Source Test Report

BCP Ingredients
299 Extension St
Verona, MO 65769

Source Tested: Ethylene Oxide Scrubber
Test Dates: February 13-17, 2023

Project No. AST-2023-0231R1

Prepared By
Alliance Technical Group, LLC
1355 Sherman Road, Suite 300
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Source Information

Source Name	*Test Locations*	*Target Parameter*
Ethylene Oxide (EtO) Scrubber	Inlet and Outlet	EtO

Contact Information

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Verona, MO 65769

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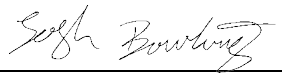
Alliance Technical Group, LLC (Alliance) has completed the source testing as described in this report. Results apply only to the source(s) tested and operating condition(s) for the specific test date(s) and time(s) identified within this report. All results are intended to be considered in their entirety, 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.



Josh Bowling
Alliance Technical Group, LLC

Date

TABLE OF CONTENTS

1.0 Introduction 1-1
1.1 Project Team 1-1
1.2 Site Specific Test Plan & Notification 1-1
1.3 Test Program Notes 1-1
1.4 Report Revision Notes 1-1
2.0 Summary of Results 2-1
3.0 Testing Methodology 3-1
3.1 U.S. EPA Reference Test Methods 1A and 2A – Sampling/Traverse Points and Volumetric Flow Rate 3-1
3.2 U.S. EPA Reference Test Method 3A – Oxygen/Carbon Dioxide 3-1
3.3 U.S. EPA Reference Test Method 320 – Moisture Content & Ethylene Oxide 3-2
3.4 Quality Assurance/Quality Control – U.S. EPA Reference Test Method 3A 3-2
3.5 Quality Assurance/Quality Control – U.S. EPA Reference Method 320 3-3

LIST OF TABLES

Table 1-1: Project Team 1-1
Table 2-1: Summary of Results 2-1
Table 2-2: Summary of Results – Full Test Period 2-2
Table 3-1: Source Testing Methodology 3-1

APPENDICES

Appendix A Sample Calculations
Appendix B Field Data
Appendix C Quality Assurance/Quality Control Data
Appendix D Process Operating/Venting Log
Appendix E SSTP and Associated Documentation

Introduction

1.0 Introduction

Alliance Technical Group, LLC (Alliance) was retained by BCP Ingredients (BCP) to conduct voluntary performance testing at the facility located in Verona, Missouri. Testing was conducted to determine the emission rate of ethylene oxide (EtO) at the inlet and exhaust of the EtO scrubber over a 96-hour period.

This testing was performed voluntarily by BCP. BCP voluntarily coordinated this testing with the U.S. Environmental Protection Agency (EPA) and the Missouri Department of Natural Resources (MDNR). Both agencies were present to observe the test.

1.1 Project Team

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

Table 1-1: Project Team

Facility Personnel	Shawn Thomas
Regulatory Personnel	Chris Appier (EPA) Mychel Varner (MoDNR)
Alliance Personnel	Josh Bowling Blake Borchers Austin Smith

1.2 Site Specific Test Plan & Notification

Testing was conducted in accordance with the Site-Specific Voluntary Performance Test Plan (SSTP).

1.3 Test Program Notes

Inlet Flow time was 5 minutes faster than the outlet flow time. Outlet Fourier transform infrared (FTIR) data stopped logging at midnight on February 14, 2023 due to an unexpected forced computer update. FTIR logging came back online at approximately 0700 on February 15, 2023. The "Greyed" out sections in the mornings were due to calibrating and performing health checks.

1.4 Report Revision Notes

This report was revised on 6/14/2023 (R1). A small section of outlet FTIR data recorded on 2/13/23, exceeded the upper calibration limits of the FTIR. This data has been replaced with calculated data and re-averaged.

Summary of Results

2.0 Summary of Results

Alliance conducted voluntary performance testing at the BCP facility in Verona, MO on February 13-17, 2023. Testing consisted of determining the emission rate of EtO at the inlet and exhaust of the EtO scrubber over a 96-hour period. Full minute data logs can be found in Appendix B.

Table 2-1 provides a summary of the emission testing results. Any difference between the summary results listed in the following table and the detailed results contained in appendices is due to rounding for presentation.

Table 2-1: Summary of Results

Date	02/13/23	02/13/23*	02/14/23	02/15/23	02/16/23	02/17/23
EtO Data						
Inlet Concentration, ppmvd	7,829.4	4,523.7	11,518.4	14,646.7	27,953.5	9,080.3
Inlet Emission Rate, lb/hr	2.13	1.21	0.74	2.24	1.16	2.86
Outlet Concentration, ppmvd	332.9	48.4	4.5	1.1	0.3	4.9
Outlet Emission Rate, lb/hr	0.34	0.05	0.003	0.001	0.0004	0.009
Reduction Efficiency, %	83.99	95.88	99.53	99.96	99.96	99.69
Volumetric Flow Rate Data						
Inlet VFR, dscfm	39.7	39.1	9.34	22.28	6.05	45.9
Outlet VFR, dscfm	149.5	150.4	112.1	116.1	194.0	265.3
Oxygen Data						
Inlet Concentration, % dry	12.77	12.76	19.17	16.09	15.02	12.25
Outlet Concentration, % dry	17.75	17.75	20.97	19.99	21.24	18.57
Carbon Dioxide Data						
Inlet Concentration, % dry	0.03	0.02	0.02	0.05	0.03	0.02
Outlet Concentration, % dry	0.00	0.00	0.01	0.00	0.02	0.01

* Averages exclude data from 14:49-15:25 during a railcar unloading event.

Unit Definitions: ppmvd – parts per million by volume dry;
lb/hr – pounds per hour;
ft/sec – feet per second;
dscfm – dry standard cubic feet per minute;
°F - Fahrenheit

Table 2-2: Summary of Results – Full Test Period

Date	**02/13/23 (09:00) - 02/17/23 (09:00)**
EtO Data	
Inlet Concentration, ppmvd	15,540.3
Inlet Emission Rate, lb/hr	2.14
Outlet Concentration, ppmvd	58.68
Outlet Emission Rate, lb/hr	0.063
Reduction Efficiency, %	97.03
Volumetric Flow Rate Data	
Inlet VFR, dscfm	20
Outlet VFR, dscfm	158
Oxygen Data	
Inlet Concentration, % dry	15.80
Outlet Concentration, % dry	20.12
Carbon Dioxide Data	
Inlet Concentration, % dry	0.03
Outlet Concentration, % dry	0.04

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 C.

Table 3-1: Source Testing Methodology

Parameter	U.S. EPA Reference Test Methods	Notes/Remarks
Volumetric Flow Rate	1A & 2A	--
Oxygen & Carbon Dioxide	3A	Instrumental Analysis
Moisture Content & EtO	320	FTIR

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

Please refer to Appendix E for pictures of the scrubber inlet and outlet test ports.

Due to the inherent safety risk of EtO exposure, Alliance utilized a supplied air respirator (SAR) system to access sampling locations. Furthermore, the port was equipped with a 2-inch ball valve and connections capable of sealing the probe in a stationary position throughout the duration of the test program.

Differential Pressure was continuously measured in inches – water column (in. WC) and recorded from a single point using an S type pitot tube and a Shortridge model ADM-880C digital multimeter. Stack temperature was continuously measured and recorded from a single point using a K-type thermocouple and data acquisition system (DAS). Velocity measurements were recorded in ~1-minute increments to coincide with gas pollutant measurements.

Gas concentration, differential pressure and temperature measurements were sampled from a custom probe containing an S-type Pitot tube, thermocouple, and gas sampling tube enclosed in a 1-inch over sheath, allowing entry into the sample location while sufficiently sealing the entry point to limit exposure to the gas stream.

The scrubber flow profile is intermittent as a result of process induced purge and blowdown events. Because of this, the duration of the sampling program, the small duct diameters, and safety considerations, full velocity traverses were not performed. Instead, continuous velocity readings were obtained to better characterize the gas and flow profile, lag time, and specific process induced EtO emissions over the course of normal operations.

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

The oxygen (O_2) and carbon dioxide (CO_2) 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 3.4.

3.3 U.S. EPA Reference Test Method 320 – Moisture Content & Ethylene Oxide

The concentrations of moisture content & EtO were 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 3.5.

3.4 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 C.

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.

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.

3.5 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 C.

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 Full Width Half Height (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 surrogate spiking analyte EtO was recorded. Spike gas was introduced to the sampling system at a constant flow rate ≤ 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 ± 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: Sample Calculations

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Run No. /Method Run 1 / Method 320

Ethylene Oxide - Outlet Concentration (CC2H4O), ppmvd

$$C_{C2H4O} = \frac{C_{C2H4Ow}}{1 - BWS}$$

where,

C_{C2H4Ow}	14.4	= Ethylene Oxide - Outlet Concentration, ppmvw
BWS	0.005	= moisture fraction, unitless
C_{C2H4O}	14.5	= ppmvd

Ethylene Oxide - Outlet Emission Rate (ERC2H4O), lb/hr

$$ER_{C2H4O} = \frac{C_{C2H4O} \times MW \times Qs \times 60 \ \frac{min}{hr} \times 28.32 \ \frac{L}{ft}}{24.04 \ \frac{L}{-mole} \times 1.0E06 \times 454_{\frac{}{h}}}$$

where,

C_{C2H4O}	14.5	= Ethylene Oxide - Outlet Concentration, ppmvd
MW	44.05	= C2H4O molecular weight, g/g-mole
Qs	158	= stack gas volumetric flow rate at standard conditions, dscfm
ER_{C2H4O}	0.016	= lb/hr

Location	**BCP Ingredients - Verona, MO**
Source	**Ethylene Oxide Scrubber**
Project No.	**2023-0231**
Run No.	**1**
Parameter(s)	**VFR**

Absolute Stack Gas Pressure (Ps), in. Hg

$$Ps = Pb + \frac{Pg}{13.6}$$

where,

Pb	28.66	= barometric pressure, in. Hg
Pg	0.30	= static pressure, in. H_2O
Ps	28.68	= in. Hg

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

$$BWSsat = \frac{10^{6.37-\left(\frac{2,827}{Ts+365}\right)}}{Ps}$$

where,

Ts	45.7	= stack temperature, °F
Ps	28.7	= absolute stack gas pressure, in. Hg
BWSsat	0.010	= dimensionless

Moisture Fraction (BWS), dimensionless

$$BWS = BWSmsd \text{ unless } BWSsat < BWSmsd$$

where,

BWSsat	0.010	= moisture fraction (theoretical at saturated conditions)
BWSmsd	0.005	= moisture fraction (measured)
BWS	0.005	

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

$$Md = (0.44 \times \%\,CO_2) + (0.32 \times \%\,O2) + (0.28\,(100 - \%\,CO_2 - \%\,O2))$$

where,

CO_2	21.4	= carbon dioxide concentration, %
O_2	0.0	= oxygen concentration, %
Md	28.86	= lb/lb mol

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

$$Ms = Md\ (1 - BWS) + 18.015\ (BWS)$$

where,

Md	28.86	= molecular weight (DRY), lb/lb mol
BWS	0.005	= moisture fraction, dimensionless
Ms	28.81	= lb/lb mol

Average Velocity (Vs), ft/sec

$$Vs = 85.49 \times Cp \times (\Delta P^{1/2})\,avg \times \sqrt{\frac{Ts}{Ps \times Ms}}$$

where,

Cp	0.84	= pitot tube coefficient
$\Delta P^{1/2}$	0.312	= velocity head of stack gas, $(\text{in. } H_2O)^{1/2}$
Ts	505.4	= absolute stack temperature, °R
Ps	28.68	= absolute stack gas pressure, in. Hg
Ms	28.81	= molecular weight of stack gas, lb/lb mol
Vs	17.5	= ft/sec

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

$$Qsd = 17.636 \times (60 \times Vs \times As) \times (1 - BWS) \times \frac{Ps}{Ts}$$

where,

Vs	17.5	= stack gas velocity, ft/sec
As	0.12	= cross-sectional area of stack, ft^2
BWS	0.005	= moisture fraction, dimensionless
Ps	28.68	= absolute stack gas pressure, in. Hg
Ts	505.4	= absolute stack temperature, °R
Qs	129	= dscfm

Location BCP Ingredients - Verona, MO
Source(s) Ethylene Oxide Scrubber Inlet
Project No. AST-2023-0231
Date(s) 2/12/2023

CTS Recovery Value (CTS_R), %

$$\frac{CTS_{avg}}{CTS_{cy}} \times 100$$

Where,

CTS_{avg}	99.18	= average of all CTS calibration gas readings, ppm
CTS_{cyl}	102	= CTS bottle certified gas value, ppm
CTS_R	97.2%	= CTS recovery value, %

Spike Dilution Factor (DF), %

$$\frac{SF6_{spike} - SF6_{nat}}{SF6_{dir}} \times 100$$

Where,

$SF6_{dir}$	8.73	= average of direct tracer gas value readings
$SF6_{nat}$	0.001286	= average of native tracer gas value readings
$SF6_{spike}$	0.575062	= average of dynamic spike tracer gas value readings
DF	6.57%	= spike dilution factor, %

Calculated Spike ($Spike_{calc}$), ppm

$$(DF \times Analyte_{dir}) + (Analyt\ _{nat} \times (1 - DF))$$

Where,

DF.	0.065709	= spike dilution factor, %
$Analyte_{dir}$	469.12	= average of direct analyte gas values, ppm
Analyte $_{nat}$	1.89	= average of native analyte gas values, ppm
$Spike_{calc}$	32.60	= calculated spike, ppm value, ppm

Spike Recovery Value ($Spike_R$), %

$$\frac{Analyte_{spike}}{Spike_{calc}} \times 100$$

Where,

$Spike_{calc}$	32.60	= calculated spike, ppm value, ppm
$Analyte_{spike}$	30.71	= average of spiked analyte gas values, ppm
$Spike_R$	94.21%	= spike recovery value, %

Appendix B: Field Data

Location BCP Ingredients - Verona, MO
Source Ethylene Oxide Scrubber
Project No. 2023-0231

Run Number		Cycle Minus Rail Car Unloading
Test Dates		2/13/2023
Start Date / Time	2/13/2023	9:00
Stop Date / Time	2/13/2023	23:58
Input Data - Inlet		
Moisture Fraction, dimensionless (FTIR)	BWSI	2.251
Volumetric Flow Rate (M1-4), dscfm	QsI	39.07
Input Data - Outlet		
Moisture Fraction, dimensionless (FTIR)	BWS	0.561
Volumetric Flow Rate (M1-4), dscfm	Qs	150.44
Calculated Data - Inlet		
O_2i Concentration, % dry	C_{O_2i}	12.76
CO_2i Concentration, % dry	C_{CO_2i}	0.02
Calculated Data - Outlet		
O_2 Concentration, % dry	C_{O_2}	17.75
CO_2 Concentration, % dry	C_{CO_2}	-0.01
FTIR Calculated Data		
Ethylene Oxide - Inlet Concentration, ppmvd	C_{C2H4Oi}	4,523.7
Ethylene Oxide - Inlet Concentration, ppmvw	$C_{C2H4Oiw}$	4,453.9
Ethylene Oxide - Inlet Emission Rate, lb/hr	ER_{C2H4Oi}	1.21
Ethylene Oxide - Outlet Concentration, ppmvd	C_{C2H4O}	48.4
Ethylene Oxide - Outlet Concentration, ppmvw	C_{C2H4Ow}	47.7
Ethylene Oxide - Outlet Emission Rate, lb/hr	ER_{C2H4O}	0.050
Reduction Calculation		
Ethylene Oxide Reduction, %	RE_{C2H4O}	95.88

Excludes data from 14:49-15:25 rail car unloading.

Location BCP Ingredients - Verona, MO
Source Ethylene Oxide Scrubber
Project No. 2023-0231

Run Number		Cycle
Test Dates		2/13/2023
Start Date / Time	2/13/2023	9:00
Stop Date / Time	2/13/2023	23:58
Input Data - Inlet		
Moisture Fraction, dimensionless (FTIR)	BWSI	2.315
Temperature, °F		67.64
Velocity (M1-4), ft/s	QsI	5.94
Volumetric Flow Rate (M1-4), dscfm	QsI	39.70
Input Data - Outlet		
Moisture Fraction, dimensionless (FTIR)	BWS	0.555
Temperature, °F		59.54
Velocity (M1-4), ft/s	QsI	20.88
Volumetric Flow Rate (M1-4), dscfm	Qs	149.46
Calculated Data - Inlet		
O_2i Concentration, % dry	C_{O_2i}	12.77
CO_2i Concentration, % dry	C_{CO_2i}	0.03
Calculated Data - Outlet		
O_2 Concentration, % dry	C_{O_2}	17.75
CO_2 Concentration, % dry	C_{CO_2}	-0.01
FTIR Calculated Data		
Ethylene Oxide - Inlet Concentration, ppmvd	C_{C2H4Oi}	-1,560.9
Ethylene Oxide - Inlet Concentration, ppmvw	$C_{C2H4Oiw}$	7,708.6
Ethylene Oxide - Inlet Emission Rate, lb/hr	ER_{C2H4Oi}	-0.43
Ethylene Oxide - Outlet Concentration, ppmvd	C_{C2H4O}	332.9
Ethylene Oxide - Outlet Concentration, ppmvw	C_{C2H4Ow}	328.3
Ethylene Oxide - Outlet Emission Rate, lb/hr	ER_{C2H4O}	0.342
Reduction Calculation		
Ethylene Oxide Reduction, %	RE_{C2H4O}	180.29

Location BCP Ingredients - Verona, MO
Source Ethylene Oxide Scrubber
Project No. 2023-0231

Run Number		Cycle
Test Dates		2/14/23
Start Date / Time	2/14/2023	0:00
Stop Date / Time	2/14/2023	23:59
Input Data - Inlet		
Moisture Fraction, dimensionless (FTIR)	BWSI	1.044
Volumetric Flow Rate (M1-4), dscfm	QsI	9.34
Input Data - Outlet		
Moisture Fraction, dimensionless (FTIR)	BWS	0.676
Volumetric Flow Rate (M1-4), dscfm	Qs	112.07
Calculated Data - Inlet		
O_2i Concentration, % dry	C_{O_2i}	19.17
CO_2i Concentration, % dry	C_{CO_2i}	0.02
Calculated Data - Outlet		
O_2 Concentration, % dry	C_{O_2}	20.97
CO_2 Concentration, % dry	C_{CO_2}	0.01
FTIR Calculated Data		
Ethylene Oxide - Inlet Concentration, ppmvd	C_{C2H4Oi}	11,518.4
Ethylene Oxide - Inlet Concentration, ppmvw	$C_{C2H4Oiw}$	11,340.7
Ethylene Oxide - Inlet Emission Rate, lb/hr	ER_{C2H4Oi}	0.74
Ethylene Oxide - Outlet Concentration, ppmvd	C_{C2H4O}	4.5
Ethylene Oxide - Outlet Concentration, ppmvw	C_{C2H4Ow}	4.4
Ethylene Oxide - Outlet Emission Rate, lb/hr	ER_{C2H4O}	0.003
Reduction Calculation		
Ethylene Oxide Reduction, %	RE_{C2H4O}	99.53

Location BCP Ingredients - Verona, MO
Source Ethylene Oxide Scrubber
Project No. 2023-0231

Run Number		Cycle
Test Dates		2/15/23
Start Date / Time	2/15/2023	0:00
Stop Date / Time	2/15/2023	23:59
Input Data - Inlet		
Moisture Fraction, dimensionless (FTIR)	BWSI	1.562
Volumetric Flow Rate (M1-4), dscfm	QsI	22.28
Input Data - Outlet		
Moisture Fraction, dimensionless (FTIR)	BWS	0.628
Volumetric Flow Rate (M1-4), dscfm	Qs	116.12
Calculated Data - Inlet		
O_2i Concentration, % dry	C_{O_2i}	16.09
CO_2i Concentration, % dry	C_{CO_2i}	0.05
Calculated Data - Outlet		
O_2 Concentration, % dry	C_{O_2}	19.99
CO_2 Concentration, % dry	C_{CO_2}	-0.01
FTIR Calculated Data		
Ethylene Oxide - Inlet Concentration, ppmvd	C_{C2H4Oi}	14,646.7
Ethylene Oxide - Inlet Concentration, ppmvw	$C_{C2H4Oiw}$	14,420.7
Ethylene Oxide - Inlet Emission Rate, lb/hr	ER_{C2H4Oi}	2.24
Ethylene Oxide - Outlet Concentration, ppmvd	C_{C2H4O}	1.1
Ethylene Oxide - Outlet Concentration, ppmvw	C_{C2H4Ow}	1.1
Ethylene Oxide - Outlet Emission Rate, lb/hr	ER_{C2H4O}	0.001
Reduction Calculation		
Ethylene Oxide Reduction, %	RE_{C2H4O}	99.96

Location BCP Ingredients - Verona, MO
Source Ethylene Oxide Scrubber
Project No. 2023-0231

Run Number		Cycle
Test Dates		2/16/23
Start Date / Time	2/16/2023	0:00
Stop Date / Time	2/16/2023	23:59
Input Data - Inlet		
Moisture Fraction, dimensionless (FTIR)	BWSI	0.659
Volumetric Flow Rate (M1-4), dscfm	QsI	6.05
Input Data - Outlet		
Moisture Fraction, dimensionless (FTIR)	BWS	0.407
Volumetric Flow Rate (M1-4), dscfm	Qs	193.95
Calculated Data - Inlet		
O_2i Concentration, % dry	C_{O_2i}	15.02
CO_2i Concentration, % dry	C_{CO_2i}	0.03
Calculated Data - Outlet		
O_2 Concentration, % dry	C_{O_2}	21.24
CO_2 Concentration, % dry	C_{CO_2}	0.02
FTIR Calculated Data		
Ethylene Oxide - Inlet Concentration, ppmvd	C_{C2H4Oi}	27,953.5
Ethylene Oxide - Inlet Concentration, ppmvw	$C_{C2H4Oiw}$	27,522.2
Ethylene Oxide - Inlet Emission Rate, lb/hr	ER_{C2H4Oi}	1.16
Ethylene Oxide - Outlet Concentration, ppmvd	C_{C2H4O}	0.3
Ethylene Oxide - Outlet Concentration, ppmvw	C_{C2H4Ow}	0.3
Ethylene Oxide - Outlet Emission Rate, lb/hr	ER_{C2H4O}	0.0004
Reduction Calculation		
Ethylene Oxide Reduction, %	RE_{C2H4O}	99.96

Location BCP Ingredients - Verona, MO
Source Ethylene Oxide Scrubber
Project No. 2023-0231

Run Number		Cycle
Test Dates		2/17/23
Start Date / Time	2/17/2023	0:00
Stop Date / Time	2/17/2023	9:00
Input Data - Inlet		
Moisture Fraction, dimensionless (FTIR)	BWSI	0.435
Volumetric Flow Rate (M1-4), dscfm	QsI	45.89
Input Data - Outlet		
Moisture Fraction, dimensionless (FTIR)	BWS	0.296
Volumetric Flow Rate (M1-4), dscfm	Qs	265.33
Calculated Data - Inlet		
O_2i Concentration, % dry	C_{O_2i}	12.25
CO_2i Concentration, % dry	C_{CO_2i}	0.02
Calculated Data - Outlet		
O_2 Concentration, % dry	C_{O_2}	18.57
CO_2 Concentration, % dry	C_{CO_2}	0.01
FTIR Calculated Data		
Ethylene Oxide - Inlet Concentration, ppmvd	C_{C2H4Oi}	9,080.3
Ethylene Oxide - Inlet Concentration, ppmvw	$C_{C2H4Oiw}$	8,940.3
Ethylene Oxide - Inlet Emission Rate, lb/hr	ER_{C2H4Oi}	2.86
Ethylene Oxide - Outlet Concentration, ppmvd	C_{C2H4O}	4.9
Ethylene Oxide - Outlet Concentration, ppmvw	C_{C2H4Ow}	4.9
Ethylene Oxide - Outlet Emission Rate, lb/hr	ER_{C2H4O}	0.009
Reduction Calculation		
Ethylene Oxide Reduction, %	RE_{C2H4O}	99.69

Location BCP Ingredients - Verona, MO
Source Ethylene Oxide Scrubber
Project No. 2023-0231

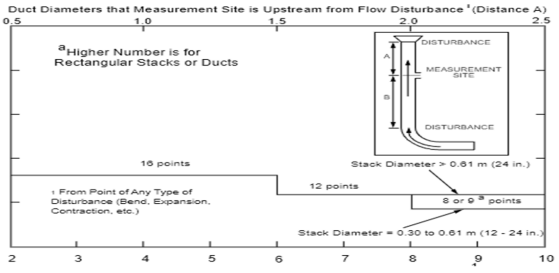
Run Number		Cycle
Test Dates		2/13/2023 to 2/17/2023
Start Date / Time	2/13/2023	9:00
Stop Date / Time	2/17/2023	9:00
Input Data - Inlet		
Moisture Fraction, dimensionless (FTIR)	BWSI	0.012
Volumetric Flow Rate (M1-4), dscfm	QsI	20
Input Data - Outlet		
Moisture Fraction, dimensionless (FTIR)	BWS	0.005
Volumetric Flow Rate (M1-4), dscfm	Qs	158
Calculated Data - Inlet		
O_2i Concentration, % dry	C_{O_2i}	15.80
CO_2i Concentration, % dry	C_{CO_2i}	0.03
Calculated Data - Outlet		
O_2 Concentration, % dry	C_{O_2}	20.12
CO_2 Concentration, % dry	C_{CO_2}	0.04
FTIR Calculated Data		
Ethylene Oxide - Inlet Concentration, ppmvd	C_{C2H4Oi}	15,540.3
Ethylene Oxide - Inlet Concentration, ppmvw	$C_{C2H4Oiw}$	15,350.6
Ethylene Oxide - Inlet Emission Rate, lb/hr	ER_{C2H4Oi}	2.14
Ethylene Oxide - Outlet Concentration, ppmvd	C_{C2H4O}	58.68
Ethylene Oxide - Outlet Concentration, ppmvw	C_{C2H4Ow}	58.36
Ethylene Oxide - Outlet Emission Rate, lb/hr	ER_{C2H4O}	0.063
Reduction Calculation		
Ethylene Oxide Reduction, %	RE_{C2H4O}	97.03

Method 1 Data

Location BCP Ingredients - Verona, MO
Source Ethylene Oxide Scrubber Inlet
Project No. 2023-0231
Date: 02/13/23

Stack Parameters

Duct Orientation:	Horizontal	
Duct Design:	Circular	
Distance from Far Wall to Outside of Port:	20.50	in
Nipple Length:	15.75	in
Depth of Duct:	4.75	in
No. of Test Ports:	1	
Number of Readings per Point:	1	
Distance A:	14.5	ft
Distance A Duct Diameters:	36.6	**(must be > 0.5)**
Distance B:	32.0	ft
Distance B Duct Diameters:	80.8	**(must be > 2)**
Actual Number of Traverse Points:	12	
Measurer (Initial and Date):	ACS	
Reviewer (Initial and Date):	BRB	



CIRCULAR DUCT

LOCATION OF TRAVERSE POINTS

Number of traverse points on a diameter

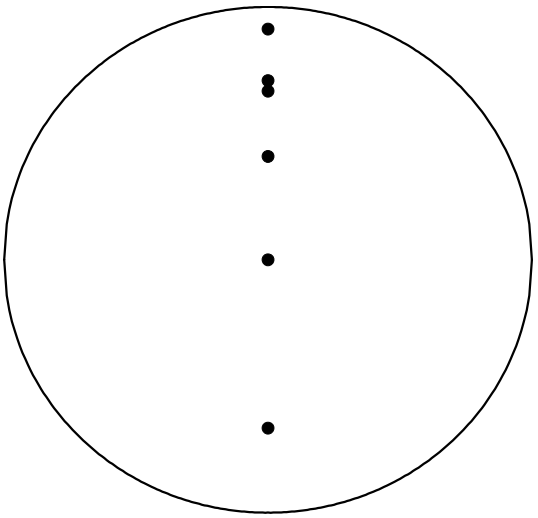
	2	3	4	5	6	7	8	9	10	11	12
1	14.6	16.7	6.7	--	4.4	--	3.2	--	2.6	--	2.1
2	85.4	50.0	25.0	--	14.6	--	10.5	--	8.2	--	6.7
3	--	83.3	75.0	--	29.6	--	19.4	--	14.6	--	11.8
4	--	--	93.3	--	70.4	--	32.3	--	22.6	--	17.7
5	--	--	--	--	85.4	--	67.7	--	34.2	--	25.0
6	--	--	--	--	95.6	--	80.6	--	65.8	--	35.6
7	--	--	--	--	--	--	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

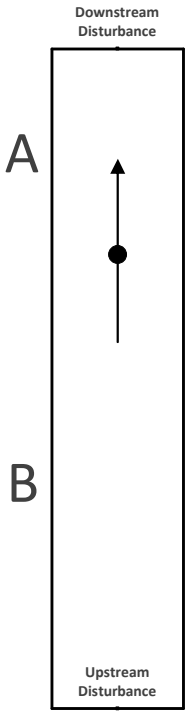
**Percent of stack diameter from inside wall to traverse point.*

Traverse Point	% of Diameter	Distance from inside wall	Distance from outside of port
1	16.7	0.79	16.54
2	50.0	2.38	18.13
3	83.3	3.96	19.71
4	70.4	3.34	19.09
5	85.4	4.06	19.81
6	95.6	4.54	20.29
7	--	--	--
8	--	--	--
9	--	--	--
10	--	--	--
11	--	--	--
12	--	--	--

Stack Diagram
A = 14.5 ft.
B = 32 ft.
Depth of Duct = 4.75 in.

Cross Sectional Area



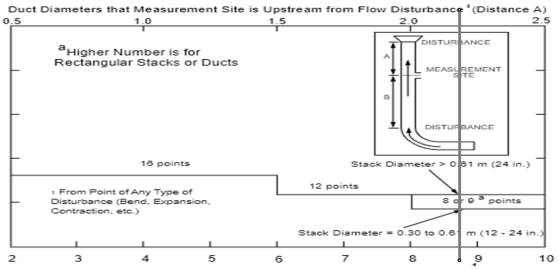


Method 1 Data

Location BCP Ingredients - Verona, MO
Source Ethylene Oxide Scrubber Outlet
Project No. 2023-0231
Date: 02/13/23

Stack Parameters

Duct Orientation:	Vertical	
Duct Design:	Circular	
Distance from Far Wall to Outside of Port:	20.50	in
Nipple Length:	15.75	in
Depth of Duct:	4.75	in
No. of Test Ports:	2	
Number of Readings per Point:	1	
Distance A:	48.0	ft
Distance A Duct Diameters:	121.3	**(must be > 0.5)**
Distance B:	3.4	ft
Distance B Duct Diameters:	8.6	**(must be > 2)**
Actual Number of Traverse Points:	3	
Measurer (Initial and Date):	ACS	
Reviewer (Initial and Date):	BRB	



CIRCULAR DUCT

LOCATION OF TRAVERSE POINTS

Number of traverse points on a diameter

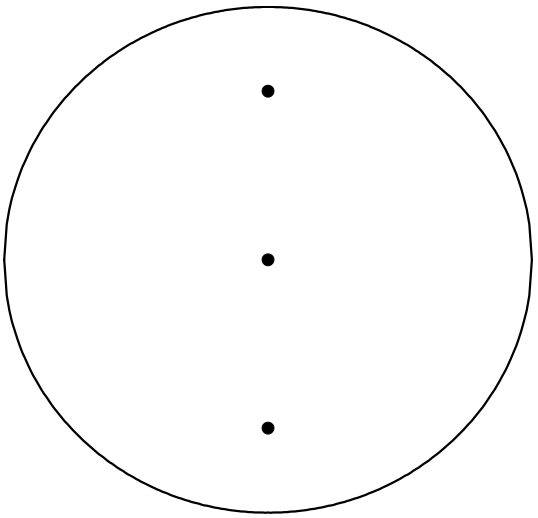
	2	3	4	5	6	7	8	9	10	11	12
1	14.6	16.7	6.7	--	4.4	--	3.2	--	2.6	--	2.1
2	85.4	50.0	25.0	--	14.6	--	10.5	--	8.2	--	6.7
3	--	83.3	75.0	--	29.6	--	19.4	--	14.6	--	11.8
4	--	--	93.3	--	70.4	--	32.3	--	22.6	--	17.7
5	--	--	--	--	85.4	--	67.7	--	34.2	--	25.0
6	--	--	--	--	95.6	--	80.6	--	65.8	--	35.6
7	--	--	--	--	--	--	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	0.79	16.54
2	50.0	2.38	18.13
3	83.3	3.96	19.71
4	--	--	--
5	--	--	--
6	--	--	--
7	--	--	--
8	--	--	--
9	--	--	--
10	--	--	--
11	--	--	--
12	--	--	--

Stack Diagram
A = 48 ft.
B = 3.4 ft.
Depth of Duct = 4.75 in.

Cross Sectional Area



ETO Recorded Data

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wt}$**	**BWS - Inlet$_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wt}$**	**BWS - Outlet$_{used}$**
	Unit	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/13/2023	9:00	192.0	0.924	42,883.7	2.441	0.62	1.22	0.62	210.1	0.967	0.6	0.0005	0.50	1.05	0.50
2/13/2023	9:01	192.1	0.924	38,127.4	2.429	0.71	1.22	0.71	211.4	0.967	0.4	0.0003	0.51	1.05	0.51
2/13/2023	9:02	192.1	0.924	39,919.6	2.788	1.09	1.23	1.09	178.5	0.967	0.5	0.0004	0.48	1.05	0.48
2/13/2023	9:03	192.0	0.924	47,654.3	3.588	0.46	1.23	0.46	149.6	0.967	0.3	0.0003	0.44	1.06	0.44
2/13/2023	9:04	192.0	0.924	41,058.9	3.694	0.71	1.24	0.71	149.6	0.967	0.5	0.0005	0.45	1.06	0.45
2/13/2023	9:05	192.0	0.924	36,419.9	2.541	0.71	1.24	0.71	149.5	0.967	0.5	0.0005	0.44	1.06	0.44
2/13/2023	9:06	192.0	0.924	52,059.5	3.628	0.41	1.25	0.41	149.9	0.967	0.3	0.0003	0.44	1.07	0.44
2/13/2023	9:07	192.0	0.924	45,669.8	2.905	0.58	1.26	0.58	149.8	0.967	0.3	0.0003	0.44	1.07	0.44
2/13/2023	9:08	192.0	0.924	39,804.0	2.264	0.76	1.27	0.76	161.8	0.967	0.4	0.0004	0.45	1.08	0.45
2/13/2023	9:09	192.0	0.924	36,037.9	2.059	0.87	1.27	0.87	213.6	0.967	0.3	0.0002	0.52	1.08	0.52
2/13/2023	9:10	192.0	0.924	50,835.4	3.573	0.49	1.29	0.49	157.2	0.967	0.4	0.0004	0.46	1.07	0.46
2/13/2023	9:11	192.0	0.924	44,641.2	1.812	0.61	1.31	0.61	149.9	0.967	0.1	0.0001	0.47	1.08	0.47
2/13/2023	9:12	192.0	0.924	36,925.3	9.173	0.72	1.36	0.72	149.9	0.968	93.4	0.1035	0.45	1.08	0.45
2/13/2023	9:13	192.0	0.925	39,836.3	16.347	0.97	1.42	0.97	149.9	0.968	174.3	0.2319	0.43	1.09	0.43
2/13/2023	9:14	192.0	0.927	8,546.6	4.014	0.20	1.51	0.20	149.9	0.967	170.3	0.2412	0.45	1.10	0.45
2/13/2023	9:15	192.0	0.927	4,839.1	2.515	0.20	1.63	0.20				--			
2/13/2023	9:16	192.0	0.928	3,885.5	2.105	0.20	1.76	0.20	149.9	0.967	161.5	0.2392	0.49	1.11	0.49
2/13/2023	9:17				--				149.9	0.968	140.2	0.2081	0.51	1.11	0.51
2/13/2023	9:18	191.9	0.928	3,856.3	2.223	0.20	2.03	0.20	149.9	0.967	122.0	0.1828	0.52	1.12	0.52
2/13/2023	9:19	191.9	0.929	2,841.5	1.696	0.29	2.15	0.29	149.9	0.967	120.8	0.1804	0.52	1.14	0.52
2/13/2023	9:20	192.0	0.928	2,341.5	1.384	0.39	2.30	0.39	149.9	0.967	104.1	0.1556	0.53	1.14	0.53
2/13/2023	9:21	192.0	0.929	2,616.1	1.431	0.49	2.47	0.49	149.9	0.967	86.1	0.1256	0.54	1.15	0.54
2/13/2023	9:22	192.0	0.928	1,835.6	1.055	0.53	2.61	0.53	149.8	0.967	84.3	0.1238	0.54	1.16	0.54
2/13/2023	9:23	192.0	0.928	1,654.8	0.952	0.57	2.74	0.57	149.9	0.968	84.6	0.1243	0.54	1.15	0.54
2/13/2023	9:24	192.0	0.928	2,046.5	1.156	0.64	2.87	0.64	149.9	0.967	73.8	0.1074	0.55	1.17	0.55
2/13/2023	9:25	192.0	0.928	1,515.1	0.883	0.64	3.00	0.64	149.9	0.967	64.6	0.0956	0.56	1.15	0.56
2/13/2023	9:26	192.0	0.928	1,340.3	0.875	0.66	3.12	0.66	149.9	0.967	81.3	0.1200	0.56	1.16	0.56
2/13/2023	9:27	192.0	0.928	1,220.5	0.736	0.69	3.21	0.69	149.8	0.968	69.4	0.1026	0.56	1.17	0.56
2/13/2023	9:28	192.0	0.928	1,837.6	1.107	0.74	3.33	0.74	149.8	0.967	53.4	0.0796	0.57	1.17	0.57
2/13/2023	9:29	192.0	0.928	1,103.4	0.673	0.74	3.44	0.74	149.9	0.967	61.8	0.0914	0.57	1.17	0.57
2/13/2023	9:30	192.0	0.928	1,007.4	0.619	0.76	3.56	0.76	150.2	0.967	63.2	0.0926	0.57	1.19	0.57
2/13/2023	9:31	192.0	0.928	1,628.5	1.005	0.81	3.63	0.81	150.3	0.967	45.5	0.0670	0.58	1.19	0.58
2/13/2023	9:32	192.0	0.928	976.6	0.607	0.81	3.70	0.81	150.1	0.967	40.7	0.0598	0.59	1.20	0.59
2/13/2023	9:33	192.0	0.928	862.0	0.541	0.84	3.72	0.84	149.8	0.967	55.3	0.0806	0.59	1.19	0.59
2/13/2023	9:34	191.9	0.928	859.9	0.536	0.86	3.72	0.86	150.0	0.967	40.7	0.0595	0.59	1.21	0.59
2/13/2023	9:35	192.0	0.928	1,506.0	0.851	0.90	3.73	0.90	150.0	0.967	30.5	0.0426	0.59	1.22	0.59
2/13/2023	9:36	191.9	0.927	778.4	0.463	0.90	3.77	0.90	150.0	0.967	42.3	0.0606	0.59	1.22	0.59
2/13/2023	9:37	191.9	0.928	737.8	0.446	0.92	3.79	0.92	150.0	0.967	38.7	0.0555	0.60	1.23	0.60
2/13/2023	9:38	191.9	0.927	1,514.7	0.890	0.96	3.80	0.96	150.0	0.967	28.1	0.0394	0.60	1.22	0.60
2/13/2023					--							--			
2/13/2023	9:40	191.9	0.927	748.4	0.454	0.96	3.81	0.96	150.0	0.967	34.4	0.0502	0.59	1.23	0.59
2/13/2023	9:41	191.9	0.926	613.1	0.380	2.58	3.82	2.58	150.0	0.967	41.9	0.0606	0.60	1.22	0.60
2/13/2023	9:42	191.8	0.925	1,339.4	0.845	9.22	3.85	3.85	150.0	0.967	30.3	0.0436	0.60	1.23	0.60
2/13/2023	9:43	191.7	0.926	744.3	0.468	6.47	3.87	3.87	150.0	0.967	29.2	0.0414	0.60	1.23	0.60
2/13/2023	9:44	191.8	0.927	613.8	0.389	5.25	3.87	3.87	150.0	0.967	45.2	0.0644	0.59	1.22	0.59
2/13/2023	9:45	191.8	0.927	1,007.3	0.638	3.84	3.91	3.84	150.0	0.967	33.8	0.0485	0.59	1.24	0.59
2/13/2023	9:46	191.7	0.927	940.8	0.596	3.71	3.96	3.71	150.0	0.967	24.1	0.0345	0.60	1.25	0.60
2/13/2023	9:47	191.7	0.927	584.0	0.375	3.19	3.99	3.19	150.0	0.967	47.8	0.0680	0.59	1.25	0.59
2/13/2023	9:48	191.7	0.927	535.6	0.342	3.90	3.96	3.90	149.9	0.967	36.6	0.0523	0.60	1.25	0.60
2/13/2023	9:49	191.7	0.927	1,294.7	0.822	3.63	3.99	3.63	150.0	0.967	21.5	0.0308	0.60	1.27	0.60
2/13/2023	9:50	191.7	0.927	565.3	0.361	3.31	3.97	3.31	149.9	0.967	41.4	0.0569	0.60	1.27	0.60
2/13/2023	9:51	191.6	0.927	506.0	0.310	3.62	3.97	3.62	150.0	0.967	32.2	0.0449	0.59	1.27	0.59
2/13/2023	9:52	191.6	0.927	1,308.7	0.779	3.89	3.99	3.89	149.9	0.967	19.8	0.0274	0.59	1.27	0.59
2/13/2023	9:53	191.7	0.927	535.1	0.318	3.36	4.02	3.36	149.9	0.967	31.4	0.0434	0.60	1.28	0.60
2/13/2023	9:54	191.6	0.926	461.5	0.284	4.65	4.05	4.05	149.9	0.967	37.3	0.0520	0.60	1.27	0.60
2/13/2023	9:55	191.6	0.927	1,263.1	0.782	3.62	4.08	3.62	149.9	0.967	23.6	0.0331	0.60	1.28	0.60
2/13/2023	9:56	191.7	0.927	539.6	0.335	4.07	4.14	4.07	149.9	0.967	21.1	0.0294	0.59	1.28	0.59
2/13/2023	9:57	191.7	0.927	452.8	0.282	3.87	4.08	3.87	149.9	0.967	120.0	0.1724	0.59	1.30	0.59
2/13/2023	9:58	191.7	0.927	820.6	0.514	3.81	4.00	3.81	149.9	0.967	665.0	0.9372	0.40	1.30	0.40
2/13/2023	9:59	191.7	0.928	786.1	0.538	3.82	3.99	3.82	149.9	0.967	2,196.8	3.1643	0.20	1.31	0.20
2/13/2023	10:00	191.7	0.930	11,862.0	12.915	4.24	3.92	3.92	149.9	0.968	2,299.9	3.9461	0.20	1.31	0.20
2/13/2023					--				149.9	0.967	2,250.7	3.6224	0.20	1.33	0.20
2/13/2023	10:02	191.6	0.931	61,571.7	53.109	3.11	3.88	3.11				--			
2/13/2023	10:03	191.6	0.930	51,030.6	48.150	3.52	3.83	3.52	149.9	0.967	2,539.4	4.3057	0.20	1.34	0.20
2/13/2023	10:04	191.7	0.930	48,163.4	49.630	3.68	3.84	3.68	149.9	0.967	3,139.4	5.3131	0.20	1.34	0.20
2/13/2023	10:05	191.7	0.931	48,568.8	50.622	3.64	3.93	3.64	149.9	0.967	2,929.0	4.8104	0.20	1.35	0.20
2/13/2023	10:06	191.7	0.932	78,976.1	60.585	3.55	3.99	3.55	149.9	0.967	2,226.1	3.3975	0.20	1.34	0.20
2/13/2023	10:07	191.7	0.930	61,700.2	37.969	2.64	4.05	2.64	149.9	0.967	1,456.8	2.0815	0.20	1.34	0.20
2/13/2023	10:08	191.6	0.928	9,472.9	5.802	5.43	4.07	4.07	149.9	0.967	758.5	1.0045	0.39	1.34	0.39
2/13/2023	10:09	191.5	0.927	3,549.2	2.056	3.52	4.15	3.52	149.9	0.967	418.7	0.5786	0.50	1.35	0.50
2/13/2023	10:10	191.5	0.927	1,554.2	0.928	3.28	4.16	3.28	149.9	0.967	254.4	0.3522	0.55	1.34	0.55
2/13/2023	10:11	191.5	0.927	1,110.0	0.677	3.37	4.16	3.37	149.9	0.968	177.2	0.2473	0.58	1.34	0.58
2/13/2023	10:12	191.6	0.927	1,559.5	0.967	3.92	4.21	3.92	149.9	0.968	118.8	0.1672	0.59	1.36	0.59
2/13/2023	10:13	191.7	0.927	815.1	0.502	3.48	4.23	3.48	149.9	0.967	84.4	0.1186	0.59	1.36	0.59
2/13/2023	10:14	191.7	0.927	645.5	0.399	3.79	4.27	3.79	149.9	0.967	81.5	0.1145	0.59	1.38	0.59
2/13/2023	10:15	191.6	0.927	1,149.6	0.720	4.43	4.31	4.31	149.9	0.968	57.9	0.0819	0.60	1.37	0.60
2/13/2023	10:16	191.6	0.927	684.3	0.430	3.78	4.29	3.78	149.9	0.968	40.7	0.0574	0.60	1.38	0.60
2/13/2023	10:17	191.6	0.927	469.3	0.293	4.08	4.12	4.08	149.9	0.967	55.5	0.0799	0.60	1.38	0.60
2/13/2023	10:18	191.5	0.927	568.4	0.347	3.73	4.04	3.73	149.9	0.967	37.3	0.0514	0.60	1.37	0.60
2/13/2023	10:19	191.6	0.927	1,061.9	0.572	4.49	4.03	4.03	149.9	0.967	20.7	0.0276	0.59	1.37	0.59
2/13/2023	10:20	191.5	0.926	422.6	0.201	4.34	4.03	4.03	149.9	0.968	20.9	0.0260	0.57	1.39	0.57
2/13/2023	10:21	191.5	0.925	453.6	0.205	3.84	4.01	3.84	149.9	0.967	20.0	0.0247	0.57	1.37	0.57
2/13/2023	10:22	191.4	0.925	1,399.8	0.605	4.35	4.01	4.01	149.9	0.967	14.4	0.0174	0.56	1.41	0.56
2/13/2023					--				149.9	0.967	13.9	0.0165	0.57	1.40	0.57
2/13/2023	10:24	191.1	0.925	537.1	0.220	3.72	4.11	3.72	149.9	0.968	19.5	0.0231	0.57	1.39	0.57
2/13/2023	10:25	190.8	0.925	473.8	0.206	4.26	4.15	4.15	149.9	0.968	17.2	0.0208	0.58	1.40	0.58
2/13/2023	10:26	190.0	0.925	1,448.6	0.710	4.02	4.17	4.02				--			
2/13/2023	10:27	188.3	0.926	500.2	0.259	3.58	4.18	3.58	149.9	0.968	32.3	0.0422	0.59	1.41	0.59
2/13/2023	10:28	186.7	0.926	395.1	0.212	3.85	4.20	3.85	149.9	0.967	30.4	0.0400	0.58	1.41	0.58
2/13/2023	10:29	185.1	0.926	1,221.1	0.675	3.92	4.23	3.92	149.9	0.968	19.5	0.0259	0.60	1.42	0.60
2/13/2023	10:30	183.6	0.926	349.4	0.197	3.96	4.26	3.96	149.9	0.968	36.9	0.0496	0.59	1.42	0.59
2/13/2023	10:31	182.1	0.926	597.6	0.339	3.89	4.32	3.89	149.9	0.968	29.2	0.0391	0.59	1.44	0.59
2/13/2023	10:32	180.7	0.927	793.3	0.456	3.67	4.40	3.67	149.9	0.968	19.4	0.0266	0.59	1.43	0.59
2/13/2023	10:33	179.3	0.927	299.2	0.173	4.09	4.42	4.09	149.9	0.968	40.1	0.0544	0.59	1.45	0.59

