3.45	
2/6/24 9:36	13.55	3.47	
2/6/24 9:37	13.55	3.46	Run 1
2/6/24 9:38	13.57	3.45	
2/6/24 9:39	13.57	3.45	
2/6/24 9:40	13.57	3.45	
2/6/24 9:41	13.55	3.45	
2/6/24 9:42	13.55	3.45	
2/6/24 9:43	13.54	3.45	
2/6/24 9:44	13.55	3.45	
2/6/24 9:45	13.55	3.45	
2/6/24 9:46	13.57	3.45	
2/6/24 9:47	13.56	3.45	
2/6/24 9:48	13.55	3.45	
2/6/24 9:49	13.56	3.45	
2/6/24 9:50	13.56	3.45	
2/6/24 9:51	13.55	3.45	
2/6/24 9:52	13.57	3.45	
2/6/24 9:53	13.55	3.45	
2/6/24 9:54	13.57	3.45	
2/6/24 9:55	13.58	3.44	
2/6/24 9:56	13.56	3.44	

XOM - Beaumont, TX
Unit 43 - 1-minute CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/6/24 9:57	13.58	3.44	
2/6/24 9:58	13.57	3.45	
2/6/24 9:59	13.57	3.45	
2/6/24 10:00	13.56	3.44	
2/6/24 10:01	13.58	3.45	
2/6/24 10:02	13.56	3.45	
2/6/24 10:03	13.56	3.45	
2/6/24 10:04	13.56	3.46	
2/6/24 10:05	13.58	3.46	
2/6/24 10:06	13.57	3.46	
2/6/24 10:07	13.57	3.47	
2/6/24 10:08	13.56	3.47	
2/6/24 10:09	13.55	3.47	
2/6/24 10:10	13.58	3.47	
2/6/24 10:11	13.57	3.47	
2/6/24 10:12	13.58	3.47	
2/6/24 10:13	13.58	3.47	
2/6/24 10:14	13.57	3.47	
2/6/24 10:15	13.57	3.48	
2/6/24 10:16	13.59	3.47	
2/6/24 10:17	13.59	3.47	
2/6/24 10:18	13.57	3.47	
2/6/24 10:19	13.58	3.48	
2/6/24 10:20	13.58	3.48	
2/6/24 10:21	13.57	3.48	
2/6/24 10:22	13.57	3.48	
2/6/24 10:23	13.56	3.48	
2/6/24 10:24	13.58	3.48	
2/6/24 10:25	13.58	3.48	
2/6/24 10:26	13.58	3.47	
2/6/24 10:27	13.56	3.48	
2/6/24 10:28	13.57	3.48	
2/6/24 10:29	13.56	3.47	
2/6/24 10:30	13.59	3.48	
2/6/24 10:31	13.58	3.48	
2/6/24 10:32	13.57	3.48	
2/6/24 10:33	13.58	3.48	
2/6/24 10:34	13.58	3.48	
2/6/24 10:35	13.58	3.47	
2/6/24 10:36	13.59	3.47	Run 1 end
2/6/24 10:37	13.57	3.48	
2/6/24 10:38	11.10	2.54	
2/6/24 10:39	1.28	0.10	
2/6/24 10:40	0.07	-0.12	
2/6/24 10:41	0.01	-0.14	
2/6/24 10:42	0.01	-0.14	
2/6/24 10:43	0.01	-0.14	
2/6/24 10:44	0.01	-0.14	
2/6/24 10:45	0.01	-0.15	
2/6/24 10:46	6.16	5.24	
2/6/24 10:47	10.46	8.90	
2/6/24 10:48	10.86	9.24	
2/6/24 10:49	11.47	7.71	
2/6/24 10:50	16.51	1.59	
2/6/24 10:51	18.21	-0.03	
2/6/24 10:52	17.68	-0.04	
2/6/24 10:53	17.75	-0.06	
2/6/24 10:54	10.92	1.23	
2/6/24 10:55	12.48	3.25	

XOM - Beaumont, TX
Unit 43 - 1-minute CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/6/24 10:56	13.54	3.44	Run 2
2/6/24 10:57	13.58	3.46	
2/6/24 10:58	13.60	3.46	
2/6/24 10:59	13.60	3.46	
2/6/24 11:00	13.61	3.46	
2/6/24 11:01	13.59	3.46	
2/6/24 11:02	13.58	3.46	
2/6/24 11:03	13.60	3.46	
2/6/24 11:04	13.59	3.46	
2/6/24 11:05	13.58	3.46	
2/6/24 11:06	13.59	3.46	
2/6/24 11:07	13.59	3.47	
2/6/24 11:08	13.61	3.47	
2/6/24 11:09	13.58	3.47	
2/6/24 11:10	13.61	3.47	
2/6/24 11:11	13.61	3.47	
2/6/24 11:12	13.61	3.47	
2/6/24 11:13	13.59	3.47	
2/6/24 11:14	13.60	3.47	
2/6/24 11:15	13.60	3.47	
2/6/24 11:16	13.60	3.47	
2/6/24 11:17	13.60	3.47	
2/6/24 11:18	13.62	3.48	
2/6/24 11:19	13.59	3.48	
2/6/24 11:20	13.61	3.47	
2/6/24 11:21	13.60	3.48	
2/6/24 11:22	13.62	3.48	
2/6/24 11:23	13.59	3.48	
2/6/24 11:24	13.61	3.48	
2/6/24 11:25	13.59	3.48	
2/6/24 11:26	13.60	3.48	
2/6/24 11:27	13.60	3.48	
2/6/24 11:28	13.59	3.48	
2/6/24 11:29	13.61	3.48	
2/6/24 11:30	13.60	3.48	
2/6/24 11:31	13.59	3.47	
2/6/24 11:32	13.61	3.46	
2/6/24 11:33	13.58	3.46	
2/6/24 11:34	13.60	3.46	
2/6/24 11:35	13.62	3.46	
2/6/24 11:36	13.62	3.46	
2/6/24 11:37	13.61	3.45	
2/6/24 11:38	13.60	3.45	
2/6/24 11:39	13.62	3.46	
2/6/24 11:40	13.61	3.46	
2/6/24 11:41	13.62	3.46	
2/6/24 11:42	13.60	3.46	
2/6/24 11:43	13.63	3.46	
2/6/24 11:44	13.61	3.46	
2/6/24 11:45	13.61	3.46	
2/6/24 11:46	13.61	3.47	
2/6/24 11:47	13.62	3.47	
2/6/24 11:48	13.61	3.47	
2/6/24 11:49	13.60	3.47	
2/6/24 11:50	13.62	3.47	
2/6/24 11:51	13.63	3.47	
2/6/24 11:52	13.62	3.47	
2/6/24 11:53	13.62	3.48	
2/6/24 11:54	13.60	3.48	

XOM - Beaumont, TX
Unit 43 - 1-minute CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/6/24 11:55	13.62	3.48	Run 2 end
2/6/24 11:56	13.61	3.48	
2/6/24 11:57	10.98	2.52	
2/6/24 11:58	1.98	0.28	
2/6/24 11:59	0.26	-0.05	
2/6/24 12:00	0.16	-0.07	
2/6/24 12:01	0.13	-0.08	
2/6/24 12:02	0.08	-0.10	
2/6/24 12:03	0.02	-0.12	
2/6/24 12:04	0.02	-0.12	
2/6/24 12:05	0.02	-0.12	
2/6/24 12:06	0.02	-0.12	
2/6/24 12:07	5.27	4.72	
2/6/24 12:08	10.63	9.09	
2/6/24 12:09	10.90	9.33	
2/6/24 12:10	10.09	8.09	
2/6/24 12:11	2.10	1.29	
2/6/24 12:12	0.14	-0.02	Run 3
2/6/24 12:13	0.02	-0.10	
2/6/24 12:14	0.02	-0.11	
2/6/24 12:15	3.26	1.09	
2/6/24 12:16	12.28	3.25	
2/6/24 12:17	13.53	3.47	
2/6/24 12:18	13.61	3.48	
2/6/24 12:19	13.62	3.49	
2/6/24 12:20	13.62	3.49	
2/6/24 12:21	13.62	3.49	
2/6/24 12:22	13.61	3.49	
2/6/24 12:23	13.62	3.49	
2/6/24 12:24	13.62	3.49	
2/6/24 12:25	13.62	3.49	
2/6/24 12:26	13.62	3.49	
2/6/24 12:27	13.62	3.49	
2/6/24 12:28	13.63	3.49	
2/6/24 12:29	13.60	3.49	
2/6/24 12:30	13.63	3.49	
2/6/24 12:31	13.59	3.49	
2/6/24 12:32	13.63	3.50	
2/6/24 12:33	13.61	3.50	
2/6/24 12:34	13.62	3.50	
2/6/24 12:35	13.61	3.50	
2/6/24 12:36	13.62	3.50	
2/6/24 12:37	13.59	3.50	
2/6/24 12:38	13.61	3.51	
2/6/24 12:39	13.61	3.50	
2/6/24 12:40	13.62	3.50	
2/6/24 12:41	13.58	3.50	
2/6/24 12:42	13.61	3.50	
2/6/24 12:43	13.62	3.50	
2/6/24 12:44	13.59	3.51	
2/6/24 12:45	13.62	3.50	
2/6/24 12:46	13.61	3.50	
2/6/24 12:47	13.60	3.50	
2/6/24 12:48	13.59	3.50	
2/6/24 12:49	13.60	3.50	
2/6/24 12:50	13.59	3.50	
2/6/24 12:51	13.60	3.50	
2/6/24 12:52	13.60	3.50	
2/6/24 12:53	13.59	3.50	

XOM - Beaumont, TX
Unit 43 - 1-minute CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/6/24 12:54	13.60	3.49	
2/6/24 12:55	13.60	3.49	
2/6/24 12:56	13.61	3.49	
2/6/24 12:57	13.60	3.49	
2/6/24 12:58	13.60	3.48	
2/6/24 12:59	13.59	3.48	
2/6/24 13:00	13.61	3.48	
2/6/24 13:01	13.62	3.48	
2/6/24 13:02	13.60	3.48	
2/6/24 13:03	13.61	3.48	
2/6/24 13:04	13.61	3.48	
2/6/24 13:05	13.61	3.48	
2/6/24 13:06	13.60	3.48	
2/6/24 13:07	13.60	3.48	
2/6/24 13:08	13.61	3.49	
2/6/24 13:09	13.60	3.49	
2/6/24 13:10	13.58	3.50	
2/6/24 13:11	13.59	3.50	
2/6/24 13:12	13.61	3.50	
2/6/24 13:13	13.60	3.50	
2/6/24 13:14	13.60	3.51	
2/6/24 13:15	13.58	3.50	
2/6/24 13:16	13.59	3.50	
2/6/24 13:17	13.58	3.50	Run 3 end
2/6/24 13:18	9.22	2.12	
2/6/24 13:19	0.75	0.07	
2/6/24 13:20	0.05	-0.10	
2/6/24 13:21	13.61	0.00	
2/6/24 13:22	17.88	0.02	
2/6/24 13:23	17.72	0.01	
2/6/24 13:24	18.52	0.01	
2/6/24 13:25	18.08	0.01	
2/6/24 13:26	17.85	0.01	
2/6/24 13:27	18.42	0.01	
2/6/24 13:28	18.19	0.01	
2/6/24 13:29	18.49	0.01	
2/6/24 13:30	18.45	0.00	
2/6/24 13:31	18.12	0.00	
2/6/24 13:32	17.56	0.01	
2/6/24 13:33	18.26	0.04	
2/6/24 13:34	14.97	4.75	
2/6/24 13:35	10.91	10.83	
2/6/24 13:36	10.91	11.00	
2/6/24 13:37	10.91	10.87	
2/6/24 13:38	11.03	9.07	
2/6/24 13:39	12.33	5.36	
2/6/24 13:40	18.78	0.08	
2/6/24 13:41	17.52	-0.06	
2/6/24 13:42	17.68	-0.09	
2/6/24 13:43	17.10	-0.09	
2/6/24 13:44	17.93	-0.10	
2/6/24 13:45	17.94	-0.10	
2/6/24 13:46	17.59	-0.10	
2/6/24 13:47	17.81	-0.11	
2/6/24 13:48	17.63	-0.11	
2/6/24 13:49	17.87	-0.11	
2/6/24 13:50	18.16	-0.12	
2/6/24 13:51	18.17	-0.12	
2/6/24 13:52	18.15	-0.12	