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wt}$**	**BWS - Inlet$_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wt}$**	**BWS - Outlet$_{used}$**
	Unit	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/13/2023	10:34	178.0	0.927	744.5	0.429	3.93	4.40	3.93	149.9	0.968	30.5	0.0413	0.59	1.50	0.59
2/13/2023	10:35	176.6	0.927	576.7	0.338	3.96	4.40	3.96	149.9	0.968	17.2	0.0235	0.61	1.48	0.61
2/13/2023	10:36	175.3	0.927	239.7	0.129	3.39	4.40	3.39	149.9	0.968	32.8	0.0430	0.60	1.46	0.60
2/13/2023	10:37	173.9	0.927	706.9	0.406	3.65	4.41	3.65	149.9	0.968	24.0	0.0323	0.61	1.46	0.61
2/13/2023	10:38	172.7	0.927	490.0	0.289	4.02	4.43	4.02	149.9	0.968	22.6	0.0306	0.61	1.47	0.61
2/13/2023	10:39	171.4	0.927	208.9	0.123	3.58	4.42	3.58	149.9	0.968	39.3	0.0535	0.60	1.46	0.60
2/13/2023	10:40	170.2	0.927	906.5	0.556	3.34	4.46	3.34	149.9	0.968	27.4	0.0381	0.60	1.46	0.60
2/13/2023	10:41	168.9	0.927	302.2	0.190	3.08	4.50	3.08	149.9	0.968	33.5	0.0467	0.60	1.47	0.60
2/13/2023	10:43	169.8	0.928	708.6	0.448	3.34	4.56	3.34	149.9	0.968	41.4	0.0578	0.60	1.48	0.60
2/13/2023	10:44	173.5	0.928	328.5	0.210	3.02	4.63	3.02	149.9	0.968	23.8	0.0334	0.61	1.48	0.61
2/13/2023	10:45	176.7	0.927	105.3	0.068	4.58	4.69	4.58	149.9	0.968	36.5	0.0510	0.60	1.63	0.60
2/13/2023	10:46	179.6	0.928	857.2	0.552	3.48	4.77	3.48	149.9	0.968	37.1	0.0522	0.61	1.78	0.61
2/13/2023	10:47	182.3	0.928	215.8	0.140	3.58	4.77	3.58	149.9	0.968	20.4	0.0291	0.61	1.53	0.61
2/13/2023	10:48	185.0	0.928	178.5	0.115	5.24	4.81	4.81	149.9	0.968	40.7	0.0571	0.61	1.51	0.61
2/13/2023	10:49	187.5	0.928	853.9	0.557	4.02	4.82	4.02	149.8	0.968	34.9	0.0494	0.61	1.53	0.61
2/13/2023	10:50	189.6	0.928	192.3	0.124	3.78	4.86	3.78				--			
2/13/2023	10:51	191.2	0.928	181.7	0.118	2.08	4.84	2.08	149.9	0.968	19.8	0.0282	0.62	1.54	0.62
2/13/2023					--				149.9	0.968	44.8	0.0630	0.62	1.55	0.62
2/13/2023	10:53	192.0	0.927	916.4	0.594	7.87	4.83	4.83	149.9	0.968	32.5	0.0459	0.62	1.57	0.62
2/13/2023	10:54	192.1	0.928	215.5	0.140	2.42	4.80	2.42	149.9	0.968	27.8	0.0394	0.61	1.57	0.61
2/13/2023	10:55	192.0	0.929	181.8	0.118	2.10	4.81	2.10	149.9	0.968	45.9	0.0652	0.61	1.57	0.61
2/13/2023	10:56	192.0	0.926	778.6	0.503	8.71	4.83	4.83	149.8	0.968	29.8	0.0416	0.62	1.58	0.62
2/13/2023	10:57	191.9	0.928	175.4	0.114	3.50	4.87	3.50	149.8	0.968	29.6	0.0417	0.62	1.60	0.62
2/13/2023	10:58	191.9	0.928	434.3	0.278	2.01	4.92	2.01	149.8	0.967	45.0	0.0631	0.62	1.87	0.62
2/13/2023	10:59	191.9	0.926	599.1	0.392	6.67	4.89	4.89	149.8	0.967	28.5	0.0397	0.62	1.85	0.62
2/13/2023	11:00	191.9	0.927	186.9	0.121	7.37	4.88	4.88	149.8	0.968	36.2	0.0507	0.62	1.62	0.62
2/13/2023	11:01	191.9	0.927	831.7	0.546	5.83	4.85	4.85	149.8	0.968	43.2	0.0605	0.62	1.63	0.62
2/13/2023	11:02	191.9	0.927	269.6	0.175	5.38	4.84	4.84	149.8	0.967	23.5	0.0331	0.61	1.62	0.61
2/13/2023	11:03	191.9	0.928	172.2	0.112	4.39	4.84	4.39	149.8	0.968	40.7	0.0568	0.61	1.63	0.61
2/13/2023	11:04	191.9	0.928	889.5	0.574	5.74	4.88	4.88	149.8	0.967	37.5	0.0520	0.61	1.62	0.61
2/13/2023	11:05	191.9	0.928	236.2	0.150	4.29	4.89	4.29	149.8	0.967	20.3	0.0281	0.62	1.65	0.62
2/13/2023	11:06	191.9	0.927	163.8	0.104	5.78	4.88	4.88	149.8	0.967	46.9	0.0650	0.62	1.65	0.62
2/13/2023	11:07	191.9	0.927	910.9	0.572	4.17	4.88	4.17	149.8	0.968	37.0	0.0512	0.62	1.65	0.62
2/13/2023	11:08	191.9	0.927	186.1	0.117	4.94	4.86	4.86	149.8	0.968	24.2	0.0335	0.61	1.66	0.61
2/13/2023	11:09	191.9	0.927	133.5	0.085	4.84	4.86	4.84	149.8	0.967	48.5	0.0665	0.62	1.67	0.62
2/13/2023	11:10	191.9	0.927	866.5	0.551	5.16	4.86	4.86	149.9	0.967	32.7	0.0453	0.61	1.68	0.61
2/13/2023	11:11	191.9	0.927	152.8	0.097	5.05	4.88	4.88	149.8	0.967	32.4	0.0448	0.61	1.66	0.61
2/13/2023	11:12	191.9	0.927	689.8	0.459	4.37	4.91	4.37				--			
2/13/2023					--				149.8	0.967	44.3	0.0606	0.62	1.68	0.62
2/13/2023	11:14	191.9	0.927	303.6	0.193	4.38	4.96	4.38	149.8	0.967	28.5	0.0396	0.62	1.69	0.62
2/13/2023	11:15	191.9	0.927	165.5	0.105	3.97	4.98	3.97	149.8	0.967	45.8	0.0632	0.63	1.69	0.63
2/13/2023	11:16	191.9	0.927	851.2	0.543	5.33	5.03	5.03	149.8	0.967	42.3	0.0581	0.62	1.71	0.62
2/13/2023	11:17	191.9	0.927	183.2	0.119	5.12	5.07	5.07	149.8	0.967	23.5	0.0326	0.62	1.71	0.62
2/13/2023	11:18	191.9	0.927	137.7	0.089	6.07	5.11	5.11	149.8	0.967	52.4	0.0722	0.62	1.72	0.62
2/13/2023	11:19	191.9	0.927	845.7	0.541	4.47	5.15	4.47	149.8	0.967	36.3	0.0502	0.62	1.74	0.62
2/13/2023	11:20	191.9	0.927	152.7	0.098	4.71	5.20	4.71	149.8	0.967	37.9	0.0522	0.63	1.74	0.63
2/13/2023	11:21	191.9	0.927	699.8	0.455	4.98	5.21	4.98	149.8	0.967	49.0	0.0675	0.63	1.75	0.63
2/13/2023	11:22	191.9	0.927	290.8	0.188	5.68	5.24	5.24	149.8	0.967	29.8	0.0411	0.63	1.76	0.63
2/13/2023	11:23	191.8	0.927	129.6	0.083	4.83	5.26	4.83	149.8	0.967	49.2	0.0674	0.63	1.79	0.63
2/13/2023	11:24	191.8	0.927	822.0	0.527	5.18	5.23	5.18	149.8	0.967	42.7	0.0587	0.63	1.77	0.63
2/13/2023	11:25	191.8	0.927	153.3	0.099	5.01	5.22	5.01	149.8	0.967	30.0	0.0407	0.65	1.78	0.65
2/13/2023	11:26	191.8	0.927	117.0	0.075	4.72	5.22	4.72	149.8	0.967	54.6	0.0741	0.64	1.79	0.64
2/13/2023	11:27	191.7	0.927	833.2	0.531	5.16	5.25	5.16	149.7	0.967	35.4	0.0482	0.64	1.81	0.64
2/13/2023	11:28	191.8	0.927	109.8	0.070	4.95	5.26	4.95	149.8	0.967	44.4	0.0604	0.63	1.80	0.63
2/13/2023	11:29	191.8	0.927	762.2	0.488	5.72	5.25	5.25	149.8	0.967	45.9	0.0626	0.63	1.82	0.63
2/13/2023	11:30	191.8	0.927	160.6	0.102	4.44	5.25	4.44	149.8	0.967	27.5	0.0374	0.63	1.81	0.63
2/13/2023	11:31	191.8	0.927	114.4	0.073	5.78	5.24	5.24	149.8	0.967	54.0	0.0728	0.63	1.83	0.63
2/13/2023	11:32	191.8	0.927	857.7	0.546	2.70	5.21	2.70	149.8	0.967	37.8	0.0510	0.62	1.84	0.62
2/13/2023	11:33	191.8	0.927	144.6	0.093	2.04	5.24	2.04	149.8	0.967	38.1	0.0512	0.63	1.83	0.63
2/13/2023	11:34	191.8	0.928	707.2	0.498	1.88	5.22	1.88	149.8	0.967	49.3	0.0675	0.63	1.85	0.63
2/13/2023					--							--			
2/13/2023	11:36	191.8	0.924	269.5	0.172	10.26	5.29	5.29	149.7	0.967	30.0	0.0405	0.63	2.19	0.63
2/13/2023	11:37	191.8	0.927	93.0	0.060	5.32	5.29	5.29	149.7	0.967	50.7	0.0685	0.62	2.12	0.62
2/13/2023	11:38	191.8	0.927	852.0	0.539	2.20	5.28	2.20	149.8	0.967	39.7	0.0538	0.63	1.85	0.63
2/13/2023	11:39	191.8	0.928	156.2	0.100	1.85	5.31	1.85	149.8	0.967	36.8	0.0498	0.63	1.86	0.63
2/13/2023	11:40	191.7	0.925	694.4	0.442	8.90	5.34	5.34	149.8	0.967	48.0	0.0647	0.62	1.87	0.62
2/13/2023	11:41	191.8	0.927	261.1	0.167	5.54	5.35	5.35	149.8	0.967	29.5	0.0397	0.63	1.87	0.63
2/13/2023	11:42	191.8	0.927	120.1	0.076	2.35	5.35	2.35	149.7	0.967	51.7	0.0696	0.63	1.89	0.63
2/13/2023	11:43	191.8	0.926	848.5	0.532	2.64	5.35	2.64	149.7	0.967	39.6	0.0529	0.63	1.89	0.63
2/13/2023	11:44	191.8	0.925	141.6	0.091	10.17	5.31	5.31	149.8	0.967	39.5	0.0532	0.63	1.89	0.63
2/13/2023	11:45	191.7	0.927	667.6	0.422	4.32	5.27	4.32	149.8	0.967	50.3	0.0672	0.65	1.90	0.65
2/13/2023	11:46	191.7	0.927	251.9	0.161	1.85	5.26	1.85	149.7	0.967	30.1	0.0403	0.65	1.89	0.65
2/13/2023	11:47	191.8	0.926	8.7	0.006	4.72	5.20	4.72	149.8	0.967	53.6	0.0723	0.64	1.90	0.64
2/13/2023	11:48	191.8	0.926	834.1	0.530	8.54	5.19	5.19	149.7	0.967	40.5	0.0538	0.63	1.89	0.63
2/13/2023	11:49	191.7	0.927	122.6	0.078	3.27	5.12	3.27	149.8	0.967	35.1	0.0464	0.63	1.89	0.63
2/13/2023	11:50	191.7	0.927	453.4	0.286	2.03	5.11	2.03	149.8	0.967	55.8	0.0740	0.63	1.90	0.63
2/13/2023	11:51	191.7	0.925	346.1	0.221	8.22	5.09	5.09	149.7	0.967	32.9	0.0434	0.63	1.89	0.63
2/13/2023	11:52	191.8	0.926	98.0	0.062	6.26	5.06	5.06	149.7	0.967	50.3	0.0656	0.63	1.89	0.63
2/13/2023	11:53	191.8	0.925	641.8	0.408	6.46	5.07	5.07	149.7	0.966	43.6	0.0571	0.63	1.90	0.63
2/13/2023	11:54	191.8	0.927	124.5	0.078	3.37	5.11	3.37	149.8	0.967	35.9	0.0469	0.64	1.91	0.64
2/13/2023	11:55	191.8	0.927	346.4	0.218	2.17	5.08	2.17	149.7	0.967	55.4	0.0731	0.64	1.90	0.64
2/13/2023	11:56	191.7	0.927	549.8	0.347	1.93	5.06	1.93	149.8	0.966	34.4	0.0448	0.63	1.91	0.63
2/13/2023					--							--			
2/13/2023	11:58	191.7	0.924	119.6	0.076	9.72	5.05	5.05	149.7	0.966	50.4	0.0660	0.63	1.90	0.63
2/13/2023	11:59	191.7	0.927	744.5	0.474	4.58	5.03	4.58	149.7	0.966	46.5	0.0606	0.63	1.91	0.63
2/13/2023	12:00	191.7	0.926	142.1	0.089	1.91	5.00	1.91	149.8	0.966	37.2	0.0487	0.63	1.90	0.63
2/13/2023	12:01	191.7	0.927	272.1	0.172	1.91	4.99	1.91	149.7	0.966	61.3	0.0800	0.62	1.90	0.62
2/13/2023	12:02	191.8	0.924	697.1	0.442	8.69	4.96	4.96	149.7	0.966	36.5	0.0479	0.62	1.91	0.62
2/13/2023	12:03	191.8	0.926	88.9	0.059	6.40	4.94	4.94	149.7	0.966	53.7	0.0705	0.63	1.90	0.63
2/13/2023	12:04	191.8	0.926	797.8	0.504	2.40	4.91	2.40	149.7	0.966	46.9	0.0616	0.64	1.90	0.64
2/13/2023	12:05	191.7	0.926	136.1	0.085	2.00	4.90	2.00	149.7	0.966	35.4	0.0466	0.64	1.89	0.64
2/13/2023	12:06	191.7	0.925	126.0	0.080	5.16	4.88	4.88	149.7	0.966	59.6	0.0787	0.63	1.88	0.63
2/13/2023	12:07	191.7	0.925	591.1	0.377	8.09	4.93	4.93	149.7	0.966	36.1	0.0471	0.63	1.91	0.63
2/13/2023	12:08	191.8	0.926	88.1	0.055	2.50	4.94	2.50	149.7	0.966	49.2	0.0649	0.64	1.90	0.64
2/13/2023	12:09	191.8	0.926	774.7	0.487	1.89	5.00	1.89	149.7	0.966	48.0	0.0635	0.65	1.92	0.65

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet$_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet$_{used}$**
	Unit	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/13/2023	12:10	191.7	0.925	83.1	0.052	3.52	5.03	3.52	149.7	0.966	33.1	0.0430	0.65	2.27	0.65
2/13/2023	12:11	191.7	0.925	87.5	0.056	10.01	5.01	5.01	149.7	0.966	60.7	0.0799	0.64	2.30	0.64
2/13/2023	12:12	191.7	0.926	796.3	0.507	3.69	4.98	3.69	149.7	0.966	36.6	0.0489	0.65	2.02	0.65
2/13/2023	12:13	191.7	0.927	97.2	0.061	1.97	4.97	1.97	149.7	0.966	49.7	0.0667	0.63	1.91	0.63
2/13/2023	12:14	191.7	0.927	772.9	0.480	1.92	4.99	1.92	149.7	0.966	48.4	0.0649	0.63	1.89	0.63
2/13/2023	12:15	191.7	0.924	84.4	0.053	6.87	5.04	5.04	149.7	0.966	30.7	0.0415	0.63	1.92	0.63
2/13/2023	12:16	191.7	0.926	72.6	0.045	7.37	5.07	5.07	149.7	0.966	61.2	0.0827	0.63	1.91	0.63
2/13/2023	12:17	191.7	0.926	842.9	0.522	2.84	5.12	2.84	149.7	0.966	37.7	0.0511	0.63	1.92	0.63
2/13/2023	12:18	191.7	0.926	102.5	0.063	2.14	5.15	2.14	149.7	0.966	45.0	0.0605	0.64	1.93	0.64
2/13/2023					--							--			
2/13/2023	12:20	191.7	0.925	735.0	0.455	3.05	5.06	3.05	149.7	0.966	46.8	0.0633	0.65	1.92	0.65
2/13/2023	12:21	191.7	0.924	152.6	0.096	10.21	5.05	5.05	149.7	0.966	35.8	0.0493	0.64	1.92	0.64
2/13/2023	12:22	191.7	0.926	221.6	0.139	3.93	5.02	3.93	149.7	0.966	52.7	0.0728	0.64	1.90	0.64
2/13/2023	12:23	191.7	0.926	636.0	0.398	2.09	5.00	2.09	149.7	0.966	32.8	0.0445	0.63	1.89	0.63
2/13/2023	12:24	191.7	0.927	90.4	0.056	1.90	4.98	1.90	149.7	0.966	55.8	0.0757	0.63	1.90	0.63
2/13/2023	12:25	191.7	0.924	672.8	0.425	9.41	4.96	4.96	149.7	0.966	41.8	0.0566	0.64	1.90	0.64
2/13/2023	12:26	191.7	0.926	56.6	0.036	4.53	4.99	4.53	149.7	0.966	39.3	0.0538	0.64	1.91	0.64
2/13/2023	12:27	191.7	0.926	610.3	0.379	1.99	5.00	1.99	149.7	0.966	55.0	0.0752	0.62	1.90	0.62
2/13/2023	12:28	191.7	0.927	280.3	0.176	2.00	5.08	2.00	149.7	0.966	32.8	0.0448	0.64	1.90	0.64
2/13/2023	12:29	191.7	0.923	99.1	0.062	11.04	5.11	5.11	149.7	0.966	55.4	0.0764	0.63	1.92	0.63
2/13/2023	12:30	191.7	0.926	749.8	0.470	4.14	5.16	4.14	149.7	0.965	46.6	0.0631	0.63	1.92	0.63
2/13/2023	12:31	191.7	0.926	126.4	0.078	2.03	5.22	2.03	149.7	0.966	43.7	0.0590	0.64	1.94	0.64
2/13/2023	12:32	191.7	0.925	561.8	0.350	2.86	5.23	2.86	149.7	0.966	56.2	0.0759	0.64	1.95	0.64
2/13/2023	12:33	191.7	0.924	212.6	0.132	10.39	5.23	5.23	149.7	0.966	35.0	0.0468	0.65	1.96	0.65
2/13/2023	12:34	191.7	0.926	57.4	0.035	4.04	5.24	4.04	149.7	0.966	65.9	0.0877	0.64	1.96	0.64
2/13/2023	12:35	191.7	0.926	852.3	0.529	2.18	5.22	2.18	149.7	0.965	43.2	0.0561	0.65	1.94	0.65
2/13/2023	12:36	191.7	0.926	107.5	0.066	2.19	5.21	2.19	149.7	0.966	48.8	0.0641	0.66	1.95	0.66
2/13/2023	12:37	191.7	0.923	779.6	0.489	10.77	5.14	5.14	149.7	0.965	55.3	0.0722	0.66	1.97	0.66
2/13/2023	12:38	191.7	0.925	148.7	0.093	4.55	5.11	4.55	149.7	0.966	40.5	0.0529	0.66	1.97	0.66
2/13/2023	12:39	191.7	0.926	105.1	0.066	2.59	5.12	2.59	149.7	0.966	65.2	0.0837	0.66	2.29	0.66
2/13/2023	12:40	191.7	0.926	800.5	0.502	2.17	5.12	2.17	149.7	0.965	38.7	0.0499	0.66	2.27	0.66
2/13/2023					--							--			
2/13/2023	12:42	191.7	0.922	111.1	0.070	10.41	5.12	5.12	149.7	0.965	64.6	0.0824	0.66	2.21	0.66
2/13/2023	12:43	191.6	0.925	752.2	0.478	5.46	5.08	5.08	149.7	0.965	47.8	0.0609	0.65	2.00	0.65
2/13/2023	12:44	191.7	0.925	117.3	0.082	2.49	5.09	2.49	149.7	0.965	52.6	0.0682	0.66	2.00	0.66
2/13/2023	12:45	191.7	0.926	740.8	0.463	2.20	5.09	2.20	149.7	0.965	53.6	0.0683	0.68	2.01	0.68
2/13/2023	12:46	191.7	0.923	112.0	0.071	5.55	5.09	5.09	149.7	0.965	39.1	0.0500	0.67	2.02	0.67
2/13/2023	12:47	191.7	0.925	167.3	0.103	8.55	5.07	5.07	149.7	0.965	63.8	0.0820	0.67	2.02	0.67
2/13/2023	12:48	191.7	0.925	717.3	0.443	2.62	5.07	2.62	149.7	0.965	38.1	0.0484	0.65	2.03	0.65
2/13/2023	12:49	191.7	0.925	86.9	0.054	2.02	5.07	2.02	149.7	0.965	60.5	0.0775	0.65	2.04	0.65
2/13/2023	12:50	191.7	0.924	733.1	0.457	3.82	5.07	3.82	149.7	0.965	44.0	0.0563	0.65	2.03	0.65
2/13/2023	12:51	191.7	0.924	106.1	0.066	9.00	5.04	5.04	149.7	0.965	50.4	0.0644	0.66	2.02	0.66
2/13/2023	12:52	191.6	0.925	743.6	0.463	3.21	5.05	3.21	149.7	0.965	56.5	0.0726	0.65	2.02	0.65
2/13/2023	12:53	191.6	0.924	104.2	0.065	7.72	5.07	5.07	149.7	0.965	37.2	0.0474	0.66	2.03	0.66
2/13/2023	12:54	191.7	0.925	71.8	0.045	2.38	5.08	2.38	149.7	0.965	68.6	0.0877	0.65	2.02	0.65
2/13/2023	12:55	191.7	0.924	799.9	0.502	7.10	5.10	5.10	149.7	0.965	42.4	0.0547	0.65	2.03	0.65
2/13/2023	12:56	191.7	0.925	78.6	0.049	3.46	5.10	3.46	149.7	0.965	112.6	0.1464	0.65	2.03	0.65
2/13/2023	12:57	191.6	0.925	2,696.0	1.763	2.48	5.12	2.48	149.7	0.965	159.1	0.2100	0.64	2.03	0.64
2/13/2023	12:58	191.6	0.923	1,009.5	0.640	8.62	5.12	5.12	149.7	0.965	136.7	0.1765	0.64	2.03	0.64
2/13/2023	12:59	191.6	0.925	869.2	0.544	3.22	5.15	3.22	149.7	0.965	124.9	0.1602	0.64	2.04	0.64
2/13/2023	13:00	191.7	0.925	873.7	0.544	2.33	5.13	2.33	149.7	0.965	105.3	0.1370	0.64	2.05	0.64
2/13/2023	13:01	191.7	0.924	672.7	0.422	8.11	5.09	5.09	149.7	0.965	117.3	0.1519	0.65	2.05	0.65
2/13/2023					--				149.7	0.965	83.0	0.1070	0.65	2.04	0.65
2/13/2023	13:03	191.7	0.925	930.0	0.577	3.45	5.06	3.45				--			
2/13/2023	13:04	191.7	0.925	128.0	0.079	2.28	5.05	2.28	149.7	0.965	83.4	0.1089	0.64	2.07	0.64
2/13/2023	13:05	191.7	0.923	709.4	0.461	8.62	5.05	5.05	149.7	0.965	83.7	0.1094	0.65	2.05	0.65
2/13/2023	13:06	191.7	0.925	796.1	0.500	3.09	5.00	3.09	149.7	0.965	108.4	0.1421	0.65	2.06	0.65
2/13/2023	13:07	191.7	0.924	762.1	0.500	5.21	4.99	4.99	149.7	0.965	106.4	0.1462	0.65	2.07	0.65
2/13/2023	13:08	191.7	0.925	805.4	0.506	5.00	4.96	4.96	149.7	0.965	109.2	0.1453	0.65	2.05	0.65
2/13/2023	13:09	191.7	0.925	881.7	0.550	2.36	4.96	2.36	149.7	0.965	111.7	0.1499	0.65	2.04	0.65
2/13/2023	13:10	191.7	0.924	648.4	0.409	4.70	4.93	4.70	149.7	0.965	105.3	0.1440	0.65	2.04	0.65
2/13/2023	13:11	191.7	0.924	709.4	0.449	7.21	4.88	4.88	149.7	0.965	97.5	0.1325	0.64	2.04	0.64
2/13/2023	13:12	191.7	0.925	277.7	0.173	2.25	4.87	2.25	149.7	0.965	95.4	0.1314	0.63	2.06	0.63
2/13/2023	13:13	191.7	0.925	806.9	0.507	3.48	4.84	3.48	149.6	0.965	72.0	0.0983	0.64	2.04	0.64
2/13/2023	13:14	191.7	0.924	632.0	0.394	7.65	4.84	4.84	149.6	0.965	97.7	0.1348	0.64	2.05	0.64
2/13/2023	13:15	191.7	0.925	1,001.1	0.618	2.56	4.81	2.56	149.6	0.965	119.0	0.1658	0.63	2.06	0.63
2/13/2023	13:16	191.7	0.926	963.6	0.596	2.39	4.82	2.39	149.7	0.965	101.4	0.1430	0.64	2.06	0.64
2/13/2023	13:17	191.7	0.924	702.6	0.440	8.11	4.84	4.84	149.6	0.965	94.8	0.1321	0.62	2.04	0.62
2/13/2023	13:18	191.7	0.925	313.9	0.193	3.57	4.86	3.57	149.6	0.965	117.0	0.1649	0.64	2.06	0.64
2/13/2023	13:19	191.7	0.926	1,692.4	1.054	2.32	4.89	2.32	149.6	0.965	103.7	0.1485	0.63	2.07	0.63
2/13/2023	13:20	191.7	0.925	465.5	0.289	2.75	4.90	2.75	149.6	0.965	110.3	0.1590	0.63	2.06	0.63
2/13/2023	13:21	191.7	0.924	1,029.7	0.650	9.31	4.91	4.91	149.7	0.965	109.1	0.1579	0.63	2.06	0.63
2/13/2023	13:22	191.7	0.926	663.5	0.433	2.60	4.90	2.60	149.6	0.965	120.1	0.1727	0.63	2.06	0.63
2/13/2023	13:23	191.7	0.926	1,274.3	0.796	2.30	4.94	2.30	149.7	0.965	120.3	0.1736	0.63	2.06	0.63
2/13/2023					--				149.7	0.965	112.8	0.1617	0.62	2.06	0.62
2/13/2023	13:25	191.7	0.924	872.4	0.601	6.73	5.01	5.01				--			
2/13/2023	13:26	191.7	0.926	771.0	0.488	4.82	4.99	4.82	149.7	0.965	109.9	0.1589	0.63	2.08	0.63
2/13/2023	13:27	191.7	0.926	681.9	0.464	2.39	4.88	2.39	149.7	0.965	120.9	0.1768	0.63	2.09	0.63
2/13/2023	13:28	191.7	0.925	967.3	0.581	3.81	4.85	3.81	149.7	0.965	111.8	0.1573	0.62	2.11	0.62
2/13/2023	13:29	191.7	0.925	924.3	0.470	6.98	4.88	4.88	149.7	0.965	79.3	0.1036	0.62	2.10	0.62
2/13/2023	13:30	191.7	0.924	808.5	0.388	2.74	5.01	2.74	149.7	0.965	72.0	0.0921	0.63	2.17	0.63
2/13/2023	13:31	191.7	0.924	935.7	0.461	2.76	5.10	2.76	149.7	0.965	77.4	0.0998	0.63	2.20	0.63
2/13/2023	13:32	191.7	0.923	1,004.2	0.535	9.83	5.16	5.16	149.7	0.965	86.6	0.1127	0.65	2.37	0.65
2/13/2023	13:33	191.7	0.924	663.3	0.372	3.35	5.17	3.35	149.7	0.965	98.4	0.1318	0.66	2.18	0.66
2/13/2023	13:34	191.7	0.925	997.6	0.579	2.52	5.11	2.52	149.8	0.965	109.3	0.1468	0.64	2.17	0.64
2/13/2023	13:35	191.7	0.925	1,214.9	0.724	2.24	5.09	2.24	149.8	0.964	114.4	0.1552	0.64	2.13	0.64
2/13/2023	13:36	191.8	0.924	1,017.7	0.618	3.23	5.09	3.23	149.9	0.964	112.9	0.1552	0.65	2.15	0.65
2/13/2023	13:37	191.8	0.923	951.2	0.583	10.96	5.09	5.09	149.9	0.964	121.1	0.1669	0.65	2.13	0.65
2/13/2023	13:38	191.8	0.925	945.7	0.643	4.22	5.10	4.22	149.9	0.964	184.5	0.2552	0.63	2.16	0.63
2/13/2023	13:39	191.9	0.925	3,586.1	2.210	2.21	5.14	2.21	150.0	0.964	184.8	0.2531	0.64	2.16	0.64
2/13/2023	13:40	191.9	0.925	782.3	0.486	2.09	5.11	2.09	149.9	0.965	148.8	0.2017	0.65	2.18	0.65
2/13/2023	13:41	191.9	0.923	895.4	0.559	5.57	5.13	5.13	149.9	0.964	113.6	0.1545	0.66	2.19	0.66
2/13/2023	13:42	191.9	0.924	832.5	0.524	9.55	5.10	5.10	150.0	0.965	82.4	0.1114	0.68	2.21	0.68
2/13/2023	13:43	191.9	0.925	122.2	0.076	4.25	5.13	4.25	150.0	0.964	64.9	0.0880	0.68	2.23	0.68
2/13/2023	13:44	191.9	0.925	725.1	0.447	2.54	5.10	2.54	149.9	0.964	65.6	0.0886	0.68	2.22	0.68