XOM - Beaumont, TX
Unit 43 - 1-minute CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/6/24 13:53	17.64	-0.13	
2/6/24 13:54	17.49	-0.13	
2/6/24 13:55	17.84	-0.13	
2/6/24 13:56	17.91	-0.13	
2/6/24 13:57	17.29	-0.14	
2/6/24 13:58	17.32	-0.14	
2/6/24 13:59	18.45	-0.14	
2/6/24 14:00	18.22	-0.14	
2/6/24 14:01	18.08	-0.15	
2/6/24 14:02	18.16	-0.15	
2/6/24 14:03	17.50	-0.15	
2/6/24 14:04	17.92	-0.15	
2/6/24 14:05	18.72	-0.15	
2/6/24 14:06	17.98	-0.15	
2/6/24 14:07	17.97	-0.15	
2/6/24 14:08	17.86	-0.15	
2/6/24 14:09	17.81	-0.15	
2/6/24 14:10	17.70	-0.16	
2/6/24 14:11	17.93	-0.16	
2/6/24 14:12	18.37	-0.16	
2/6/24 14:13	17.34	-0.16	
2/6/24 14:14	17.84	-0.16	
2/6/24 14:15	18.00	-0.16	
2/6/24 14:16	17.47	-0.16	
2/6/24 14:17	17.25	-0.15	
2/6/24 14:18	17.83	-0.15	
2/6/24 14:19	18.12	-0.15	
2/6/24 14:20	17.49	-0.15	
2/6/24 14:21	18.05	-0.15	
2/6/24 14:22	18.31	-0.15	
2/6/24 14:23	17.39	-0.15	
2/6/24 14:24	17.62	-0.14	
2/6/24 14:25	17.89	-0.15	
2/6/24 14:26	17.86	-0.15	
2/6/24 14:27	17.72	-0.15	
2/6/24 14:28	17.28	-0.15	
2/6/24 14:29	17.57	-0.16	
2/6/24 14:30	17.44	-0.16	
2/6/24 14:31	18.08	-0.16	
2/6/24 14:32	18.29	-0.16	
2/6/24 14:33	17.20	-0.16	
2/6/24 14:34	17.74	-0.16	
2/6/24 14:35	18.53	-0.16	
2/6/24 14:36	18.07	-0.16	
2/6/24 14:37	17.95	-0.16	
2/6/24 14:38	16.86	-0.16	
2/6/24 14:39	17.54	-0.16	
2/6/24 14:40	17.72	-0.17	
2/6/24 14:41	17.93	-0.17	
2/6/24 14:42	17.95	-0.17	
2/6/24 14:43	18.01	-0.17	
2/6/24 14:44	17.65	-0.17	
2/6/24 14:45	17.78	-0.18	
2/6/24 14:46	17.76	-0.18	
2/6/24 14:47	17.70	-0.18	
2/6/24 14:48	18.33	-0.18	
2/6/24 14:49	17.90	-0.18	
2/6/24 14:50	17.59	-0.18	
2/6/24 14:51	18.11	-0.17	

XOM - Beaumont, TX
Unit 43 - 1-minute CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/6/24 14:52	17.87	-0.17	
2/6/24 14:53	17.36	-0.17	
2/6/24 14:54	17.75	-0.17	
2/6/24 14:55	17.77	-0.17	
2/6/24 14:56	18.14	-0.18	
2/6/24 14:57	17.53	-0.18	
2/6/24 14:58	18.01	-0.18	

XOM - Beaumont, TX
Unit 43 - 10-second CSV Data

DATE / TIME	O2 FTIR	CO2-FTIR	NOTES
2/6/24 7:00	17.80	0.18	
2/6/24 7:00	18.18	0.17	
2/6/24 7:00	18.03	0.18	
2/6/24 7:00	17.02	0.18	
2/6/24 7:00	17.12	0.18	
2/6/24 7:00	17.78	0.18	
2/6/24 7:01	17.51	0.18	
2/6/24 7:01	16.87	0.18	
2/6/24 7:01	17.26	0.18	
2/6/24 7:01	18.81	0.17	
2/6/24 7:01	18.84	0.18	
2/6/24 7:01	18.16	0.18	
2/6/24 7:02	17.18	0.18	
2/6/24 7:02	17.18	0.18	
2/6/24 7:02	17.44	0.18	
2/6/24 7:02	17.88	0.18	
2/6/24 7:02	18.38	0.18	
2/6/24 7:02	18.05	0.18	
2/6/24 7:03	18.06	0.17	
2/6/24 7:03	18.85	0.18	
2/6/24 7:03	19.21	0.18	
2/6/24 7:03	18.28	0.17	
2/6/24 7:03	17.88	0.18	
2/6/24 7:03	17.55	0.18	
2/6/24 7:04	17.16	0.18	
2/6/24 7:04	17.68	0.18	
2/6/24 7:04	17.95	0.18	
2/6/24 7:04	19.00	0.18	
2/6/24 7:04	19.51	0.18	
2/6/24 7:04	19.41	0.17	
2/6/24 7:05	18.95	0.18	
2/6/24 7:05	18.82	0.17	
2/6/24 7:05	18.14	0.18	
2/6/24 7:05	17.53	0.18	
2/6/24 7:05	17.11	0.18	
2/6/24 7:05	16.92	0.18	
2/6/24 7:06	17.53	0.18	
2/6/24 7:06	18.01	0.18	
2/6/24 7:06	18.03	0.18	
2/6/24 7:06	17.18	0.18	
2/6/24 7:06	17.27	0.18	
2/6/24 7:06	18.05	0.18	
2/6/24 7:07	19.04	0.17	
2/6/24 7:07	18.27	0.18	
2/6/24 7:07	16.77	0.18	
2/6/24 7:07	16.53	0.18	
2/6/24 7:07	18.14	0.18	
2/6/24 7:07	18.42	0.18	
2/6/24 7:08	17.66	0.18	
2/6/24 7:08	17.11	0.19	
2/6/24 7:08	16.86	0.20	
2/6/24 7:08	17.18	0.19	
2/6/24 7:08	17.67	0.20	
2/6/24 7:08	17.94	0.19	
2/6/24 7:09	18.50	0.20	
2/6/24 7:09	18.21	0.20	
2/6/24 7:09	17.59	0.20	
2/6/24 7:09	17.08	0.20	
2/6/24 7:09	17.04	0.20	

XOM - Beaumont, TX
Unit 43 - 10-second CSV Data

2/6/24 7:09	17.05	0.20	Calibration Error
2/6/24 7:10	17.33	0.19	
2/6/24 7:10	17.80	0.20	
2/6/24 7:10	18.58	0.20	
2/6/24 7:10	3.65	0.16	
2/6/24 7:10	0.22	0.08	
2/6/24 7:10	0.22	0.08	
2/6/24 7:11	0.21	0.08	
2/6/24 7:11	0.21	0.08	
2/6/24 7:11	0.21	0.08	
2/6/24 7:11	0.14	0.08	
2/6/24 7:11	0.03	0.08	
2/6/24 7:11	0.01	0.08	
2/6/24 7:12	0.02	0.06	
2/6/24 7:12	0.01	0.01	
2/6/24 7:12	0.01	0.01	Zero
2/6/24 7:12	0.01	0.01	
2/6/24 7:12	0.01	0.01	
2/6/24 7:12	0.01	0.01	
2/6/24 7:13	0.00	0.07	
2/6/24 7:13	12.75	11.03	High
2/6/24 7:13	18.70	18.80	
2/6/24 7:13	19.36	19.44	
2/6/24 7:13	19.35	19.57	
2/6/24 7:13	19.27	19.34	
2/6/24 7:14	19.08	19.01	
2/6/24 7:14	18.36	18.48	
2/6/24 7:14	18.49	18.63	
2/6/24 7:14	18.03	18.18	
2/6/24 7:14	17.67	17.50	
2/6/24 7:14	17.13	17.15	
2/6/24 7:15	9.43	9.14	
2/6/24 7:15	0.03	0.32	
2/6/24 7:15	0.01	6.91	
2/6/24 7:15	13.20	22.31	
2/6/24 7:15	22.00	22.18	
2/6/24 7:15	22.00	22.06	
2/6/24 7:16	21.99	21.99	Mid
2/6/24 7:16	21.99	21.98	
2/6/24 7:16	21.99	21.98	
2/6/24 7:16	21.99	21.97	
2/6/24 7:16	15.89	15.78	
2/6/24 7:16	10.97	12.59	Run 1 Pre-Bias
2/6/24 7:17	10.97	12.67	
2/6/24 7:17	10.99	12.79	
2/6/24 7:17	10.99	12.78	
2/6/24 7:17	10.99	12.78	
2/6/24 7:17	10.98	11.03	Zero
2/6/24 7:17	10.97	11.02	
2/6/24 7:18	10.98	11.02	
2/6/24 7:18	7.20	6.81	
2/6/24 7:18	-0.01	0.23	
2/6/24 7:18	-0.02	0.23	Zero
2/6/24 7:18	-0.02	0.22	
2/6/24 7:18	-0.02	0.22	
2/6/24 7:19	-0.02	0.21	
2/6/24 7:19	-0.02	0.03	
2/6/24 7:19	-0.02	0.01	Zero
2/6/24 7:19	-0.02	0.00	