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/17/2023

					Inlet				Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{cc}$**	**BWS - Inlet $_{mod}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{cc}$**	**BWS - Outlet $_{mod}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/13/2023	13:45	191.9	0.925	184.3	0.114	2.13	5.14	2.13	150.0	0.965	50.4	0.0667	0.68	2.25	0.68
2/13/2023					--				150.0	0.964	64.6	0.0863	0.67	2.24	0.67
2/13/2023	13:47	191.9	0.924	443.7	0.273	3.68	5.08	3.68				--			
2/13/2023	13:48	191.9	0.924	208.1	0.137	9.46	5.08	5.08	150.0	0.964	51.1	0.0702	0.68	2.24	0.68
2/13/2023	13:49	191.9	0.925	654.0	0.401	4.82	5.10	4.82	149.9	0.964	63.3	0.0838	0.69	2.25	0.69
2/13/2023	13:50	192.0	0.925	239.3	0.146	2.61	5.10	2.61	150.0	0.964	60.2	0.0797	0.68	2.27	0.68
2/13/2023	13:51	191.9	0.925	755.1	0.464	2.49	5.11	2.49	149.9	0.964	50.6	0.0669	0.69	2.28	0.69
2/13/2023	13:52	191.9	0.924	42.3	0.026	5.18	5.14	5.14	150.0	0.965	71.1	0.0945	0.68	2.29	0.68
2/13/2023	13:53	191.9	0.924	810.7	0.504	8.78	5.12	5.12	149.9	0.965	49.7	0.0663	0.67	2.30	0.67
2/13/2023	13:54	191.9	0.925	88.1	0.054	4.35	5.14	4.35	149.9	0.965	70.0	0.0932	0.68	2.32	0.68
2/13/2023	13:55	192.0	0.925	831.7	0.520	2.81	5.11	2.81	150.0	0.964	69.3	0.0934	0.68	2.33	0.68
2/13/2023	13:56	192.0	0.925	769.3	0.470	2.48	5.08	2.48	149.9	0.965	59.0	0.0780	0.68	2.33	0.68
2/13/2023	13:57	192.0	0.923	99.5	0.067	5.56	5.03	5.03	149.9	0.964	65.2	0.0867	0.68	2.33	0.68
2/13/2023	13:58	191.9	0.924	780.9	0.482	9.36	4.99	4.99	149.9	0.964	48.3	0.0639	0.69	2.33	0.69
2/13/2023	13:59	191.9	0.925	103.1	0.065	5.07	4.96	4.96	149.9	0.964	67.4	0.0885	0.68	2.31	0.68
2/13/2023	14:00	191.9	0.926	808.2	0.497	2.65	4.97	2.65	149.9	0.964	51.9	0.0682	0.68	2.34	0.68
2/13/2023	14:01	192.0	0.926	256.8	0.156	2.24	5.00	2.24	150.0	0.965	66.6	0.0868	0.69	2.35	0.69
2/13/2023	14:02	192.0	0.925	646.1	0.394	2.20	4.96	2.20	150.1	0.964	58.9	0.0748	0.68	2.32	0.68
2/13/2023	14:03	192.0	0.923	732.3	0.445	8.68	4.96	4.96	150.1	0.964	59.7	0.0774	0.68	2.34	0.68
2/13/2023	14:04	192.1	0.925	141.6	0.086	7.19	4.94	4.94	150.1	0.964	67.1	0.0866	0.69	2.34	0.69
2/13/2023	14:05	192.1	0.925	793.0	0.488	3.62	4.91	3.62	150.0	0.964	52.7	0.0681	0.70	2.37	0.70
2/13/2023	14:06	192.0	0.926	113.2	0.070	2.36	4.85	2.36	150.0	0.964	74.2	0.0960	0.69	2.35	0.69
2/13/2023	14:07	192.0	0.926	818.7	0.504	2.31	4.85	2.31	150.0	0.964	54.1	0.0693	0.69	2.34	0.69
2/13/2023					--				149.9	0.965	67.1	0.0880	0.69	2.36	0.69
2/13/2023	14:09	191.9	0.924	466.8	0.290	4.01	4.77	4.01	149.9	0.965	59.6	0.0763	0.69	2.35	0.69
2/13/2023	14:10	191.9	0.925	380.2	0.233	9.61	4.70	4.70				--			
2/13/2023	14:11	191.9	0.926	729.5	0.446	5.38	4.67	4.67	149.9	0.964	63.7	0.0818	0.69	2.36	0.69
2/13/2023	14:12	191.9	0.926	167.8	0.102	2.56	4.65	2.56	149.8	0.964	57.9	0.0738	0.69	2.34	0.69
2/13/2023	14:13	191.9	0.926	669.8	0.411	2.17	4.65	2.17	149.8	0.964	45.7	0.0590	0.69	2.33	0.69
2/13/2023	14:14	191.9	0.926	232.6	0.142	2.13	4.61	2.13	149.8	0.964	76.3	0.0972	0.68	2.34	0.68
2/13/2023	14:15	191.9	0.923	850.3	0.528	7.80	4.62	4.62	149.9	0.965	54.0	0.0693	0.69	2.31	0.69
2/13/2023	14:16	191.9	0.925	362.9	0.224	8.46	4.63	4.63	149.9	0.964	73.4	0.0955	0.69	2.31	0.69
2/13/2023	14:17	191.9	0.926	1,149.4	0.702	4.77	4.68	4.68	149.9	0.964	70.1	0.0901	0.69	2.34	0.69
2/13/2023	14:18	191.9	0.926	157.9	0.097	2.57	4.64	2.57	149.9	0.964	62.2	0.0803	0.70	2.34	0.70
2/13/2023	14:19	191.9	0.926	758.8	0.462	2.26	4.64	2.26	149.8	0.964	63.8	0.0821	0.68	2.34	0.68
2/13/2023	14:20	191.9	0.926	163.1	0.100	2.14	4.65	2.14	149.8	0.964	74.5	0.0955	0.68	2.32	0.68
2/13/2023	14:21	191.9	0.924	764.9	0.469	3.92	4.64	3.92	149.8	0.965	51.4	0.0655	0.68	2.33	0.68
2/13/2023	14:22	191.9	0.924	97.2	0.060	10.07	4.61	4.61	149.8	0.964	36.4	0.0470	0.70	2.32	0.70
2/13/2023	14:23	191.8	0.926	589.6	0.366	5.88	4.59	4.59	149.9	0.964	54.2	0.0693	0.69	2.32	0.69
2/13/2023	14:24	191.9	0.926	787.5	0.480	2.72	4.60	2.72	149.8	0.964	82.3	0.1058	0.68	2.31	0.68
2/13/2023	14:25	191.9	0.926	546.7	0.332	2.21	4.63	2.21	149.9	0.964	91.4	0.1173	0.67	2.32	0.67
2/13/2023	14:26	191.9	0.926	660.5	0.402	2.20	4.64	2.20	149.8	0.964	68.4	0.0874	0.68	2.32	0.68
2/13/2023	14:27	191.9	0.925	454.4	0.277	2.73	4.65	2.73	149.8	0.964	79.8	0.1015	0.69	2.34	0.69
2/13/2023	14:28	191.9	0.924	310.5	0.189	10.44	4.68	4.68	149.8	0.964	70.5	0.0896	0.69	2.34	0.69
2/13/2023	14:29	191.9	0.926	783.2	0.477	6.21	4.69	4.69	149.8	0.965	68.8	0.0876	0.69	2.36	0.69
2/13/2023					--				149.9	0.964	60.9	0.0776	0.67	2.31	0.67
2/13/2023	14:31	191.9	0.926	157.7	0.097	3.01	4.31	3.01				--			
2/13/2023	14:32	191.9	0.926	797.5	0.168	2.41	4.23	2.41	149.9	0.964	18.2	0.0154	0.60	2.35	0.60
2/13/2023	14:33	191.9	0.923	162.2	0.028	2.23	4.12	2.23	149.9	0.964	6.6	0.0053	0.59	2.31	0.59
2/13/2023	14:34	191.9	0.922	1,537.7	0.231	2.40	4.03	2.40	149.9	0.964	3.1	0.0024	0.57	2.31	0.57
2/13/2023	14:35	191.9	0.920	1,091.2	0.153	7.43	3.88	3.88	149.9	0.964	1.6	0.0012	0.57	2.34	0.57
2/13/2023	14:36	191.8	0.921	2,752.3	0.298	8.11	3.76	3.76	149.8	0.964	0.7	0.0005	0.56	2.34	0.56
2/13/2023	14:37	191.9	0.922	958.4	0.060	3.89	3.63	3.63	149.8	0.964	0.9	0.0006	0.55	2.33	0.55
2/13/2023	14:38	191.9	0.922	5,633.9	0.314	2.85	3.54	2.85	149.9	0.964	0.6	0.0005	0.55	2.37	0.55
2/13/2023	14:39	191.9	0.922	4,585.0	0.128	2.27	3.45	2.27	149.9	0.964	0.5	0.0004	0.53	2.35	0.53
2/13/2023	14:40	191.9	0.921	3,715.1	0.147	2.28	3.41	2.28	149.9	0.964	0.6	0.0004	0.51	2.35	0.51
2/13/2023	14:41	191.9	0.922	15,782.2	0.988	2.43	3.42	2.43	149.9	0.964	0.4	0.0003	0.51	2.34	0.51
2/13/2023	14:42	191.9	0.920	12,860.0	0.721	5.22	3.43	3.43	149.8	0.964	0.6	0.0004	0.52	2.35	0.52
2/13/2023	14:43	191.9	0.920	15,127.4	1.272	9.43	3.43	3.43	149.8	0.964	0.5	0.0004	0.54	2.34	0.54
2/13/2023	14:44	191.9	0.922	22,619.9	2.100	6.45	3.41	3.41	149.8	0.964	0.6	0.0005	0.54	2.34	0.54
2/13/2023	14:45	191.9	0.922	13,640.2	1.427	3.64	3.41	3.41	149.8	0.964	0.7	0.0006	0.54	2.42	0.54
2/13/2023	14:46	191.9	0.922	4,616.1	0.386	2.69	3.36	2.69	149.9	0.964	0.3	0.0002	0.53	2.35	0.53
2/13/2023	14:47	191.9	0.922	8,717.6	0.878	2.58	3.37	2.58	149.9	0.964	0.5	0.0004	0.53	2.36	0.53
2/13/2023	14:48	191.9	0.922	3,512.8	0.327	2.48	3.32	2.48	149.9	0.964	0.6	0.0004	0.56	2.37	0.56
2/13/2023	14:49	191.9	0.922	6,803.8	0.938	2.40	3.20	2.40	149.8	0.964	187.6	0.1416	0.20	2.38	0.20
2/13/2023	14:50	191.9	0.927	3,278.5	3.593	2.38	3.09	2.38	149.8	0.964	17,470.0	26.6262	0.20	2.40	0.20
2/13/2023	14:51	191.9	0.931	160,415.8	174.516	9.92	2.98	2.98	149.8	0.964	23,317.4	35.4629	0.20	2.43	0.20
2/13/2023					--				149.9	0.964	25,737.8	39.3805	0.20	2.42	0.20
2/13/2023	14:53	191.8	0.931	162,650.0	172.804	6.31	2.83	2.83				--			
2/13/2023	14:54	191.8	0.931	164,991.8	174.139	6.24	2.79	2.79				--			
2/13/2023	14:55	191.9	0.931	165,920.0	173.507	13.82	2.78	2.78	149.9	0.964	27,106.0	40.5974	0.20	2.45	0.20
2/13/2023	14:56	191.9	0.931	166,805.2	174.899	12.00	2.80	2.80	149.9	0.964	25,362.0	37.2151	0.20	2.45	0.20
2/13/2023	14:57	191.8	0.931	163,506.1	21.645	29.40	2.76	2.76	149.8	0.964	5,732.5	3.8609	0.20	2.46	0.20
2/13/2023	14:58	191.8	0.926	148,238.1	29.123	1.54	2.76	1.54	149.8	0.964	4,747.3	3.4400	0.20	2.48	0.20
2/13/2023	14:59	191.8	0.923	118,662.1	122.068	1.46	2.78	1.46	149.9	0.964	8,766.7	12.4621	0.20	2.46	0.20
2/13/2023	15:00	191.8	0.929	88,001.6	11.048	2.02	2.77	2.02	149.9	0.964	1,276.9	0.8805	0.34	2.45	0.34
2/13/2023	15:01	191.9	0.924	121,594.4	11.827	1.43	2.77	1.43	149.9	0.964	751.3	0.4872	0.41	2.47	0.41
2/13/2023	15:02	191.9	0.923	91,679.5	23.850	1.86	2.71	1.86	149.9	0.964	273.3	0.2322	0.53	2.46	0.53
2/13/2023	15:03	192.0	0.923	49,575.1	22.567	1.59	2.66	1.59	149.9	0.964	466.0	0.3799	0.55	2.47	0.55
2/13/2023	15:04	191.9	0.924	124,231.3	162.472	1.76	2.63	1.76	149.9	0.964	44,706.5	51.7678	0.20	2.48	0.20
2/13/2023	15:05	191.7	0.932	449,797.5	464.368	1.80	2.65	1.80	149.8	0.964	41,670.7	62.1769	0.20	2.45	0.20
2/13/2023	15:06	191.7	0.933	172,114.1	176.330	1.80	2.65	1.80	149.8	0.963	10,786.5	15.8263	0.20	2.46	0.20
2/13/2023	15:07	191.8	0.928	167,322.2	27.254	1.80	2.66	1.80	149.8	0.964	1,609.9	1.1819	0.24	2.46	0.24
2/13/2023	15:08	191.8	0.923	128,134.8	11.833	0.78	2.66	0.78	149.9	0.964	1,227.4	0.7900	0.29	2.45	0.29
2/13/2023	15:09	191.8	0.923	99,672.6	11.799	1.50	2.68	1.50	149.9	0.964	400.3	0.2725	0.43	2.45	0.43
2/13/2023	15:10	191.9	0.922	42,987.2	3.791	1.62	2.69	1.62	149.9	0.964	183.4	0.1196	0.50	2.46	0.50
2/13/2023	15:11	191.9	0.922	18,381.0	1.622	1.88	2.70	1.88	149.9	0.964	96.9	0.0618	0.52	2.45	0.52
2/13/2023	15:12	191.9	0.922	17,419.0	1.685	2.75	2.70	2.70	149.9	0.964	60.0	0.0382	0.53	2.44	0.53
2/13/2023	15:13	192.0	0.922	19,088.1	1.767	2.01	2.71	2.01	149.8	0.964	40.1	0.0259	0.53	2.43	0.53
2/13/2023					--				149.8	0.963	42.2	0.0278	0.54	2.43	0.54
2/13/2023	15:15	192.0	0.922	17,238.4	1.800	2.24	2.73	2.24				--			
2/13/2023	15:16	191.9	0.922	10,686.7	1.075	1.98	2.74	1.98	149.8	0.964	41.6	0.0267	0.54	2.44	0.54
2/13/2023	15:17	191.9	0.922	12,362.5	1.290	2.18	2.75	2.18	149.9	0.964	31.1	0.0207	0.54	2.43	0.54
2/13/2023	15:18	191.9	0.921	8,535.5	0.922	2.26	2.75	2.26	149.9	0.964	27.6	0.0177	0.54	2.44	0.54
2/13/2023	15:19	192.0	0.922	8,416.2	0.908	1.92	2.76	1.92	149.9	0.964	20.2	0.0133	0.54	2.43	0.54

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wt}$**	**BWS - Inlet$_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wt}$**	**BWS - Outlet$_{used}$**
	Unit	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/13/2023	15:20	192.0	0.921	8,549.5	0.984	2.40	2.75	2.40	149.8	0.963	17.8	0.0116	0.53	2.44	0.53
2/13/2023	15:21	192.0	0.921	6,421.8	0.669	1.94	2.77	1.94	149.8	0.963	16.2	0.0104	0.53	2.44	0.53
2/13/2023	15:22	192.0	0.922	10,193.1	0.899	2.40	2.77	2.40	149.8	0.963	13.9	0.0090	0.54	2.42	0.54
2/13/2023	15:23	192.0	0.921	5,460.7	0.609	2.20	2.78	2.20	149.8	0.963	13.2	0.0083	0.54	2.41	0.54
2/13/2023	15:24	192.0	0.922	7,200.8	0.723	2.04	2.77	2.04	149.8	0.963	11.6	0.0073	0.55	2.42	0.55
2/13/2023	15:25	192.0	0.922	5,218.4	0.525	2.04	2.78	2.04	149.7	0.963	9.8	0.0064	0.54	2.41	0.54
2/13/2023	15:26	191.9	0.921	10,880.6	1.176	2.59	2.79	2.59	149.7	0.963	9.6	0.0060	0.53	2.42	0.53
2/13/2023	15:27	191.9	0.921	6,914.2	0.721	2.05	2.79	2.05	149.7	0.963	8.6	0.0055	0.54	2.41	0.54
2/13/2023	15:28	191.9	0.921	4,679.8	0.452	2.00	2.79	2.00	149.7	0.963	8.2	0.0051	0.55	2.42	0.55
2/13/2023	15:29	191.9	0.921	11,309.2	1.263	2.58	2.79	2.58	149.7	0.964	7.4	0.0049	0.54	2.40	0.54
2/13/2023	15:30	191.9	0.921	4,631.9	0.532	2.19	2.79	2.19	149.8	0.963	7.0	0.0044	0.55	2.41	0.55
2/13/2023	15:31	191.9	0.921	6,975.6	0.754	2.13	2.78	2.13	149.8	0.963	6.2	0.0040	0.54	2.41	0.54
2/13/2023	15:32	191.9	0.921	6,206.1	0.692	2.44	2.78	2.44	149.8	0.963	5.9	0.0038	0.54	2.39	0.54
2/13/2023	15:33	191.9	0.921	4,292.7	0.464	1.97	2.77	1.97	149.8	0.963	5.8	0.0038	0.53	2.41	0.53
2/13/2023	15:34	191.9	0.921	10,291.5	1.035	2.44	2.77	2.44	149.8	0.963	5.4	0.0034	0.54	2.40	0.54
2/13/2023					--				149.8	0.963	5.3	0.0035	0.55	2.42	0.55
2/13/2023	15:36	191.8	0.921	3,488.5	0.275	2.04	2.77	2.04	149.8	0.963	4.8	0.0030	0.55	2.39	0.55
2/13/2023	15:37	191.9	0.921	8,483.4	0.579	2.21	2.78	2.21				--			
2/13/2023	15:38	191.9	0.921	3,939.3	0.311	2.01	2.77	2.01	149.7	0.963	4.7	0.0031	0.55	2.40	0.55
2/13/2023	15:39	191.9	0.921	10,978.9	1.187	2.53	2.77	2.53	149.7	0.963	4.5	0.0028	0.54	2.40	0.54
2/13/2023	15:40	191.9	0.921	3,203.1	0.236	1.97	2.76	1.97	149.8	0.963	4.3	0.0027	0.53	2.40	0.53
2/13/2023	15:41	191.9	0.921	3,610.4	0.349	2.04	2.75	2.04	149.8	0.963	4.0	0.0026	0.53	2.39	0.53
2/13/2023	15:42	191.9	0.921	8,331.3	0.838	2.36	2.74	2.36	149.8	0.963	4.0	0.0025	0.53	2.38	0.53
2/13/2023	15:43	191.9	0.922	8,837.8	0.818	2.47	2.74	2.47	149.8	0.963	4.0	0.0025	0.54	2.38	0.54
2/13/2023	15:44	191.9	0.921	4,883.6	0.708	2.16	2.75	2.16	149.7	0.963	3.8	0.0024	0.53	2.38	0.53
2/13/2023	15:45	191.9	0.921	6,677.3	0.697	2.05	2.73	2.05	149.8	0.963	3.6	0.0022	0.54	2.37	0.54
2/13/2023	15:46	191.9	0.921	8,010.6	0.837	2.35	2.73	2.35	149.8	0.963	3.5	0.0025	0.54	2.37	0.54
2/13/2023	15:47	191.9	0.921	4,110.8	0.429	1.95	2.71	1.95	149.8	0.963	3.6	0.0023	0.55	2.39	0.55
2/13/2023	15:48	191.9	0.921	8,879.7	0.822	2.16	2.70	2.16	149.8	0.963	3.4	0.0022	0.54	2.38	0.54
2/13/2023	15:49	191.9	0.921	4,415.6	0.427	2.31	2.69	2.31	149.8	0.963	3.3	0.0021	0.54	2.38	0.54
2/13/2023	15:50	191.9	0.921	5,436.3	0.503	1.94	2.71	1.94	149.8	0.963	3.3	0.0021	0.54	2.37	0.54
2/13/2023	15:51	191.9	0.921	9,776.2	0.905	2.33	2.68	2.33	149.8	0.963	3.2	0.0020	0.54	2.37	0.54
2/13/2023	15:52	191.9	0.921	3,390.5	0.501	1.87	2.67	1.87	149.8	0.963	3.0	0.0020	0.52	2.36	0.52
2/13/2023	15:53	191.8	0.921	1,867.8	0.180	1.99	2.68	1.99	149.8	0.963	3.1	0.0020	0.53	2.37	0.53
2/13/2023	15:54	191.8	0.921	13,261.8	1.334	2.09	2.68	2.09	149.8	0.963	3.1	0.0020	0.53	2.36	0.53
2/13/2023	15:55	191.8	0.921	10,991.9	1.064	2.36	2.66	2.36	149.8	0.963	2.8	0.0018	0.54	2.36	0.54
2/13/2023	15:56	191.9	0.921	4,330.0	0.418	1.84	2.66	1.84	149.8	0.963	2.8	0.0018	0.54	2.34	0.54
2/13/2023					--				149.8	0.963	2.8	0.0018	0.55	2.35	0.55
2/13/2023	15:58	191.9	0.921	4,574.5	0.585	1.92	2.63	1.92	149.8	0.963	2.8	0.0018	0.55	2.35	0.55
2/13/2023	15:59	191.9	0.921	9,091.3	0.950	2.19	2.62	2.19				--			
2/13/2023	16:00	191.9	0.921	3,746.3	0.362	2.17	2.60	2.17	149.8	0.963	2.8	0.0018	0.54	2.34	0.54
2/13/2023	16:01	191.8	0.921	12,397.4	1.148	2.42	2.62	2.42	149.8	0.963	2.6	0.0017	0.54	2.34	0.54
2/13/2023	16:02	191.8	0.921	5,829.2	0.564	1.86	2.61	1.86	149.8	0.963	2.6	0.0017	0.54	2.34	0.54
2/13/2023	16:03	191.9	0.921	9,127.6	0.954	2.34	2.59	2.34	149.8	0.962	2.4	0.0015	0.54	2.34	0.54
2/13/2023	16:04	191.9	0.921	3,938.9	0.365	1.78	2.58	1.78	149.8	0.963	2.6	0.0016	0.54	2.36	0.54
2/13/2023	16:05	191.9	0.921	4,610.0	0.446	1.87	2.57	1.87	149.8	0.962	2.6	0.0016	0.54	2.36	0.54
2/13/2023	16:06	191.9	0.921	8,936.4	0.901	2.13	2.56	2.13	149.8	0.963	2.5	0.0016	0.54	2.35	0.54
2/13/2023	16:07	191.9	0.921	6,439.9	0.623	1.81	2.55	1.81	149.8	0.962	2.6	0.0017	0.53	2.35	0.53
2/13/2023	16:08	191.9	0.920	9,755.4	0.863	2.30	2.54	2.30	149.8	0.963	2.3	0.0015	0.53	2.34	0.53
2/13/2023	16:09	191.9	0.921	5,680.3	0.897	1.74	2.54	1.74	149.8	0.963	2.3	0.0015	0.54	2.35	0.54
2/13/2023	16:10	191.9	0.921	8,665.2	0.839	2.30	2.52	2.30	149.8	0.962	2.5	0.0016	0.54	2.35	0.54
2/13/2023	16:11	191.9	0.921	11,072.4	1.117	2.38	2.50	2.38	149.8	0.962	2.3	0.0015	0.55	2.35	0.55
2/13/2023	16:12	191.9	0.921	4,958.5	0.784	1.77	2.51	1.77	149.8	0.962	2.3	0.0015	0.55	2.33	0.55
2/13/2023	16:13	191.8	0.921	5,041.4	0.528	1.79	2.49	1.79	149.8	0.962	2.3	0.0015	0.55	2.35	0.55
2/13/2023	16:14	191.9	0.921	10,671.4	1.432	2.35	2.48	2.35	149.8	0.962	2.5	0.0016	0.55	2.34	0.55
2/13/2023	16:15	191.9	0.920	4,731.7	0.477	1.73	2.48	1.73	149.8	0.962	2.4	0.0015	0.54	2.34	0.54
2/13/2023	16:16	191.9	0.921	17,957.2	1.668	2.48	2.47	2.47	149.8	0.963	2.4	0.0015	0.53	2.35	0.53
2/13/2023	16:17	191.9	0.920	7,851.7	0.694	1.87	2.46	1.87	149.8	0.963	2.3	0.0015	0.53	2.35	0.53
2/13/2023	16:18	191.9	0.920	2,415.6	0.224	1.71	2.45	1.71	149.8	0.962	2.2	0.0014	0.54	2.34	0.54
2/13/2023					--				149.8	0.962	2.3	0.0015	0.55	2.34	0.55
2/13/2023	16:20	191.8	0.921	4,116.8	0.364	2.46	2.43	2.43	149.8	0.962	2.2	0.0015	0.54	2.31	0.54
2/13/2023	16:21	191.8	0.921	4,010.0	0.372	1.72	2.41	1.72				--			
2/13/2023	16:22	191.8	0.921	5,340.3	0.496	3.21	2.39	2.39	149.8	0.962	2.4	0.0015	0.55	2.31	0.55
2/13/2023	16:23	191.9	0.920	5,854.7	0.518	1.75	2.38	1.75	149.8	0.963	2.1	0.0014	0.56	2.31	0.56
2/13/2023	16:24	191.9	0.921	1,897.5	0.159	1.67	2.38	1.67	149.8	0.962	1.8	0.0012	0.55	2.32	0.55
2/13/2023	16:25	191.9	0.920	9,855.4	0.873	2.15	2.35	2.15	149.8	0.963	2.1	0.0014	0.54	2.31	0.54
2/13/2023	16:26	191.9	0.920	10,392.0	0.966	2.27	2.35	2.27	149.8	0.962	2.2	0.0014	0.53	2.31	0.53
2/13/2023	16:27	191.9	0.921	3,937.5	0.349	1.99	2.34	1.99	149.8	0.962	2.2	0.0014	0.52	2.31	0.52
2/13/2023	16:28	191.9	0.920	6,151.6	0.596	1.77	2.32	1.77	149.8	0.962	2.2	0.0014	0.52	2.31	0.52
2/13/2023	16:29	191.8	0.920	5,842.5	0.518	1.95	2.30	1.95	149.8	0.962	2.2	0.0014	0.51	2.30	0.51
2/13/2023	16:30	191.8	0.920	4,975.8	0.441	2.01	2.29	2.01	149.8	0.962	2.1	0.0013	0.52	2.30	0.52
2/13/2023	16:31	191.8	0.921	5,942.0	0.500	1.73	2.28	1.73	149.8	0.962	2.0	0.0013	0.52	2.28	0.52
2/13/2023	16:32	191.9	0.920	5,779.6	0.458	1.81	2.27	1.81	149.8	0.962	1.9	0.0012	0.53	2.29	0.53
2/13/2023	16:33	191.9	0.920	7,830.5	0.659	1.86	2.26	1.86	149.8	0.962	1.9	0.0013	0.52	2.27	0.52
2/13/2023	16:34	191.8	0.921	3,954.4	0.400	2.15	2.24	2.15	149.7	0.962	1.8	0.0012	0.52	2.26	0.52
2/13/2023	16:35	191.8	0.920	4,706.3	0.417	1.65	2.23	1.65	149.8	0.962	2.0	0.0013	0.53	2.26	0.53
2/13/2023	16:36	191.8	0.921	6,957.7	0.851	2.10	2.23	2.10	149.8	0.962	1.9	0.0013	0.54	2.27	0.54
2/13/2023	16:37	191.8	0.920	3,273.5	0.290	1.60	2.22	1.60	149.8	0.962	1.7	0.0011	0.53	2.55	0.53
2/13/2023	16:38	191.8	0.921	9,010.3	0.799	2.08	2.22	2.08	149.8	0.962	1.8	0.0013	0.53	2.42	0.53
2/13/2023	16:39	191.8	0.920	4,372.0	0.368	1.97	2.20	1.97	149.8	0.962	2.0	0.0013	0.54	2.26	0.54
2/13/2023	16:40	191.9	0.920	6,231.2	0.525	1.67	2.18	1.67	149.8	0.962	1.9	0.0013	0.54	2.25	0.54
2/13/2023					--				149.8	0.962	1.8	0.0012	0.53	2.24	0.53
2/13/2023	16:42	191.9	0.920	2,196.8	0.195	1.56	2.17	1.56	149.8	0.962	1.8	0.0012	0.53	2.25	0.53
2/13/2023	16:43	191.9	0.921	8,348.8	1.124	2.02	2.16	2.02				--			
2/13/2023	16:44	191.8	0.920	9,748.4	0.821	2.14	2.16	2.14	149.8	0.962	2.0	0.0014	0.52	2.26	0.52
2/13/2023	16:45	191.8	0.921	4,395.4	0.349	1.75	2.15	1.75	149.8	0.962	1.9	0.0013	0.52	2.26	0.52
2/13/2023	16:46	191.8	0.921	8,421.0	0.709	1.77	2.14	1.77	149.8	0.962	1.9	0.0013	0.52	2.24	0.52
2/13/2023	16:47	191.9	0.921	3,760.8	0.299	2.01	2.13	2.01	149.8	0.962	1.6	0.0012	0.52	2.23	0.52
2/13/2023	16:48	191.9	0.921	5,380.6	0.453	1.64	2.12	1.64	149.8	0.962	1.8	0.0012	0.52	2.24	0.52
2/13/2023	16:49	191.9	0.921	7,460.6	0.663	2.09	2.12	2.09	149.8	0.962	1.9	0.0013	0.53	2.23	0.53
2/13/2023	16:50	191.9	0.921	4,222.5	0.543	1.72	2.11	1.72	149.7	0.963	1.9	0.0013	0.53	2.22	0.53
2/13/2023	16:51	191.9	0.921	8,198.9	0.691	1.80	2.10	1.80	149.8	0.962	1.8	0.0013	0.54	2.22	0.54
2/13/2023	16:52	191.9	0.921	3,923.5	0.312	2.03	2.10	2.03	149.8	0.962	1.8	0.0012	0.54	2.21	0.54
2/13/2023	16:53	191.9	0.921	4,956.6	0.417	1.62	2.09	1.62	149.8	0.963	1.8	0.0012	0.54	2.23	0.54
2/13/2023	16:54	191.9	0.921	8,236.0	0.655	1.96	2.08	1.96	149.8	0.962	1.6	0.0011	0.54	2.23	0.54

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wt}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wt}$**	**BWS - Outlet $_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/13/2023	16:55	191.9	0.921	4,445.4	0.467	1.86	2.08	1.86	149.8	0.963	1.7	0.0012	0.55	2.23	0.55
2/13/2023	16:56	191.9	0.921	6,262.6	0.498	1.70	2.07	1.70	149.8	0.962	1.7	0.0011	0.56	2.22	0.56
2/13/2023	16:57	191.9	0.921	5,194.9	0.358	2.24	2.07	2.07	149.8	0.962	1.7	0.0012	0.55	2.21	0.55
2/13/2023	16:58	191.9	0.920	4,789.5	0.380	1.61	2.07	1.61	149.8	0.962	1.6	0.0011	0.55	2.20	0.55
2/13/2023	16:59	191.8	0.921	9,528.5	0.709	1.90	2.05	1.90	149.8	0.962	1.8	0.0013	0.54	2.21	0.54
2/13/2023	17:00	191.8	0.921	3,475.2	0.276	1.84	2.05	1.84	149.8	0.962	1.7	0.0012	0.54	2.19	0.54
2/13/2023	17:01	191.8	0.921	6,430.4	0.511	1.67	2.03	1.67	149.8	0.962	1.7	0.0012	0.54	2.19	0.54
2/13/2023	17:02	191.9	0.921	4,924.3	0.634	2.08	2.01	2.01	149.8	0.962	1.7	0.0012	0.54	2.18	0.54
2/13/2023					--				149.8	0.962	1.7	0.0012	0.54	2.18	0.54
2/13/2023	17:04	191.9	0.920	4,214.8	0.290	1.53	2.01	1.53				--			
2/13/2023	17:05	191.8	0.921	11,935.9	0.888	2.03	2.01	2.01	149.7	0.963	1.7	0.0012	0.55	2.18	0.55
2/13/2023	17:06	191.9	0.920	3,759.1	0.334	1.72	1.99	1.72	149.7	0.962	1.7	0.0012	0.55	2.15	0.55
2/13/2023	17:07	191.9	0.920	6,896.4	0.699	1.69	1.99	1.69	149.8	0.962	1.5	0.0011	0.55	2.15	0.55
2/13/2023	17:08	191.9	0.921	4,858.2	0.453	1.83	1.98	1.83	149.7	0.962	1.5	0.0011	0.56	2.13	0.56
2/13/2023	17:09	191.8	0.920	2,605.9	0.293	1.49	1.97	1.49	149.8	0.962	1.8	0.0013	0.56	2.12	0.56
2/13/2023	17:10	191.9	0.920	7,027.3	0.685	1.72	1.95	1.72	149.7	0.962	1.7	0.0012	0.57	2.11	0.57
2/13/2023	17:11	191.9	0.920	2,352.3	0.209	1.49	1.94	1.49	149.7	0.962	1.6	0.0011	0.58	2.10	0.58
2/13/2023	17:12	191.9	0.920	6,109.0	0.620	1.52	1.94	1.52	149.8	0.962	1.7	0.0012	0.57	2.07	0.57
2/13/2023	17:13	191.9	0.920	3,731.2	0.348	1.74	1.93	1.74	149.8	0.962	1.7	0.0012	0.56	2.07	0.56
2/13/2023	17:14	191.9	0.920	3,394.1	0.317	1.33	1.93	1.33	149.8	0.962	1.7	0.0013	0.56	2.07	0.56
2/13/2023	17:15	191.9	0.920	7,140.3	0.636	1.64	1.91	1.64	149.8	0.962	1.7	0.0012	0.56	2.07	0.56
2/13/2023	17:16	191.9	0.920	2,028.8	0.198	1.30	1.91	1.30	149.8	0.962	1.6	0.0012	0.56	2.15	0.56
2/13/2023	17:17	191.9	0.920	6,807.2	0.664	1.66	1.91	1.66	149.8	0.962	1.4	0.0010	0.55	2.35	0.55
2/13/2023	17:18	191.9	0.920	2,433.3	0.247	1.29	1.88	1.29	149.8	0.962	1.5	0.0012	0.55	2.04	0.55
2/13/2023	17:19	191.8	0.920	6,674.4	0.595	1.55	1.87	1.55	149.8	0.962	1.5	0.0012	0.57	2.02	0.57
2/13/2023	17:20	191.8	0.920	3,062.1	0.273	1.62	1.86	1.62	149.8	0.962	1.5	0.0011	0.57	2.02	0.57
2/13/2023	17:21	191.8	0.920	4,253.2	0.397	1.31	1.85	1.31	149.8	0.962	1.6	0.0013	0.57	2.00	0.57
2/13/2023	17:22	191.8	0.921	4,559.2	0.574	1.70	1.85	1.70	149.8	0.962	1.4	0.0011	0.56	2.00	0.56
2/13/2023	17:23	191.8	0.920	2,892.8	0.258	1.24	1.83	1.24	149.8	0.962	1.3	0.0010	0.55	2.00	0.55
2/13/2023	17:24	191.9	0.920	7,152.3	0.698	1.51	1.83	1.51	149.8	0.962	1.7	0.0013	0.56	1.98	0.56
2/13/2023					--				149.8	0.962	1.6	0.0012	0.54	1.97	0.54
2/13/2023	17:26	191.9	0.920	2,691.6	0.228	1.41	1.81	1.41				--			
2/13/2023	17:27	191.9	0.920	5,413.4	0.506	1.34	1.80	1.34	149.8	0.962	1.6	0.0013	0.54	1.95	0.54
2/13/2023	17:28	191.9	0.920	2,899.2	0.245	1.58	1.80	1.58	149.8	0.962	1.3	0.0010	0.53	1.96	0.53
2/13/2023	17:29	191.9	0.920	4,564.8	0.407	1.27	1.80	1.27	149.8	0.962	1.6	0.0012	0.54	1.94	0.54
2/13/2023	17:30	191.9	0.920	5,610.6	0.447	1.68	1.79	1.68	149.8	0.962	1.3	0.0010	0.55	1.93	0.55
2/13/2023	17:31	191.9	0.920	3,025.4	0.270	1.23	1.78	1.23	149.8	0.962	1.4	0.0011	0.55	1.93	0.55
2/13/2023	17:32	191.9	0.921	3,803.9	0.322	1.78	1.77	1.77	149.8	0.962	1.4	0.0011	0.55	1.92	0.55
2/13/2023	17:33	191.8	0.920	3,322.9	0.281	1.23	1.76	1.23	149.8	0.962	1.5	0.0012	0.54	1.92	0.54
2/13/2023	17:34	191.9	0.920	3,584.3	0.303	1.77	1.76	1.76	149.8	0.962	1.5	0.0012	0.55	1.91	0.55
2/13/2023	17:35	191.9	0.920	3,732.5	0.364	1.23	1.76	1.23	149.8	0.962	1.7	0.0013	0.57	1.90	0.57
2/13/2023	17:36	191.9	0.920	7,012.1	0.560	1.60	1.73	1.60	149.8	0.962	1.3	0.0011	0.56	1.90	0.56
2/13/2023	17:37	191.9	0.920	2,537.5	0.215	1.21	1.72	1.21	149.8	0.962	1.4	0.0011	0.55	1.88	0.55
2/13/2023	17:38	191.9	0.920	8,926.3	0.756	1.53	1.72	1.53	149.8	0.962	1.8	0.0015	0.53	1.86	0.53
2/13/2023	17:39	191.9	0.920	2,819.0	0.251	1.34	1.71	1.34	149.8	0.962	1.3	0.0011	0.53	1.86	0.53
2/13/2023	17:40	191.9	0.920	6,629.8	0.561	1.35	1.70	1.35	149.8	0.962	1.6	0.0014	0.56	1.85	0.56
2/13/2023	17:41	191.9	0.920	2,052.9	0.183	1.31	1.69	1.31	149.8	0.962	1.4	0.0012	0.57	1.84	0.57
2/13/2023	17:42	191.9	0.920	6,247.1	0.499	1.37	1.69	1.37	149.8	0.962	1.5	0.0012	0.57	1.84	0.57
2/13/2023	17:43	191.9	0.920	2,015.0	0.189	1.27	1.68	1.27	149.8	0.962	1.6	0.0013	0.57	1.83	0.57
2/13/2023	17:44	191.9	0.920	7,450.9	0.595	1.42	1.67	1.42	149.8	0.962	1.6	0.0013	0.57	1.82	0.57
2/13/2023	17:45	191.9	0.920	1,956.5	0.191	1.18	1.66	1.18	149.8	0.962	1.6	0.0013	0.57	1.81	0.57
2/13/2023	17:46	191.9	0.920	8,143.8	0.727	1.52	1.66	1.52	149.8	0.962	1.2	0.0010	0.57	1.79	0.57
2/13/2023					--				149.8	0.962	1.4	0.0012	0.57	1.80	0.57
2/13/2023	17:48	191.9	0.920	2,345.5	0.199	1.26	1.64	1.26				--			
2/13/2023	17:49	191.9	0.920	7,265.5	0.649	1.42	1.63	1.42	149.8	0.962	1.4	0.0012	0.57	1.78	0.57
2/13/2023	17:50	191.9	0.920	1,801.2	0.161	1.15	1.62	1.15	149.8	0.962	1.1	0.0009	0.58	1.78	0.58
2/13/2023	17:51	191.9	0.920	8,368.2	0.710	1.47	1.61	1.47	149.8	0.962	1.3	0.0011	0.58	1.76	0.58
2/13/2023	17:52	191.9	0.920	1,964.0	0.167	1.13	1.60	1.13	149.8	0.962	1.2	0.0010	0.58	1.76	0.58
2/13/2023	17:53	191.9	0.920	7,488.8	0.705	1.52	1.59	1.52	149.8	0.962	1.2	0.0010	0.58	1.75	0.58
2/13/2023	17:54	191.9	0.920	1,766.9	0.158	1.13	1.60	1.13	149.8	0.962	1.3	0.0011	0.60	1.75	0.60
2/13/2023	17:55	191.9	0.921	10,934.2	0.978	1.96	1.57	1.57	149.8	0.962	1.3	0.0012	0.60	1.74	0.60
2/13/2023	17:56	191.8	0.920	35,029.6	3.430	1.36	1.57	1.36	149.8	0.962	1.4	0.0012	0.60	1.72	0.60
2/13/2023	17:57	191.9	0.921	64,564.1	5.469	0.29	1.58	0.29	149.8	0.962	1.2	0.0010	0.60	1.73	0.60
2/13/2023	17:58	191.9	0.920	20,110.8	1.798	1.39	1.56	1.39	149.8	0.962	1.5	0.0013	0.60	1.73	0.60
2/13/2023	17:59	191.9	0.920	8,348.3	0.818	1.10	1.56	1.10	149.8	0.962	1.5	0.0013	0.59	1.71	0.59
2/13/2023	18:00	191.9	0.920	7,278.3	0.742	1.61	1.55	1.55	149.8	0.962	1.3	0.0011	0.58	1.70	0.58
2/13/2023	18:01	191.9	0.920	5,682.8	0.482	1.11	1.54	1.11	149.8	0.961	1.3	0.0011	0.58	1.70	0.58
2/13/2023	18:02	191.9	0.920	3,604.0	0.338	1.41	1.53	1.41	149.8	0.962	1.2	0.0010	0.58	1.69	0.58
2/13/2023	18:03	191.9	0.920	6,197.8	0.582	1.16	1.53	1.16	149.8	0.961	1.4	0.0012	0.58	1.69	0.58
2/13/2023	18:04	191.9	0.920	3,530.5	0.300	1.49	1.52	1.49	149.8	0.961	1.3	0.0011	0.58	1.67	0.58
2/13/2023	18:05	191.9	0.920	4,955.1	0.443	1.13	1.52	1.13	149.8	0.962	1.5	0.0014	0.59	1.68	0.59
2/13/2023	18:06	191.9	0.920	2,398.5	0.215	1.33	1.50	1.33	149.8	0.961	1.4	0.0012	0.60	1.68	0.60
2/13/2023	18:07	191.9	0.920	5,896.5	0.528	1.20	1.50	1.20	149.8	0.961	1.2	0.0011	0.59	1.66	0.59
2/13/2023	18:08	191.9	0.920	1,819.4	0.163	1.09	1.50	1.09	149.8	0.962	1.2	0.0011	0.59	1.66	0.59
2/13/2023					--							--			
2/13/2023	18:10	191.9	0.920	7,791.9	0.698	1.38	1.48	1.38	149.8	0.961	1.4	0.0012	0.59	1.66	0.59
2/13/2023	18:11	191.9	0.920	1,930.1	0.244	1.05	1.48	1.05	149.8	0.961	1.1	0.0010	0.58	1.66	0.58
2/13/2023	18:12	191.9	0.920	6,369.4	0.571	1.44	1.47	1.44	149.8	0.961	1.4	0.0012	0.58	1.64	0.58
2/13/2023	18:13	191.9	0.920	2,465.3	0.327	1.06	1.47	1.06	149.8	0.962	1.5	0.0013	0.57	1.66	0.57
2/13/2023	18:14	191.9	0.920	7,818.7	0.700	1.41	1.46	1.41	149.8	0.961	1.3	0.0012	0.58	1.65	0.58
2/13/2023	18:15	191.9	0.920	2,361.5	0.211	1.05	1.46	1.05	149.8	0.961	1.3	0.0012	0.58	1.63	0.58
2/13/2023	18:16	191.9	0.920	7,363.0	0.660	1.44	1.45	1.44	149.8	0.961	1.0	0.0009	0.58	1.62	0.58
2/13/2023	18:17	191.9	0.920	7,654.0	0.686	1.40	1.45	1.40	149.8	0.961	1.2	0.0011	0.57	1.60	0.57
2/13/2023	18:18	191.9	0.920	2,777.5	0.236	1.04	1.44	1.04	149.8	0.962	1.1	0.0010	0.57	1.60	0.57
2/13/2023	18:19	191.9	0.920	961.4	0.082	1.04	1.43	1.04	149.8	0.962	1.4	0.0012	0.57	1.60	0.57
2/13/2023	18:20	191.9	0.920	4,113.6	0.369	1.52	1.42	1.42	149.8	0.961	1.3	0.0012	0.58	1.58	0.58
2/13/2023	18:21	191.9	0.920	3,009.6	0.330	1.02	1.42	1.02	149.8	0.962	1.1	0.0011	0.58	1.58	0.58
2/13/2023	18:22	191.9	0.920	2,429.1	0.219	1.45	1.41	1.41	149.8	0.961	1.1	0.0010	0.58	1.57	0.58
2/13/2023	18:23	191.9	0.920	5,437.1	0.491	1.22	1.41	1.22	149.8	0.961	1.2	0.0011	0.58	1.57	0.58
2/13/2023	18:24	191.9	0.920	5,482.0	0.470	1.16	1.41	1.16	149.8	0.962	1.0	0.0009	0.59	1.55	0.59
2/13/2023	18:25	191.9	0.920	1,368.8	0.123	1.55	1.40	1.40	149.8	0.961	1.2	0.0017	0.58	1.55	0.58
2/13/2023	18:26	191.9	0.922	14,304.9	1.148	3.17	1.39	1.39	149.8	0.962	1.2	0.0011	0.57	1.54	0.57
2/13/2023	18:27	191.9	0.921	47,686.3	3.574	0.74	1.38	0.74	149.8	0.961	1.3	0.0012	0.57	1.53	0.57
2/13/2023	18:28	191.9	0.920	35,167.0	2.638	1.19	1.38	1.19	149.8	0.961	1.3	0.0012	0.57	1.52	0.57
2/13/2023	18:29	191.9	0.920	10,647.1	0.739	1.12	1.38	1.12	149.8	0.961	1.3	0.0012	0.57	1.52	0.57