XOM - Beaumont, TX
Unit 43 - 10-second CSV Data

2/6/24 7:19	0.18	0.02	
2/6/24 7:19	10.64	10.09	
2/6/24 7:20	10.96	10.81	
2/6/24 7:20	10.95	10.95	
2/6/24 7:20	10.98	11.03	Span
2/6/24 7:20	10.98	11.05	
2/6/24 7:20	10.96	11.03	
2/6/24 7:20	10.86	10.54	
2/6/24 7:21	10.63	7.28	
2/6/24 7:21	10.52	6.79	
2/6/24 7:21	10.45	6.67	
2/6/24 7:21	10.36	6.56	
2/6/24 7:21	10.33	6.56	
2/6/24 7:21	10.35	6.58	
2/6/24 7:22	10.32	6.56	
2/6/24 7:22	10.30	6.55	
2/6/24 7:22	10.29	6.55	
2/6/24 7:22	10.31	6.54	
2/6/24 7:22	10.27	6.54	
2/6/24 7:22	10.27	6.53	
2/6/24 7:23	10.27	6.53	
2/6/24 7:23	10.26	6.52	
2/6/24 7:23	10.27	6.52	
2/6/24 7:23	10.25	6.52	
2/6/24 7:23	10.24	6.51	
2/6/24 7:23	10.25	6.51	
2/6/24 7:24	10.25	6.49	
2/6/24 7:24	10.24	6.50	
2/6/24 7:24	10.24	6.49	
2/6/24 7:24	10.24	6.49	
2/6/24 7:24	10.24	6.48	
2/6/24 7:24	10.23	6.48	
2/6/24 7:25	10.23	6.47	
2/6/24 7:25	10.23	6.47	
2/6/24 7:25	10.22	6.47	
2/6/24 7:25	10.23	6.46	
2/6/24 7:25	10.23	6.46	
2/6/24 7:25	10.23	6.46	
2/6/24 7:26	10.22	6.45	
2/6/24 7:26	10.23	6.45	
2/6/24 7:26	10.22	6.45	
2/6/24 7:26	10.23	6.45	
2/6/24 7:26	10.23	6.44	
2/6/24 7:26	10.24	6.44	
2/6/24 7:27	10.23	6.44	
2/6/24 7:27	10.23	6.44	
2/6/24 7:27	10.22	6.44	
2/6/24 7:27	10.23	6.43	
2/6/24 7:27	10.22	6.43	
2/6/24 7:27	10.23	6.43	
2/6/24 7:28	10.23	6.43	
2/6/24 7:28	10.23	6.42	
2/6/24 7:28	10.23	6.42	
2/6/24 7:28	10.24	6.42	
2/6/24 7:28	10.23	6.41	
2/6/24 7:28	10.24	6.41	
2/6/24 7:29	10.23	6.41	
2/6/24 7:29	10.25	6.41	
2/6/24 7:29	10.25	6.41	
2/6/24 7:29	10.25	6.41	

XOM - Beaumont, TX
Unit 43 - 10-second CSV Data

2/6/24 7:29	10.25	6.41	
2/6/24 7:29	10.25	6.40	
2/6/24 7:30	10.25	6.40	
2/6/24 7:30	10.26	6.41	
2/6/24 7:30	10.25	6.40	
2/6/24 7:30	10.25	6.39	
2/6/24 7:30	10.26	6.39	
2/6/24 7:30	10.27	6.40	
2/6/24 10:39	12.10	2.54	
2/6/24 10:39	8.55	1.51	Run 1 Post-Bias
2/6/24 10:39	5.39	0.86	
2/6/24 10:39	3.35	0.48	
2/6/24 10:39	1.91	0.19	
2/6/24 10:40	1.08	0.07	
2/6/24 10:40	0.66	-0.01	
2/6/24 10:40	0.41	-0.06	
2/6/24 10:40	0.25	-0.09	
2/6/24 10:40	0.16	-0.11	
2/6/24 10:40	0.10	-0.12	
2/6/24 10:41	0.07	-0.12	
2/6/24 10:41	0.05	-0.13	
2/6/24 10:41	0.03	-0.13	
2/6/24 10:41	0.02	-0.13	
2/6/24 10:41	0.02	-0.13	
2/6/24 10:41	0.02	-0.13	
2/6/24 10:42	0.01	-0.14	
2/6/24 10:42	0.01	-0.14	
2/6/24 10:42	0.01	-0.14	
2/6/24 10:42	0.01	-0.14	
2/6/24 10:42	0.01	-0.14	
2/6/24 10:42	0.02	-0.14	
2/6/24 10:43	0.01	-0.14	
2/6/24 10:43	0.01	-0.14	
2/6/24 10:43	0.01	-0.14	
2/6/24 10:43	0.01	-0.14	
2/6/24 10:43	0.01	-0.14	
2/6/24 10:43	0.01	-0.14	
2/6/24 10:43	0.01	-0.14	
2/6/24 10:44	0.01	-0.14	
2/6/24 10:44	0.01	-0.14	
2/6/24 10:44	0.01	-0.14	
2/6/24 10:44	0.01	-0.14	Zero
2/6/24 10:44	0.01	-0.14	
2/6/24 10:44	0.01	-0.14	
2/6/24 10:45	0.01	-0.14	
2/6/24 10:45	0.01	-0.14	
2/6/24 10:45	0.02	-0.14	
2/6/24 10:45	0.01	-0.15	
2/6/24 10:45	0.01	-0.15	
2/6/24 10:45	0.01	-0.15	
2/6/24 10:46	0.01	-0.15	
2/6/24 10:46	0.01	-0.15	
2/6/24 10:46	0.01	-0.15	
2/6/24 10:46	0.01	-0.14	
2/6/24 10:46	0.88	0.78	
2/6/24 10:46	4.00	3.44	
2/6/24 10:47	6.19	5.21	
2/6/24 10:47	7.69	6.50	
2/6/24 10:47	8.73	7.45	
2/6/24 10:47	9.45	8.06	

XOM - Beaumont, TX
Unit 43 - 10-second CSV Data

2/6/24 10:47	9.95	8.47	
2/6/24 10:47	10.26	8.73	
2/6/24 10:48	10.48	8.91	
2/6/24 10:48	10.61	9.04	
2/6/24 10:48	10.71	9.12	
2/6/24 10:48	10.77	9.16	
2/6/24 10:48	10.81	9.20	
2/6/24 10:48	10.84	9.23	
2/6/24 10:49	10.85	9.24	
2/6/24 10:49	10.88	9.26	
2/6/24 10:49	10.87	9.26	
2/6/24 10:49	10.88	9.27	
2/6/24 10:49	10.89	9.27	
2/6/24 10:49	10.88	10.91	
2/6/24 10:50	10.90	10.91	Span
2/6/24 10:50	11.24	10.91	
2/6/24 10:50	12.00	6.16	
2/6/24 10:50	12.89	5.00	
2/6/24 10:50	13.42	4.55	
2/6/24 10:50	13.60	4.10	
2/6/24 10:51	15.65	0.95	
2/6/24 10:51	19.08	-0.02	
2/6/24 10:51	19.17	-0.03	
2/6/24 10:51	18.16	-0.03	
2/6/24 10:51	18.00	-0.03	
2/6/24 10:51	18.04	-0.03	
2/6/24 10:52	18.48	-0.03	
2/6/24 10:52	18.68	-0.04	
2/6/24 10:52	18.58	-0.03	
2/6/24 10:52	17.50	-0.03	
2/6/24 10:52	17.16	-0.03	
2/6/24 10:52	17.32	-0.03	
2/6/24 10:53	17.28	-0.03	
2/6/24 10:53	17.68	-0.03	
2/6/24 10:53	18.00	-0.05	
2/6/24 10:53	18.62	-0.07	
2/6/24 10:53	18.68	-0.07	
2/6/24 10:53	17.17	-0.06	
2/6/24 10:54	16.51	-0.06	
2/6/24 10:54	17.22	-0.06	
2/6/24 10:54	18.14	-0.04	
2/6/24 10:54	18.77	-0.05	
2/6/24 10:54	18.30	-0.05	
2/6/24 10:54	16.15	0.05	
2/6/24 10:55	7.27	0.80	
2/6/24 10:55	6.47	1.63	
2/6/24 10:55	7.80	2.28	
2/6/24 10:55	9.51	2.70	
2/6/24 10:55	10.91	2.98	
2/6/24 10:55	11.90	3.16	
2/6/24 10:56	12.53	3.26	
2/6/24 10:56	12.93	3.34	
2/6/24 10:56	13.20	3.38	
2/6/24 10:56	13.41	3.41	
2/6/24 10:56	13.45	3.43	
2/6/24 10:56	13.50	3.44	
2/6/24 11:57	13.60	3.48	
2/6/24 11:57	13.63	3.48	
2/6/24 11:57	13.59	3.47	

XOM - Beaumont, TX
Unit 43 - 10-second CSV Data

2/6/24 11:57	13.63	3.48	
2/6/24 11:57	13.62	3.48	
2/6/24 11:57	13.62	3.48	
2/6/24 11:58	13.25	3.15	
2/6/24 11:58	11.24	2.32	
2/6/24 11:58	8.29	1.59	Run 2 Post-Bias
2/6/24 11:58	5.89	1.10	
2/6/24 11:58	4.22	0.76	
2/6/24 11:58	2.98	0.49	
2/6/24 11:59	1.97	0.25	
2/6/24 11:59	1.26	0.13	
2/6/24 11:59	0.84	0.06	
2/6/24 11:59	0.59	0.01	
2/6/24 11:59	0.43	-0.02	
2/6/24 11:59	0.32	-0.04	
2/6/24 12:00	0.26	-0.06	
2/6/24 12:00	0.22	-0.06	
2/6/24 12:00	0.19	-0.07	
2/6/24 12:00	0.17	-0.07	
2/6/24 12:00	0.17	-0.07	
2/6/24 12:00	0.17	-0.07	
2/6/24 12:01	0.16	-0.07	
2/6/24 12:01	0.16	-0.07	
2/6/24 12:01	0.15	-0.08	
2/6/24 12:01	0.14	-0.08	
2/6/24 12:01	0.14	-0.08	
2/6/24 12:01	0.13	-0.08	
2/6/24 12:02	0.13	-0.09	
2/6/24 12:02	0.12	-0.09	
2/6/24 12:02	0.13	-0.08	
2/6/24 12:02	0.14	-0.08	
2/6/24 12:02	0.14	-0.08	
2/6/24 12:02	0.12	-0.09	
2/6/24 12:03	0.08	-0.10	
2/6/24 12:03	0.06	-0.11	
2/6/24 12:03	0.05	-0.11	
2/6/24 12:03	0.04	-0.11	
2/6/24 12:03	0.03	-0.11	
2/6/24 12:03	0.02	-0.12	
2/6/24 12:04	0.03	-0.12	
2/6/24 12:04	0.02	-0.12	
2/6/24 12:04	0.02	-0.11	
2/6/24 12:04	0.02	-0.11	
2/6/24 12:04	0.02	-0.12	
2/6/24 12:04	0.02	-0.11	
2/6/24 12:05	0.02	-0.12	
2/6/24 12:05	0.02	-0.12	
2/6/24 12:05	0.02	-0.12	
2/6/24 12:05	0.02	-0.12	Zero
2/6/24 12:05	0.02	-0.12	
2/6/24 12:05	0.02	-0.12	
2/6/24 12:06	0.02	-0.12	
2/6/24 12:06	0.02	-0.12	
2/6/24 12:06	0.02	-0.12	
2/6/24 12:06	0.02	-0.12	
2/6/24 12:06	0.02	-0.12	
2/6/24 12:06	0.02	-0.12	
2/6/24 12:07	0.02	-0.11	
2/6/24 12:07	0.02	-0.12	
2/6/24 12:07	0.02	-0.12	