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet$_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet$_{used}$**
	Unit	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/13/2023	18:30	191.9	0.920	4,331.4	0.301	1.02	1.37	1.02	149.8	0.961	1.3	0.0013	0.57	1.52	0.57
2/13/2023					--							--			
2/13/2023	18:32	191.9	0.920	2,273.2	0.193	1.02	1.36	1.02	149.8	0.961	1.6	0.0015	0.57	1.50	0.57
2/13/2023	18:33	191.9	0.920	1,421.2	0.107	1.05	1.35	1.05	149.8	0.961	1.2	0.0012	0.56	1.49	0.56
2/13/2023	18:34	191.9	0.920	1,302.6	0.091	1.18	1.35	1.18	149.8	0.961	1.1	0.0011	0.56	1.48	0.56
2/13/2023	18:35	191.9	0.920	21,352.1	2.274	1.95	1.35	1.35	149.8	0.961	1.1	0.0010	0.56	1.47	0.56
2/13/2023	18:36	191.9	0.920	4,456.9	0.358	1.07	1.34	1.07	149.8	0.961	1.2	0.0012	0.57	1.47	0.57
2/13/2023	18:37	191.9	0.920	1,787.4	0.144	1.09	1.33	1.09	149.8	0.961	1.3	0.0012	0.55	1.47	0.55
2/13/2023	18:38	191.9	0.920	62,025.7	6.599	0.38	1.32	0.38	149.8	0.961	1.2	0.0011	0.55	1.47	0.55
2/13/2023	18:39	191.9	0.920	13,383.5	1.431	1.83	1.32	1.32	149.8	0.961	1.2	0.0012	0.56	1.43	0.56
2/13/2023	18:40	191.9	0.920	4,695.3	0.356	1.51	1.31	1.31	149.8	0.961	1.4	0.0013	0.55	1.45	0.55
2/13/2023	18:41	191.9	0.920	67,577.9	20.152	0.20	1.30	0.20	149.9	0.961	0.9	0.0010	0.58	1.44	0.58
2/13/2023	18:42	191.9	0.921	49,399.0	4.207	0.92	1.30	0.92	149.9	0.961	1.3	0.0014	0.57	1.44	0.57
2/13/2023	18:43	191.9	0.922	188,646.5	14.221	1.00	1.29	1.00	149.9	0.961	1.7	0.0016	0.56	1.44	0.56
2/13/2023	18:44	191.9	0.921	48,948.4	5.030	0.91	1.29	0.91	149.9	0.961	1.7	0.0016	0.56	1.44	0.56
2/13/2023	18:45	191.9	0.921	8,092.7	0.515	1.11	1.28	1.11	149.9	0.961	1.5	0.0015	0.56	1.43	0.56
2/13/2023	18:46	191.9	0.921	3,618.9	0.326	2.06	1.28	1.28	149.8	0.961	1.3	0.0013	0.55	1.42	0.55
2/13/2023	18:47	191.9	0.921	80,255.8	10.192	0.34	1.28	0.34	149.8	0.961	1.3	0.0013	0.56	1.42	0.56
2/13/2023	18:48	191.9	0.921	9,726.3	1.206	2.09	1.27	1.27	149.8	0.961	1.2	0.0012	0.56	1.43	0.56
2/13/2023	18:49	191.9	0.920	5,226.1	0.630	1.74	1.27	1.27	149.9	0.961	1.5	0.0015	0.56	1.42	0.56
2/13/2023	18:50	191.9	0.920	5,608.4	0.676	1.17	1.26	1.17	149.9	0.961	1.2	0.0012	0.56	1.41	0.56
2/13/2023	18:51	191.9	0.920	4,055.7	0.282	0.76	1.26	0.76	149.8	0.961	1.5	0.0014	0.55	1.41	0.55
2/13/2023	18:52	191.9	0.920	3,860.2	0.219	0.38	1.25	0.38				--			
2/13/2023					--				149.8	0.961	1.6	0.0015	0.55	1.43	0.55
2/13/2023	18:54	192.0	0.920	3,291.8	0.162	0.29	1.24	0.29	149.8	0.961	1.2	0.0012	0.56	1.41	0.56
2/13/2023	18:55	192.0	0.920	3,061.2	0.151	0.22	1.24	0.22	149.9	0.961	1.2	0.0011	0.57	1.41	0.57
2/13/2023	18:56	192.0	0.920	3,441.0	0.196	0.20	1.24	0.20	149.8	0.961	1.2	0.0011	0.58	1.43	0.58
2/13/2023	18:57	192.0	0.920	23,362.7	1.149	0.20	1.24	0.20	149.8	0.961	1.2	0.0011	0.57	1.42	0.57
2/13/2023	18:58	192.0	0.920	13,572.7	0.944	0.20	1.23	0.20	149.8	0.961	1.3	0.0012	0.58	1.41	0.58
2/13/2023	18:59	192.0	0.920	6,408.0	0.407	0.20	1.23	0.20	149.8	0.961	1.1	0.0010	0.57	1.42	0.57
2/13/2023	19:00	191.9	0.920	13,591.2	0.772	0.20	1.23	0.20	149.8	0.961	1.3	0.0012	0.57	1.43	0.57
2/13/2023	19:01	192.0	0.920	8,173.4	0.465	0.20	1.22	0.20	149.8	0.961	1.4	0.0013	0.57	1.42	0.57
2/13/2023	19:02	192.0	0.920	3,909.9	0.222	0.57	1.23	0.57	149.8	0.961	1.2	0.0011	0.57	1.42	0.57
2/13/2023	19:03	192.0	0.920	8,342.6	0.530	0.20	1.22	0.20	149.8	0.961	1.3	0.0012	0.57	1.42	0.57
2/13/2023	19:04	191.9	0.920	17,641.3	1.120	0.20	1.21	0.20	149.8	0.961	1.4	0.0013	0.57	1.42	0.57
2/13/2023	19:05	191.9	0.920	13,102.9	0.744	0.20	1.20	0.20	149.8	0.961	1.2	0.0011	0.56	1.40	0.56
2/13/2023	19:06	191.9	0.920	8,764.9	0.498	0.31	1.20	0.31	149.9	0.961	1.2	0.0011	0.56	1.40	0.56
2/13/2023	19:07	192.0	0.920	5,412.2	0.308	0.56	1.20	0.56	149.9	0.961	1.5	0.0014	0.56	1.39	0.56
2/13/2023	19:08	192.0	0.920	3,853.6	0.245	0.68	1.20	0.68	149.9	0.961	1.5	0.0014	0.56	1.39	0.56
2/13/2023	19:09	192.0	0.920	2,681.8	0.170	0.78	1.20	0.78	149.9	0.961	1.3	0.0012	0.56	1.40	0.56
2/13/2023	19:10	192.0	0.920	2,719.4	0.155	0.80	1.19	0.80	149.9	0.961	1.6	0.0015	0.56	1.39	0.56
2/13/2023	19:11	192.0	0.920	2,183.3	0.124	0.82	1.19	0.82	149.9	0.961	1.3	0.0012	0.56	1.38	0.56
2/13/2023	19:12	192.0	0.920	1,837.1	0.117	0.86	1.20	0.86	149.8	0.961	1.5	0.0014	0.56	1.39	0.56
2/13/2023	19:13	192.0	0.920	1,416.0	0.090	0.88	1.19	0.88	149.9	0.961	1.4	0.0013	0.56	1.40	0.56
2/13/2023	19:14	192.0	0.920	1,313.4	0.075	0.89	1.19	0.89				--			
2/13/2023					--				149.9	0.961	1.5	0.0014	0.56	1.39	0.56
2/13/2023	19:16	192.0	0.920	1,385.3	0.088	0.89	1.18	0.89	149.9	0.961	1.4	0.0013	0.56	1.39	0.56
2/13/2023	19:17	191.9	0.920	1,324.1	0.075	0.90	1.18	0.90	149.9	0.961	1.3	0.0012	0.56	1.39	0.56
2/13/2023	19:18	191.9	0.920	1,470.3	0.084	0.90	1.18	0.90	149.9	0.961	1.4	0.0013	0.56	1.41	0.56
2/13/2023	19:19	192.0	0.919	1,485.0	0.085	0.89	1.18	0.89	149.9	0.961	1.2	0.0011	0.56	1.41	0.56
2/13/2023	19:20	192.0	0.920	2,022.4	0.115	0.88	1.17	0.88	149.9	0.961	1.4	0.0013	0.56	1.40	0.56
2/13/2023	19:21	192.0	0.920	3,166.6	0.180	0.84	1.18	0.84	149.9	0.961	1.6	0.0015	0.56	1.40	0.56
2/13/2023	19:22	191.9	0.920	3,745.6	0.239	0.80	1.17	0.80	149.8	0.961	1.6	0.0015	0.56	1.39	0.56
2/13/2023	19:23	191.9	0.920	4,827.0	0.275	0.73	1.16	0.73	149.9	0.961	1.3	0.0012	0.56	1.39	0.56
2/13/2023	19:24	192.0	0.920	11,185.5	0.637	0.41	1.17	0.41	149.9	0.961	1.6	0.0015	0.55	1.39	0.55
2/13/2023	19:25	192.0	0.920	21,988.5	1.252	0.20	1.16	0.20	149.9	0.961	1.6	0.0015	0.55	1.39	0.55
2/13/2023	19:26	192.0	0.920	25,946.7	1.477	0.20	1.16	0.20	149.9	0.961	1.4	0.0013	0.55	1.39	0.55
2/13/2023	19:27	192.0	0.920	25,496.3	1.451	0.20	1.16	0.20	149.9	0.961	1.4	0.0013	0.56	1.38	0.56
2/13/2023	19:28	192.0	0.920	22,893.8	1.128	0.20	1.16	0.20	149.9	0.961	1.5	0.0014	0.55	1.39	0.55
2/13/2023	19:29	192.0	0.920	20,891.1	1.189	0.20	1.16	0.20	149.8	0.961	1.5	0.0014	0.56	1.39	0.56
2/13/2023	19:30	192.0	0.920	18,072.7	1.028	0.20	1.16	0.20	149.8	0.961	1.5	0.0014	0.56	1.39	0.56
2/13/2023	19:31	192.0	0.920	15,334.8	0.872	0.20	1.16	0.20	149.9	0.961	1.5	0.0013	0.56	1.39	0.56
2/13/2023	19:32	192.0	0.920	10,308.9	0.586	0.20	1.15	0.20	149.8	0.961	1.3	0.0012	0.55	1.38	0.55
2/13/2023	19:33	192.0	0.920	6,264.8	0.356	0.20	1.15	0.20	149.9	0.961	1.5	0.0014	0.55	1.38	0.55
2/13/2023	19:34	192.0	0.920	5,529.2	0.385	0.20	1.15	0.20	149.9	0.961	1.3	0.0012	0.55	1.39	0.55
2/13/2023	19:35	192.0	0.920	5,322.4	0.303	0.20	1.14	0.20				--			
2/13/2023					--				149.9	0.961	1.4	0.0013	0.55	1.40	0.55
2/13/2023	19:37	192.0	0.920	2,107.5	0.147	0.20	1.15	0.20	149.9	0.961	0.9	0.0009	0.55	1.39	0.55
2/13/2023	19:38	192.0	0.920	1,349.0	0.086	0.52	1.14	0.52	149.9	0.961	1.1	0.0011	0.55	1.39	0.55
2/13/2023	19:39	192.0	0.920	797.7	0.056	0.72	1.14	0.72	149.9	0.961	1.3	0.0012	0.55	1.39	0.55
2/13/2023	19:40	192.0	0.920	631.8	0.040	0.78	1.14	0.78	149.9	0.961	1.0	0.0009	0.55	1.39	0.55
2/13/2023	19:41	192.0	0.920	515.8	0.033	0.82	1.13	0.82	149.9	0.961	1.2	0.0011	0.54	1.37	0.54
2/13/2023	19:42	192.0	0.920	461.1	0.032	0.84	1.13	0.84	149.9	0.961	1.4	0.0013	0.54	1.38	0.54
2/13/2023	19:43	192.0	0.920	420.4	0.029	0.85	1.13	0.85	149.9	0.961	1.6	0.0014	0.55	1.38	0.55
2/13/2023	19:44	192.0	0.920	1,224.7	0.085	0.72	1.13	0.72	149.9	0.961	1.4	0.0013	0.55	1.38	0.55
2/13/2023	19:45	192.0	0.920	3,351.4	0.213	0.48	1.13	0.48	149.9	0.961	1.4	0.0013	0.55	1.38	0.55
2/13/2023	19:46	191.9	0.920	2,809.2	0.212	0.60	1.13	0.60	149.9	0.961	1.4	0.0013	0.56	1.39	0.56
2/13/2023	19:47	192.0	0.920	1,616.1	0.113	0.74	1.13	0.74	149.9	0.961	1.2	0.0011	0.56	1.38	0.56
2/13/2023	19:48	192.0	0.920	1,267.3	0.088	0.80	1.13	0.80	149.9	0.961	1.2	0.0011	0.55	1.38	0.55
2/13/2023	19:49	192.0	0.920	1,169.9	0.082	0.83	1.12	0.83	149.9	0.961	1.3	0.0012	0.55	1.38	0.55
2/13/2023	19:50	192.0	0.920	1,014.7	0.071	0.84	1.12	0.84	149.9	0.961	1.4	0.0013	0.55	1.39	0.55
2/13/2023	19:51	192.0	0.920	912.0	0.064	0.86	1.12	0.86	149.9	0.961	1.3	0.0012	0.55	1.39	0.55
2/13/2023	19:52	192.0	0.920	916.2	0.058	0.87	1.12	0.87	149.9	0.961	1.3	0.0012	0.55	1.38	0.55
2/13/2023	19:53	192.0	0.920	888.2	0.067	0.88	1.12	0.88	149.9	0.961	1.3	0.0012	0.55	1.38	0.55
2/13/2023	19:54	192.0	0.920	791.5	0.060	0.89	1.11	0.89	149.9	0.961	1.4	0.0013	0.55	1.38	0.55
2/13/2023	19:55	192.0	0.920	773.3	0.054	0.90	1.12	0.90	149.9	0.961	1.3	0.0012	0.55	1.38	0.55
2/13/2023	19:56	192.0	0.920	755.0	0.057	0.91	1.11	0.91	149.9	0.961	1.3	0.0011	0.55	1.39	0.55
2/13/2023	19:57	192.0	0.920	754.6	0.057	0.92	1.12	0.92				--			
2/13/2023					--				149.9	0.961	1.3	0.0012	0.55	1.39	0.55
2/13/2023	19:59	192.0	0.920	737.3	0.051	0.92	1.11	0.92	149.9	0.961	1.3	0.0012	0.55	1.39	0.55
2/13/2023	20:00	192.0	0.920	747.4	0.056	0.93	1.11	0.93	149.9	0.961	1.5	0.0013	0.54	1.37	0.54
2/13/2023	20:01	192.0	0.920	690.9	0.052	0.93	1.11	0.93	149.9	0.961	1.3	0.0012	0.55	1.38	0.55
2/13/2023	20:02	192.0	0.920	654.3	0.049	0.94	1.10	0.94	149.9	0.961	1.4	0.0013	0.54	1.38	0.54
2/13/2023	20:03	192.0	0.920	576.1	0.043	0.94	1.10	0.94	149.9	0.961	1.4	0.0013	0.54	1.38	0.54
2/13/2023	20:04	192.0	0.920	606.3	0.046	0.94	1.11	0.94	149.9	0.961	1.1	0.0010	0.54	1.37	0.54

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet Temperature - Inlet	Inlet Pressure - Inlet	Inlet Ethylene Oxide - Inlet	Inlet Ethylene Oxide - Inlet	Inlet BWS - Inlet	Inlet BWS - Inlet$_{wf}$	Inlet BWS - Inlet$_{used}$	Outlet Temperature - Outlet	Outlet Pressure - Outlet	Outlet Ethylene Oxide - Outlet	Outlet Ethylene Oxide - Outlet	Outlet BWS - Outlet	Outlet BWS - Outlet$_{wf}$	Outlet BWS - Outlet$_{used}$
	Unit	°C	atm	ppmvw	lb/hr	% (wet)	% (wet)	% (wet)	°C	atm	ppmvw	lb/hr	% (wet)	% (wet)	% (wet)
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/13/2023	20:05	192.0	0.920	592.1	0.041	0.94	1.10	0.94	149.9	0.961	1.2	0.0011	0.54	1.37	0.54
2/13/2023	20:06	192.0	0.920	565.4	0.039	0.93	1.10	0.93	149.9	0.961	1.2	0.0011	0.54	1.37	0.54
2/13/2023	20:07	191.9	0.920	529.1	0.037	0.93	1.10	0.93	149.9	0.961	1.0	0.0009	0.54	1.37	0.54
2/13/2023	20:08	192.0	0.920	534.5	0.037	0.94	1.10	0.94	149.9	0.961	1.0	0.0010	0.54	1.37	0.54
2/13/2023	20:09	192.0	0.920	470.9	0.030	0.95	1.10	0.95	149.9	0.961	1.1	0.0011	0.54	1.36	0.54
2/13/2023	20:10	192.0	0.920	516.1	0.033	0.95	1.10	0.95	149.9	0.961	0.9	0.0009	0.54	1.37	0.54
2/13/2023	20:11	192.0	0.920	436.2	0.030	0.95	1.10	0.95	149.9	0.961	1.2	0.0011	0.54	1.36	0.54
2/13/2023	20:12	192.0	0.920	438.4	0.033	0.96	1.11	0.96	149.9	0.961	1.1	0.0010	0.53	1.37	0.53
2/13/2023	20:13	192.1	0.920	416.7	0.029	0.95	1.09	0.95	149.9	0.961	1.1	0.0010	0.54	1.37	0.54
2/13/2023	20:14	192.0	0.920	411.4	0.031	0.96	1.10	0.96	149.9	0.961	1.1	0.0010	0.54	1.37	0.54
2/13/2023	20:15	192.0	0.920	400.8	0.028	0.96	1.10	0.96	149.9	0.961	1.2	0.0011	0.54	1.38	0.54
2/13/2023	20:16	192.0	0.920	360.3	0.025	0.95	1.09	0.95	149.9	0.961	1.3	0.0012	0.54	1.37	0.54
2/13/2023	20:17	192.0	0.920	368.7	0.026	0.96	1.10	0.96	149.9	0.961	1.3	0.0012	0.54	1.38	0.54
2/13/2023	20:18	192.0	0.920	333.8	0.023	0.95	1.09	0.95	149.9	0.961	1.4	0.0013	0.54	1.36	0.54
2/13/2023	20:19	192.0	0.920	337.5	0.025	0.95	1.09	0.95				--			
2/13/2023					--				149.9	0.961	1.3	0.0012	0.54	1.36	0.54
2/13/2023	20:21	192.0	0.920	329.5	0.023	0.95	1.09	0.95	149.9	0.961	1.3	0.0013	0.54	1.36	0.54
2/13/2023	20:22	192.0	0.920	335.1	0.025	0.95	1.09	0.95	149.9	0.961	1.3	0.0012	0.54	1.36	0.54
2/13/2023	20:23	192.0	0.920	309.7	0.023	0.95	1.09	0.95	149.9	0.961	1.2	0.0011	0.54	1.36	0.54
2/13/2023	20:24	192.0	0.920	314.5	0.024	0.95	1.09	0.95	149.9	0.961	1.2	0.0011	0.54	1.35	0.54
2/13/2023	20:25	192.0	0.920	297.7	0.021	0.96	1.09	0.96	149.9	0.961	1.3	0.0012	0.54	1.35	0.54
2/13/2023	20:26	192.0	0.920	278.5	0.021	0.95	1.08	0.95	149.9	0.961	0.9	0.0008	0.54	1.36	0.54
2/13/2023	20:27	192.0	0.920	265.6	0.020	0.96	1.09	0.96	149.9	0.961	1.3	0.0012	0.54	1.35	0.54
2/13/2023	20:28	192.0	0.920	248.0	0.017	0.95	1.08	0.95	149.9	0.961	1.2	0.0011	0.54	1.35	0.54
2/13/2023	20:29	192.0	0.920	253.3	0.018	0.96	1.08	0.96	149.9	0.961	1.2	0.0011	0.54	1.35	0.54
2/13/2023	20:30	192.0	0.920	247.1	0.017	0.96	1.09	0.96	149.9	0.961	1.3	0.0012	0.54	1.35	0.54
2/13/2023	20:31	192.0	0.920	233.4	0.018	0.96	1.08	0.96	149.9	0.961	1.2	0.0011	0.54	1.36	0.54
2/13/2023	20:32	192.0	0.920	210.8	0.015	0.93	1.08	0.93	149.9	0.961	1.2	0.0011	0.54	1.35	0.54
2/13/2023	20:33	192.0	0.920	201.4	0.015	0.93	1.08	0.93	149.9	0.961	1.1	0.0011	0.54	1.35	0.54
2/13/2023	20:34	192.0	0.920	191.0	0.013	0.93	1.08	0.93	149.9	0.961	1.4	0.0013	0.54	1.35	0.54
2/13/2023	20:35	192.0	0.920	185.1	0.012	0.92	1.08	0.92	149.9	0.961	1.1	0.0010	0.54	1.34	0.54
2/13/2023	20:36	192.0	0.920	202.7	0.014	0.93	1.08	0.93	149.9	0.961	1.1	0.0010	0.55	1.34	0.55
2/13/2023	20:37	192.0	0.920	189.2	0.013	0.92	1.07	0.92	149.9	0.961	1.1	0.0011	0.55	1.34	0.55
2/13/2023	20:38	192.0	0.920	183.5	0.015	0.92	1.07	0.92	149.9	0.961	1.2	0.0011	0.54	1.33	0.54
2/13/2023	20:39	192.0	0.920	172.5	0.013	0.92	1.07	0.92	149.9	0.961	1.5	0.0014	0.54	1.34	0.54
2/13/2023	20:40	192.0	0.920	168.3	0.012	0.92	1.07	0.92				--			
2/13/2023	20:41	192.0	0.920	167.0	0.012	0.92	1.07	0.92	149.9	0.961	1.2	0.0011	0.53	1.34	0.53
2/13/2023					--				149.9	0.961	1.0	0.0010	0.53	1.34	0.53
2/13/2023	20:43	192.0	0.920	148.7	0.011	0.92	1.07	0.92	149.9	0.961	1.2	0.0011	0.53	1.33	0.53
2/13/2023	20:44	192.0	0.920	154.6	0.010	0.92	1.07	0.92	149.9	0.960	1.0	0.0009	0.52	1.34	0.52
2/13/2023	20:45	192.0	0.920	147.5	0.010	0.92	1.07	0.92	149.9	0.961	1.2	0.0011	0.53	1.35	0.53
2/13/2023	20:46	192.0	0.920	146.6	0.010	0.92	1.07	0.92	149.9	0.960	1.1	0.0011	0.53	1.34	0.53
2/13/2023	20:47	192.0	0.920	143.5	0.010	0.92	1.07	0.92	149.9	0.961	1.1	0.0011	0.53	1.35	0.53
2/13/2023	20:48	192.0	0.920	141.7	0.011	0.93	1.07	0.93	149.9	0.961	0.9	0.0009	0.53	1.34	0.53
2/13/2023	20:49	192.0	0.920	137.3	0.010	0.92	1.07	0.92	149.9	0.961	1.0	0.0009	0.53	1.34	0.53
2/13/2023	20:50	192.0	0.920	142.1	0.010	0.92	1.07	0.92	149.9	0.961	1.1	0.0010	0.53	1.35	0.53
2/13/2023	20:51	192.0	0.920	130.4	0.009	0.92	1.08	0.92	149.9	0.961	1.1	0.0010	0.53	1.33	0.53
2/13/2023	20:52	192.0	0.920	137.0	0.010	0.94	1.08	0.94	149.9	0.961	1.3	0.0012	0.53	1.35	0.53
2/13/2023	20:53	192.0	0.920	116.6	0.007	0.94	1.08	0.94	149.9	0.961	1.1	0.0011	0.53	1.34	0.53
2/13/2023	20:54	192.0	0.920	114.7	0.008	0.93	1.08	0.93	150.0	0.961	1.2	0.0011	0.53	1.34	0.53
2/13/2023	20:55	192.0	0.920	117.8	0.008	0.93	1.07	0.93	149.9	0.961	1.2	0.0011	0.53	1.33	0.53
2/13/2023	20:56	192.0	0.920	116.0	0.008	0.93	1.07	0.93	149.9	0.961	1.2	0.0011	0.52	1.34	0.52
2/13/2023	20:57	192.0	0.920	116.7	0.007	0.92	1.08	0.92	149.9	0.961	0.9	0.0009	0.53	1.34	0.53
2/13/2023	20:58	192.0	0.920	112.1	0.007	0.92	1.07	0.92	149.9	0.960	1.2	0.0011	0.53	1.34	0.53
2/13/2023	20:59	192.0	0.920	116.7	0.007	0.93	1.08	0.93	149.9	0.960	1.0	0.0010	0.53	1.35	0.53
2/13/2023	21:00	192.0	0.920	94.3	0.005	0.91	1.08	0.91	149.9	0.961	1.1	0.0010	0.53	1.35	0.53
2/13/2023	21:01	192.0	0.920	56.9	0.003	0.88	1.08	0.88	149.9	0.961	0.9	0.0009	0.53	1.36	0.53
2/13/2023	21:02	192.0	0.920	50.9	0.003	0.87	1.08	0.87				--			
2/13/2023	21:03	192.0	0.920	48.0	0.003	0.87	1.08	0.87	149.9	0.960	1.0	0.0010	0.53	1.35	0.53
2/13/2023					--				149.9	0.961	1.2	0.0011	0.52	1.35	0.52
2/13/2023	21:05	192.0	0.920	46.3	0.003	0.86	1.09	0.86	149.9	0.961	1.2	0.0012	0.52	1.36	0.52
2/13/2023	21:06	192.0	0.920	45.3	0.003	0.87	1.08	0.87	149.9	0.961	0.9	0.0008	0.52	1.36	0.52
2/13/2023	21:07	192.0	0.920	44.1	0.003	0.86	1.08	0.86	149.9	0.961	1.1	0.0011	0.52	1.36	0.52
2/13/2023	21:08	192.0	0.920	43.8	0.002	0.86	1.08	0.86	149.9	0.960	1.0	0.0009	0.52	1.36	0.52
2/13/2023	21:09	192.1	0.920	42.7	0.003	0.86	1.09	0.86	149.9	0.960	1.2	0.0012	0.51	1.37	0.51
2/13/2023	21:10	192.1	0.920	41.7	0.003	0.86	1.09	0.86	149.9	0.961	0.9	0.0009	0.51	1.37	0.51
2/13/2023	21:11	192.1	0.920	41.2	0.002	0.85	1.09	0.85	149.9	0.961	1.5	0.0014	0.51	1.37	0.51
2/13/2023	21:12	192.0	0.920	40.6	0.003	0.86	1.09	0.86	149.9	0.961	1.2	0.0011	0.51	1.38	0.51
2/13/2023	21:13	192.0	0.920	39.6	0.003	0.86	1.09	0.86	149.9	0.960	1.0	0.0010	0.51	1.38	0.51
2/13/2023	21:14	192.0	0.920	39.1	0.002	0.85	1.09	0.85	149.9	0.960	1.0	0.0009	0.51	1.37	0.51
2/13/2023	21:15	192.0	0.920	38.6	0.003	0.85	1.09	0.85	150.0	0.961	1.0	0.0010	0.50	1.46	0.50
2/13/2023	21:16	192.0	0.920	39.1	0.002	0.85	1.10	0.85	150.0	0.961	1.1	0.0010	0.50	1.39	0.50
2/13/2023	21:17	192.1	0.920	38.6	0.002	0.86	1.10	0.86	150.1	0.961	0.8	0.0008	0.50	1.37	0.50
2/13/2023	21:18	192.1	0.920	37.0	0.002	0.85	1.10	0.85	150.3	0.960	1.1	0.0010	0.49	1.39	0.49
2/13/2023	21:19	192.2	0.920	36.9	0.002	0.86	1.09	0.86	150.3	0.960	0.9	0.0009	0.49	1.39	0.49
2/13/2023	21:20	192.5	0.920	36.9	0.002	0.86	1.11	0.86	150.2	0.960	0.9	0.0008	0.50	1.40	0.50
2/13/2023	21:21	192.5	0.920	36.5	0.002	0.86	1.10	0.86	150.2	0.960	0.9	0.0008	0.50	1.40	0.50
2/13/2023	21:22	192.4	0.920	36.6	0.002	0.86	1.11	0.86	150.2	0.960	0.9	0.0009	0.49	1.42	0.49
2/13/2023	21:23	192.4	0.920	35.2	0.002	0.86	1.11	0.86	150.1	0.960	1.1	0.0010	0.48	1.42	0.48
2/13/2023	21:24	192.4	0.920	34.8	0.002	0.86	1.11	0.86				--			
2/13/2023	21:25	192.4	0.920	34.4	0.002	0.86	1.12	0.86	150.1	0.960	0.9	0.0008	0.48	1.44	0.48
2/13/2023					--				150.1	0.960	0.8	0.0007	0.49	1.44	0.49
2/13/2023	21:27	192.3	0.920	34.4	0.002	0.87	1.12	0.87	150.0	0.960	0.8	0.0007	0.49	1.45	0.49
2/13/2023	21:28	192.4	0.920	34.4	0.002	0.88	1.13	0.88	150.0	0.960	0.9	0.0009	0.48	1.47	0.48
2/13/2023	21:29	192.4	0.920	34.3	0.002	0.87	1.13	0.87	150.0	0.960	0.8	0.0007	0.48	1.45	0.48
2/13/2023	21:30	192.3	0.920	33.7	0.002	0.88	1.14	0.88	150.0	0.960	0.9	0.0008	0.48	1.46	0.48
2/13/2023	21:31	192.3	0.920	33.2	0.002	0.88	1.14	0.88	150.0	0.960	1.0	0.0009	0.48	1.47	0.48
2/13/2023	21:32	192.3	0.920	32.8	0.002	0.88	1.14	0.88	150.0	0.960	1.0	0.0009	0.48	1.49	0.48
2/13/2023	21:33	192.3	0.920	32.9	0.002	0.89	1.15	0.89	150.0	0.960	0.8	0.0007	0.48	1.50	0.48
2/13/2023	21:34	192.3	0.920	32.6	0.002	0.88	1.15	0.88	149.9	0.960	0.7	0.0006	0.49	1.48	0.49
2/13/2023	21:35	192.3	0.920	31.8	0.002	0.89	1.16	0.89	149.9	0.960	0.9	0.0008	0.48	1.50	0.48
2/13/2023	21:36	192.3	0.920	31.1	0.002	0.89	1.17	0.89	149.9	0.960	1.0	0.0009	0.49	1.51	0.49
2/13/2023	21:37	192.3	0.920	31.1	0.002	0.90	1.17	0.90	150.0	0.960	1.0	0.0009	0.48	1.51	0.48
2/13/2023	21:38	192.3	0.920	31.2	0.002	0.89	1.17	0.89	150.0	0.960	0.8	0.0008	0.49	1.50	0.49
2/13/2023	21:39	192.3	0.920	30.0	0.002	0.90	1.17	0.90	149.9	0.960	0.7	0.0007	0.49	1.51	0.49

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wt}$**	**BWS - Inlet$_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wt}$**	**BWS - Outlet$_{used}$**
	Unit	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/13/2023	21:40	192.3	0.920	29.5	0.002	0.90	1.18	0.90	150.0	0.960	0.8	0.0007	0.48	1.51	0.48
2/13/2023	21:41	192.3	0.920	29.1	0.001	0.90	1.19	0.90	150.0	0.960	0.7	0.0006	0.48	1.52	0.48
2/13/2023	21:42	192.3	0.920	28.9	0.001	0.90	1.19	0.90	149.9	0.960	0.6	0.0005	0.49	1.52	0.49
2/13/2023	21:43	192.3	0.920	344.0	0.014	1.01	1.20	1.01	150.0	0.960	0.9	0.0007	0.49	1.53	0.49
2/13/2023	21:44	192.2	0.920	799.0	0.045	1.03	1.21	1.03	149.9	0.960	0.7	0.0006	0.48	1.54	0.48
2/13/2023	21:45	192.2	0.920	685.7	0.034	1.02	1.21	1.02	149.9	0.960	0.7	0.0007	0.48	1.53	0.48
2/13/2023	21:46	192.2	0.920	391.8	0.019	1.04	1.21	1.04				--			
2/13/2023	21:47	192.2	0.920	345.2	0.017	1.04	1.22	1.04	150.0	0.960	0.7	0.0006	0.49	1.54	0.49
2/13/2023					--				149.9	0.960	0.8	0.0007	0.49	1.55	0.49
2/13/2023	21:49	192.2	0.920	597.2	0.024	1.05	1.22	1.05	150.0	0.960	1.0	0.0009	0.48	1.54	0.48
2/13/2023	21:50	192.2	0.920	898.5	0.044	1.03	1.23	1.03	149.9	0.960	1.2	0.0010	0.48	1.56	0.48
2/13/2023	21:51	192.2	0.920	1,085.0	0.044	0.90	1.24	0.90	150.0	0.960	1.0	0.0009	0.48	1.55	0.48
2/13/2023	21:52	192.2	0.920	1,194.7	0.048	0.72	1.24	0.72	149.9	0.960	1.2	0.0011	0.48	1.59	0.48
2/13/2023	21:53	192.2	0.920	1,396.8	0.069	0.51	1.25	0.51	149.9	0.960	1.0	0.0009	0.48	1.57	0.48
2/13/2023	21:54	192.2	0.920	1,593.7	0.090	0.33	1.25	0.33	150.0	0.960	0.9	0.0008	0.48	1.60	0.48
2/13/2023	21:55	192.2	0.920	1,742.8	0.086	0.20	1.25	0.20	149.9	0.960	1.1	0.0010	0.49	1.57	0.49
2/13/2023	21:56	192.2	0.920	1,783.6	0.088	0.20	1.25	0.20	150.0	0.960	0.8	0.0007	0.49	1.58	0.49
2/13/2023	21:57	192.3	0.920	1,712.5	0.084	0.20	1.26	0.20	149.9	0.960	1.2	0.0010	0.49	1.58	0.49
2/13/2023	21:58	192.2	0.920	1,890.5	0.054	0.20	1.26	0.20	150.0	0.960	1.0	0.0008	0.49	1.58	0.49
2/13/2023	21:59	192.2	0.920	1,946.3	0.096	0.20	1.26	0.20	149.9	0.960	1.1	0.0009	0.48	1.58	0.48
2/13/2023	22:00	192.2	0.920	1,899.5	0.093	0.20	1.27	0.20	149.9	0.960	0.8	0.0007	0.49	1.59	0.49
2/13/2023	22:01	192.2	0.920	2,028.3	0.115	0.20	1.27	0.20	149.9	0.960	0.7	0.0006	0.48	1.58	0.48
2/13/2023	22:02	192.2	0.920	2,058.7	0.083	0.20	1.28	0.20	150.0	0.960	0.5	0.0004	0.49	1.59	0.49
2/13/2023	22:03	192.2	0.920	2,075.6	0.102	0.20	1.29	0.20	150.0	0.960	1.0	0.0009	0.49	1.59	0.49
2/13/2023	22:04	192.2	0.920	2,068.6	0.102	0.20	1.29	0.20	150.0	0.960	1.2	0.0010	0.49	1.60	0.49
2/13/2023	22:05	192.2	0.920	2,102.1	0.103	0.20	1.30	0.20	150.0	0.960	1.0	0.0008	0.49	1.61	0.49
2/13/2023	22:06	192.2	0.920	2,157.4	0.122	0.20	1.30	0.20	150.0	0.960	0.9	0.0007	0.49	1.60	0.49
2/13/2023	22:07	192.2	0.920	2,172.4	0.107	0.20	1.30	0.20	150.0	0.960	0.9	0.0008	0.49	1.62	0.49
2/13/2023	22:08	192.2	0.920	2,146.5	0.122	0.20	1.31	0.20				--			
2/13/2023	22:09	192.2	0.920	2,097.6	0.103	0.20	1.31	0.20	150.0	0.960	0.7	0.0006	0.49	1.61	0.49
2/13/2023					--				149.9	0.960	1.2	0.0010	0.49	1.62	0.49
2/13/2023	22:11	192.2	0.920	2,153.2	0.122	0.20	1.31	0.20	149.9	0.960	0.8	0.0007	0.49	1.61	0.49
2/13/2023	22:12	192.2	0.920	2,126.6	0.104	0.20	1.31	0.20	149.9	0.960	0.9	0.0008	0.49	1.62	0.49
2/13/2023	22:13	192.2	0.920	2,089.3	0.084	0.20	1.32	0.20	150.0	0.960	0.9	0.0008	0.49	1.63	0.49
2/13/2023	22:14	192.2	0.920	2,141.6	0.105	0.20	1.31	0.20	150.0	0.960	0.9	0.0008	0.49	1.63	0.49
2/13/2023	22:15	192.2	0.920	2,141.8	0.105	0.20	1.32	0.20	150.0	0.960	0.8	0.0007	0.49	1.64	0.49
2/13/2023	22:16	192.2	0.920	2,168.1	0.106	0.20	1.32	0.20	149.9	0.960	1.1	0.0009	0.49	1.63	0.49
2/13/2023	22:17	192.2	0.920	2,124.5	0.104	0.20	1.33	0.20	150.0	0.960	0.7	0.0006	0.49	1.63	0.49
2/13/2023	22:18	192.2	0.920	2,157.0	0.086	0.20	1.34	0.20	149.9	0.960	0.6	0.0005	0.50	1.65	0.50
2/13/2023	22:19	192.2	0.920	2,151.2	0.106	0.20	1.34	0.20	150.0	0.960	0.7	0.0006	0.49	1.65	0.49
2/13/2023	22:20	192.2	0.920	2,130.1	0.085	0.20	1.34	0.20	149.9	0.960	0.8	0.0007	0.49	1.65	0.49
2/13/2023	22:21	192.2	0.920	2,162.1	0.106	0.20	1.34	0.20	149.9	0.960	0.8	0.0007	0.49	1.65	0.49
2/13/2023	22:22	192.2	0.920	2,173.6	0.087	0.20	1.35	0.20	150.0	0.960	0.7	0.0006	0.49	1.66	0.49
2/13/2023	22:23	192.2	0.920	2,228.4	0.126	0.20	1.35	0.20	149.9	0.960	1.0	0.0008	0.49	1.64	0.49
2/13/2023	22:24	192.2	0.920	2,142.5	0.121	0.20	1.35	0.20	149.9	0.960	1.0	0.0008	0.49	1.64	0.49
2/13/2023	22:25	192.2	0.920	2,256.5	0.111	0.20	1.36	0.20	150.0	0.960	0.7	0.0006	0.49	1.65	0.49
2/13/2023	22:26	192.2	0.920	2,056.1	0.101	0.20	1.36	0.20	149.9	0.960	0.7	0.0006	0.50	1.65	0.50
2/13/2023	22:27	192.2	0.920	2,182.7	0.107	0.20	1.35	0.20	149.9	0.960	1.0	0.0009	0.50	1.65	0.50
2/13/2023	22:28	192.2	0.920	2,127.8	0.121	0.20	1.36	0.20	149.9	0.960	0.9	0.0008	0.50	1.65	0.50
2/13/2023	22:29	192.2	0.920	2,147.2	0.105	0.20	1.36	0.20	149.9	0.960	0.8	0.0007	0.50	1.66	0.50
2/13/2023	22:30	192.2	0.920	2,153.1	0.106	0.20	1.37	0.20	149.9	0.960	1.0	0.0009	0.50	1.65	0.50
2/13/2023	22:31	192.2	0.920	2,109.1	0.103	0.20	1.37	0.20				--			
2/13/2023					--				149.9	0.960	0.9	0.0007	0.49	1.68	0.49
2/13/2023	22:33	192.2	0.920	2,142.4	0.121	0.20	1.37	0.20	149.9	0.960	0.8	0.0007	0.49	1.68	0.49
2/13/2023	22:34	192.2	0.920	2,083.3	0.102	0.20	1.37	0.20	149.9	0.960	0.9	0.0007	0.51	1.68	0.51
2/13/2023	22:35	192.2	0.920	2,132.3	0.121	0.20	1.38	0.20	149.9	0.960	1.0	0.0009	0.49	1.65	0.49
2/13/2023	22:36	192.2	0.920	2,056.7	0.101	0.20	1.38	0.20	149.9	0.960	0.9	0.0008	0.50	1.67	0.50
2/13/2023	22:37	192.2	0.920	2,081.0	0.102	0.20	1.38	0.20	149.9	0.960	0.9	0.0008	0.50	1.68	0.50
2/13/2023	22:38	192.2	0.920	2,081.3	0.102	0.20	1.38	0.20	149.9	0.960	0.9	0.0007	0.50	1.68	0.50
2/13/2023	22:39	192.2	0.920	2,054.6	0.101	0.20	1.39	0.20	149.9	0.960	0.9	0.0008	0.50	1.67	0.50
2/13/2023	22:40	192.2	0.920	2,074.2	0.117	0.20	1.38	0.20	149.9	0.960	0.8	0.0007	0.50	1.67	0.50
2/13/2023	22:41	192.2	0.920	2,015.5	0.114	0.20	1.38	0.20	150.0	0.960	0.9	0.0007	0.49	1.68	0.49
2/13/2023	22:42	192.2	0.920	2,079.1	0.102	0.20	1.38	0.20	149.9	0.960	0.6	0.0005	0.50	1.68	0.50
2/13/2023	22:43	192.2	0.920	1,966.9	0.125	0.20	1.38	0.20	149.9	0.960	0.6	0.0005	0.49	1.67	0.49
2/13/2023	22:44	192.2	0.920	2,017.7	0.099	0.20	1.40	0.20	150.0	0.960	0.7	0.0006	0.50	1.69	0.50
2/13/2023	22:45	192.2	0.920	2,022.4	0.099	0.20	1.39	0.20	149.9	0.959	0.7	0.0006	0.49	1.68	0.49
2/13/2023	22:46	192.1	0.920	2,012.4	0.099	0.20	1.39	0.20	150.0	0.960	0.9	0.0008	0.49	1.68	0.49
2/13/2023	22:47	192.2	0.920	2,008.5	0.098	0.20	1.39	0.20	150.0	0.960	0.6	0.0005	0.50	1.69	0.50
2/13/2023	22:48	192.2	0.920	2,006.6	0.098	0.20	1.40	0.20	150.0	0.960	1.1	0.0009	0.49	1.69	0.49
2/13/2023	22:49	192.2	0.920	2,028.8	0.081	0.20	1.40	0.20	150.0	0.960	0.8	0.0007	0.50	1.69	0.50
2/13/2023	22:50	192.2	0.920	1,974.5	0.097	0.20	1.39	0.20	150.0	0.959	0.7	0.0006	0.50	1.68	0.50
2/13/2023	22:51	192.2	0.920	2,009.3	0.080	0.20	1.39	0.20	149.9	0.960	1.1	0.0009	0.50	1.69	0.50
2/13/2023	22:52	192.2	0.920	1,971.3	0.097	0.20	1.39	0.20	149.9	0.960	1.0	0.0009	0.50	1.68	0.50
2/13/2023					--							--			
2/13/2023	22:54	192.2	0.920	1,981.3	0.097	0.20	1.40	0.20	149.9	0.959	1.2	0.0010	0.50	1.68	0.50
2/13/2023	22:55	192.2	0.920	1,993.5	0.098	0.20	1.40	0.20	149.9	0.960	0.7	0.0006	0.50	1.68	0.50
2/13/2023	22:56	192.1	0.920	1,969.1	0.097	0.20	1.40	0.20	150.0	0.960	0.9	0.0008	0.50	1.68	0.50
2/13/2023	22:57	192.1	0.920	1,961.9	0.079	0.20	1.40	0.20	149.9	0.960	0.6	0.0005	0.49	1.69	0.49
2/13/2023	22:58	192.1	0.920	1,953.8	0.096	0.20	1.40	0.20	149.9	0.959	0.7	0.0006	0.49	1.68	0.49
2/13/2023	22:59	192.1	0.920	1,971.7	0.097	0.20	1.40	0.20	150.0	0.959	0.6	0.0005	0.50	1.68	0.50
2/13/2023	23:00	192.1	0.919	1,922.0	0.109	0.20	1.41	0.20	149.9	0.959	0.9	0.0008	0.49	1.69	0.49
2/13/2023	23:01	192.1	0.920	1,979.2	0.097	0.20	1.40	0.20	149.9	0.959	0.8	0.0007	0.49	1.70	0.49
2/13/2023	23:02	192.1	0.920	1,956.5	0.096	0.20	1.41	0.20	150.0	0.960	1.0	0.0009	0.49	1.69	0.49
2/13/2023	23:03	192.1	0.920	1,952.0	0.096	0.20	1.40	0.20	150.0	0.959	0.7	0.0006	0.49	1.69	0.49
2/13/2023	23:04	192.1	0.920	1,893.2	0.076	0.20	1.40	0.20	150.0	0.960	0.8	0.0007	0.50	1.68	0.50
2/13/2023	23:05	192.2	0.920	1,941.2	0.095	0.20	1.41	0.20	149.9	0.960	0.9	0.0007	0.50	1.68	0.50
2/13/2023	23:06	192.1	0.919	1,912.6	0.077	0.20	1.41	0.20	149.9	0.959	0.8	0.0007	0.50	1.68	0.50
2/13/2023	23:07	192.1	0.920	1,919.6	0.094	0.20	1.40	0.20	149.9	0.959	0.8	0.0007	0.50	1.69	0.50
2/13/2023	23:08	192.2	0.920	1,914.5	0.094	0.20	1.42	0.20	150.0	0.960	0.6	0.0005	0.50	1.95	0.50
2/13/2023	23:09	192.2	0.920	1,902.3	0.076	0.20	1.42	0.20	149.9	0.959	0.9	0.0007	0.49	2.01	0.49
2/13/2023	23:10	192.2	0.920	1,929.4	0.109	0.20	1.42	0.20	149.9	0.960	0.8	0.0007	0.50	1.99	0.50
2/13/2023	23:11	192.2	0.920	1,868.2	0.106	0.20	1.42	0.20	149.9	0.959	0.9	0.0008	0.50	2.03	0.50
2/13/2023	23:12	192.1	0.919	1,899.4	0.093	0.20	1.42	0.20	149.9	0.959	0.9	0.0008	0.50	1.97	0.50
2/13/2023	23:13	192.1	0.920	1,935.9	0.095	0.20	1.42	0.20	149.9	0.959	1.1	0.0009	0.50	2.00	0.50
2/13/2023	23:14	192.1	0.920	1,831.9	0.104	0.20	1.42	0.20	150.0	0.959	0.9	0.0008	0.50	2.03	0.50

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet							Outlet						
		Temperature - Inlet	Pressure - Inlet	Ethylene Oxide - Inlet	Ethylene Oxide - Inlet	BWS - Inlet	BWS - Inlet$_{wet}$	BWS - Inlet$_{used}$	Temperature - Outlet	Pressure - Outlet	Ethylene Oxide - Outlet	Ethylene Oxide - Outlet	BWS - Outlet	BWS - Outlet$_{wet}$	BWS - Outlet$_{used}$
Unit		°C	atm	ppmvw	lb/hr	% (wet)	% (wet)	% (wet)	°C	atm	ppmvw	lb/hr	% (wet)	% (wet)	% (wet)
Type		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MDL		--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
Status		Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/13/2023					--				149.9	0.959	0.8	0.0007	0.50	2.00	0.50
2/13/2023	23:16	192.1	0.919	1,929.4	0.077	0.20	1.43	0.20				--			
2/13/2023	23:17	192.1	0.920	1,860.5	0.074	0.20	1.43	0.20	150.0	0.959	0.9	0.0007	0.50	2.04	0.50
2/13/2023	23:18	192.2	0.919	1,954.7	0.096	0.20	1.43	0.20	150.0	0.959	0.9	0.0007	0.50	2.03	0.50
2/13/2023	23:19	192.2	0.919	1,831.1	0.090	0.20	1.42	0.20	149.9	0.959	0.7	0.0006	0.50	2.04	0.50
2/13/2023	23:20	192.1	0.920	1,819.8	0.089	0.20	1.43	0.20	149.9	0.959	0.5	0.0004	0.50	1.99	0.50
2/13/2023	23:21	192.2	0.919	1,864.8	0.075	0.20	1.43	0.20	150.0	0.959	0.5	0.0005	0.50	1.99	0.50
2/13/2023	23:22	192.1	0.919	1,900.1	0.107	0.20	1.43	0.20	150.0	0.959	1.0	0.0009	0.50	2.02	0.50
2/13/2023	23:23	192.1	0.919	1,878.7	0.106	0.20	1.42	0.20	150.0	0.959	0.9	0.0008	0.50	1.99	0.50
2/13/2023	23:24	192.1	0.919	1,874.7	0.106	0.20	1.42	0.20	149.9	0.959	0.7	0.0006	0.50	2.01	0.50
2/13/2023	23:25	192.1	0.919	1,314.3	0.083	0.29	1.42	0.29	150.0	0.959	1.0	0.0008	0.50	2.00	0.50
2/13/2023	23:26	192.1	0.919	566.6	0.036	0.69	1.42	0.69	149.9	0.959	1.1	0.0009	0.50	2.00	0.50
2/13/2023	23:27	192.1	0.919	371.8	0.021	0.79	1.42	0.79	149.9	0.959	0.9	0.0007	0.50	2.02	0.50
2/13/2023	23:28	192.1	0.919	291.4	0.018	0.83	1.42	0.83	149.9	0.959	0.8	0.0006	0.50	2.00	0.50
2/13/2023	23:29	192.1	0.919	252.6	0.016	0.86	1.42	0.86	149.9	0.959	0.7	0.0005	0.50	1.96	0.50
2/13/2023	23:30	192.1	0.919	214.9	0.015	0.89	1.42	0.89	150.0	0.959	0.8	0.0007	0.50	2.03	0.50
2/13/2023	23:31	192.1	0.919	204.6	0.013	0.88	1.42	0.88	149.9	0.959	0.9	0.0007	0.50	1.99	0.50
2/13/2023	23:32	192.1	0.919	200.5	0.013	0.88	1.41	0.88	149.9	0.959	0.7	0.0005	0.49	2.03	0.49
2/13/2023	23:33	192.1	0.919	190.1	0.012	0.89	1.42	0.89	149.9	0.959	0.9	0.0007	0.50	2.01	0.50
2/13/2023	23:34	192.1	0.919	178.6	0.011	0.89	1.42	0.89	149.9	0.959	0.9	0.0008	0.50	2.00	0.50
2/13/2023	23:35	192.1	0.919	174.1	0.010	0.89	1.41	0.89	149.9	0.959	0.8	0.0006	0.50	2.01	0.50
2/13/2023	23:36	192.1	0.919	170.1	0.011	0.89	1.42	0.89	149.9	0.959	1.0	0.0008	0.50	1.99	0.50
2/13/2023					--				149.9	0.959	0.8	0.0007	0.50	1.99	0.50
2/13/2023	23:38	192.1	0.919	159.7	0.010	0.90	1.41	0.90				--			
2/13/2023	23:39	192.1	0.919	153.4	0.010	0.91	1.41	0.91	149.9	0.959	0.9	0.0007	0.50	1.98	0.50
2/13/2023	23:40	192.1	0.919	143.3	0.008	0.90	1.41	0.90	149.9	0.959	0.9	0.0008	0.50	2.01	0.50
2/13/2023	23:41	192.1	0.919	141.0	0.008	0.91	1.41	0.91	149.9	0.959	0.7	0.0005	0.50	2.00	0.50
2/13/2023	23:42	192.1	0.919	137.6	0.009	0.90	1.41	0.90	149.9	0.959	1.0	0.0008	0.50	1.96	0.50
2/13/2023	23:43	192.1	0.919	130.1	0.007	0.91	1.41	0.91	149.9	0.959	0.9	0.0008	0.50	2.03	0.50
2/13/2023	23:44	192.1	0.919	129.2	0.007	0.92	1.41	0.92	149.9	0.959	0.6	0.0005	0.50	2.01	0.50
2/13/2023	23:45	192.1	0.919	122.3	0.008	0.92	1.41	0.92	149.9	0.959	0.8	0.0007	0.50	2.01	0.50
2/13/2023	23:46	192.1	0.919	115.8	0.007	0.92	1.41	0.92	149.9	0.959	1.0	0.0009	0.50	2.02	0.50
2/13/2023	23:47	192.1	0.919	115.1	0.007	0.91	1.41	0.91	149.9	0.959	0.8	0.0006	0.50	1.98	0.50
2/13/2023	23:48	192.1	0.919	109.9	0.007	0.92	1.42	0.92	149.9	0.959	0.8	0.0006	0.50	2.02	0.50
2/13/2023	23:49	192.2	0.919	108.2	0.007	0.92	1.41	0.92	149.9	0.959	0.6	0.0005	0.50	1.99	0.50
2/13/2023	23:50	192.2	0.919	108.5	0.006	0.93	1.41	0.93	149.9	0.959	0.7	0.0006	0.50	2.00	0.50
2/13/2023	23:51	192.1	0.919	107.2	0.006	0.92	1.41	0.92	149.9	0.959	0.8	0.0007	0.50	2.02	0.50
2/13/2023	23:52	192.1	0.919	104.6	0.007	0.92	1.41	0.92	149.9	0.959	0.8	0.0007	0.50	2.00	0.50
2/13/2023	23:53	192.1	0.919	101.2	0.006	0.92	1.41	0.92	150.0	0.959	1.0	0.0008	0.50	2.01	0.50
2/13/2023	23:54	192.1	0.919	94.9	0.005	0.93	1.41	0.93	149.9	0.959	0.6	0.0005	0.50	2.00	0.50
2/13/2023	23:55	192.1	0.919	94.0	0.006	0.92	1.42	0.92	149.9	0.959	0.7	0.0006	0.50	1.98	0.50
2/13/2023	23:56	192.1	0.919	93.5	0.005	0.93	1.41	0.93	149.9	0.959	0.6	0.0005	0.50	2.02	0.50
2/13/2023	23:57	192.2	0.919	92.8	0.006	0.93	1.41	0.93	149.9	0.959	0.8	0.0007	0.50	1.97	0.50
2/13/2023	23:58	192.2	0.919	89.3	0.006	0.93	1.42	0.93	149.9	0.959	0.6	0.0005	0.50	2.02	0.50
2/13/2023					--				149.9	0.959	0.6	0.0005	0.50	2.01	0.50
2/13/2023	0:00	192.2	0.919	86.5	0.006	0.93	1.41	0.93	149.9	0.959	0.7	0.0005	0.50	1.99	0.50
2/14/2023	0:01	192.1	0.919	85.2	0.005	0.93	1.42	0.93				--			
2/14/2023	0:02	192.1	0.919	82.6	0.005	0.92	1.43	0.92	149.9	0.959	0.8	0.0007	0.49	2.04	0.49
2/14/2023	0:03	192.1	0.919	81.2	0.005	0.93	1.42	0.93	149.9	0.959	1.1	0.0009	0.49	2.02	0.49
2/14/2023	0:04	192.1	0.919	82.2	0.005	0.92	1.43	0.92	149.9	0.959	0.6	0.0005	0.50	2.05	0.50
2/14/2023	0:05	192.1	0.919	82.8	0.005	0.92	1.43	0.92	149.9	0.959	0.6	0.0005	0.50	2.00	0.50
2/14/2023	0:06	192.1	0.919	78.8	0.005	0.93	1.43	0.93	149.9	0.959	0.8	0.0007	0.50	2.00	0.50
2/14/2023	0:07	192.1	0.919	77.8	0.005	0.93	1.43	0.93	149.9	0.959	0.6	0.0005	0.50	2.04	0.50
2/14/2023	0:08	192.1	0.919	75.1	0.005	0.93	1.42	0.93	149.9	0.959	0.7	0.0006	0.50	2.01	0.50
2/14/2023	0:09	192.2	0.919	73.4	0.005	0.93	1.43	0.93	150.0	0.959	0.8	0.0007	0.50	2.01	0.50
2/14/2023	0:10	192.2	0.919	71.5	0.005	0.93	1.43	0.93	149.9	0.959	0.5	0.0004	0.50	2.02	0.50
2/14/2023	0:11	192.2	0.919	74.2	0.004	0.93	1.43	0.93	149.9	0.959	0.8	0.0007	0.50	2.01	0.50
2/14/2023	0:12	192.2	0.919	73.1	0.005	0.93	1.43	0.93	150.0	0.959	0.7	0.0006	0.49	2.03	0.49
2/14/2023	0:13	192.1	0.919	71.0	0.003	0.93	1.44	0.93	150.0	0.958	0.8	0.0006	0.50	2.03	0.50
2/14/2023	0:14	192.1	0.919	67.8	0.004	0.93	1.43	0.93	149.9	0.959	0.8	0.0007	0.50	2.02	0.50
2/14/2023	0:15	192.1	0.919	68.6	0.004	0.94	1.43	0.94	150.0	0.958	0.7	0.0005	0.50	2.05	0.50
2/14/2023	0:16	192.1	0.919	68.7	0.004	0.93	1.43	0.93	149.9	0.959	0.8	0.0006	0.50	2.02	0.50
2/14/2023	0:17	192.1	0.919	65.7	0.004	0.94	1.44	0.94	149.9	0.959	0.7	0.0005	0.50	2.07	0.50
2/14/2023	0:18	192.1	0.919	64.6	0.004	0.94	1.44	0.94	149.9	0.958	0.8	0.0006	0.50	2.10	0.50
2/14/2023	0:19	192.1	0.919	64.4	0.004	0.94	1.44	0.94	149.9	0.959	0.7	0.0005	0.50	2.09	0.50
2/14/2023	0:20	192.1	0.919	62.1	0.004	0.94	1.45	0.94	150.0	0.959	0.7	0.0006	0.50	2.08	0.50
2/14/2023					--				149.9	0.959	0.6	0.0005	0.50	2.09	0.50
2/14/2023	0:22	192.2	0.919	60.8	0.003	0.94	1.43	0.94	150.0	0.959	0.8	0.0006	0.50	2.03	0.50
2/14/2023	0:23	192.2	0.919	61.2	0.004	0.95	1.44	0.95	149.9	0.959	0.5	0.0004	0.50	2.06	0.50
2/14/2023	0:24	192.2	0.919	59.8	0.003	0.95	1.44	0.95				--			
2/14/2023	0:25	192.1	0.919	54.5	0.003	0.94	1.44	0.94	150.0	0.959	0.9	0.0007	0.50	2.04	0.50
2/14/2023	0:26	192.1	0.919	56.6	0.004	0.94	1.43	0.94	149.9	0.959	0.9	0.0008	0.50	2.01	0.50
2/14/2023	0:27	192.1	0.919	55.5	0.003	0.94	1.43	0.94	149.9	0.959	0.7	0.0006	0.50	2.03	0.50
2/14/2023	0:28	192.1	0.919	54.7	0.003	0.94	1.44	0.94	150.0	0.959	0.7	0.0005	0.50	2.05	0.50
2/14/2023	0:29	192.1	0.919	52.4	0.003	0.94	1.44	0.94	149.9	0.959	0.6	0.0005	0.50	2.05	0.50
2/14/2023	0:30	192.1	0.919	50.9	0.003	0.95	1.44	0.95	149.9	0.959	0.6	0.0005	0.50	2.04	0.50
2/14/2023	0:31	192.1	0.919	51.3	0.003	0.94	1.43	0.94	150.0	0.959	0.8	0.0007	0.50	2.07	0.50
2/14/2023	0:32	192.1	0.919	50.0	0.003	0.95	1.43	0.95	149.9	0.958	1.0	0.0008	0.51	2.02	0.51
2/14/2023	0:33	192.1	0.919	48.1	0.003	0.96	1.44	0.96	149.9	0.958	0.7	0.0006	0.50	2.03	0.50
2/14/2023	0:34	192.1	0.918	52.2	0.003	0.95	1.44	0.95	149.9	0.958	0.7	0.0005	0.50	2.07	0.50
2/14/2023	0:35	192.1	0.919	381.0	0.021	0.76	1.44	0.76	149.9	0.958	0.5	0.0004	0.51	2.03	0.51
2/14/2023	0:36	192.1	0.919	1,408.8	0.079	0.29	1.44	0.29	149.9	0.958	0.7	0.0006	0.50	2.06	0.50
2/14/2023	0:37	192.1	0.919	1,529.4	0.096	0.24	1.44	0.24	150.0	0.958	0.6	0.0005	0.50	2.06	0.50
2/14/2023	0:38	192.1	0.919	901.3	0.051	0.51	1.44	0.51	149.9	0.958	0.7	0.0006	0.50	2.05	0.50
2/14/2023	0:39	192.1	0.919	1,145.1	0.056	0.42	1.45	0.42	149.9	0.958	0.7	0.0006	0.50	2.12	0.50
2/14/2023	0:40	192.1	0.919	1,217.7	0.059	0.43	1.45	0.43	149.9	0.959	0.9	0.0007	0.50	2.04	0.50
2/14/2023	0:41	192.1	0.919	1,628.8	0.092	0.34	1.46	0.34	149.9	0.958	0.9	0.0008	0.51	2.12	0.51
2/14/2023	0:42	192.1	0.918	1,290.9	0.081	0.49	1.46	0.49	149.9	0.958	0.7	0.0005	0.50	2.14	0.50
2/14/2023					--				150.0	0.958	0.8	0.0006	0.50	2.08	0.50
2/14/2023	0:44	192.1	0.918	1,319.3	0.074	0.49	1.45	0.49	149.9	0.958	0.8	0.0006	0.50	2.11	0.50
2/14/2023	0:45	192.1	0.918	1,502.3	0.094	0.39	1.45	0.39	149.9	0.958	0.7	0.0006	0.50	2.07	0.50
2/14/2023	0:46	192.1	0.918	1,113.2	0.125	0.51	1.45	0.51				--			
2/14/2023	0:47	192.1	0.918	1,110.9	0.077	0.50	1.46	0.50	149.9	0.958	0.9	0.0007	0.50	2.07	0.50
2/14/2023	0:48	192.1	0.918	974.6	0.061	0.54	1.46	0.54	150.0	0.958	0.7	0.0007	0.51	2.03	0.51
2/14/2023	0:49	192.2	0.918	513.8	0.033	0.74	1.46	0.74	150.0	0.958	0.9	0.0008	0.51	2.05	0.51

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wt}$**	**BWS - Inlet$_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wt}$**	**BWS - Outlet$_{used}$**
	Unit	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/14/2023	0:50	192.1	0.918	1,683.5	0.095	0.20	1.46	0.20	150.0	0.958	0.8	0.0007	0.51	2.09	0.51
2/14/2023	0:51	192.1	0.918	1,177.9	0.081	0.42	1.46	0.42	150.0	0.958	1.2	0.0010	0.50	2.05	0.50
2/14/2023	0:52	192.1	0.918	4,023.3	0.227	1.39	1.46	1.39	149.9	0.958	0.9	0.0007	0.50	2.08	0.50
2/14/2023	0:53	192.1	0.918	18,721.6	1.182	0.90	1.46	0.90	149.9	0.958	0.8	0.0006	0.50	2.07	0.50
2/14/2023	0:54	192.1	0.918	22,235.8	1.402	0.97	1.45	0.97	149.9	0.958	0.8	0.0006	0.50	2.06	0.50
2/14/2023	0:55	192.1	0.918	12,465.6	0.703	0.93	1.46	0.93	150.0	0.958	0.5	0.0004	0.50	2.09	0.50
2/14/2023	0:56	192.1	0.918	24,806.2	1.563	0.84	1.46	0.84	150.0	0.958	0.8	0.0006	0.50	2.08	0.50
2/14/2023	0:57	192.1	0.918	17,979.4	1.133	0.86	1.46	0.86	149.9	0.958	0.6	0.0005	0.51	1.98	0.51
2/14/2023	0:58	192.1	0.918	15,191.0	0.958	0.85	1.44	0.85	149.9	0.958	0.6	0.0005	0.50	1.76	0.50
2/14/2023	0:59	192.1	0.918	13,316.2	0.919	0.87	1.44	0.87	149.9	0.958	0.7	0.0005	0.50	1.75	0.50
2/14/2023	1:00	192.1	0.918	11,434.6	0.644	0.89	1.44	0.89	149.9	0.958	0.7	0.0005	0.50	1.75	0.50
2/14/2023	1:01	192.1	0.918	11,897.0	0.749	0.94	1.44	0.94	149.9	0.958	0.6	0.0005	0.50	1.74	0.50
2/14/2023	1:02	192.1	0.918	8,454.4	0.412	0.86	1.45	0.86	149.9	0.958	0.8	0.0007	0.50	1.75	0.50
2/14/2023	1:03	192.1	0.918	10,012.5	0.631	0.84	1.45	0.84	149.9	0.958	0.4	0.0004	0.50	1.73	0.50
2/14/2023	1:04	192.1	0.918	7,896.9	0.497	0.87	1.44	0.87	149.9	0.958	0.9	0.0007	0.50	1.71	0.50
2/14/2023					--				149.9	0.958	0.9	0.0008	0.51	1.74	0.51
2/14/2023	1:06	192.1	0.918	6,532.9	0.368	0.89	1.44	0.89	150.0	0.958	0.7	0.0005	0.51	1.74	0.51
2/14/2023	1:07	192.1	0.918	10,788.5	0.680	0.93	1.44	0.93	149.9	0.958	0.7	0.0006	0.51	1.73	0.51
2/14/2023	1:08	192.1	0.918	8,757.3	0.493	0.87	1.44	0.87	150.0	0.958	0.8	0.0007	0.51	1.73	0.51
2/14/2023	1:09	192.1	0.918	7,642.9	0.373	0.89	1.44	0.89				--			
2/14/2023	1:10	192.1	0.918	8,606.9	0.542	0.89	1.44	0.89	149.9	0.958	0.8	0.0006	0.53	1.74	0.53
2/14/2023	1:11	192.1	0.918	8,705.5	0.548	0.89	1.44	0.89	150.0	0.958	0.9	0.0007	0.52	1.74	0.52
2/14/2023	1:12	192.1	0.918	6,746.4	0.380	0.92	1.44	0.92	150.0	0.958	0.6	0.0005	0.51	1.74	0.51
2/14/2023	1:13	192.1	0.918	7,072.8	0.446	0.93	1.44	0.93	150.0	0.958	0.8	0.0007	0.51	1.74	0.51
2/14/2023	1:14	192.1	0.918	8,059.4	0.454	0.90	1.44	0.90	150.0	0.958	0.7	0.0006	0.51	1.74	0.51
2/14/2023	1:15	192.1	0.918	6,525.0	0.411	0.91	1.44	0.91	150.0	0.958	1.0	0.0008	0.51	1.74	0.51
2/14/2023	1:16	192.1	0.918	5,960.7	0.376	0.93	1.44	0.93	149.9	0.958	1.1	0.0009	0.51	1.74	0.51
2/14/2023	1:17	192.1	0.918	9,806.1	0.618	0.88	1.44	0.88	149.9	0.958	0.9	0.0007	0.52	1.74	0.52
2/14/2023	1:18	192.1	0.918	8,534.1	0.538	0.89	1.44	0.89	149.9	0.958	0.9	0.0007	0.52	1.73	0.52
2/14/2023	1:19	192.1	0.918	9,822.5	0.554	0.92	1.44	0.92	150.0	0.957	0.8	0.0007	0.51	1.74	0.51
2/14/2023	1:20	192.1	0.918	12,820.3	0.808	0.98	1.44	0.98	150.0	0.957	0.7	0.0006	0.51	1.73	0.51
2/14/2023	1:21	192.1	0.918	8,321.9	0.574	0.92	1.43	0.92	149.9	0.957	0.8	0.0007	0.52	1.74	0.52
2/14/2023	1:22	192.1	0.918	8,842.8	0.557	0.91	1.44	0.91	149.9	0.957	0.9	0.0007	0.51	1.74	0.51
2/14/2023	1:23	192.1	0.918	8,375.7	0.528	0.95	1.44	0.95	150.0	0.958	0.9	0.0007	0.51	1.74	0.51
2/14/2023	1:24	192.1	0.918	5,297.9	0.334	0.93	1.44	0.93	150.0	0.957	0.9	0.0007	0.51	1.73	0.51
2/14/2023	1:25	192.1	0.918	5,741.5	0.362	0.94	1.44	0.94	149.9	0.957	0.9	0.0007	0.51	1.74	0.51
2/14/2023	1:26	192.1	0.917	7,572.5	0.477	0.93	1.44	0.93	149.9	0.957	0.9	0.0007	0.52	1.75	0.52
2/14/2023					--				150.0	0.957	0.8	0.0007	0.51	1.75	0.51
2/14/2023	1:28	192.1	0.918	4,203.1	0.290	0.95	1.44	0.95	149.9	0.957	0.9	0.0007	0.52	1.74	0.52
2/14/2023	1:29	192.1	0.918	5,255.4	0.331	0.95	1.44	0.95	149.9	0.957	0.9	0.0008	0.52	1.74	0.52
2/14/2023	1:30	192.1	0.917	3,897.2	0.219	0.96	1.44	0.96	150.0	0.957	0.6	0.0005	0.53	1.75	0.53
2/14/2023	1:31	192.1	0.918	3,600.5	0.203	0.96	1.44	0.96				--			
2/14/2023	1:32	192.1	0.918	3,307.1	0.186	0.97	1.44	0.97	150.0	0.957	0.8	0.0007	0.53	1.74	0.53
2/14/2023	1:33	192.1	0.918	3,009.9	0.190	0.97	1.45	0.97	149.9	0.957	1.0	0.0008	0.52	1.75	0.52
2/14/2023	1:34	192.1	0.918	3,030.7	0.209	0.97	1.44	0.97	150.0	0.957	0.9	0.0007	0.52	1.74	0.52
2/14/2023	1:35	192.1	0.917	4,144.6	0.261	0.97	1.44	0.97	150.0	0.957	0.9	0.0007	0.52	1.76	0.52
2/14/2023	1:36	192.1	0.918	5,083.1	0.320	0.95	1.45	0.95	150.0	0.957	0.7	0.0006	0.52	1.87	0.52
2/14/2023	1:37	192.2	0.917	5,250.8	0.296	0.95	1.46	0.95	149.9	0.957	0.7	0.0006	0.51	2.09	0.51
2/14/2023	1:38	192.2	0.917	4,131.0	0.260	0.95	1.46	0.95	150.0	0.957	0.8	0.0006	0.52	2.04	0.52
2/14/2023	1:39	192.2	0.917	5,936.4	0.334	0.94	1.46	0.94	149.9	0.957	0.9	0.0007	0.52	2.07	0.52
2/14/2023	1:40	192.1	0.917	4,214.3	0.265	0.97	1.46	0.97	149.9	0.957	0.9	0.0008	0.52	2.08	0.52
2/14/2023	1:41	192.1	0.917	6,776.0	0.427	0.94	1.46	0.94	149.9	0.957	0.9	0.0007	0.52	2.08	0.52
2/14/2023	1:42	192.1	0.917	7,219.0	0.498	0.94	1.47	0.94	149.9	0.957	1.0	0.0008	0.52	2.07	0.52
2/14/2023	1:43	192.1	0.917	6,338.8	0.437	0.95	1.46	0.95	149.9	0.957	0.8	0.0006	0.52	2.08	0.52
2/14/2023	1:44	192.1	0.917	6,162.0	0.388	0.95	1.46	0.95	150.0	0.956	1.0	0.0008	0.52	2.06	0.52
2/14/2023	1:45	192.1	0.917	5,544.7	0.349	0.95	1.46	0.95	149.9	0.956	0.7	0.0006	0.52	2.10	0.52
2/14/2023	1:46	192.2	0.917	4,614.1	0.290	0.96	1.47	0.96	149.9	0.957	0.9	0.0007	0.52	2.07	0.52
2/14/2023	1:47	192.1	0.917	5,413.4	0.341	0.96	1.47	0.96	150.0	0.956	0.8	0.0006	0.53	2.07	0.53
2/14/2023	1:48	192.1	0.917	4,082.1	0.199	0.97	1.47	0.97	149.9	0.956	1.1	0.0009	0.52	2.09	0.52
2/14/2023					--				149.9	0.957	0.9	0.0008	0.52	2.06	0.52
2/14/2023	1:50	192.1	0.917	3,961.4	0.223	0.98	1.46	0.98	149.9	0.957	0.8	0.0006	0.52	2.08	0.52
2/14/2023	1:51	192.1	0.917	3,725.9	0.210	0.97	1.47	0.97	149.9	0.957	0.9	0.0007	0.53	2.11	0.53
2/14/2023	1:52	192.1	0.917	3,199.2	0.201	0.97	1.47	0.97	149.9	0.957	0.9	0.0007	0.53	2.08	0.53
2/14/2023	1:53	192.1	0.917	2,097.7	0.118	0.97	1.46	0.97	149.9	0.957	1.1	0.0009	0.52	2.11	0.52
2/14/2023	1:54	192.1	0.917	2,679.9	0.169	0.99	1.47	0.99				--			
2/14/2023	1:55	192.1	0.917	2,983.6	0.145	0.99	1.48	0.99	149.9	0.956	0.6	0.0005	0.52	2.08	0.52
2/14/2023	1:56	192.1	0.917	3,321.3	0.229	0.99	1.47	0.99	149.9	0.956	0.9	0.0008	0.52	2.12	0.52
2/14/2023	1:57	192.1	0.917	5,379.7	0.339	1.00	1.48	1.00	149.9	0.957	0.8	0.0007	0.52	2.08	0.52
2/14/2023	1:58	192.1	0.916	5,345.5	0.301	0.97	1.48	0.97	149.9	0.956	0.9	0.0007	0.53	2.09	0.53
2/14/2023	1:59	192.1	0.916	4,055.4	0.228	0.97	1.47	0.97	150.0	0.956	0.7	0.0006	0.53	2.10	0.53
2/14/2023	2:00	192.1	0.917	4,023.2	0.253	0.98	1.47	0.98	149.9	0.956	0.9	0.0007	0.52	2.08	0.52
2/14/2023	2:01	192.1	0.916	5,400.8	0.304	0.97	1.47	0.97	149.9	0.957	0.8	0.0006	0.52	2.12	0.52
2/14/2023	2:02	192.1	0.917	4,144.8	0.261	0.97	1.47	0.97	149.9	0.956	0.8	0.0006	0.52	2.11	0.52
2/14/2023	2:03	192.1	0.917	4,933.5	0.310	0.97	1.47	0.97	149.9	0.957	0.8	0.0006	0.53	2.07	0.53
2/14/2023	2:04	192.1	0.917	3,810.3	0.214	0.98	1.47	0.98	149.9	0.956	0.8	0.0006	0.53	2.10	0.53
2/14/2023	2:05	192.1	0.917	3,396.4	0.234	0.98	1.47	0.98	149.9	0.956	0.6	0.0005	0.52	2.07	0.52
2/14/2023	2:06	192.1	0.917	2,839.2	0.138	0.97	1.47	0.97	149.9	0.956	0.9	0.0007	0.52	2.10	0.52
2/14/2023	2:07	192.1	0.917	2,145.6	0.135	0.96	1.47	0.96	149.9	0.956	0.9	0.0007	0.53	2.09	0.53
2/14/2023	2:08	192.1	0.916	2,591.3	0.163	1.00	1.47	1.00	149.9	0.956	0.9	0.0007	0.53	2.09	0.53
2/14/2023	2:09	192.1	0.916	2,276.8	0.157	0.96	1.48	0.96	149.9	0.956	0.7	0.0005	0.52	2.12	0.52
2/14/2023	2:10	192.1	0.916	2,269.7	0.143	0.97	1.47	0.97	149.9	0.956	1.0	0.0008	0.53	2.08	0.53
2/14/2023					--				149.9	0.956	0.7	0.0006	0.52	2.07	0.52
2/14/2023	2:12	192.1	0.916	2,032.0	0.140	0.97	1.48	0.97	150.0	0.956	0.5	0.0004	0.52	2.12	0.52
2/14/2023	2:13	192.1	0.916	2,625.6	0.128	0.99	1.48	0.99	149.9	0.956	0.5	0.0004	0.52	2.09	0.52
2/14/2023	2:14	192.1	0.916	1,913.9	0.108	0.96	1.47	0.96	149.9	0.956	0.7	0.0006	0.52	2.08	0.52
2/14/2023	2:15	192.1	0.916	1,476.4	0.093	0.97	1.48	0.97	149.9	0.956	0.8	0.0006	0.52	2.09	0.52
2/14/2023	2:16	192.1	0.916	2,028.8	0.128	0.97	1.47	0.97	149.9	0.956	0.7	0.0006	0.52	2.06	0.52
2/14/2023	2:17	192.1	0.916	2,543.0	0.143	1.01	1.47	1.01				--			
2/14/2023	2:18	192.1	0.916	3,400.9	0.191	0.99	1.47	0.99	149.9	0.956	0.9	0.0007	0.52	2.06	0.52
2/14/2023	2:19	192.1	0.916	3,544.1	0.223	0.99	1.48	0.99	149.9	0.956	0.9	0.0008	0.52	2.08	0.52
2/14/2023	2:20	192.1	0.916	3,475.1	0.219	0.98	1.47	0.98	149.9	0.956	0.6	0.0005	0.52	2.08	0.52
2/14/2023	2:21	192.1	0.916	1,525.8	0.096	0.97	1.47	0.97	149.9	0.956	0.5	0.0004	0.52	2.09	0.52
2/14/2023	2:22	192.1	0.916	3,429.0	0.216	0.98	1.47	0.98	149.9	0.956	0.7	0.0006	0.53	2.11	0.53
2/14/2023	2:23	192.1	0.917	1,237.1	0.078	0.97	1.47	0.97	149.9	0.956	0.8	0.0006	0.54	2.07	0.54
2/14/2023	2:24	192.1	0.917	1,054.1	0.059	0.98	1.47	0.98	149.9	0.956	0.7	0.0006	0.52	2.07	0.52

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wt}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wt}$**	**BWS - Outlet $_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/14/2023	2:25	192.1	0.917	877.3	0.055	0.99	1.47	0.99	149.9	0.956	0.6	0.0005	0.52	2.08	0.52
2/14/2023	2:26	192.1	0.917	1,030.5	0.065	0.98	1.47	0.98	149.9	0.956	0.8	0.0006	0.52	2.05	0.52
2/14/2023	2:27	192.1	0.916	1,005.7	0.057	0.97	1.46	0.97	149.9	0.956	0.4	0.0004	0.52	2.05	0.52
2/14/2023	2:28	192.1	0.916	1,167.9	0.081	0.98	1.46	0.98	149.9	0.956	0.7	0.0005	0.52	2.09	0.52
2/14/2023	2:29	192.1	0.916	732.2	0.041	0.97	1.47	0.97	149.9	0.956	0.8	0.0006	0.52	2.05	0.52
2/14/2023	2:30	192.1	0.916	580.2	0.037	0.99	1.46	0.99	149.9	0.956	0.8	0.0007	0.52	2.06	0.52
2/14/2023	2:31	192.1	0.917	872.1	0.049	0.99	1.46	0.99	150.0	0.956	0.9	0.0007	0.52	2.06	0.52
2/14/2023	2:32	192.1	0.916	577.2	0.040	0.98	1.46	0.98	149.9	0.956	0.5	0.0004	0.52	2.02	0.52
2/14/2023					--				149.9	0.956	0.9	0.0007	0.52	2.05	0.52
2/14/2023	2:34	192.1	0.917	645.3	0.036	1.00	1.46	1.00	149.9	0.956	0.8	0.0006	0.52	2.06	0.52
2/14/2023	2:35	192.1	0.916	693.3	0.039	0.99	1.45	0.99	149.9	0.956	0.6	0.0005	0.52	2.04	0.52
2/14/2023	2:36	192.1	0.917	616.7	0.035	0.99	1.46	0.99	149.9	0.956	1.0	0.0008	0.53	2.10	0.53
2/14/2023	2:37	192.1	0.916	600.2	0.038	0.99	1.46	0.99	149.9	0.956	1.0	0.0008	0.52	2.08	0.52
2/14/2023	2:38	192.1	0.917	636.0	0.036	1.00	1.46	1.00	149.9	0.956	0.9	0.0007	0.53	2.08	0.53
2/14/2023	2:39	192.1	0.916	703.8	0.040	1.00	1.46	1.00				--			
2/14/2023	2:40	192.1	0.916	1,141.6	0.072	0.99	1.46	0.99	150.0	0.956	0.6	0.0005	0.52	2.04	0.52
2/14/2023	2:41	192.2	0.916	1,139.0	0.072	0.97	1.46	0.97	149.9	0.956	0.6	0.0005	0.52	2.07	0.52
2/14/2023	2:42	192.1	0.916	1,523.5	0.086	0.98	1.46	0.98	149.9	0.956	0.6	0.0005	0.53	2.05	0.53
2/14/2023	2:43	192.1	0.916	2,922.1	0.165	0.99	1.46	0.99	149.9	0.956	0.7	0.0006	0.52	2.05	0.52
2/14/2023	2:44	192.2	0.916	2,019.0	0.127	0.96	1.45	0.96	149.9	0.956	0.7	0.0005	0.53	2.08	0.53
2/14/2023	2:45	192.1	0.916	2,656.6	0.167	0.97	1.45	0.97	149.9	0.956	0.7	0.0006	0.52	2.03	0.52
2/14/2023	2:46	192.2	0.916	1,237.5	0.078	0.96	1.45	0.96	149.9	0.956	0.7	0.0005	0.53	2.04	0.53
2/14/2023	2:47	192.1	0.916	1,634.7	0.103	0.97	1.46	0.97	149.9	0.956	0.5	0.0004	0.53	2.06	0.53
2/14/2023	2:48	192.1	0.916	1,895.4	0.119	0.97	1.45	0.97	149.9	0.956	0.6	0.0005	0.52	2.04	0.52
2/14/2023	2:49	192.1	0.916	2,628.8	0.165	0.97	1.46	0.97	149.9	0.956	0.5	0.0004	0.52	2.09	0.52
2/14/2023	2:50	192.1	0.916	2,393.3	0.135	0.97	1.46	0.97	149.9	0.956	0.7	0.0006	0.52	2.03	0.52
2/14/2023	2:51	192.1	0.916	1,590.3	0.090	0.96	1.45	0.96	149.9	0.956	0.8	0.0006	0.52	2.07	0.52
2/14/2023	2:52	192.1	0.916	1,453.9	0.092	0.97	1.45	0.97	149.9	0.956	0.5	0.0004	0.52	2.10	0.52
2/14/2023	2:53	192.1	0.916	1,186.1	0.067	0.97	1.45	0.97	149.9	0.956	0.5	0.0004	0.52	2.06	0.52
2/14/2023	2:54	192.1	0.916	1,295.5	0.073	0.96	1.45	0.96	149.9	0.956	0.7	0.0005	0.52	2.05	0.52
2/14/2023					--				149.9	0.956	0.5	0.0004	0.52	2.02	0.52
2/14/2023	2:56	192.1	0.916	1,701.3	0.096	0.96	1.44	0.96	149.9	0.956	0.6	0.0005	0.53	2.00	0.53
2/14/2023	2:57	192.1	0.916	1,836.0	0.103	0.95	1.44	0.95	149.9	0.956	0.6	0.0005	0.53	2.01	0.53
2/14/2023	2:58	192.1	0.916	2,509.6	0.141	0.97	1.44	0.97	149.9	0.956	0.5	0.0004	0.53	1.99	0.53
2/14/2023	2:59	192.1	0.916	3,330.6	0.210	0.96	1.45	0.96	149.9	0.956	0.6	0.0005	0.52	2.00	0.52
2/14/2023	3:00	192.1	0.916	2,711.9	0.153	0.97	1.44	0.97	149.9	0.956	0.6	0.0005	0.51	1.99	0.51
2/14/2023	3:01	192.1	0.916	4,041.9	0.197	0.97	1.43	0.97	149.9	0.956	0.8	0.0006	0.51	1.95	0.51
2/14/2023	3:02	192.1	0.916	2,936.2	0.185	0.96	1.44	0.96				--			
2/14/2023	3:03	192.1	0.916	3,187.6	0.180	0.96	1.44	0.96	149.9	0.956	0.5	0.0004	0.51	1.97	0.51
2/14/2023	3:04	192.1	0.916	3,473.0	0.196	0.96	1.44	0.96	149.9	0.955	0.8	0.0006	0.51	1.99	0.51
2/14/2023	3:05	192.1	0.916	4,042.1	0.197	0.96	1.43	0.96	149.9	0.955	0.8	0.0006	0.51	2.03	0.51
2/14/2023	3:06	192.1	0.915	3,419.0	0.193	0.95	1.43	0.95	149.9	0.955	0.7	0.0006	0.51	1.97	0.51
2/14/2023	3:07	192.1	0.915	3,280.8	0.207	0.95	1.43	0.95	149.9	0.955	0.5	0.0004	0.51	2.00	0.51
2/14/2023	3:08	192.1	0.915	3,179.6	0.179	0.96	1.44	0.96	149.9	0.955	0.6	0.0005	0.51	1.99	0.51
2/14/2023	3:09	192.1	0.915	4,899.5	0.309	0.95	1.44	0.95	149.9	0.956	0.8	0.0007	0.52	1.96	0.52
2/14/2023	3:10	192.1	0.915	5,630.0	0.355	0.95	1.43	0.95	149.9	0.955	0.8	0.0006	0.51	2.02	0.51
2/14/2023	3:11	192.1	0.916	5,199.3	0.328	0.94	1.43	0.94	149.9	0.955	0.8	0.0007	0.52	1.96	0.52
2/14/2023	3:12	192.1	0.915	3,948.5	0.249	0.96	1.43	0.96	149.9	0.955	0.6	0.0005	0.52	1.98	0.52
2/14/2023	3:13	192.1	0.915	4,484.8	0.253	0.95	1.43	0.95	149.9	0.955	0.8	0.0007	0.52	1.99	0.52
2/14/2023	3:14	192.1	0.915	5,365.9	0.338	0.94	1.43	0.94	149.9	0.955	0.7	0.0006	0.52	1.96	0.52
2/14/2023	3:15	192.1	0.915	4,492.2	0.283	0.95	1.44	0.95	149.9	0.955	0.8	0.0006	0.52	2.01	0.52
2/14/2023	3:16	192.1	0.915	5,083.2	0.286	0.94	1.44	0.94	149.9	0.955	0.7	0.0006	0.53	1.99	0.53
2/14/2023					--				150.0	0.955	0.7	0.0006	0.52	1.99	0.52
2/14/2023	3:18	192.1	0.915	4,911.4	0.310	0.95	1.43	0.95	150.0	0.955	0.8	0.0007	0.52	2.05	0.52
2/14/2023	3:19	192.1	0.915	6,578.1	0.414	0.94	1.43	0.94	149.9	0.955	0.6	0.0005	0.52	2.01	0.52
2/14/2023	3:20	192.2	0.915	6,214.6	0.392	0.93	1.43	0.93	150.0	0.955	0.6	0.0005	0.52	1.99	0.52
2/14/2023	3:21	192.1	0.915	6,138.7	0.387	0.95	1.44	0.95	149.9	0.955	0.9	0.0007	0.51	2.01	0.51
2/14/2023	3:22	192.1	0.915	7,098.5	0.447	0.93	1.43	0.93	150.0	0.955	0.7	0.0006	0.51	2.01	0.51
2/14/2023	3:23	192.1	0.915	6,010.5	0.339	0.93	1.42	0.93	149.9	0.955	0.3	0.0003	0.51	1.97	0.51
2/14/2023	3:24	192.1	0.914	5,304.4	0.334	0.94	1.43	0.94	149.9	0.955	0.6	0.0005	0.51	1.96	0.51
2/14/2023	3:25	192.1	0.915	4,475.7	0.282	0.95	1.43	0.95				--			
2/14/2023	3:26	192.1	0.915	5,990.0	0.414	0.94	1.42	0.94	149.9	0.955	0.7	0.0006	0.52	1.98	0.52
2/14/2023	3:27	192.1	0.915	4,794.0	0.270	0.95	1.42	0.95	149.9	0.955	1.2	0.0010	0.53	1.98	0.53
2/14/2023	3:28	192.1	0.915	7,530.4	0.475	0.95	1.42	0.95	149.9	0.955	0.7	0.0006	0.53	1.93	0.53
2/14/2023	3:29	192.1	0.915	8,006.5	0.451	0.96	1.43	0.96	149.9	0.955	0.7	0.0006	0.53	1.97	0.53
2/14/2023	3:30	192.1	0.915	9,426.4	0.651	0.92	1.42	0.92	149.9	0.955	0.7	0.0006	0.53	1.96	0.53
2/14/2023	3:31	192.1	0.915	9,206.9	0.580	0.93	1.43	0.93	149.9	0.955	0.6	0.0005	0.54	2.04	0.54
2/14/2023	3:32	192.1	0.915	6,168.1	0.389	0.95	1.42	0.95	149.9	0.955	0.4	0.0004	0.53	1.95	0.53
2/14/2023	3:33	192.1	0.915	8,251.4	0.465	0.94	1.41	0.94	149.9	0.955	0.5	0.0004	0.53	1.94	0.53
2/14/2023	3:34	192.1	0.915	6,486.1	0.366	0.94	1.43	0.94	149.9	0.954	0.7	0.0006	0.53	2.01	0.53
2/14/2023	3:35	192.1	0.915	6,617.9	0.373	0.94	1.43	0.94	149.9	0.954	0.7	0.0005	0.53	2.00	0.53
2/14/2023	3:36	192.1	0.915	8,214.2	0.567	0.94	1.42	0.94	149.9	0.954	0.6	0.0004	0.53	2.01	0.53
2/14/2023	3:37	192.1	0.915	9,212.2	0.580	0.93	1.43	0.93	149.9	0.954	0.7	0.0005	0.53	2.01	0.53
2/14/2023					--				149.9	0.955	0.9	0.0007	0.53	1.98	0.53
2/14/2023	3:39	192.1	0.915	7,134.4	0.450	0.94	1.42	0.94	149.9	0.955	0.6	0.0005	0.53	2.01	0.53
2/14/2023	3:40	192.1	0.915	8,252.9	0.466	0.92	1.41	0.92	149.9	0.954	0.7	0.0006	0.53	1.92	0.53
2/14/2023	3:41	192.1	0.915	7,437.3	0.469	0.94	1.42	0.94	150.0	0.954	0.6	0.0005	0.53	1.94	0.53
2/14/2023	3:42	192.1	0.915	9,901.5	0.558	0.93	1.42	0.93	149.9	0.954	0.9	0.0007	0.53	2.01	0.53
2/14/2023	3:43	192.1	0.915	9,298.5	0.642	0.93	1.42	0.93	149.9	0.954	0.8	0.0007	0.54	1.95	0.54
2/14/2023	3:44	192.1	0.915	12,941.8	0.894	1.02	1.42	1.02	149.9	0.954	0.7	0.0005	0.53	1.96	0.53
2/14/2023	3:45	192.1	0.914	10,423.8	0.588	1.02	1.42	1.02	149.9	0.954	0.8	0.0006	0.54	1.98	0.54
2/14/2023	3:46	192.1	0.914	9,374.0	0.591	0.94	1.42	0.94	149.9	0.954	0.8	0.0007	0.54	1.94	0.54
2/14/2023	3:47	192.1	0.914	8,380.4	0.528	0.92	1.42	0.92	149.9	0.954	0.7	0.0005	0.54	1.98	0.54
2/14/2023	3:48	192.1	0.915	7,115.4	0.449	0.94	1.42	0.94				--			
2/14/2023	3:49	192.1	0.914	7,225.9	0.499	0.96	1.41	0.96	149.9	0.954	0.8	0.0006	0.54	1.96	0.54
2/14/2023	3:50	192.2	0.914	5,894.1	0.332	0.96	1.41	0.96	149.9	0.954	1.0	0.0008	0.55	1.98	0.55
2/14/2023	3:51	192.1	0.914	7,466.3	0.595	0.97	1.41	0.97	149.9	0.954	1.0	0.0008	0.54	1.94	0.54
2/14/2023	3:52	192.1	0.914	7,218.8	0.456	0.96	1.41	0.96	149.9	0.954	1.0	0.0009	0.54	1.95	0.54
2/14/2023	3:53	192.1	0.914	8,699.3	0.604	0.96	1.42	0.96	149.9	0.954	0.9	0.0007	0.55	1.93	0.55
2/14/2023	3:54	192.1	0.914	6,953.1	0.481	0.95	1.41	0.95	149.9	0.954	0.7	0.0006	0.55	1.96	0.55
2/14/2023	3:55	192.1	0.914	9,113.4	0.630	1.13	1.41	1.13	149.9	0.953	0.8	0.0007	0.55	1.97	0.55
2/14/2023	3:56	192.1	0.914	50,718.0	2.861	0.75	1.41	0.75	149.9	0.953	0.7	0.0006	0.56	1.96	0.56
2/14/2023	3:57	192.1	0.914	27,675.9	1.746	1.02	1.41	1.02	149.9	0.954	0.6	0.0005	0.57	1.98	0.57
2/14/2023	3:58	192.1	0.914	21,575.4	1.610	1.01	1.41	1.01	149.9	0.954	0.5	0.0004	0.58	1.99	0.58
2/14/2023	3:59	192.1	0.914	18,624.5	1.178	1.02	1.40	1.02	149.9	0.954	0.4	0.0003	0.57	1.97	0.57