XOM - Beaumont, TX
Unit 43 - 10-second CSV Data

2/6/24 12:07	0.02	-0.12	
2/6/24 12:07	0.02	-0.12	
2/6/24 12:07	0.03	-0.05	
2/6/24 12:08	3.92	4.55	
2/6/24 12:08	8.13	7.21	
2/6/24 12:08	9.51	8.16	
2/6/24 12:08	10.02	8.56	
2/6/24 12:08	10.32	8.80	
2/6/24 12:08	10.51	8.98	
2/6/24 12:09	10.63	9.08	
2/6/24 12:09	10.72	9.17	
2/6/24 12:09	10.78	9.23	
2/6/24 12:09	10.83	10.92	
2/6/24 12:09	10.87	10.92	Span
2/6/24 12:09	10.90	10.91	
2/6/24 12:10	10.91	9.33	
2/6/24 12:10	10.92	9.34	
2/6/24 12:10	10.92	9.34	
2/6/24 12:10	10.91	9.33	
2/6/24 12:10	10.91	9.31	
2/6/24 12:10	10.91	9.30	
2/6/24 12:11	10.91	9.29	
2/6/24 12:11	10.91	9.28	
2/6/24 12:11	9.92	6.89	
2/6/24 12:11	6.97	4.47	
2/6/24 12:11	4.69	2.93	
2/6/24 12:11	3.07	1.98	
2/6/24 12:12	2.10	1.35	
2/6/24 12:12	1.37	0.81	
2/6/24 12:12	0.84	0.43	
2/6/24 12:12	0.50	0.22	
2/6/24 12:12	0.31	0.10	
2/6/24 12:12	0.20	0.02	
2/6/24 12:13	0.12	-0.02	
2/6/24 12:13	0.09	-0.05	
2/6/24 12:13	0.06	-0.07	
2/6/24 12:13	0.04	-0.08	
2/6/24 12:13	0.03	-0.09	
2/6/24 12:13	0.02	-0.10	
2/6/24 12:14	0.02	-0.10	
2/6/24 12:14	0.02	-0.11	
2/6/24 12:14	0.01	-0.11	
2/6/24 12:14	0.02	-0.11	
2/6/24 12:14	0.02	-0.11	
2/6/24 12:14	0.02	-0.11	
2/6/24 12:15	0.01	-0.11	
2/6/24 12:15	0.02	-0.11	
2/6/24 12:15	0.01	-0.11	
2/6/24 12:15	0.02	-0.12	
2/6/24 12:15	0.02	-0.12	
2/6/24 12:15	0.02	-0.10	
2/6/24 12:16	0.72	0.48	
2/6/24 12:16	3.36	1.42	
2/6/24 12:16	6.55	2.23	
2/6/24 12:16	8.93	2.61	
2/6/24 12:16	10.47	2.91	
2/6/24 12:16	11.60	3.15	
2/6/24 12:17	12.34	3.27	
2/6/24 12:17	12.81	3.35	
2/6/24 12:17	13.12	3.40	

XOM - Beaumont, TX
Unit 43 - 10-second CSV Data

2/6/24 12:17	13.32	3.43	
2/6/24 12:17	13.45	3.45	
2/6/24 12:17	13.50	3.47	
2/6/24 13:18	13.56	3.50	
2/6/24 13:18	13.60	3.50	
2/6/24 13:18	13.57	3.50	
2/6/24 13:18	13.59	3.50	
2/6/24 13:18	13.60	3.49	
2/6/24 13:18	13.58	3.49	
2/6/24 13:19	12.80	2.88	Run 3 Post-Bias
2/6/24 13:19	8.05	1.47	
2/6/24 13:19	4.50	0.85	
2/6/24 13:19	2.76	0.52	
2/6/24 13:19	1.76	0.30	
2/6/24 13:19	1.12	0.15	
2/6/24 13:20	0.70	0.06	
2/6/24 13:20	0.45	0.00	
2/6/24 13:20	0.29	-0.04	
2/6/24 13:20	0.19	-0.07	
2/6/24 13:20	0.12	-0.08	
2/6/24 13:20	0.08	-0.09	
2/6/24 13:21	0.05	-0.10	Zero
2/6/24 13:21	0.03	-0.10	
2/6/24 13:21	0.02	-0.11	
2/6/24 13:21	0.01	-0.11	
2/6/24 13:21	0.00	-0.11	
2/6/24 13:21	8.48	0.01	
2/6/24 13:22	17.50	0.02	
2/6/24 13:22	18.60	0.05	
2/6/24 13:22	18.75	0.02	
2/6/24 13:22	18.35	0.02	
2/6/24 13:22	17.85	0.02	
2/6/24 13:22	17.28	0.02	
2/6/24 13:23	17.67	0.02	
2/6/24 13:23	18.53	0.02	
2/6/24 13:23	18.46	0.02	
2/6/24 13:23	17.51	0.02	
2/6/24 13:23	18.38	0.01	
2/6/24 13:23	18.66	0.02	
2/6/24 13:24	17.77	0.01	
2/6/24 13:24	16.73	0.01	
2/6/24 13:24	16.84	0.01	
2/6/24 13:24	17.95	0.02	
2/6/24 13:24	18.67	0.01	
2/6/24 13:24	18.93	0.01	
2/6/24 13:25	18.69	0.01	
2/6/24 13:25	18.60	0.01	
2/6/24 13:25	18.23	0.01	
2/6/24 13:25	17.99	0.02	
2/6/24 13:25	17.86	0.01	
2/6/24 13:25	17.49	0.01	
2/6/24 13:26	17.49	0.02	
2/6/24 13:26	18.27	0.01	
2/6/24 13:26	18.63	0.01	
2/6/24 13:26	18.75	0.01	
2/6/24 13:26	18.41	0.01	
2/6/24 13:26	17.74	0.01	
2/6/24 13:27	16.80	0.00	
2/6/24 13:27	16.71	0.01	