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wt}$**	**BWS - Inlet$_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wt}$**	**BWS - Outlet$_{used}$**
	Unit	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/14/2023					--				149.9	0.954	0.7	0.0006	0.57	1.98	0.57
2/14/2023	4:01	192.1	0.914	16,215.6	1.121	1.02	1.41	1.02	149.9	0.953	0.5	0.0004	0.57	1.97	0.57
2/14/2023	4:02	192.1	0.914	14,347.4	0.991	1.01	1.40	1.01	149.9	0.953	0.7	0.0006	0.57	1.96	0.57
2/14/2023	4:03	192.1	0.914	18,090.3	1.351	2.45	1.41	1.41	149.9	0.953	0.4	0.0003	0.57	1.92	0.57
2/14/2023	4:04	192.1	0.914	57,776.5	3.257	0.64	1.40	0.64	149.9	0.953	0.6	0.0005	0.58	1.94	0.58
2/14/2023	4:05	192.1	0.914	32,263.1	1.821	1.30	1.40	1.30	149.9	0.953	0.4	0.0004	0.58	1.93	0.58
2/14/2023	4:06	192.1	0.914	15,711.8	0.627	0.98	1.39	0.98	149.9	0.953	0.7	0.0006	0.58	1.93	0.58
2/14/2023	4:07	192.1	0.914	8,745.1	0.604	0.65	1.39	0.65	149.9	0.953	0.7	0.0006	0.58	1.90	0.58
2/14/2023	4:08	192.1	0.913	5,795.5	0.365	0.47	1.40	0.47	149.9	0.954	0.6	0.0005	0.58	1.96	0.58
2/14/2023	4:09	192.1	0.914	4,664.3	0.228	0.36	1.40	0.36	149.9	0.953	0.6	0.0005	0.58	1.94	0.58
2/14/2023	4:10	192.1	0.914	4,080.3	0.230	0.30	1.40	0.30	149.9	0.953	0.5	0.0004	0.58	1.93	0.58
2/14/2023	4:11	192.1	0.914	3,728.2	0.210	0.26	1.39	0.26				--			
2/14/2023	4:12	192.1	0.913	3,510.3	0.198	0.24	1.40	0.24	149.9	0.953	0.5	0.0004	0.58	1.94	0.58
2/14/2023	4:13	192.1	0.913	3,312.7	0.187	0.22	1.40	0.22	149.9	0.953	0.5	0.0004	0.57	1.93	0.57
2/14/2023	4:14	192.1	0.914	3,165.7	0.178	0.20	1.40	0.20	149.9	0.953	0.4	0.0004	0.58	1.94	0.58
2/14/2023	4:15	192.1	0.914	3,035.8	0.148	0.20	1.40	0.20	149.9	0.953	0.6	0.0005	0.57	1.90	0.57
2/14/2023	4:16	192.1	0.913	2,912.8	0.142	0.20	1.39	0.20	149.9	0.953	0.8	0.0007	0.57	1.90	0.57
2/14/2023	4:17	192.1	0.913	2,826.9	0.159	0.20	1.40	0.20	149.9	0.953	0.7	0.0005	0.57	1.90	0.57
2/14/2023	4:18	192.1	0.914	2,755.9	0.155	0.20	1.40	0.20	149.9	0.953	0.6	0.0005	0.56	1.89	0.56
2/14/2023	4:19	192.1	0.913	2,685.1	0.151	0.20	1.40	0.20	149.9	0.953	0.4	0.0004	0.57	1.91	0.57
2/14/2023	4:20	192.1	0.913	2,623.1	0.181	0.20	1.40	0.20	149.9	0.953	0.8	0.0007	0.56	1.92	0.56
2/14/2023	4:21	192.1	0.914	2,563.6	0.144	0.20	1.40	0.20	149.9	0.953	0.8	0.0006	0.56	1.93	0.56
2/14/2023					--				149.9	0.953	0.4	0.0004	0.57	1.93	0.57
2/14/2023	4:23	192.1	0.913	2,532.4	0.123	0.20	1.41	0.20	149.9	0.953	0.7	0.0005	0.57	1.93	0.57
2/14/2023	4:24	192.2	0.914	2,480.9	0.156	0.20	1.41	0.20	149.9	0.953	0.8	0.0006	0.57	1.93	0.57
2/14/2023	4:25	192.2	0.913	2,451.2	0.120	0.20	1.40	0.20	149.9	0.953	0.5	0.0005	0.57	1.93	0.57
2/14/2023	4:26	192.1	0.913	2,413.0	0.152	0.20	1.41	0.20	150.0	0.953	0.5	0.0004	0.57	1.93	0.57
2/14/2023	4:27	192.1	0.913	2,391.4	0.135	0.20	1.41	0.20	149.9	0.953	0.6	0.0005	0.57	2.00	0.57
2/14/2023	4:28	192.1	0.913	2,336.8	0.132	0.20	1.42	0.20	150.0	0.953	0.5	0.0004	0.56	1.98	0.56
2/14/2023	4:29	192.1	0.913	2,327.3	0.160	0.20	1.41	0.20	149.9	0.953	0.7	0.0006	0.56	2.01	0.56
2/14/2023	4:30	192.2	0.913	2,298.3	0.112	0.20	1.42	0.20	150.0	0.953	0.6	0.0005	0.57	1.97	0.57
2/14/2023	4:31	192.1	0.913	2,291.2	0.144	0.20	1.42	0.20	149.9	0.953	0.5	0.0004	0.57	1.98	0.57
2/14/2023	4:32	192.1	0.913	2,261.9	0.142	0.20	1.41	0.20	150.0	0.953	1.1	0.0009	0.56	1.94	0.56
2/14/2023	4:33	192.1	0.913	2,245.8	0.126	0.20	1.41	0.20				--			
2/14/2023	4:34	192.2	0.913	2,218.4	0.125	0.20	1.41	0.20	150.0	0.953	0.7	0.0006	0.57	1.95	0.57
2/14/2023	4:35	192.1	0.913	2,193.7	0.124	0.20	1.42	0.20	150.0	0.953	0.4	0.0004	0.57	1.97	0.57
2/14/2023	4:36	192.1	0.913	2,186.6	0.087	0.20	1.41	0.20	149.9	0.953	0.5	0.0004	0.58	1.94	0.58
2/14/2023	4:37	192.2	0.914	2,145.3	0.135	0.20	1.42	0.20	149.9	0.954	0.3	0.0003	0.58	1.94	0.58
2/14/2023	4:38	192.1	0.913	2,115.0	0.119	0.20	1.41	0.20	149.9	0.954	0.5	0.0004	0.58	1.96	0.58
2/14/2023	4:39	192.1	0.914	2,101.8	0.084	0.20	1.42	0.20	149.9	0.954	0.5	0.0004	0.58	1.90	0.58
2/14/2023	4:40	192.1	0.914	2,086.8	0.102	0.20	1.42	0.20	149.9	0.954	0.7	0.0006	0.57	1.97	0.57
2/14/2023	4:41	192.1	0.914	2,071.1	0.101	0.20	1.42	0.20	150.0	0.954	0.3	0.0002	0.58	1.95	0.58
2/14/2023	4:42	192.1	0.914	2,063.9	0.142	0.20	1.41	0.20	149.9	0.955	0.7	0.0006	0.59	1.90	0.59
2/14/2023	4:43	192.1	0.915	2,054.2	0.142	0.20	1.41	0.20	149.9	0.955	0.9	0.0007	0.61	1.96	0.61
2/14/2023					--				150.0	0.957	0.6	0.0005	0.62	1.94	0.62
2/14/2023	4:45	192.1	0.915	2,042.8	0.152	0.20	1.40	0.20	149.9	0.957	0.6	0.0005	0.61	1.91	0.61
2/14/2023	4:46	192.1	0.917	2,030.5	0.140	0.20	1.39	0.20	149.9	0.957	0.6	0.0005	0.62	1.92	0.62
2/14/2023	4:47	192.1	0.917	1,568.0	0.108	0.41	1.38	0.41	149.9	0.957	0.5	0.0004	0.61	1.88	0.61
2/14/2023	4:48	192.1	0.917	640.7	0.044	0.85	1.37	0.85	149.9	0.956	0.8	0.0007	0.60	1.93	0.60
2/14/2023	4:49	192.1	0.917	453.2	0.034	0.95	1.36	0.95	149.9	0.955	0.6	0.0005	0.61	1.89	0.61
2/14/2023	4:50	192.1	0.916	405.1	0.028	0.97	1.36	0.97	149.9	0.956	0.5	0.0004	0.63	1.90	0.63
2/14/2023	4:51	192.1	0.915	377.2	0.026	0.98	1.37	0.98	149.9	0.957	0.8	0.0007	0.62	1.91	0.62
2/14/2023	4:52	192.1	0.916	349.5	0.026	1.00	1.35	1.00	149.9	0.957	0.5	0.0004	0.63	1.86	0.63
2/14/2023	4:53	192.1	0.916	678.3	0.051	0.83	1.35	0.83	149.9	0.957	0.7	0.0006	0.63	1.87	0.63
2/14/2023	4:54	192.1	0.917	511.3	0.032	0.90	1.34	0.90	149.9	0.957	0.6	0.0005	0.63	1.87	0.63
2/14/2023	4:55	192.1	0.917	381.5	0.026	0.96	1.34	0.96	149.9	0.957	0.8	0.0007	0.63	1.87	0.63
2/14/2023	4:56	192.1	0.917	335.0	0.023	0.99	1.33	0.99				--			
2/14/2023	4:57	192.1	0.917	299.8	0.021	0.99	1.33	0.99	149.9	0.957	1.0	0.0008	0.64	1.85	0.64
2/14/2023	4:58	192.1	0.917	283.6	0.020	1.00	1.32	1.00	149.9	0.957	0.7	0.0006	0.63	1.85	0.63
2/14/2023	4:59	192.1	0.917	289.9	0.020	1.01	1.32	1.01	149.9	0.956	0.7	0.0006	0.64	1.90	0.64
2/14/2023	5:00	192.1	0.917	3,755.9	0.237	0.83	1.31	0.83	149.9	0.957	0.7	0.0006	0.64	1.90	0.64
2/14/2023	5:01	192.1	0.917	2,961.5	0.187	0.90	1.31	0.90	149.9	0.957	0.6	0.0005	0.64	1.88	0.64
2/14/2023	5:02	192.1	0.917	1,964.2	0.136	0.93	1.30	0.93	149.9	0.957	0.6	0.0005	0.65	1.88	0.65
2/14/2023	5:03	192.1	0.917	1,536.6	0.097	0.95	1.30	0.95	150.0	0.957	0.7	0.0006	0.65	1.86	0.65
2/14/2023	5:04	192.1	0.917	2,086.7	0.132	0.94	1.29	0.94	150.0	0.956	0.6	0.0005	0.65	1.84	0.65
2/14/2023	5:05	192.1	0.917	2,657.9	0.168	0.94	1.29	0.94	150.0	0.957	0.7	0.0006	0.65	1.84	0.65
2/14/2023					--				150.0	0.957	0.8	0.0007	0.64	1.83	0.64
2/14/2023	5:07	192.1	0.917	2,849.3	0.180	0.95	1.28	0.95	149.9	0.957	1.0	0.0008	0.65	1.86	0.65
2/14/2023	5:08	192.1	0.917	5,144.3	0.356	1.00	1.29	1.00	149.9	0.957	0.5	0.0004	0.65	1.82	0.65
2/14/2023	5:09	192.1	0.917	6,682.2	0.462	0.88	1.28	0.88	149.9	0.956	0.7	0.0006	0.65	1.85	0.65
2/14/2023	5:10	192.1	0.917	4,964.1	0.314	0.91	1.27	0.91	149.9	0.956	0.8	0.0007	0.66	1.85	0.66
2/14/2023	5:11	192.1	0.916	4,754.4	0.300	0.92	1.27	0.92	150.0	0.956	0.9	0.0008	0.65	1.82	0.65
2/14/2023	5:12	192.1	0.916	5,085.6	0.321	0.92	1.27	0.92	149.9	0.956	0.6	0.0005	0.63	1.83	0.63
2/14/2023	5:13	192.1	0.916	6,254.0	0.395	0.90	1.27	0.90	149.9	0.956	0.5	0.0004	0.63	1.82	0.63
2/14/2023	5:14	192.1	0.916	6,291.8	0.398	0.90	1.26	0.90	149.9	0.956	0.8	0.0007	0.63	1.80	0.63
2/14/2023	5:15	192.1	0.916	5,744.1	0.363	0.91	1.26	0.91	149.9	0.956	0.8	0.0007	0.63	1.82	0.63
2/14/2023	5:16	192.1	0.916	9,711.8	0.614	1.00	1.26	1.00	149.9	0.956	0.7	0.0006	0.63	1.80	0.63
2/14/2023	5:17	192.1	0.916	9,743.4	0.616	0.86	1.26	0.86	149.9	0.956	0.9	0.0008	0.63	1.80	0.63
2/14/2023	5:18	192.1	0.916	8,161.8	0.516	0.89	1.25	0.89	149.9	0.956	0.6	0.0005	0.64	1.80	0.64
2/14/2023	5:19	192.2	0.916	7,048.6	0.398	0.91	1.26	0.91				--			
2/14/2023	5:20	192.1	0.916	6,390.6	0.361	0.93	1.25	0.93	150.0	0.956	0.8	0.0006	0.64	1.81	0.64
2/14/2023	5:21	192.1	0.916	8,145.8	0.515	0.91	1.25	0.91	149.9	0.956	0.8	0.0007	0.64	1.79	0.64
2/14/2023	5:22	192.2	0.916	8,590.3	0.543	0.91	1.25	0.91	149.9	0.956	0.8	0.0007	0.64	1.81	0.64
2/14/2023	5:23	192.1	0.916	8,222.9	0.520	0.91	1.25	0.91	149.9	0.956	0.8	0.0007	0.64	1.82	0.64
2/14/2023	5:24	192.1	0.916	8,178.9	0.517	0.91	1.25	0.91	149.9	0.956	0.6	0.0005	0.63	1.80	0.63
2/14/2023	5:25	192.1	0.916	16,423.2	1.039	1.04	1.25	1.04	149.9	0.955	0.6	0.0006	0.63	1.78	0.63
2/14/2023	5:26	192.1	0.916	12,063.6	0.682	0.98	1.24	0.98	149.9	0.956	0.8	0.0007	0.63	1.75	0.63
2/14/2023	5:27	192.2	0.916	10,376.5	0.587	0.98	1.23	0.98	149.9	0.955	0.6	0.0006	0.64	1.74	0.64
2/14/2023					--				150.0	0.956	0.6	0.0006	0.64	1.77	0.64
2/14/2023	5:29	192.1	0.916	9,541.3	0.540	0.91	1.23	0.91	149.9	0.955	0.7	0.0006	0.64	1.75	0.64
2/14/2023	5:30	192.1	0.916	11,019.9	0.624	0.98	1.23	0.98	150.0	0.956	0.7	0.0006	0.64	1.76	0.64
2/14/2023	5:31	192.2	0.916	11,295.6	0.715	0.99	1.24	0.99	150.0	0.955	0.7	0.0006	0.64	1.76	0.64
2/14/2023	5:32	192.2	0.915	11,213.1	0.709	0.98	1.23	0.98	149.9	0.955	0.6	0.0005	0.63	1.75	0.63
2/14/2023	5:33	192.1	0.916	13,494.0	0.854	1.22	1.23	1.22	149.9	0.955	0.6	0.0005	0.64	1.72	0.64
2/14/2023	5:34	192.1	0.916	15,975.9	1.011	0.99	1.22	0.99	150.0	0.955	0.8	0.0007	0.64	1.73	0.64

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wt}$**	**BWS - Inlet$_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wt}$**	**BWS - Outlet$_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/14/2023	5:35	192.1	0.915	13,774.7	0.780	0.99	1.23	0.99	149.9	0.955	0.8	0.0007	0.64	1.73	0.64
2/14/2023	5:36	192.1	0.915	12,963.6	0.734	0.99	1.22	0.99	150.0	0.955	0.6	0.0005	0.64	1.75	0.64
2/14/2023	5:37	192.1	0.915	13,145.6	0.744	0.99	1.22	0.99	150.0	0.955	0.7	0.0006	0.64	1.74	0.64
2/14/2023	5:38	192.1	0.915	13,166.4	0.745	1.00	1.22	1.00	149.9	0.955	0.4	0.0004	0.64	1.73	0.64
2/14/2023	5:39	192.1	0.916	12,536.2	0.710	0.99	1.22	0.99	150.0	0.955	0.6	0.0005	0.64	1.74	0.64
2/14/2023	5:40	192.1	0.915	12,265.9	0.777	1.00	1.22	1.00	150.0	0.955	0.7	0.0006	0.64	1.71	0.64
2/14/2023	5:41	192.1	0.915	11,700.1	0.662	1.00	1.22	1.00	150.0	0.955	0.5	0.0004	0.64	1.72	0.64
2/14/2023	5:42	192.1	0.915	11,432.4	0.723	1.00	1.23	1.00				--			
2/14/2023	5:43	192.2	0.915	20,311.4	1.408	1.08	1.22	1.08	149.9	0.955	0.5	0.0004	0.63	1.69	0.63
2/14/2023	5:44	192.1	0.915	15,682.6	0.996	0.99	1.22	0.99	149.9	0.955	0.7	0.0006	0.63	1.74	0.63
2/14/2023	5:45	192.1	0.915	14,171.8	0.985	0.99	1.23	0.99	149.9	0.955	0.6	0.0005	0.62	1.72	0.62
2/14/2023	5:46	192.1	0.915	13,730.8	0.869	0.99	1.23	0.99	149.9	0.955	0.6	0.0006	0.62	1.72	0.62
2/14/2023	5:47	192.1	0.916	25,362.8	1.436	2.68	1.23	1.23	149.9	0.955	0.4	0.0004	0.63	1.73	0.63
2/14/2023	5:48	192.1	0.915	23,092.6	1.307	1.37	1.24	1.24	150.0	0.955	0.7	0.0006	0.62	1.77	0.62
2/14/2023	5:49	192.1	0.915	7,196.2	0.407	0.33	1.23	0.33	150.0	0.955	0.4	0.0003	0.63	1.73	0.63
2/14/2023					--				150.0	0.955	0.4	0.0004	0.64	1.73	0.64
2/14/2023	5:51	192.1	0.915	4,291.5	0.271	0.32	1.23	0.32	149.9	0.955	0.6	0.0005	0.62	1.74	0.62
2/14/2023	5:52	192.1	0.915	3,049.5	0.172	0.36	1.23	0.36	149.9	0.955	0.5	0.0005	0.62	1.78	0.62
2/14/2023	5:53	192.1	0.915	2,330.0	0.147	0.46	1.23	0.46	150.0	0.955	0.7	0.0006	0.63	1.76	0.63
2/14/2023	5:54	192.2	0.915	1,772.4	0.112	0.68	1.23	0.68	149.9	0.955	0.6	0.0005	0.64	1.77	0.64
2/14/2023	5:55	192.1	0.915	1,376.9	0.078	0.87	1.23	0.87	149.9	0.955	0.7	0.0006	0.64	1.79	0.64
2/14/2023	5:56	192.2	0.915	1,279.9	0.072	0.93	1.23	0.93	150.0	0.955	0.4	0.0004	0.64	1.73	0.64
2/14/2023	5:57	192.1	0.915	1,276.3	0.081	0.95	1.22	0.95	149.9	0.955	0.8	0.0007	0.63	1.73	0.63
2/14/2023	5:58	192.2	0.915	1,271.0	0.080	0.95	1.23	0.95	149.9	0.955	0.5	0.0004	0.63	1.74	0.63
2/14/2023	5:59	192.2	0.915	1,190.7	0.075	0.96	1.22	0.96	150.0	0.955	0.6	0.0005	0.63	1.76	0.63
2/14/2023	6:00	192.2	0.915	1,153.8	0.073	0.97	1.23	0.97	149.9	0.955	0.4	0.0004	0.62	1.78	0.62
2/14/2023	6:01	192.2	0.915	1,134.8	0.072	0.97	1.22	0.97	149.9	0.955	0.7	0.0006	0.62	1.74	0.62
2/14/2023	6:02	192.2	0.915	1,177.3	0.058	0.96	1.23	0.96	150.0	0.955	0.5	0.0005	0.64	1.73	0.64
2/14/2023	6:03	192.1	0.915	1,192.6	0.075	0.96	1.22	0.96	150.0	0.955	0.6	0.0005	0.64	1.77	0.64
2/14/2023	6:04	192.1	0.915	1,126.8	0.071	0.97	1.23	0.97	150.0	0.955	0.8	0.0007	0.64	1.72	0.64
2/14/2023	6:05	192.2	0.915	1,113.4	0.070	0.98	1.22	0.98				--			
2/14/2023	6:06	192.2	0.915	1,116.4	0.071	0.98	1.22	0.98	150.0	0.955	0.6	0.0005	0.64	1.73	0.64
2/14/2023	6:07	192.1	0.915	1,060.6	0.067	0.99	1.23	0.99	149.9	0.955	0.7	0.0006	0.64	1.78	0.64
2/14/2023	6:08	192.1	0.915	973.4	0.062	1.01	1.22	1.01	150.0	0.954	0.5	0.0005	0.63	1.75	0.63
2/14/2023	6:09	192.1	0.915	1,035.7	0.072	0.98	1.22	0.98	150.0	0.955	0.6	0.0005	0.63	1.75	0.63
2/14/2023	6:10	192.1	0.915	1,030.7	0.065	0.98	1.23	0.98	150.0	0.955	0.6	0.0005	0.62	1.76	0.62
2/14/2023	6:11	192.1	0.915	949.9	0.066	0.99	1.22	0.99	150.0	0.955	0.7	0.0006	0.62	1.76	0.62
2/14/2023					--				149.9	0.955	0.5	0.0004	0.62	1.72	0.62
2/14/2023	6:13	192.1	0.915	927.6	0.059	0.99	1.23	0.99	149.9	0.955	0.5	0.0004	0.63	1.77	0.63
2/14/2023	6:14	192.2	0.915	877.3	0.055	0.99	1.22	0.99	150.0	0.955	0.5	0.0004	0.62	1.76	0.62
2/14/2023	6:15	192.1	0.915	826.6	0.052	1.00	1.23	1.00	150.0	0.955	0.6	0.0005	0.62	1.78	0.62
2/14/2023	6:16	192.1	0.915	750.8	0.042	0.99	1.23	0.99	150.0	0.955	0.5	0.0005	0.63	1.77	0.63
2/14/2023	6:17	192.1	0.915	705.6	0.040	1.00	1.24	1.00	150.0	0.955	0.6	0.0005	0.63	1.81	0.63
2/14/2023	6:18	192.1	0.915	738.2	0.047	1.00	1.23	1.00	150.0	0.955	0.6	0.0005	0.63	1.76	0.63
2/14/2023	6:19	192.1	0.915	750.2	0.047	1.00	1.23	1.00	149.9	0.955	0.7	0.0006	0.63	1.79	0.63
2/14/2023	6:20	192.1	0.915	679.3	0.043	1.00	1.22	1.00	149.9	0.954	0.4	0.0003	0.63	1.76	0.63
2/14/2023	6:21	192.1	0.915	649.1	0.037	1.00	1.23	1.00	149.9	0.954	0.5	0.0004	0.63	1.78	0.63
2/14/2023	6:22	192.2	0.915	634.4	0.036	1.00	1.23	1.00	150.0	0.954	0.6	0.0005	0.62	1.80	0.62
2/14/2023	6:23	192.2	0.915	579.7	0.037	1.01	1.23	1.01	150.0	0.954	0.4	0.0004	0.61	1.79	0.61
2/14/2023	6:24	192.2	0.915	572.4	0.032	1.00	1.24	1.00	149.9	0.954	0.6	0.0005	0.60	1.79	0.60
2/14/2023	6:25	192.2	0.914	549.2	0.035	0.99	1.24	0.99	150.0	0.954	0.3	0.0003	0.60	1.79	0.60
2/14/2023	6:26	192.2	0.914	521.6	0.033	0.99	1.24	0.99	149.9	0.954	0.5	0.0004	0.60	1.77	0.60
2/14/2023	6:27	192.1	0.914	492.8	0.031	1.00	1.24	1.00				--			
2/14/2023	6:28	192.1	0.914	512.8	0.032	0.99	1.24	0.99	150.0	0.954	0.7	0.0006	0.60	1.78	0.60
2/14/2023	6:29	192.1	0.914	528.6	0.033	0.98	1.24	0.98	150.0	0.954	0.6	0.0005	0.60	1.78	0.60
2/14/2023	6:30	192.1	0.914	471.6	0.030	1.00	1.24	1.00	150.0	0.954	0.6	0.0005	0.59	1.79	0.59
2/14/2023	6:31	192.1	0.914	455.7	0.026	1.00	1.25	1.00	150.0	0.954	0.7	0.0006	0.59	1.80	0.59
2/14/2023	6:32	192.1	0.914	425.7	0.024	0.99	1.25	0.99	149.9	0.954	0.7	0.0006	0.60	1.84	0.60
2/14/2023	6:33	192.1	0.914	419.8	0.027	1.00	1.25	1.00	150.0	0.954	0.3	0.0003	0.60	1.83	0.60
2/14/2023					--				150.0	0.954	0.4	0.0003	0.61	1.67	0.61
2/14/2023	6:35	192.1	0.914	376.6	0.024	1.00	1.24	1.00	150.0	0.954	0.5	0.0005	0.61	1.57	0.61
2/14/2023	6:36	192.1	0.914	342.8	0.019	1.00	1.24	1.00	150.0	0.954	0.6	0.0005	0.61	1.56	0.61
2/14/2023	6:37	192.1	0.914	324.0	0.016	1.01	1.24	1.01	150.0	0.955	0.5	0.0004	0.61	1.57	0.61
2/14/2023	6:38	192.2	0.914	340.2	0.021	1.00	1.25	1.00	149.9	0.954	0.7	0.0006	0.62	1.57	0.62
2/14/2023	6:39	192.2	0.914	311.6	0.015	1.01	1.25	1.01	150.0	0.954	0.7	0.0006	0.63	1.57	0.63
2/14/2023	6:40	192.2	0.914	299.9	0.019	1.01	1.24	1.01	149.9	0.954	0.4	0.0004	0.62	1.56	0.62
2/14/2023	6:41	192.2	0.914	313.1	0.020	1.02	1.25	1.02	150.0	0.954	0.4	0.0004	0.63	1.56	0.63
2/14/2023	6:42	192.2	0.914	308.7	0.017	1.02	1.25	1.02	149.9	0.954	0.7	0.0006	0.64	1.56	0.64
2/14/2023	6:43	192.2	0.914	310.2	0.021	1.03	1.24	1.03	149.9	0.954	0.5	0.0004	0.64	1.56	0.64
2/14/2023	6:44	192.2	0.914	284.2	0.018	1.03	1.24	1.03	149.9	0.954	0.5	0.0004	0.64	1.55	0.64
2/14/2023	6:45	192.1	0.914	250.2	0.017	1.03	1.24	1.03	150.0	0.954	0.5	0.0005	0.63	1.56	0.63
2/14/2023	6:46	192.1	0.914	209.9	0.015	1.01	1.24	1.01	149.9	0.955	0.4	0.0004	0.64	1.56	0.64
2/14/2023	6:47	192.1	0.914	197.4	0.012	1.00	1.24	1.00	149.9	0.954	0.7	0.0006	0.65	1.55	0.65
2/14/2023	6:48	192.1	0.914	179.2	0.012	1.01	1.23	1.01	149.9	0.954	0.8	0.0007	0.66	1.54	0.66
2/14/2023	6:49	192.1	0.914	169.7	0.012	1.02	1.24	1.02				--			
2/14/2023	6:50	192.1	0.914	162.1	0.011	1.02	1.24	1.02	149.9	0.954	0.8	0.0007	0.66	1.54	0.66
2/14/2023	6:51	192.1	0.914	152.1	0.010	1.02	1.22	1.02	150.0	0.955	0.6	0.0005	0.67	1.54	0.67
2/14/2023	6:52	192.1	0.915	145.5	0.011	1.02	1.24	1.02	150.0	0.954	0.4	0.0003	0.67	1.54	0.67
2/14/2023	6:53	192.1	0.915	139.9	0.010	1.02	1.23	1.02	150.0	0.954	0.4	0.0004	0.68	1.53	0.68
2/14/2023	6:54	192.1	0.915	146.0	0.010	1.02	1.22	1.02	149.9	0.954	0.5	0.0004	0.68	1.53	0.68
2/14/2023	6:55	192.1	0.914	157.3	0.010	1.03	1.23	1.03	150.0	0.955	0.5	0.0004	0.68	1.53	0.68
2/14/2023					--				149.9	0.955	0.6	0.0006	0.68	1.53	0.68
2/14/2023	6:57	192.1	0.915	161.0	0.010	1.02	1.22	1.02	149.9	0.954	0.6	0.0005	0.68	1.53	0.68
2/14/2023	6:58	192.2	0.914	151.4	0.076	1.03	1.23	1.03	149.9	0.954	0.7	0.0006	0.68	1.53	0.68
2/14/2023	6:59	192.2	0.915	159.3	0.010	1.03	1.23	1.03	149.9	0.954	0.8	0.0007	0.69	1.52	0.69
2/14/2023	7:00	192.2	0.915	193.0	0.011	1.03	1.24	1.03	149.9	0.954	0.6	0.0005	0.70	1.53	0.70
2/14/2023	7:01	192.2	0.914	290.4	0.018	1.05	1.23	1.05	149.9	0.954	0.6	0.0005	0.70	1.51	0.70
2/14/2023	7:02	192.2	0.915	271.4	0.015	1.05	1.22	1.05	150.0	0.954	0.3	0.0003	0.72	1.51	0.72
2/14/2023	7:03	192.2	0.915	240.9	0.017	1.06	1.23	1.06	150.0	0.954	0.6	0.0005	0.72	1.51	0.72
2/14/2023	7:04	192.2	0.916	4,855.5	0.337	2.06	1.22	1.22	150.0	0.954	0.6	0.0005	0.71	1.50	0.71
2/14/2023	7:05	192.2	0.915	48,035.9	3.043	0.74	1.21	0.74	150.0	0.954	0.6	0.0005	0.70	1.50	0.70
2/14/2023	7:06	192.1	0.914	37,784.7	2.394	0.97	1.22	0.97	150.0	0.954	0.6	0.0005	0.70	1.50	0.70
2/14/2023	7:07	192.2	0.914	31,371.0	1.987	0.97	1.21	0.97	149.9	0.954	0.6	0.0005	0.70	1.49	0.70
2/14/2023	7:08	192.1	0.914	26,649.3	1.688	0.99	1.20	0.99	150.0	0.954	0.6	0.0005	0.71	1.49	0.71
2/14/2023	7:09	192.1	0.914	23,498.6	1.488	1.00	1.20	1.00	150.0	0.954	0.6	0.0005	0.71	1.49	0.71