XOM - Beaumont, TX
Unit 43 - 10-second CSV Data

2/6/24 13:27	18.09	0.01	
2/6/24 13:27	19.33	0.01	
2/6/24 13:27	18.25	0.01	
2/6/24 13:27	17.85	0.00	
2/6/24 13:28	18.25	0.01	
2/6/24 13:28	18.41	0.01	
2/6/24 13:28	18.75	0.01	
2/6/24 13:28	18.99	0.01	
2/6/24 13:28	18.62	0.01	
2/6/24 13:28	18.57	0.01	
2/6/24 13:29	18.11	0.01	
2/6/24 13:29	17.80	0.01	
2/6/24 13:29	17.65	0.01	
2/6/24 13:29	18.38	0.01	
2/6/24 13:29	19.19	0.00	
2/6/24 13:29	19.59	0.01	
2/6/24 13:30	19.14	0.01	
2/6/24 13:30	17.68	0.01	
2/6/24 13:30	17.17	0.01	
2/6/24 13:30	18.17	0.01	
2/6/24 13:30	18.56	0.01	
2/6/24 13:30	18.32	0.00	
2/6/24 13:31	18.69	0.00	
2/6/24 13:31	18.40	0.00	
2/6/24 13:31	18.50	0.00	
2/6/24 13:31	18.24	0.00	
2/6/24 13:31	18.31	0.00	
2/6/24 13:31	18.41	0.00	
2/6/24 13:32	17.80	0.00	
2/6/24 13:32	17.32	0.00	
2/6/24 13:32	18.08	0.00	
2/6/24 13:32	18.78	0.00	
2/6/24 13:32	18.44	0.00	
2/6/24 13:32	17.11	0.01	
2/6/24 13:33	16.49	0.01	
2/6/24 13:33	17.05	0.01	
2/6/24 13:33	18.13	0.01	
2/6/24 13:33	18.13	0.03	
2/6/24 13:33	18.12	0.03	
2/6/24 13:33	18.09	0.04	
2/6/24 13:34	18.26	0.04	
2/6/24 13:34	18.25	0.04	
2/6/24 13:34	18.42	0.04	
2/6/24 13:34	18.39	0.04	
2/6/24 13:34	18.27	0.04	
2/6/24 13:34	17.75	0.04	
2/6/24 13:35	17.97	0.67	
2/6/24 13:35	13.91	9.18	
2/6/24 13:35	11.02	9.29	
2/6/24 13:35	10.90	9.31	
2/6/24 13:35	10.89	9.75	
2/6/24 13:35	10.93	11.03	
2/6/24 13:36	10.92	11.04	O2 Span
2/6/24 13:36	10.92	11.05	
2/6/24 13:36	10.91	11.07	
2/6/24 13:36	10.91	11.05	
2/6/24 13:36	10.91	11.03	
2/6/24 13:36	10.92	11.02	
2/6/24 13:37	10.92	11.01	
2/6/24 13:37	10.92	11.00	

XOM - Beaumont, TX
Unit 43 - 10-second CSV Data

2/6/24 13:37	10.91	10.98	
2/6/24 13:37	10.91	10.96	
2/6/24 13:37	10.90	10.95	
2/6/24 13:37	10.90	10.92	CO2 Span
2/6/24 13:38	10.91	10.92	
2/6/24 13:38	10.91	10.90	
2/6/24 13:38	10.92	10.84	
2/6/24 13:38	10.92	10.71	
2/6/24 13:38	10.92	10.50	
2/6/24 13:38	10.93	10.01	
2/6/24 13:39	10.98	9.34	
2/6/24 13:39	11.01	8.76	
2/6/24 13:39	11.09	8.20	
2/6/24 13:39	11.25	7.61	
2/6/24 13:39	11.39	7.05	
2/6/24 13:39	11.58	6.48	
2/6/24 13:40	11.83	5.94	
2/6/24 13:40	12.06	5.42	
2/6/24 13:40	12.40	4.69	
2/6/24 13:40	14.75	2.61	
2/6/24 13:40	18.22	0.10	
2/6/24 13:40	18.76	0.09	
2/6/24 13:41	19.12	0.09	
2/6/24 13:41	19.10	0.08	
2/6/24 13:41	18.92	0.07	
2/6/24 13:41	18.55	0.07	
2/6/24 13:41	17.33	0.07	
2/6/24 13:41	17.06	-0.06	
2/6/24 13:42	17.00	-0.09	
2/6/24 13:42	17.53	-0.09	
2/6/24 13:42	18.03	-0.09	
2/6/24 13:42	18.17	-0.08	
2/6/24 13:42	18.16	-0.09	
2/6/24 13:42	18.25	-0.09	
2/6/24 13:43	17.81	-0.09	
2/6/24 13:43	17.39	-0.09	
2/6/24 13:43	17.06	-0.09	
2/6/24 13:43	17.44	-0.09	
2/6/24 13:43	17.74	-0.09	
2/6/24 13:43	16.66	-0.09	
2/6/24 13:44	16.13	-0.09	
2/6/24 13:44	16.77	-0.09	
2/6/24 13:44	17.57	-0.09	
2/6/24 13:44	17.73	-0.09	
2/6/24 13:44	17.93	-0.09	
2/6/24 13:44	18.19	-0.09	
2/6/24 13:45	18.47	-0.09	
2/6/24 13:45	18.14	-0.10	
2/6/24 13:45	17.28	-0.10	
2/6/24 13:45	17.58	-0.10	
2/6/24 13:45	18.16	-0.10	
2/6/24 13:45	18.43	-0.10	

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