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wt}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wt}$**	**BWS - Outlet $_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/14/2023	7:10	192.1	0.914	20,834.1	1.180	1.02	1.20	1.02	150.0	0.954	0.8	0.0007	0.72	1.48	0.72
2/14/2023	7:11	192.1	0.914	19,729.4	1.250	1.03	1.20	1.03	150.0	0.953	0.6	0.0006	0.73	1.48	0.73
2/14/2023	7:12	192.1	0.914	18,450.5	1.045	1.04	1.20	1.04				--			
2/14/2023	7:13	192.1	0.914	17,081.5	0.967	1.05	1.21	1.05	150.0	0.953	0.5	0.0005	0.72	1.64	0.72
2/14/2023	7:14	192.1	0.914	15,846.1	0.897	1.05	1.21	1.05	150.0	0.954	0.5	0.0005	0.72	1.67	0.72
2/14/2023	7:15	192.1	0.914	15,306.7	0.969	1.05	1.21	1.05	149.9	0.953	0.6	0.0005	0.72	1.66	0.72
2/14/2023	7:16	192.2	0.914	14,575.9	0.923	1.05	1.22	1.05	150.0	0.954	0.6	0.0005	0.73	1.68	0.73
2/14/2023	7:17	192.1	0.914	14,111.8	0.799	1.07	1.21	1.07	149.9	0.953	0.4	0.0003	0.73	1.65	0.73
2/14/2023					--				150.0	0.953	0.5	0.0005	0.73	1.65	0.73
2/14/2023	7:19	192.2	0.914	13,242.3	0.918	1.07	1.21	1.07	150.0	0.953	0.6	0.0005	0.72	1.64	0.72
2/14/2023	7:20	192.2	0.913	12,838.3	0.727	1.06	1.21	1.06	149.9	0.953	0.5	0.0005	0.72	1.65	0.72
2/14/2023	7:21	192.2	0.913	12,286.1	0.778	1.06	1.21	1.06	150.0	0.953	0.4	0.0003	0.72	1.64	0.72
2/14/2023	7:22	192.2	0.913	11,903.7	0.674	1.06	1.21	1.06	150.0	0.953	0.6	0.0005	0.72	1.64	0.72
2/14/2023	7:23	192.2	0.913	11,297.1	0.640	1.07	1.21	1.07	150.0	0.952	0.5	0.0004	0.72	1.66	0.72
2/14/2023	7:24	192.2	0.913	10,957.3	0.760	1.06	1.21	1.06	149.9	0.952	0.3	0.0003	0.71	1.65	0.71
2/14/2023	7:25	192.2	0.913	10,639.1	0.673	1.06	1.21	1.06	150.0	0.952	0.8	0.0007	0.71	1.67	0.71
2/14/2023	7:26	192.2	0.912	10,434.2	0.724	1.06	1.20	1.06	150.0	0.951	0.5	0.0005	0.71	1.66	0.71
2/14/2023	7:27	192.2	0.912	10,287.4	0.582	1.06	1.21	1.06	150.0	0.952	0.5	0.0005	0.71	1.65	0.71
2/14/2023	7:28	192.2	0.912	9,753.3	0.617	0.98	1.20	0.98	150.0	0.952	0.6	0.0005	0.71	1.64	0.71
2/14/2023	7:29	192.2	0.911	9,400.9	0.532	0.98	1.20	0.98	150.0	0.951	0.5	0.0004	0.71	1.63	0.71
2/14/2023	7:30	192.2	0.911	9,098.1	0.515	0.99	1.20	0.99	150.0	0.951	0.7	0.0006	0.71	1.63	0.71
2/14/2023	7:31	192.2	0.911	8,887.5	0.503	0.99	1.20	0.99	150.0	0.951	0.3	0.0003	0.72	1.63	0.72
2/14/2023	7:32	192.2	0.911	8,666.9	0.491	0.99	1.20	0.99	150.0	0.951	0.5	0.0004	0.72	1.61	0.72
2/14/2023	7:33	192.2	0.911	8,335.3	0.472	0.99	1.20	0.99	150.0	0.952	0.4	0.0003	0.73	1.63	0.73
2/14/2023	7:34	192.2	0.911	7,969.0	0.451	1.00	1.20	1.00				--			
2/14/2023	7:35	192.1	0.912	7,647.4	0.433	1.01	1.19	1.01	149.9	0.952	0.5	0.0004	0.74	1.62	0.74
2/14/2023	7:36	192.1	0.912	7,567.6	0.428	1.01	1.20	1.01	150.0	0.952	0.8	0.0007	0.74	1.62	0.74
2/14/2023	7:37	192.2	0.912	7,409.3	0.419	1.02	1.20	1.02	150.0	0.952	0.5	0.0005	0.74	1.62	0.74
2/14/2023	7:38	192.2	0.912	7,361.2	0.466	1.02	1.19	1.02	150.0	0.952	0.3	0.0002	0.74	1.61	0.74
2/14/2023	7:39	192.2	0.912	7,121.7	0.451	1.02	1.20	1.02	150.0	0.952	0.7	0.0006	0.74	1.61	0.74
2/14/2023					--				150.0	0.952	0.7	0.0006	0.74	1.61	0.74
2/14/2023	7:41	192.2	0.912	6,669.2	0.422	1.03	1.20	1.03	150.0	0.952	0.6	0.0005	0.74	1.62	0.74
2/14/2023	7:42	192.2	0.912	6,546.7	0.371	1.03	1.19	1.03	150.0	0.952	0.5	0.0004	0.74	1.62	0.74
2/14/2023	7:43	192.2	0.912	6,481.5	0.410	1.03	1.19	1.03	150.0	0.952	0.5	0.0004	0.74	1.61	0.74
2/14/2023	7:44	192.2	0.911	6,238.5	0.395	1.04	1.19	1.04	150.0	0.952	0.2	0.0001	0.74	1.62	0.74
2/14/2023	7:45	192.2	0.912	6,225.6	0.352	1.04	1.20	1.04	150.0	0.952	0.5	0.0004	0.74	1.62	0.74
2/14/2023	7:46	192.2	0.912	6,033.0	0.382	1.04	1.19	1.04	150.0	0.952	0.6	0.0005	0.73	1.63	0.73
2/14/2023	7:47	192.2	0.912	5,900.4	0.373	1.04	1.20	1.04	150.0	0.951	0.7	0.0006	0.74	1.63	0.74
2/14/2023	7:48	192.2	0.912	5,692.9	0.360	1.04	1.20	1.04	149.9	0.952	0.4	0.0003	0.74	1.62	0.74
2/14/2023	7:49	192.2	0.912	5,387.5	0.305	1.05	1.19	1.05	150.0	0.952	0.5	0.0004	0.73	1.63	0.73
2/14/2023	7:50	192.2	0.912	5,102.4	0.323	1.05	1.20	1.05	150.0	0.952	0.6	0.0005	0.72	1.63	0.72
2/14/2023	7:51	192.2	0.912	4,941.0	0.313	1.05	1.21	1.05	150.0	0.952	0.4	0.0004	0.73	1.63	0.73
2/14/2023	7:52	192.2	0.912	4,560.7	0.316	1.05	1.20	1.05	150.0	0.952	0.4	0.0004	0.73	1.64	0.73
2/14/2023	7:53	192.2	0.912	4,402.9	0.279	1.06	1.19	1.06	150.0	0.952	0.8	0.0007	0.72	1.52	0.72
2/14/2023	7:54	192.2	0.912	4,170.2	0.264	1.06	1.19	1.06	150.0	0.952	0.6	0.0005	0.72	1.48	0.72
2/14/2023	7:55	192.1	0.912	3,754.1	0.238	1.06	1.19	1.06	150.0	0.952	0.7	0.0006	0.72	1.48	0.72
2/14/2023	7:56	192.2	0.912	3,403.5	0.215	1.06	1.19	1.06	150.0	0.952	0.6	0.0005	0.73	1.49	0.73
2/14/2023	7:57	192.2	0.912	2,955.1	0.187	1.07	1.19	1.07				--			
2/14/2023	7:58	192.2	0.912	2,636.0	0.167	1.08	1.19	1.08	150.0	0.952	0.4	0.0003	0.73	1.49	0.73
2/14/2023	7:59	192.2	0.912	2,254.3	0.143	1.07	1.20	1.07	150.0	0.952	0.5	0.0004	0.73	1.49	0.73
2/14/2023	8:00	192.2	0.912	2,087.5	0.132	1.07	1.21	1.07	150.0	0.952	0.5	0.0004	0.73	1.50	0.73
2/14/2023	8:01	192.2	0.912	2,130.8	0.135	1.07	1.20	1.07	150.0	0.952	0.5	0.0005	0.73	1.50	0.73
2/14/2023					--				150.0	0.952	0.5	0.0004	0.72	1.51	0.72
2/14/2023	8:03	192.1	0.912	2,576.4	0.163	1.09	1.21	1.09	150.0	0.952	0.4	0.0004	0.72	1.50	0.72
2/14/2023	8:04	192.1	0.912	2,954.0	0.205	1.08	1.21	1.08	150.0	0.952	0.7	0.0006	0.72	1.50	0.72
2/14/2023	8:05	192.2	0.912	3,351.7	0.212	1.08	1.21	1.08	150.0	0.951	0.5	0.0004	0.73	1.50	0.73
2/14/2023	8:06	192.2	0.912	3,400.9	0.192	1.08	1.21	1.08	150.0	0.952	0.6	0.0005	0.73	1.50	0.73
2/14/2023	8:07	192.2	0.911	3,400.4	0.192	1.08	1.22	1.08	150.0	0.951	0.6	0.0005	0.73	1.50	0.73
2/14/2023	8:08	192.2	0.912	3,435.6	0.194	1.09	1.21	1.09	150.0	0.951	0.4	0.0003	0.73	1.50	0.73
2/14/2023	8:09	192.2	0.911	3,379.4	0.214	1.09	1.22	1.09	150.0	0.951	0.6	0.0005	0.73	1.50	0.73
2/14/2023	8:10	192.2	0.911	3,451.4	0.218	1.09	1.22	1.09	150.0	0.951	0.5	0.0004	0.73	1.51	0.73
2/14/2023	8:11	192.2	0.911	3,402.9	0.193	1.09	1.21	1.09	150.0	0.951	0.7	0.0006	0.74	1.50	0.74
2/14/2023	8:12	192.2	0.911	3,505.7	0.222	1.08	1.21	1.08	150.0	0.951	0.2	0.0002	0.74	1.50	0.74
2/14/2023	8:13	192.2	0.911	3,491.5	0.198	1.09	1.21	1.09	150.0	0.951	0.4	0.0004	0.74	1.51	0.74
2/14/2023	8:14	192.2	0.911	3,607.3	0.204	1.09	1.22	1.09	150.0	0.951	0.5	0.0004	0.73	1.51	0.73
2/14/2023	8:15	192.2	0.911	3,700.4	0.234	1.10	1.22	1.10	150.0	0.951	0.9	0.0007	0.73	1.52	0.73
2/14/2023	8:16	191.8	0.911	3,778.3	0.214	1.09	1.23	1.09	150.1	0.951	0.5	0.0004	0.73	1.53	0.73
2/14/2023	8:17	190.2	0.911	3,679.8	0.208	1.08	1.23	1.08	150.1	0.951	0.6	0.0005	0.74	1.52	0.74
2/14/2023	8:18	188.5	0.911	3,948.2	0.223	1.06	1.23	1.06	150.1	0.951	0.4	0.0003	0.74	1.53	0.74
2/14/2023					--				150.1	0.890	0.3	0.0002	0.54	1.54	0.54
2/14/2023	8:20	188.6	0.911	3,993.2	0.253	1.08	1.23	1.08				--			
2/14/2023	8:21	191.0	0.913	3,839.8	0.217	1.09	1.23	1.09	149.9	0.976	0.1	0.0001	0.20	1.55	0.20
2/14/2023	8:22	191.1	0.947	45.4	0.003	0.20	1.24	0.20	149.9	0.952	0.2	0.0002	0.57	1.54	0.57
2/14/2023	8:23	189.2	0.923	1,647.3	0.093	0.58	1.24	0.58	149.9	0.950	0.6	0.0004	0.73	1.55	0.73
2/14/2023	8:24	187.4	0.910	3,570.9	0.202	1.07	1.25	1.07	150.0	0.951	0.5	0.0004	0.73	1.56	0.73
2/14/2023	8:25	185.8	0.911	3,479.6	0.220	1.07	1.25	1.07	149.9	0.950	0.5	0.0004	0.74	1.56	0.74
2/14/2023	8:26	184.3	0.911	3,371.5	0.191	1.06	1.26	1.06	149.9	0.950	0.3	0.0002	0.73	1.66	0.73
2/14/2023	8:27	182.9	0.910	3,196.3	0.202	1.06	1.26	1.06	149.9	0.950	0.6	0.0005	0.74	1.57	0.74
2/14/2023	8:28	181.5	0.911	2,900.0	0.201	1.06	1.28	1.06	149.9	0.950	0.3	0.0003	0.73	1.71	0.73
2/14/2023	8:29	180.1	0.910	2,738.0	0.173	1.05	1.26	1.05	149.9	0.950	0.7	0.0006	0.73	1.63	0.73
2/14/2023					--				149.9	0.950	0.6	0.0005	0.73	1.58	0.73
2/14/2023	8:31	178.7	0.910	2,553.0	0.177	1.04	1.26	1.04	149.9	0.950	0.3	0.0002	0.73	1.58	0.73
2/14/2023	8:32	177.4	0.910	2,359.5	0.133	1.04	1.27	1.04	149.9	0.950	0.3	0.0003	0.74	1.58	0.74
2/14/2023	8:33	176.1	0.910	2,136.3	0.121	1.02	1.27	1.02	149.9	0.950	0.5	0.0004	0.74	1.59	0.74
2/14/2023	8:34	174.8	0.910	1,943.2	0.123	1.01	1.26	1.01	149.9	0.950	0.6	0.0005	0.74	1.59	0.74
2/14/2023	8:35	173.5	0.910	1,728.3	0.085	1.01	1.27	1.01	149.9	0.950	0.4	0.0003	0.74	1.60	0.74
2/14/2023	8:36	172.3	0.911	1,737.6	0.085	1.00	1.27	1.00	149.9	0.950	0.4	0.0004	0.74	1.59	0.74
2/14/2023	8:37	171.1	0.910	1,766.4	0.112	0.99	1.28	0.99	149.9	0.950	0.5	0.0004	0.75	1.60	0.75
2/14/2023	8:38	169.8	0.911	4,046.7	0.199	1.08	1.28	1.08	149.9	0.950	0.3	0.0002	0.76	1.60	0.76
2/14/2023	8:39	168.6	0.911	19,544.3	1.110	1.01	1.28	1.01	149.9	0.950	0.2	0.0001	0.76	1.60	0.76
2/14/2023					--				149.9	0.950	0.2	0.0002	0.76	1.60	0.76
2/14/2023	8:41	170.4	0.911	46,836.4	2.302	0.31	1.28	0.31	149.9	0.950	0.6	0.0005	0.76	1.59	0.76
2/14/2023	8:42	174.0	0.911	57,651.4	2.835	0.20	1.28	0.20				--			
2/14/2023	8:43	177.0	0.911	60,117.7	3.416	0.20	1.29	0.20	149.9	0.950	0.8	0.0007	0.76	1.59	0.76
2/14/2023	8:44	179.9	0.912	60,430.5	3.438	0.24	1.28	0.24	149.9	0.950	0.3	0.0002	0.76	1.59	0.76

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet $_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/14/2023	8:45	182.6	0.911	67,165.9	3.818	0.20	1.30	0.20	149.9	0.951	0.2	0.0002	0.76	1.59	0.76
2/14/2023	8:46	185.3	0.912	77,613.9	3.816	0.34	1.30	0.34	149.9	0.950	0.5	0.0004	0.76	1.59	0.76
2/14/2023	8:47	187.9	0.912	91,164.8	4.473	0.55	1.28	0.55	149.9	0.950	0.5	0.0004	0.77	1.58	0.77
2/14/2023					--				149.9	0.950	0.2	0.0002	0.77	1.59	0.77
2/14/2023	8:49	190.0	0.911	81,515.9	3.255	0.23	1.29	0.23	149.9	0.950	0.9	0.0007	0.77	1.59	0.77
2/14/2023	8:50	191.5	0.912	68,674.7	3.878	0.35	1.29	0.35				--			
2/14/2023					--				149.9	0.950	0.6	0.0005	0.78	1.59	0.78
2/14/2023	8:52	192.7	0.911	44,343.5	2.171	1.01	1.29	1.01	149.9	0.950	0.5	0.0004	0.79	1.59	0.79
2/14/2023	8:53	192.7	0.911	34,259.4	19.051	1.17	1.29	1.17	149.9	0.950	0.8	0.0006	0.78	1.60	0.78
2/14/2023	8:54	192.5	0.911	24,346.6	11.223	1.12	1.30	1.12	149.9	0.950	0.4	0.0006	0.80	1.60	0.80
2/14/2023	8:55	192.4	0.911	18,714.9	7.948	1.04	1.31	1.04	149.9	0.950	0.3	0.0004	0.79	1.60	0.79
2/14/2023	8:56	192.4	0.911	14,744.3	5.798	0.95	1.33	0.95	149.9	0.950	0.3	0.0003	0.79	1.60	0.79
2/14/2023	8:57	192.4	0.911	12,145.7	4.386	0.85	1.36	0.85	149.9	0.950	0.1	0.0001	0.79	1.59	0.79
2/14/2023	8:58	192.5	0.911	10,134.5	3.426	0.69	1.37	0.69	149.9	0.950	19.3	0.0226	0.80	1.59	0.80
2/14/2023	8:59	192.4	0.914	1,293.5	0.422	1.04	1.38	1.04	149.9	0.950	18.5	0.0208	0.80	1.59	0.80
2/14/2023	9:00				--				149.9	0.950	11.8	0.0130	0.80	1.58	0.80
2/14/2023	9:01				--							--			
2/14/2023	9:02				--							--			
2/14/2023	9:03				--							--			
2/14/2023	9:04				--							--			
2/14/2023	9:05				--							--			
2/14/2023	9:06				--							--			
2/14/2023	9:07				--							--			
2/14/2023	9:08				--							--			
2/14/2023	9:09				--							--			
2/14/2023	9:10				--							--			
2/14/2023	9:11				--							--			
2/14/2023	9:12				--							--			
2/14/2023	9:13				--							--			
2/14/2023	9:14				--							--			
2/14/2023	9:15				--							--			
2/14/2023	9:16				--							--			
2/14/2023	9:17				--							--			
2/14/2023	9:18				--							--			
2/14/2023	9:19				--							--			
2/14/2023	9:20				--							--			
2/14/2023	9:21				--							--			
2/14/2023	9:22				--							--			
2/14/2023	9:23				--							--			
2/14/2023	9:24				--							--			
2/14/2023	9:25				--							--			
2/14/2023	9:26				--							--			
2/14/2023	9:27				--							--			
2/14/2023	9:28				--							--			
2/14/2023	9:29				--							--			
2/14/2023	9:30				--							--			
2/14/2023	9:31				--							--			
2/14/2023	9:32				--				150.0	0.955	1.4	--	0.20	1.57	0.20
2/14/2023	9:33				--				150.0	0.955	1.2	--	0.20	1.58	0.20
2/14/2023	9:34				--				150.0	0.956	1.3	--	0.20	1.56	0.20
2/14/2023	9:35	190.6	0.910	827.6	--	1.31	1.32	1.31	150.0	0.956	1.6	--	0.20	1.56	0.20
2/14/2023	9:36	192.0	0.910	956.5	--	1.31	1.31	1.31	150.1	0.953	1.6	--	0.21	1.55	0.21
2/14/2023	9:37	192.6	0.910	870.7	--	1.32	1.30	1.30	150.1	0.950	1.7	--	0.84	1.56	0.84
2/14/2023	9:38	192.7	0.910	966.8	--	1.32	1.31	1.31	150.1	0.950	2.0	--	0.83	1.56	0.83
2/14/2023	9:39	192.7	0.913	727.3	--	1.23	1.32	1.23	150.1	0.950	1.5	--	0.84	1.56	0.84
2/14/2023	9:40	192.6	0.916	28.2	--	0.20	1.32	0.20	150.2	0.950	1.9	--	0.84	1.58	0.84
2/14/2023	9:41	192.6	0.915	21.2	--	0.20	1.33	0.20	150.2	0.950	2.0	--	0.84	1.56	0.84
2/14/2023	9:42	192.7	0.912	224.8	0.014	0.34	1.32	0.34	150.2	0.950	1.7	0.0013	0.85	1.56	0.85
2/14/2023	9:43	192.6	0.910	942.8	0.060	1.23	1.32	1.23	150.2	0.950	1.6	0.0013	0.85	1.56	0.85
2/14/2023	9:44	192.0	0.910	1,092.0	0.069	1.24	1.32	1.24	150.2	0.950	1.8	0.0014	0.85	1.56	0.85
2/14/2023	9:45	191.7	0.910	730.6	0.041	1.27	1.33	1.27	150.2	0.950	1.5	0.0012	0.85	1.63	0.85
2/14/2023	9:46	191.9	0.910	1,011.9	0.057	1.28	1.31	1.28	150.2	0.950	1.7	0.0014	0.85	1.55	0.85
2/14/2023	9:47	192.1	0.911	855.0	0.054	1.31	1.31	1.31	150.2	0.950	1.7	0.0013	0.85	1.56	0.85
2/14/2023	9:48	192.3	0.910	861.8	0.054	1.31	1.32	1.31	150.2	0.950	1.8	0.0014	0.85	1.55	0.85
2/14/2023	9:49	192.3	0.910	1,147.7	0.056	1.30	1.32	1.30	150.1	0.950	1.6	0.0012	0.85	1.56	0.85
2/14/2023	9:50	192.4	0.911	898.2	0.044	1.32	1.32	1.32	150.1	0.950	1.7	0.0013	0.86	1.56	0.86
2/14/2023	9:51	192.4	0.910	1,394.1	0.079	1.32	1.32	1.32				--			
2/14/2023	9:52	192.4	0.910	1,131.8	0.055	1.32	1.33	1.32	150.1	0.950	1.6	0.0012	0.86	1.57	0.86
2/14/2023	9:53	192.4	0.910	1,467.3	0.083	1.33	1.33	1.33	150.1	0.950	1.6	0.0012	0.87	1.57	0.87
2/14/2023	9:54	192.4	0.911	1,349.3	0.066	1.33	1.33	1.33	150.1	0.950	1.7	0.0013	0.86	1.58	0.86
2/14/2023	9:55				--				150.1	0.950	1.8	0.0014	0.87	1.58	0.87
2/14/2023	9:56	192.4	0.911	1,461.9	0.058	1.34	1.33	1.33	150.1	0.950	1.4	0.0011	0.87	1.58	0.87
2/14/2023	9:57	192.4	0.911	1,325.2	0.075	1.34	1.34	1.34	150.1	0.950	1.8	0.0014	0.87	1.58	0.87
2/14/2023	9:58	192.3	0.911	1,514.9	0.096	1.34	1.34	1.34	150.1	0.950	1.7	0.0013	0.86	1.57	0.86
2/14/2023	9:59	192.3	0.911	1,355.8	0.086	1.34	1.33	1.33	150.1	0.950	1.8	0.0014	0.86	1.58	0.86
2/14/2023	10:00	192.3	0.911	1,219.0	0.049	1.34	1.34	1.34	150.1	0.950	1.9	0.0015	0.87	1.57	0.87
2/14/2023	10:01	192.3	0.911	1,480.8	0.072	1.34	1.34	1.34	150.1	0.950	1.6	0.0013	0.87	1.60	0.87
2/14/2023	10:02	192.3	0.911	1,368.7	0.067	1.35	1.34	1.34	150.1	0.950	1.7	0.0013	0.88	1.58	0.88
2/14/2023	10:03	192.3	0.911	1,601.1	0.090	1.35	1.34	1.34	150.1	0.950	1.2	0.0009	0.88	1.58	0.88
2/14/2023	10:04	192.3	0.910	1,824.1	0.103	1.35	1.34	1.34	150.1	0.950	1.6	0.0013	0.87	1.58	0.87
2/14/2023	10:05	192.2	0.910	1,757.8	0.099	1.36	1.35	1.35	150.1	0.950	1.9	0.0015	0.87	1.60	0.87
2/14/2023	10:06	192.2	0.910	1,578.6	0.100	1.36	1.34	1.34	150.1	0.950	1.7	0.0013	0.88	1.59	0.88
2/14/2023	10:07	192.3	0.910	1,578.4	0.100	1.36	1.35	1.35	150.1	0.950	1.8	0.0013	0.88	1.60	0.88
2/14/2023	10:08	192.3	0.910	1,408.4	0.080	1.36	1.34	1.34	150.0	0.950	1.7	0.0013	0.87	1.60	0.87
2/14/2023	10:09	192.3	0.911	1,371.1	0.067	1.36	1.35	1.35	150.0	0.950	1.6	0.0013	0.87	1.60	0.87
2/14/2023	10:10	192.2	0.911	1,272.0	0.072	1.36	1.34	1.34	150.1	0.950	1.6	0.0012	0.88	1.60	0.88
2/14/2023	10:11	192.2	0.911	1,381.8	0.078	1.36	1.35	1.35	150.0	0.950	1.5	0.0011	0.89	1.61	0.89
2/14/2023	10:12	192.2	0.911	1,430.4	0.070	1.35	1.35	1.35	150.1	0.950	2.0	0.0015	0.88	1.64	0.88
2/14/2023	10:13	192.2	0.911	1,288.2	0.073	1.36	1.36	1.36	150.0	0.950	1.8	0.0014	0.89	1.61	0.89
2/14/2023	10:14	192.2	0.910	1,411.8	0.069	1.36	1.35	1.35				--			
2/14/2023	10:15	192.2	0.911	1,276.9	0.062	1.35	1.35	1.35	150.0	0.950	1.8	0.0014	0.89	1.61	0.89
2/14/2023	10:16	192.2	0.911	1,302.0	0.082	1.35	1.36	1.35	150.0	0.950	1.9	0.0014	0.90	1.61	0.90
2/14/2023	10:17				--				150.0	0.950	1.6	0.0012	0.90	1.63	0.90
2/14/2023	10:18	192.2	0.910	1,326.4	0.075	1.35	1.37	1.35	150.0	0.950	1.6	0.0012	0.89	1.64	0.89
2/14/2023	10:19	192.2	0.911	1,316.8	0.074	1.35	1.37	1.35	150.0	0.950	1.7	0.0013	0.90	1.62	0.90

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet $_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/14/2023	10:20	192.2	0.911	1,347.7	0.076	1.34	1.37	1.34	150.0	0.950	1.7	0.0013	0.90	1.63	0.90
2/14/2023	10:21	192.2	0.910	1,357.9	0.066	1.32	1.37	1.32	150.0	0.950	1.9	0.0015	0.90	1.63	0.90
2/14/2023	10:22	192.2	0.911	1,336.2	0.075	1.31	1.38	1.31	150.0	0.950	1.6	0.0012	0.90	1.63	0.90
2/14/2023	10:23	192.2	0.911	1,225.3	0.069	1.31	1.36	1.31	150.0	0.950	1.8	0.0014	0.90	1.63	0.90
2/14/2023	10:24	192.2	0.910	1,385.4	0.087	1.29	1.37	1.29	150.0	0.950	1.9	0.0014	0.89	1.64	0.89
2/14/2023	10:25	192.2	0.911	1,378.2	0.067	1.27	1.37	1.27	150.0	0.950	1.8	0.0014	0.90	1.64	0.90
2/14/2023	10:26	192.2	0.910	1,309.5	0.074	1.27	1.37	1.27	150.0	0.950	1.7	0.0013	0.90	1.63	0.90
2/14/2023	10:27	192.2	0.910	1,347.8	0.066	1.25	1.36	1.25	150.0	0.950	1.9	0.0014	0.90	1.63	0.90
2/14/2023	10:28	192.2	0.910	1,274.2	0.062	1.24	1.37	1.24	150.0	0.950	1.8	0.0014	0.91	1.64	0.91
2/14/2023	10:29	192.2	0.910	1,402.2	0.079	1.22	1.40	1.22	150.0	0.950	1.7	0.0013	0.91	1.64	0.91
2/14/2023	10:30	192.2	0.910	1,008.5	0.064	1.26	1.39	1.26	150.0	0.950	2.1	0.0016	0.91	1.65	0.91
2/14/2023	10:31	192.2	0.910	1,338.8	0.076	1.22	1.38	1.22	150.0	0.950	2.1	0.0016	0.90	1.65	0.90
2/14/2023	10:32	192.2	0.911	1,219.1	0.060	1.22	1.38	1.22	150.0	0.950	1.9	0.0014	0.91	1.65	0.91
2/14/2023	10:33	192.2	0.911	1,466.6	0.083	1.17	1.39	1.17	150.0	0.950	1.8	0.0013	0.91	1.65	0.91
2/14/2023	10:34	192.2	0.910	1,349.4	0.066	1.17	1.38	1.17	150.0	0.950	1.7	0.0013	0.90	1.65	0.90
2/14/2023	10:35	192.2	0.911	1,553.0	0.076	1.13	1.40	1.13	150.0	0.950	1.7	0.0013	0.91	1.66	0.91
2/14/2023	10:36	192.2	0.910	1,284.0	0.072	1.17	1.38	1.17	150.0	0.950	1.7	0.0013	0.91	1.66	0.91
2/14/2023	10:37	192.3	0.911	1,594.9	0.101	1.12	1.39	1.12				--			
2/14/2023	10:38	192.3	0.911	1,741.0	0.139	1.09	1.39	1.09	150.0	0.950	1.6	0.0012	0.92	1.66	0.92
2/14/2023	10:39				--				150.0	0.950	2.0	0.0015	0.92	1.67	0.92
2/14/2023	10:40	192.3	0.910	1,854.2	0.105	1.08	1.39	1.08	150.0	0.950	1.9	0.0015	0.92	1.66	0.92
2/14/2023	10:41	192.2	0.911	1,709.6	0.096	1.11	1.39	1.11	150.0	0.950	1.9	0.0014	0.91	1.66	0.91
2/14/2023	10:42	192.3	0.910	1,757.7	0.099	1.11	1.40	1.11	150.0	0.950	1.9	0.0014	0.92	1.67	0.92
2/14/2023	10:43	192.2	0.910	1,664.9	0.081	1.14	1.40	1.14	150.0	0.950	1.6	0.0012	0.91	1.68	0.91
2/14/2023	10:44	192.2	0.911	2,702.4	0.132	0.97	1.40	0.97	150.0	0.950	1.8	0.0014	0.91	1.67	0.91
2/14/2023	10:45	192.2	0.911	2,432.4	0.137	1.03	1.40	1.03	150.0	0.950	2.1	0.0016	0.91	1.67	0.91
2/14/2023	10:46	192.2	0.911	2,480.9	0.156	1.03	1.40	1.03	150.0	0.950	2.0	0.0015	0.91	1.67	0.91
2/14/2023	10:47	192.2	0.910	2,804.2	0.137	1.05	1.40	1.05	150.0	0.950	2.2	0.0016	0.92	1.67	0.92
2/14/2023	10:48	192.2	0.911	5,861.2	0.286	1.01	1.41	1.01	150.0	0.950	1.9	0.0014	0.91	1.66	0.91
2/14/2023	10:49	192.2	0.911	7,191.3	0.406	1.02	1.41	1.02	150.0	0.950	1.8	0.0013	0.92	1.67	0.92
2/14/2023	10:50	192.2	0.911	9,559.3	0.467	0.96	1.41	0.96	150.0	0.950	1.7	0.0013	0.93	1.68	0.93
2/14/2023	10:51	192.2	0.910	10,362.3	0.653	1.03	1.41	1.03	150.0	0.950	1.7	0.0013	0.93	1.68	0.93
2/14/2023	10:52	192.2	0.910	11,608.9	0.655	1.03	1.40	1.03	150.0	0.950	1.7	0.0012	0.93	1.67	0.93
2/14/2023	10:53	192.2	0.910	12,383.0	0.698	1.03	1.43	1.03	150.0	0.950	1.8	0.0013	0.93	1.68	0.93
2/14/2023	10:54	192.2	0.911	12,608.1	0.795	1.04	1.42	1.04	150.0	0.950	1.5	0.0011	0.92	1.69	0.92
2/14/2023	10:55	192.2	0.910	14,095.1	0.888	1.01	1.42	1.01	150.1	0.950	1.5	0.0012	0.93	1.68	0.93
2/14/2023	10:56	192.2	0.911	10,929.2	0.534	1.08	1.42	1.08	150.0	0.951	1.7	0.0013	0.93	1.68	0.93
2/14/2023	10:57	192.2	0.911	8,192.6	0.462	1.08	1.42	1.08	150.0	0.951	2.0	0.0015	0.93	1.68	0.93
2/14/2023	10:58	192.2	0.911	8,056.3	0.556	1.05	1.43	1.05	150.0	0.951	1.9	0.0015	0.93	1.67	0.93
2/14/2023	10:59	192.3	0.911	7,218.5	0.498	1.05	1.42	1.05				--			
2/14/2023	11:00	192.2	0.912	5,377.3	0.303	1.12	1.43	1.12	150.0	0.951	1.7	0.0012	0.92	1.66	0.92
2/14/2023	11:01				--				150.0	0.951	1.6	0.0012	0.91	1.65	0.91
2/14/2023	11:02	192.2	0.911	5,643.9	0.318	1.06	1.42	1.06	150.0	0.951	1.9	0.0014	0.91	1.65	0.91
2/14/2023	11:03	192.2	0.912	4,275.7	0.269	1.10	1.42	1.10	150.0	0.951	1.8	0.0014	0.90	1.64	0.90
2/14/2023	11:04	192.2	0.912	3,738.0	0.211	1.10	1.42	1.10	150.1	0.951	1.9	0.0014	0.90	1.64	0.90
2/14/2023	11:05	192.2	0.912	3,229.9	0.182	1.11	1.42	1.11	150.0	0.951	1.6	0.0012	0.90	1.64	0.90
2/14/2023	11:06	192.2	0.911	3,321.6	0.187	1.06	1.49	1.06	150.0	0.951	1.9	0.0014	0.90	2.01	0.90
2/14/2023	11:07	192.3	0.911	2,817.8	0.177	1.06	1.51	1.06	150.0	0.951	1.8	0.0013	0.90	2.07	0.90
2/14/2023	11:08	192.3	0.911	2,339.5	0.147	1.06	1.51	1.06	150.0	0.951	1.6	0.0012	0.90	2.08	0.90
2/14/2023	11:09	192.2	0.912	2,371.7	0.149	1.04	1.51	1.04	150.0	0.951	1.9	0.0014	0.90	2.11	0.90
2/14/2023	11:10	192.2	0.911	2,257.2	0.127	0.99	1.53	0.99	150.0	0.951	2.0	0.0015	0.89	2.18	0.89
2/14/2023	11:11	192.2	0.912	1,940.8	0.122	1.02	1.46	1.02	150.0	0.951	1.8	0.0013	0.90	1.89	0.90
2/14/2023	11:12	192.2	0.912	2,030.8	0.128	0.97	1.43	0.97	150.0	0.951	2.0	0.0015	0.90	1.66	0.90
2/14/2023	11:13	192.2	0.912	1,882.7	0.106	0.97	1.43	0.97	150.0	0.951	1.8	0.0014	0.90	1.65	0.90
2/14/2023	11:14	192.2	0.912	1,836.2	0.103	0.95	1.45	0.95	150.0	0.951	1.7	0.0013	0.90	1.64	0.90
2/14/2023	11:15	192.2	0.912	1,654.2	0.093	0.98	1.45	0.98	150.0	0.951	1.5	0.0011	0.90	1.65	0.90
2/14/2023	11:16	192.2	0.912	1,696.5	0.107	0.96	1.44	0.96	150.0	0.951	1.7	0.0013	0.89	1.66	0.89
2/14/2023	11:17	192.2	0.912	1,619.8	0.079	0.96	1.44	0.96	150.0	0.951	2.2	0.0016	0.89	1.65	0.89
2/14/2023	11:18	192.2	0.912	1,317.6	0.074	1.03	1.44	1.03	150.0	0.951	1.9	0.0014	0.89	1.66	0.89
2/14/2023	11:19	192.2	0.912	1,465.1	0.092	0.99	1.46	0.99	150.0	0.951	1.9	0.0014	0.90	1.65	0.90
2/14/2023	11:20	192.2	0.912	1,457.4	0.109	0.98	1.43	0.98	150.0	0.951	1.9	0.0014	0.89	1.64	0.89
2/14/2023	11:21	192.2	0.912	1,400.6	0.097	0.99	1.43	0.99	150.0	0.951	1.8	0.0013	0.89	1.64	0.89
2/14/2023	11:22	192.2	0.912	1,483.0	0.110	0.96	1.46	0.96				--			
2/14/2023	11:23				--				150.0	0.951	1.9	0.0014	0.90	1.63	0.90
2/14/2023	11:24	192.2	0.912	1,524.6	0.105	0.94	1.44	0.94	150.0	0.951	1.9	0.0014	0.90	1.64	0.90
2/14/2023	11:25	192.2	0.912	1,635.8	0.113	0.90	1.45	0.90	150.0	0.951	1.9	0.0014	0.90	1.65	0.90
2/14/2023	11:26	192.2	0.912	1,364.6	0.094	0.97	1.44	0.97	150.0	0.952	2.0	0.0015	0.90	1.62	0.90
2/14/2023	11:27	192.2	0.912	794.6	0.050	1.16	1.45	1.16	150.0	0.951	1.9	0.0014	0.90	1.62	0.90
2/14/2023	11:28	192.2	0.912	691.3	0.052	1.21	1.45	1.21	150.0	0.952	1.7	0.0012	0.90	1.64	0.90
2/14/2023	11:29	192.2	0.912	753.3	0.052	1.21	1.44	1.21	150.0	0.951	2.0	0.0015	0.91	1.61	0.91
2/14/2023	11:30	192.1	0.912	647.0	0.109	1.23	1.46	1.23	150.0	0.951	1.8	0.0014	0.90	1.63	0.90
2/14/2023	11:31	192.2	0.912	535.8	0.092	1.26	1.45	1.26	150.0	0.951	2.1	0.0018	0.90	1.63	0.90
2/14/2023	11:32	192.2	0.912	492.0	0.087	1.29	1.46	1.29	150.0	0.951	1.8	0.0015	0.90	1.63	0.90
2/14/2023	11:33	192.2	0.912	343.6	0.145	1.31	1.47	1.31	150.0	0.951	1.5	0.0013	0.89	1.63	0.89
2/14/2023	11:34	192.1	0.912	378.4	0.158	1.31	1.46	1.31	150.0	0.951	1.5	0.0015	0.90	1.62	0.90
2/14/2023	11:35	192.2	0.912	427.9	0.074	1.27	1.50	1.27	150.0	0.951	1.4	0.0012	0.89	1.60	0.89
2/14/2023	11:36	192.2	0.913	2,178.5	0.351	1.06	1.47	1.06	150.0	0.951	1.4	0.0012	0.89	1.61	0.89
2/14/2023	11:37	192.2	0.914	206,066.3	13.092	0.20	1.45	0.20	150.0	0.951	34.8	0.0256	0.88	1.61	0.88
2/14/2023	11:38	192.1	0.914	206,914.1	13.141	0.20	1.46	0.20	150.0	0.951	44.8	0.0333	0.88	1.60	0.88
2/14/2023	11:39	192.1	0.915	212,436.0	14.753	0.20	1.46	0.20	150.0	0.951	19.4	0.0149	0.88	1.60	0.88
2/14/2023	11:40	192.1	0.914	214,076.4	16.034	0.20	1.45	0.20	150.0	0.951	1.9	0.0014	0.89	1.60	0.89
2/14/2023	11:41	192.1	0.914	186,221.2	12.909	0.20	1.44	0.20	150.0	0.951	1.7	0.0013	0.88	1.60	0.88
2/14/2023	11:42	192.1	0.913	139,534.0	10.475	1.35	1.44	1.35	150.0	0.951	1.8	0.0013	0.88	1.58	0.88
2/14/2023	11:43	192.1	0.913	114,972.8	7.966	0.20	1.48	0.20	149.9	0.951	1.5	0.0012	0.88	1.57	0.88
2/14/2023	11:44	192.1	0.913	73,807.9	5.122	0.53	1.44	0.53	150.0	0.951	1.6	0.0012	0.88	1.58	0.88
2/14/2023	11:45				--							--			
2/14/2023	11:46	192.1	0.912	51,496.4	3.574	0.85	1.45	0.85	150.0	0.951	1.7	0.0013	0.87	1.57	0.87
2/14/2023	11:47	192.1	0.913	37,999.7	2.639	1.22	1.44	1.22	150.0	0.951	1.7	0.0013	0.87	1.58	0.87
2/14/2023	11:48	192.1	0.912	27,868.2	1.936	1.34	1.43	1.34	150.0	0.951	1.8	0.0014	0.87	1.57	0.87
2/14/2023	11:49	192.1	0.912	21,073.3	1.581	1.29	1.43	1.29	150.1	0.951	1.8	0.0013	0.87	1.58	0.87
2/14/2023	11:50	192.1	0.912	16,380.4	0.929	1.31	1.42	1.31	150.0	0.951	1.9	0.0014	0.87	1.57	0.87
2/14/2023	11:51	192.2	0.912	13,329.0	0.926	1.31	1.41	1.31	150.0	0.951	1.8	0.0014	0.88	1.56	0.88
2/14/2023	11:52	192.2	0.912	11,069.3	0.769	1.31	1.40	1.31	150.0	0.951	1.7	0.0013	0.87	1.57	0.87
2/14/2023	11:53	192.2	0.912	10,215.3	0.766	1.23	1.41	1.23	150.0	0.951	1.8	0.0013	0.87	1.57	0.87
2/14/2023	11:54	192.2	0.912	9,189.4	0.638	1.24	1.41	1.24	150.0	0.951	1.6	0.0012	0.87	1.55	0.87

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet $_{used}$**
	Unit	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/14/2023	11:55	192.2	0.912	8,186.5	0.519	1.26	1.41	1.26	150.0	0.951	1.7	0.0013	0.87	1.57	0.87
2/14/2023	11:56	192.2	0.912	6,977.5	0.485	1.27	1.41	1.27	150.0	0.951	1.9	0.0015	0.87	1.56	0.87
2/14/2023	11:57	192.2	0.911	6,659.9	0.463	1.27	1.41	1.27	150.0	0.951	1.6	0.0012	0.87	1.56	0.87
2/14/2023	11:58	192.2	0.912	6,037.3	0.419	1.27	1.41	1.27	150.0	0.951	1.9	0.0014	0.86	1.55	0.86
2/14/2023	11:59	192.2	0.911	5,560.6	0.386	1.27	1.41	1.27	150.0	0.951	1.6	0.0012	0.86	1.53	0.86
2/14/2023	12:00	192.2	0.912	5,428.2	0.377	1.26	1.42	1.26	150.0	0.951	1.5	0.0011	0.86	1.55	0.86
2/14/2023	12:01	192.2	0.912	4,888.8	0.367	1.27	1.43	1.27	150.0	0.951	1.5	0.0012	0.85	1.54	0.85
2/14/2023	12:02	192.2	0.912	4,621.6	0.321	1.26	1.42	1.26	150.0	0.951	1.7	0.0013	0.85	1.55	0.85
2/14/2023	12:03	192.2	0.911	4,237.2	0.294	1.27	1.44	1.27	150.0	0.951	1.7	0.0013	0.85	1.54	0.85
2/14/2023	12:04	192.2	0.912	3,773.5	0.262	1.27	1.44	1.27	150.0	0.951	1.8	0.0014	0.85	1.52	0.85
2/14/2023	12:05	192.2	0.912	3,659.1	0.207	1.27	1.43	1.27	150.1	0.951	1.7	0.0013	0.85	1.52	0.85
2/14/2023	12:06	192.2	0.912	2,885.5	0.142	1.26	1.42	1.26	150.0	0.951	1.6	0.0013	0.85	1.51	0.85
2/14/2023	12:07				--				150.0	0.951	1.6	0.0013	0.85	1.51	0.85
2/14/2023	12:08	192.3	0.912	3,145.3	0.217	1.26	1.43	1.26				--			
2/14/2023	12:09	192.3	0.912	3,316.8	0.229	1.26	1.43	1.26	150.0	0.951	1.7	0.0013	0.85	1.50	0.85
2/14/2023	12:10	192.2	0.912	2,424.1	0.168	1.26	1.42	1.26	150.0	0.951	1.9	0.0015	0.84	1.49	0.84
2/14/2023	12:11	192.3	0.912	1,678.5	0.106	1.24	1.44	1.24	150.0	0.951	1.7	0.0013	0.83	1.48	0.83
2/14/2023	12:12	192.2	0.911	1,594.0	0.110	1.24	1.44	1.24	150.0	0.951	1.9	0.0015	0.83	1.48	0.83
2/14/2023	12:13	192.2	0.912	1,606.2	0.101	1.22	1.42	1.22	150.0	0.951	2.0	0.0016	0.82	1.49	0.82
2/14/2023	12:14	192.2	0.912	1,908.2	0.132	1.20	1.42	1.20	150.0	0.951	2.0	0.0015	0.82	1.46	0.82
2/14/2023	12:15	192.2	0.912	1,638.1	0.103	1.20	1.45	1.20	150.0	0.951	2.0	0.0016	0.83	1.46	0.83
2/14/2023	12:16	192.2	0.912	1,868.9	0.118	1.19	1.42	1.19	150.0	0.951	1.8	0.0014	0.83	1.47	0.83
2/14/2023	12:17	192.2	0.912	1,542.2	0.106	1.19	1.44	1.19	150.0	0.951	1.8	0.0014	0.83	1.47	0.83
2/14/2023	12:18	192.2	0.912	1,342.5	0.085	1.19	1.46	1.19	150.1	0.951	1.9	0.0016	0.83	1.46	0.83
2/14/2023	12:19	192.2	0.912	1,433.8	0.090	1.20	1.45	1.20	150.1	0.951	1.8	0.0014	0.83	1.46	0.83
2/14/2023	12:20	192.3	0.912	1,269.8	0.080	1.20	1.39	1.20	150.0	0.951	1.7	0.0014	0.83	1.45	0.83
2/14/2023	12:21	192.2	0.912	1,399.4	0.088	1.20	1.43	1.20	150.0	0.951	2.0	0.0016	0.83	1.46	0.83
2/14/2023	12:22	192.2	0.912	1,385.5	0.087	1.20	1.41	1.20	150.1	0.951	2.0	0.0016	0.83	1.44	0.83
2/14/2023	12:23	192.2	0.912	1,361.5	0.086	1.20	1.46	1.20	150.1	0.951	1.7	0.0013	0.83	1.43	0.83
2/14/2023	12:24	192.2	0.911	1,119.5	0.071	1.20	1.43	1.20	150.1	0.951	1.5	0.0012	0.82	1.43	0.82
2/14/2023	12:25	192.2	0.911	1,047.4	0.066	1.19	1.42	1.19	150.0	0.951	1.7	0.0013	0.82	1.44	0.82
2/14/2023	12:26	192.2	0.911	1,156.7	0.073	1.18	1.40	1.18	150.1	0.950	1.7	0.0013	0.82	1.43	0.82
2/14/2023	12:27	192.2	0.911	1,106.8	0.076	1.17	1.42	1.17	150.0	0.950	2.0	0.0016	0.82	1.43	0.82
2/14/2023	12:28	192.2	0.911	1,054.9	0.059	1.18	1.43	1.18	150.1	0.950	1.6	0.0013	0.82	1.44	0.82
2/14/2023	12:29				--				150.0	0.950	1.9	0.0016	0.82	1.41	0.82
2/14/2023	12:30	192.2	0.911	756.0	0.048	1.20	1.42	1.20	150.1	0.950	1.7	0.0013	0.81	1.44	0.81
2/14/2023	12:31	192.2	0.911	584.1	0.040	1.20	1.42	1.20				--			
2/14/2023	12:32	192.2	0.911	557.5	0.035	1.19	1.41	1.19	150.1	0.950	1.7	0.0014	0.82	1.41	0.82
2/14/2023	12:33	192.2	0.911	541.4	0.034	1.19	1.43	1.19	150.0	0.950	1.9	0.0015	0.81	1.41	0.81
2/14/2023	12:34	192.2	0.911	504.9	0.032	1.18	1.41	1.18	150.0	0.950	1.7	0.0014	0.82	1.40	0.82
2/14/2023	12:35	192.2	0.911	492.7	0.031	1.19	1.42	1.19	150.0	0.950	1.6	0.0013	0.82	1.41	0.82
2/14/2023	12:36	192.2	0.911	565.4	0.036	1.18	1.41	1.18	150.0	0.950	1.8	0.0014	0.82	1.39	0.82
2/14/2023	12:37	192.2	0.911	482.5	0.030	1.19	1.42	1.19	150.1	0.950	1.7	0.0014	0.82	1.40	0.82
2/14/2023	12:38	192.2	0.911	436.2	0.030	1.19	1.42	1.19	150.1	0.950	1.9	0.0015	0.82	1.42	0.82
2/14/2023	12:39	192.2	0.911	400.4	0.025	1.19	1.45	1.19	150.0	0.950	1.8	0.0014	0.83	1.40	0.83
2/14/2023	12:40	192.2	0.911	334.1	0.021	1.19	1.44	1.19	150.0	0.950	1.6	0.0013	0.82	1.40	0.82
2/14/2023	12:41	192.2	0.911	330.4	0.023	1.19	1.47	1.19	150.0	0.950	1.7	0.0014	0.82	1.41	0.82
2/14/2023	12:42	192.2	0.911	310.7	0.021	1.19	1.40	1.19	150.1	0.950	2.0	0.0016	0.82	1.42	0.82
2/14/2023	12:43	192.2	0.911	330.4	0.021	1.18	1.42	1.18	150.0	0.950	1.6	0.0012	0.82	1.40	0.82
2/14/2023	12:44	192.2	0.910	293.8	0.017	1.19	1.46	1.19	150.0	0.950	1.6	0.0013	0.82	1.38	0.82
2/14/2023	12:45	192.2	0.911	260.6	0.016	1.19	1.43	1.19	150.1	0.949	1.7	0.0013	0.82	1.38	0.82
2/14/2023	12:46	192.2	0.910	240.8	0.014	1.18	1.45	1.18	150.1	0.949	1.8	0.0014	0.82	1.36	0.82
2/14/2023	12:47	192.2	0.910	234.9	0.013	1.18	1.48	1.18	150.1	0.949	1.8	0.0014	0.83	1.35	0.83
2/14/2023	12:48	192.2	0.910	217.1	0.014	1.15	1.53	1.15	150.0	0.949	1.8	0.0014	0.82	1.32	0.82
2/14/2023	12:49	192.2	0.910	272.1	0.017	1.18	1.38	1.18	150.1	0.949	1.5	0.0012	0.83	1.40	0.83
2/14/2023	12:50	192.2	0.910	214.7	0.014	1.16	1.48	1.16	150.0	0.948	1.5	0.0012	0.83	1.36	0.83
2/14/2023	12:51				--				150.1	0.947	1.6	0.0013	0.83	1.40	0.83
2/14/2023	12:52	192.3	0.910	227.9	0.013	1.16	1.41	1.16	150.1	0.948	1.6	0.0013	0.81	1.38	0.81
2/14/2023	12:53	192.2	0.909	218.1	0.014	1.16	1.43	1.16	150.0	0.948	1.4	0.0012	0.82	1.38	0.82
2/14/2023	12:54	192.3	0.908	195.4	0.011	1.16	1.41	1.16				--			
2/14/2023	12:55	192.3	0.909	210.1	0.013	1.15	1.39	1.15	150.0	0.947	1.6	0.0013	0.83	1.38	0.83
2/14/2023	12:56	192.3	0.908	382.6	0.024	1.18	1.39	1.18	150.0	0.947	1.6	0.0013	0.83	1.42	0.83
2/14/2023	12:57	192.3	0.909	324.6	0.018	1.18	1.40	1.18	150.1	0.947	1.6	0.0013	0.82	1.36	0.82
2/14/2023	12:58	192.3	0.908	256.5	0.013	1.18	1.37	1.18	150.0	0.947	1.7	0.0013	0.82	1.41	0.82
2/14/2023	12:59	192.3	0.908	246.8	0.017	1.18	1.38	1.18	150.0	0.947	1.7	0.0013	0.82	1.43	0.82
2/14/2023	13:00	192.3	0.908	203.3	0.008	1.15	1.40	1.15	150.0	0.947	1.6	0.0013	0.82	1.44	0.82
2/14/2023	13:01	192.3	0.908	147.3	0.006	1.16	1.41	1.16	150.0	0.947	1.8	0.0014	0.82	1.42	0.82
2/14/2023	13:02	192.3	0.908	131.4	0.005	1.16	1.42	1.16	150.0	0.946	1.7	0.0013	0.83	1.39	0.83
2/14/2023	13:03	192.2	0.907	124.2	0.009	1.16	1.43	1.16	150.0	0.946	1.8	0.0014	0.83	1.42	0.83
2/14/2023	13:04	192.3	0.908	115.4	0.006	1.16	1.45	1.16	150.1	0.947	1.5	0.0012	0.84	1.43	0.84
2/14/2023	13:05	192.3	0.907	107.1	0.006	1.17	1.43	1.17	150.0	0.946	1.8	0.0014	0.84	1.41	0.84
2/14/2023	13:06	192.2	0.907	105.7	0.006	1.18	1.43	1.18	150.0	0.946	1.6	0.0013	0.85	1.44	0.85
2/14/2023	13:07	192.3	0.907	101.6	0.006	1.18	1.40	1.18	150.1	0.947	1.7	0.0013	0.85	1.45	0.85
2/14/2023	13:08	192.2	0.907	96.1	0.007	1.19	1.41	1.19	150.0	0.946	1.5	0.0012	0.85	1.42	0.85
2/14/2023	13:09	192.2	0.907	101.7	0.006	1.20	1.39	1.20	150.0	0.947	1.4	0.0011	0.84	1.44	0.84
2/14/2023	13:10	192.3	0.907	103.8	0.008	1.20	1.40	1.20	150.0	0.947	1.8	0.0014	0.83	1.44	0.83
2/14/2023	13:11	192.3	0.907	104.6	0.007	1.20	1.42	1.20	150.1	0.947	1.7	0.0013	0.82	1.44	0.82
2/14/2023	13:12	192.3	0.907	101.8	0.006	1.21	1.38	1.21	150.0	0.947	1.8	0.0014	0.82	1.46	0.82
2/14/2023	13:13				--				150.0	0.946	1.7	0.0013	0.82	1.45	0.82
2/14/2023	13:14	192.3	0.907	100.1	0.006	1.20	1.41	1.20	150.0	0.946	1.4	0.0011	0.82	1.46	0.82
2/14/2023	13:15	192.3	0.907	99.6	0.005	1.19	1.40	1.19	150.1	0.946	1.5	0.0011	0.82	1.46	0.82
2/14/2023	13:16	192.3	0.907	101.4	0.005	1.19	1.39	1.19	150.1	0.946	1.6	0.0012	0.83	1.47	0.83
2/14/2023	13:17	192.3	0.907	102.7	0.005	1.20	1.40	1.20				--			
2/14/2023	13:18	192.3	0.907	103.2	0.005	1.21	1.41	1.21	150.1	0.946	1.7	0.0014	0.83	1.48	0.83
2/14/2023	13:19	192.3	0.907	103.2	0.045	1.22	1.46	1.22	150.0	0.946	1.5	0.0011	0.82	1.47	0.82
2/14/2023	13:20	192.3	0.907	101.8	0.044	1.22	1.41	1.22	150.0	0.946	1.8	0.0020	0.82	1.50	0.82
2/14/2023	13:21	192.3	0.907	99.9	0.043	1.23	1.45	1.23	150.1	0.947	1.6	0.0017	0.82	1.49	0.82
2/14/2023	13:22	192.3	0.907	96.5	0.042	1.24	1.49	1.24	150.0	0.947	1.5	0.0016	0.82	1.49	0.82
2/14/2023	13:23	192.3	0.907	208.9	0.091	1.23	1.53	1.23	150.0	0.947	0.9	0.0010	0.82	1.50	0.82
2/14/2023	13:24	192.3	0.907	528.0	0.230	1.25	1.50	1.25	150.0	0.947	87.0	0.0908	0.80	1.52	0.80
2/14/2023	13:25	192.2	0.909	996.1	0.210	1.30	1.49	1.30	150.0	0.947	393.3	0.4139	0.71	1.52	0.71
2/14/2023	13:26	192.2	0.912	210,252.5	39.615	0.20	1.50	0.20	150.0	0.947	684.1	0.5975	0.62	1.53	0.62
2/14/2023	13:27	192.1	0.912	210,793.9	8.470	0.20	1.49	0.20	150.0	0.947	937.9	0.8110	0.59	1.50	0.59
2/14/2023	13:28	192.1	0.911	214,620.5	6.093	0.20	1.50	0.20	150.0	0.947	1,091.2	0.8334	0.55	1.54	0.55
2/14/2023	13:29	192.1	0.911	215,780.3	10.602	0.20	1.51	0.20	150.0	0.947	515.8	0.3872	0.71	1.53	0.71

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet $_{used}$**
	Unit	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/14/2023	13:30	192.1	0.911	215,351.0	12.198	0.20	1.54	0.20	150.0	0.946	231.9	0.1753	0.79	1.53	0.79
2/14/2023	13:31	192.2	0.910	211,058.0	0.000	0.20	1.48	0.20	150.0	0.947	20.3	0.0153	0.83	1.56	0.83
2/14/2023	13:32	192.1	0.910	210,722.1	10.326	0.20	1.54	0.20	150.0	0.946	25.3	0.0193	0.83	1.54	0.83
2/14/2023	13:33	192.2	0.909	193,850.3	12.266	0.20	1.53	0.20	150.0	0.947	26.0	0.0194	0.83	1.55	0.83
2/14/2023	13:34	192.2	0.909	184,110.8	0.000	0.20	1.52	0.20	150.1	0.947	27.5	0.0206	0.83	1.57	0.83
2/14/2023	13:35				--				150.1	0.946	25.0	0.0184	0.83	1.56	0.83
2/14/2023	13:36	192.2	0.909	180,407.4	0.000	0.20	1.52	0.20	150.1	0.947	26.7	0.0203	0.83	1.59	0.83
2/14/2023	13:37	192.2	0.909	183,237.7	0.000	0.20	1.52	0.20	150.2	0.946	24.2	0.0182	0.83	1.58	0.83
2/14/2023	13:38	192.2	0.909	182,651.9	5.151	0.20	1.56	0.20	150.3	0.946	18.4	0.0138	0.84	1.59	0.84
2/14/2023	13:39	192.2	0.909	182,684.6	0.000	0.20	1.58	0.20	150.3	0.946	14.6	0.0108	0.84	1.61	0.84
2/14/2023	13:40	192.3	0.909	181,237.4	0.000	0.20	1.60	0.20				--			
2/14/2023	13:41	192.3	0.909	155,093.0	0.000	0.47	1.62	0.47	150.3	0.946	11.0	0.0085	0.84	1.62	0.84
2/14/2023	13:42	192.4	0.908	120,879.3	0.000	0.20	1.64	0.20	150.2	0.946	7.7	0.0060	0.84	1.64	0.84
2/14/2023	13:43	192.4	0.908	84,353.2	0.000	0.71	1.64	0.71	150.1	0.946	5.5	0.0042	0.85	1.64	0.85
2/14/2023	13:44	192.5	0.908	63,591.3	0.000	0.39	1.63	0.39	150.0	0.946	4.4	0.0034	0.85	1.66	0.85
2/14/2023	13:45	192.4	0.908	45,811.0	1.288	0.81	1.63	0.81	150.0	0.946	3.8	0.0029	0.86	1.67	0.86
2/14/2023	13:46	192.4	0.908	35,863.7	1.008	0.93	1.67	0.93	150.1	0.946	3.1	0.0024	0.85	1.68	0.85
2/14/2023	13:47	192.3	0.907	27,976.3	0.786	0.86	1.66	0.86	150.1	0.946	2.6	0.0020	0.85	1.70	0.85
2/14/2023	13:48	192.3	0.907	23,073.2	0.648	0.82	1.69	0.82	150.1	0.946	2.7	0.0021	0.85	1.70	0.85
2/14/2023	13:49	192.3	0.907	20,520.4	0.998	0.74	1.69	0.74	150.0	0.946	2.5	0.0020	0.84	1.72	0.84
2/14/2023	13:50	192.3	0.907	18,826.3	0.748	0.71	1.69	0.71	150.0	0.946	2.5	0.0019	0.84	1.71	0.84
2/14/2023	13:51	192.3	0.907	17,530.3	1.206	0.64	1.69	0.64	149.9	0.946	2.3	0.0018	0.84	1.72	0.84
2/14/2023	13:52	192.3	0.907	16,233.4	0.000	0.64	1.70	0.64	149.9	0.946	2.2	0.0018	0.83	1.72	0.83
2/14/2023	13:53	192.2	0.908	15,211.7	0.000	0.61	1.69	0.61	149.9	0.946	1.9	0.0015	0.83	1.73	0.83
2/14/2023	13:54	192.2	0.907	13,820.0	0.776	0.61	1.71	0.61	149.9	0.946	2.0	0.0015	0.83	1.73	0.83
2/14/2023	13:55	192.2	0.907	12,908.8	0.628	0.57	1.68	0.57	149.9	0.946	2.3	0.0018	0.84	1.74	0.84
2/14/2023	13:56				--				149.9	0.946	1.9	0.0016	0.84	1.73	0.84
2/14/2023	13:57	192.1	0.907	12,084.2	0.339	0.57	1.70	0.57	149.9	0.946	1.9	0.0015	0.84	1.75	0.84
2/14/2023	13:58	192.1	0.907	11,472.6	0.643	0.56	1.75	0.56	149.9	0.946	1.9	0.0015	0.84	1.75	0.84
2/14/2023	13:59	192.1	0.907	10,680.0	0.000	0.56	1.75	0.56	149.9	0.946	2.1	0.0016	0.84	1.76	0.84
2/14/2023	14:00	192.1	0.907	10,066.3	0.399	0.49	1.74	0.49	149.9	0.946	2.0	0.0015	0.83	1.76	0.83
2/14/2023	14:01	192.1	0.907	9,364.8	0.000	0.51	1.75	0.51	149.9	0.946	1.7	0.0014	0.82	1.76	0.82
2/14/2023	14:02	192.1	0.907	8,833.2	0.000	0.49	1.74	0.49	149.9	0.946	1.9	0.0015	0.83	1.77	0.83
2/14/2023	14:03	192.1	0.907	8,310.1	0.521	0.48	1.76	0.48				--			
2/14/2023	14:04	192.1	0.907	7,882.0	0.000	0.48	1.74	0.48	149.9	0.946	1.9	0.0015	0.84	1.80	0.84
2/14/2023	14:05	192.1	0.907	7,418.0	0.208	0.48	1.74	0.48	149.9	0.946	1.6	0.0012	0.84	1.80	0.84
2/14/2023	14:06	192.1	0.907	7,113.3	0.000	0.49	1.73	0.49	149.9	0.946	1.9	0.0015	0.84	1.82	0.84
2/14/2023	14:07	192.1	0.907	6,899.2	0.273	0.46	1.76	0.46	149.9	0.946	2.0	0.0015	0.83	1.81	0.83
2/14/2023	14:08	192.1	0.907	6,620.5	0.185	0.49	1.74	0.49	149.9	0.946	1.8	0.0014	0.84	1.83	0.84
2/14/2023	14:09	192.1	0.907	6,533.2	0.000	0.49	1.75	0.49	149.9	0.946	2.0	0.0016	0.83	1.82	0.83
2/14/2023	14:10	192.1	0.907	4,332.0	0.242	0.84	1.77	0.84	149.9	0.946	1.5	0.0012	0.83	1.83	0.83
2/14/2023	14:11	192.1	0.907	2,152.4	0.148	1.25	1.75	1.25	149.9	0.946	1.8	0.0014	0.83	1.84	0.83
2/14/2023	14:12	192.1	0.906	1,629.8	0.079	1.35	1.77	1.35	149.9	0.946	1.9	0.0014	0.83	1.84	0.83
2/14/2023	14:13	192.1	0.906	1,602.7	0.045	1.39	1.78	1.39	149.9	0.946	1.8	0.0014	0.84	1.85	0.84
2/14/2023	14:14	192.1	0.906	1,423.5	0.080	1.41	1.77	1.41	149.9	0.946	1.9	0.0015	0.84	1.86	0.84
2/14/2023	14:15	192.1	0.906	1,404.1	0.096	1.43	1.80	1.43	149.9	0.946	1.9	0.0014	0.84	1.86	0.84
2/14/2023	14:16	192.1	0.907	1,218.1	0.076	1.46	1.79	1.46	149.9	0.945	1.7	0.0013	0.83	1.87	0.83
2/14/2023	14:17	192.1	0.906	1,043.5	0.029	1.48	1.78	1.48	149.9	0.945	1.8	0.0015	0.83	1.87	0.83
2/14/2023	14:18				--				149.9	0.945	1.9	0.0015	0.82	1.88	0.82
2/14/2023	14:19	192.1	0.906	955.5	0.027	1.49	1.81	1.49	149.9	0.945	1.9	0.0015	0.83	1.89	0.83
2/14/2023	14:20	192.1	0.906	1,037.1	0.050	1.48	1.81	1.48	149.9	0.945	1.7	0.0013	0.83	1.90	0.83
2/14/2023	14:21	192.1	0.906	1,050.2	0.059	1.47	1.82	1.47	149.9	0.945	1.5	0.0012	0.83	1.90	0.83
2/14/2023	14:22	192.1	0.906	865.5	0.042	1.51	1.84	1.51	149.9	0.945	2.0	0.0015	0.83	1.92	0.83
2/14/2023	14:23	192.1	0.906	883.9	0.000	1.51	1.84	1.51	149.9	0.945	1.8	0.0013	0.82	1.91	0.82
2/14/2023	14:24	192.1	0.906	855.6	0.054	1.52	1.84	1.52	149.9	0.945	1.6	0.0012	0.82	1.92	0.82
2/14/2023	14:25	192.1	0.906	779.1	0.049	1.52	1.85	1.52	149.9	0.945	1.6	0.0012	0.81	1.92	0.81
2/14/2023	14:26	192.1	0.906	688.9	0.033	1.53	1.86	1.53				--			
2/14/2023	14:27	192.1	0.906	626.0	0.039	1.53	1.86	1.53	149.9	0.945	1.2	0.0009	0.80	1.92	0.80
2/14/2023	14:28	192.1	0.906	643.1	0.036	1.53	1.87	1.53	149.9	0.945	1.3	0.0010	0.80	1.94	0.80
2/14/2023	14:29	192.1	0.906	552.3	0.035	1.53	1.88	1.53	149.9	0.945	1.7	0.0012	0.81	1.95	0.81
2/14/2023	14:30	192.1	0.906	533.9	0.037	1.54	1.87	1.54	149.9	0.945	1.7	0.0013	0.80	1.95	0.80
2/14/2023	14:31	192.1	0.906	508.2	0.032	1.55	1.90	1.55	149.9	0.945	1.6	0.0012	0.79	1.95	0.79
2/14/2023	14:32	192.1	0.906	441.3	0.028	1.56	1.90	1.56	149.9	0.945	1.7	0.0013	0.79	1.96	0.79
2/14/2023	14:33	192.1	0.905	431.9	0.032	1.56	1.92	1.56	149.9	0.945	1.6	0.0012	0.79	1.96	0.79
2/14/2023	14:34	192.1	0.906	454.0	0.022	1.57	1.88	1.57	149.9	0.945	1.8	0.0013	0.78	1.96	0.78
2/14/2023	14:35	192.1	0.906	415.7	0.016	1.58	1.90	1.58	149.9	0.945	1.7	0.0012	0.78	1.96	0.78
2/14/2023	14:36	192.1	0.906	393.3	0.019	1.58	1.92	1.58	149.9	0.945	1.6	0.0012	0.77	1.97	0.77
2/14/2023	14:37	192.1	0.905	336.7	0.016	1.59	1.91	1.59	149.9	0.945	1.7	0.0012	0.77	1.97	0.77
2/14/2023	14:38	192.1	0.906	327.1	0.020	1.59	1.93	1.59	149.8	0.945	1.7	0.0013	0.77	1.97	0.77
2/14/2023	14:39	192.0	0.906	324.8	0.013	1.59	1.93	1.59	149.9	0.945	1.5	0.0011	0.78	1.99	0.78
2/14/2023	14:40				--				149.9	0.945	1.7	0.0013	0.78	1.98	0.78
2/14/2023	14:41	192.1	0.906	316.9	0.023	1.58	1.94	1.58	149.8	0.945	1.5	0.0011	0.77	1.99	0.77
2/14/2023	14:42	192.1	0.906	288.6	0.023	1.59	1.94	1.59	149.9	0.946	1.7	0.0012	0.76	2.00	0.76
2/14/2023	14:43	192.0	0.906	247.9	0.010	1.60	1.96	1.60	149.9	0.945	1.9	0.0013	0.76	2.01	0.76
2/14/2023	14:44	192.1	0.906	213.4	0.012	1.59	1.98	1.59	149.9	0.945	1.5	0.0010	0.77	2.00	0.77
2/14/2023	14:45	192.1	0.906	192.2	0.012	1.60	2.00	1.60				--			
2/14/2023	14:46	192.1	0.906	198.6	0.008	1.59	2.00	1.59	149.9	0.945	1.5	0.0010	0.77	2.03	0.77
2/14/2023	14:47	192.1	0.906	217.9	0.009	1.58	2.00	1.58	149.9	0.945	1.6	0.0011	0.75	2.02	0.75
2/14/2023	14:48	192.1	0.906	252.2	0.000	1.61	2.01	1.61	149.9	0.945	1.7	0.0012	0.74	2.01	0.74
2/14/2023	14:49	192.1	0.906	254.1	0.016	1.60	2.02	1.60	149.9	0.945	1.7	0.0012	0.74	1.99	0.74
2/14/2023	14:50	192.1	0.906	187.6	0.015	1.56	2.02	1.56	149.9	0.945	1.6	0.0011	0.74	2.00	0.74
2/14/2023	14:51	192.1	0.905	168.8	0.012	1.54	2.02	1.54	149.9	0.945	1.9	0.0013	0.75	2.02	0.75
2/14/2023	14:52	192.1	0.906	174.7	0.008	1.53	2.02	1.53	149.9	0.945	1.6	0.0011	0.76	2.01	0.76
2/14/2023	14:53	192.1	0.906	168.8	0.005	1.53	2.03	1.53	149.9	0.945	1.5	0.0011	0.76	2.01	0.76
2/14/2023	14:54	192.1	0.906	151.9	0.008	1.53	2.04	1.53	149.9	0.945	1.9	0.0013	0.74	2.02	0.74
2/14/2023	14:55	192.1	0.906	137.5	0.007	1.52	2.04	1.52	149.9	0.945	1.7	0.0012	0.73	2.01	0.73
2/14/2023	14:56	192.1	0.905	124.1	0.008	1.52	2.03	1.52	149.9	0.945	1.7	0.0012	0.74	2.01	0.74
2/14/2023	14:57	192.1	0.905	127.6	0.006	1.51	2.03	1.51	149.9	0.945	1.4	0.0010	0.76	2.01	0.76
2/14/2023	14:58	192.1	0.906	125.4	0.007	1.49	2.05	1.49	150.0	0.945	1.6	0.0011	0.76	2.02	0.76
2/14/2023	14:59	192.1	0.906	115.6	0.006	1.49	2.06	1.49	149.9	0.945	1.9	0.0013	0.74	2.03	0.74
2/14/2023	15:00	192.1	0.906	106.9	0.005	1.49	2.06	1.49	149.9	0.945	1.7	0.0012	0.73	2.03	0.73
2/14/2023	15:01	192.1	0.906	94.9	0.005	1.49	2.06	1.49	150.0	0.945	1.4	0.0009	0.73	2.03	0.73
2/14/2023	15:02				--				150.0	0.945	1.5	0.0010	0.73	2.03	0.73
2/14/2023	15:03	192.1	0.906	88.4	0.007	1.48	2.07	1.48	150.0	0.945	1.5	0.0010	0.73	2.04	0.73
2/14/2023	15:04	192.1	0.905	93.3	0.005	1.44	2.07	1.44	150.1	0.945	1.8	0.0012	0.72	2.03	0.72

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet$_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet$_{used}$**
	Unit	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/14/2023	15:05	192.2	0.905	105.6	0.006	1.43	2.08	1.43	150.2	0.945	1.6	0.0011	0.73	2.04	0.73
2/14/2023	15:06				--				150.2	0.945	1.8	0.0012	0.73	2.04	0.73
2/14/2023	15:07	192.2	0.906	95.3	0.004	1.43	2.09	1.43	150.1	0.945	1.8	0.0012	0.73	2.05	0.73
2/14/2023	15:08	192.2	0.906	81.3	0.003	1.42	2.11	1.42				--			
2/14/2023	15:09	192.3	0.906	76.8	0.004	1.42	2.08	1.42	150.1	0.945	1.6	0.0010	0.73	2.04	0.73
2/14/2023	15:10	192.3	0.906	71.4	0.004	1.41	2.09	1.41	150.1	0.945	1.6	0.0011	0.73	2.04	0.73
2/14/2023	15:11	192.2	0.906	75.3	0.006	1.39	2.11	1.39	150.1	0.945	1.8	0.0012	0.72	2.04	0.72
2/14/2023	15:12	192.2	0.906	68.9	0.005	1.39	2.11	1.39	150.1	0.945	1.8	0.0012	0.73	2.05	0.73
2/14/2023	15:13	192.2	0.906	64.0	0.004	1.40	2.11	1.40	150.0	0.945	1.8	0.0012	0.72	2.05	0.72
2/14/2023	15:14	192.2	0.906	63.5	0.004	1.39	2.13	1.39	150.0	0.945	1.7	0.0011	0.72	2.05	0.72
2/14/2023	15:15	192.2	0.906	57.9	0.005	1.38	2.11	1.38	150.0	0.945	1.6	0.0011	0.72	2.04	0.72
2/14/2023	15:16	192.2	0.906	55.5	0.003	1.38	2.11	1.38	150.0	0.945	1.8	0.0011	0.72	2.04	0.72
2/14/2023	15:17	192.1	0.906	55.6	0.004	1.38	2.10	1.38	150.0	0.945	1.8	0.0011	0.72	2.04	0.72
2/14/2023	15:18	192.1	0.906	56.8	0.004	1.38	2.11	1.38	150.0	0.945	2.0	0.0013	0.72	2.03	0.72
2/14/2023	15:19	192.1	0.906	60.3	0.003	1.38	2.11	1.38	150.0	0.945	1.8	0.0011	0.72	2.03	0.72
2/14/2023	15:20	192.1	0.906	57.8	0.004	1.38	2.10	1.38	150.0	0.945	1.7	0.0011	0.71	2.02	0.71
2/14/2023	15:21	192.1	0.906	57.1	0.003	1.38	2.09	1.38	150.0	0.945	1.8	0.0012	0.71	2.02	0.71
2/14/2023	15:22	192.2	0.906	52.7	0.002	1.37	2.10	1.37	150.0	0.945	1.6	0.0010	0.71	2.01	0.71
2/14/2023	15:23	192.2	0.906	54.8	0.004	1.37	2.08	1.37	150.0	0.945	1.8	0.0012	0.70	2.02	0.70
2/14/2023	15:24	192.1	0.906	57.2	0.004	1.37	2.09	1.37	150.0	0.946	1.7	0.0011	0.71	2.02	0.71
2/14/2023	15:25	192.1	0.906	48.3	0.004	1.35	2.05	1.35	149.9	0.945	1.8	0.0012	0.71	2.02	0.71
2/14/2023	15:26	192.1	0.906	46.0	0.003	1.34	2.06	1.34	149.9	0.946	1.8	0.0012	0.72	2.02	0.72
2/14/2023	15:27	192.1	0.906	42.3	0.003	1.36	2.05	1.36	150.0	0.946	1.8	0.0011	0.72	2.02	0.72
2/14/2023	15:28				--				149.9	0.946	1.7	0.0011	0.72	2.02	0.72
2/14/2023	15:29	192.1	0.906	40.5	0.002	1.36	2.05	1.36	149.9	0.945	1.8	0.0012	0.72	2.02	0.72
2/14/2023	15:30	192.1	0.906	38.5	0.002	1.36	2.03	1.36	149.9	0.945	1.8	0.0012	0.72	2.00	0.72
2/14/2023	15:31	192.1	0.906	34.7	0.002	1.35	2.02	1.35				--			
2/14/2023	15:32	192.1	0.906	32.8	0.002	1.34	2.03	1.34	149.9	0.946	1.9	0.0013	0.71	2.01	0.71
2/14/2023	15:33	192.1	0.906	31.0	0.002	1.34	2.03	1.34	150.0	0.946	1.5	0.0010	0.72	2.02	0.72
2/14/2023	15:34	192.1	0.906	29.5	0.001	1.35	2.03	1.35	149.9	0.946	1.5	0.0009	0.72	2.01	0.72
2/14/2023	15:35	192.1	0.906	27.8	0.002	1.35	2.03	1.35	149.9	0.946	1.4	0.0009	0.72	2.01	0.72
2/14/2023	15:36	192.1	0.906	26.6	0.002	1.36	2.02	1.36	149.9	0.946	1.6	0.0010	0.72	2.01	0.72
2/14/2023	15:37	192.1	0.906	27.6	0.002	1.36	2.02	1.36	150.0	0.946	1.7	0.0011	0.73	2.01	0.73
2/14/2023	15:38	192.0	0.906	28.2	0.002	1.36	2.04	1.36	149.9	0.946	1.6	0.0011	0.72	2.02	0.72
2/14/2023	15:39	192.1	0.906	26.7	0.002	1.35	2.03	1.35	149.9	0.946	1.7	0.0011	0.71	2.01	0.71
2/14/2023	15:40	192.1	0.906	25.6	0.002	1.36	2.02	1.36	149.9	0.946	1.6	0.0010	0.72	2.01	0.72
2/14/2023	15:41	192.1	0.906	23.6	0.001	1.36	2.02	1.36	149.9	0.946	1.8	0.0012	0.71	2.01	0.71
2/14/2023	15:42	192.1	0.906	23.0	0.002	1.35	2.02	1.35	149.9	0.946	2.0	0.0012	0.71	2.00	0.71
2/14/2023	15:43	192.1	0.906	23.9	0.002	1.36	2.02	1.36	149.9	0.946	1.7	0.0011	0.71	1.99	0.71
2/14/2023	15:44	192.1	0.906	22.8	0.001	1.35	1.99	1.35	149.9	0.946	1.6	0.0010	0.71	2.00	0.71
2/14/2023	15:45	192.1	0.906	23.8	0.001	1.34	2.00	1.34	149.9	0.946	1.6	0.0011	0.72	2.00	0.72
2/14/2023	15:46	192.1	0.906	24.1	0.002	1.33	2.00	1.33	149.9	0.946	1.6	0.0010	0.71	1.99	0.71
2/14/2023	15:47	192.1	0.906	23.7	0.001	1.34	1.96	1.34	149.9	0.946	1.6	0.0010	0.72	1.99	0.72
2/14/2023	15:48	192.1	0.906	22.4	0.002	1.32	1.96	1.32	149.9	0.946	1.6	0.0011	0.72	2.00	0.72
2/14/2023	15:49	192.1	0.906	21.6	0.001	1.32	1.96	1.32	149.9	0.946	1.4	0.0009	0.72	1.99	0.72
2/14/2023	15:50				--				149.9	0.946	1.6	0.0010	0.72	1.99	0.72
2/14/2023	15:51	192.1	0.907	20.7	0.001	1.31	1.93	1.31	149.9	0.946	1.6	0.0010	0.71	1.98	0.71
2/14/2023	15:52	192.1	0.907	21.6	0.001	1.31	1.93	1.31	149.9	0.946	1.8	0.0011	0.72	1.98	0.72
2/14/2023	15:53	192.1	0.906	18.6	0.001	1.30	1.91	1.30	149.9	0.946	1.3	0.0008	0.72	1.97	0.72
2/14/2023	15:54	192.1	0.906	19.1	0.001	1.30	1.91	1.30				--			
2/14/2023	15:55	192.1	0.906	18.0	0.001	1.30	1.90	1.30	149.9	0.946	1.6	0.0010	0.72	1.98	0.72
2/14/2023	15:56	192.1	0.906	17.3	0.001	1.29	1.90	1.29	149.9	0.946	1.6	0.0011	0.72	1.97	0.72
2/14/2023	15:57	192.1	0.906	16.5	0.001	1.29	1.90	1.29	149.9	0.946	1.3	0.0008	0.72	1.98	0.72
2/14/2023	15:58	192.1	0.906	15.8	0.001	1.29	1.89	1.29	149.9	0.946	1.6	0.0011	0.72	1.97	0.72
2/14/2023	15:59	192.1	0.906	15.0	0.001	1.28	1.88	1.28	149.9	0.946	1.6	0.0011	0.72	1.96	0.72
2/14/2023	16:00	192.1	0.906	14.6	0.001	1.28	1.87	1.28	149.9	0.946	1.5	0.0010	0.72	1.98	0.72
2/14/2023	16:01	192.1	0.906	14.9	0.001	1.28	1.87	1.28	149.9	0.946	1.7	0.0011	0.72	1.97	0.72
2/14/2023	16:02	192.1	0.906	13.8	0.001	1.28	1.86	1.28	149.9	0.946	1.6	0.0010	0.72	1.97	0.72
2/14/2023	16:03	192.1	0.906	13.4	0.001	1.28	1.87	1.28	149.9	0.946	1.6	0.0010	0.72	1.98	0.72
2/14/2023	16:04	192.1	0.906	13.0	0.001	1.28	1.86	1.28	150.0	0.946	1.7	0.0011	0.72	1.97	0.72
2/14/2023	16:05	192.1	0.906	13.2	0.001	1.28	1.84	1.28	149.9	0.946	1.6	0.0011	0.72	1.96	0.72
2/14/2023	16:06	192.1	0.906	12.2	0.001	1.28	1.84	1.28	149.9	0.946	1.4	0.0010	0.72	1.96	0.72
2/14/2023	16:07	192.1	0.906	12.4	0.001	1.27	1.83	1.27	149.9	0.946	1.6	0.0010	0.72	1.96	0.72
2/14/2023	16:08	192.0	0.906	11.9	0.001	1.27	1.83	1.27	149.9	0.946	1.7	0.0011	0.73	1.97	0.73
2/14/2023	16:09	192.1	0.906	12.2	0.001	1.26	1.83	1.26	149.9	0.946	1.6	0.0010	0.73	1.97	0.73
2/14/2023	16:10	192.1	0.906	12.0	0.001	1.27	1.81	1.27	149.9	0.946	1.6	0.0010	0.72	1.98	0.72
2/14/2023	16:11	192.1	0.906	11.5	0.001	1.27	1.81	1.27	149.9	0.946	1.4	0.0009	0.72	1.97	0.72
2/14/2023	16:12				--				149.9	0.946	1.4	0.0010	0.73	1.95	0.73
2/14/2023	16:13	192.0	0.906	10.8	0.001	1.27	1.81	1.27	149.9	0.946	1.4	0.0010	0.73	1.97	0.73
2/14/2023	16:14	192.0	0.906	10.3	0.001	1.27	1.80	1.27	149.9	0.946	1.8	0.0012	0.73	1.95	0.73
2/14/2023	16:15	192.0	0.906	10.0	0.001	1.27	1.80	1.27	149.9	0.946	1.6	0.0011	0.72	1.97	0.72
2/14/2023	16:16	192.0	0.906	10.1	0.001	1.27	1.79	1.27	149.9	0.946	1.4	0.0009	0.74	1.96	0.74
2/14/2023	16:17	192.1	0.906	9.4	0.001	1.27	1.79	1.27				--			
2/14/2023	16:18	192.1	0.906	9.2	0.001	1.27	1.79	1.27	149.9	0.946	1.4	0.0010	0.73	1.96	0.73
2/14/2023	16:19	192.1	0.906	9.0	0.001	1.27	1.79	1.27	149.9	0.946	1.9	0.0013	0.73	1.96	0.73
2/14/2023	16:20	192.1	0.906	9.0	0.001	1.27	1.78	1.27	149.9	0.946	1.5	0.0010	0.73	1.96	0.73
2/14/2023	16:21	192.0	0.906	8.3	0.001	1.27	1.77	1.27	149.9	0.946	1.8	0.0012	0.73	1.96	0.73
2/14/2023	16:22	192.1	0.906	8.3	0.001	1.26	1.78	1.26	149.9	0.946	1.7	0.0011	0.72	1.95	0.72
2/14/2023	16:23	192.0	0.906	8.5	0.001	1.27	1.77	1.27	149.9	0.946	1.6	0.0011	0.72	1.96	0.72
2/14/2023	16:24	192.0	0.906	9.0	0.001	1.27	1.77	1.27	149.9	0.946	1.5	0.0010	0.73	1.96	0.73
2/14/2023	16:25	192.1	0.906	7.6	0.000	1.26	1.77	1.26	149.9	0.946	1.8	0.0012	0.73	1.95	0.73
2/14/2023	16:26	192.1	0.906	7.7	0.001	1.26	1.75	1.26	149.9	0.946	1.7	0.0012	0.73	1.95	0.73
2/14/2023	16:27	192.1	0.906	7.4	0.000	1.27	1.76	1.27	149.9	0.946	1.6	0.0011	0.72	1.96	0.72
2/14/2023	16:28	192.1	0.906	7.4	0.000	1.27	1.76	1.27	149.9	0.946	1.7	0.0011	0.72	1.95	0.72
2/14/2023	16:29	192.1	0.906	7.2	0.000	1.27	1.75	1.27	149.9	0.946	1.5	0.0010	0.73	1.96	0.73
2/14/2023	16:30	192.1	0.906	6.4	0.000	1.26	1.75	1.26	149.9	0.946	1.7	0.0012	0.73	1.96	0.73
2/14/2023	16:31	192.1	0.906	6.9	0.000	1.26	1.74	1.26	149.9	0.946	1.7	0.0011	0.73	1.95	0.73
2/14/2023	16:32	192.1	0.906	10.7	0.001	1.29	1.74	1.29	149.9	0.946	1.4	0.0009	0.73	1.95	0.73
2/14/2023	16:33	192.1	0.906	8.4	0.001	1.27	1.74	1.27	149.9	0.946	1.7	0.0012	0.73	1.94	0.73
2/14/2023	16:34				--				149.9	0.946	1.6	0.0010	0.73	1.95	0.73
2/14/2023	16:35	192.1	0.906	7.1	0.000	1.27	1.73	1.27	149.9	0.946	1.6	0.0010	0.73	1.95	0.73
2/14/2023	16:36	192.0	0.906	6.6	0.000	1.27	1.74	1.27	149.9	0.946	1.6	0.0010	0.73	1.95	0.73
2/14/2023	16:37	192.0	0.906	6.2	0.000	1.26	1.73	1.26	149.9	0.946	1.6	0.0010	0.73	1.95	0.73
2/14/2023	16:38	192.0	0.906	6.2	0.000	1.27	1.73	1.27	149.9	0.946	1.3	0.0009	0.73	1.95	0.73
2/14/2023	16:39	192.0	0.906	6.1	0.000	1.26	1.72	1.26	149.9	0.946	1.5	0.0010	0.73	1.95	0.73

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet$_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet$_{used}$**
	Unit	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/14/2023	16:40	192.0	0.906	6.2	0.000	1.26	1.72	1.26				--			
2/14/2023	16:41	192.0	0.906	6.0	0.000	1.26	1.72	1.26	149.9	0.946	1.4	0.0010	0.73	1.94	0.73
2/14/2023	16:42	192.0	0.906	6.4	0.000	1.26	1.71	1.26	149.9	0.946	1.5	0.0010	0.74	1.94	0.74
2/14/2023	16:43	192.1	0.906	6.4	0.000	1.26	1.72	1.26	149.9	0.946	1.7	0.0011	0.74	1.94	0.74
2/14/2023	16:44	192.1	0.906	6.0	0.000	1.25	1.72	1.25	149.9	0.946	1.5	0.0010	0.74	1.94	0.74
2/14/2023	16:45	192.1	0.906	6.3	0.000	1.26	1.70	1.26	150.0	0.946	1.5	0.0010	0.74	1.94	0.74
2/14/2023	16:46	192.1	0.906	6.1	0.000	1.26	1.72	1.26	149.9	0.946	1.3	0.0009	0.74	1.93	0.74
2/14/2023	16:47	192.1	0.906	6.5	0.000	1.26	1.71	1.26	149.9	0.946	1.6	0.0011	0.74	1.95	0.74
2/14/2023	16:48	192.1	0.906	6.3	0.000	1.26	1.70	1.26	149.9	0.946	1.6	0.0011	0.74	1.95	0.74
2/14/2023	16:49	192.1	0.906	6.2	0.000	1.26	1.71	1.26	149.9	0.946	1.3	0.0009	0.74	1.94	0.74
2/14/2023	16:50	192.1	0.906	5.9	0.000	1.26	1.69	1.26	149.9	0.946	1.8	0.0012	0.74	1.94	0.74
2/14/2023	16:51	192.1	0.906	6.1	0.000	1.26	1.69	1.26	149.9	0.946	1.5	0.0010	0.74	1.94	0.74
2/14/2023	16:52	192.1	0.906	5.6	0.000	1.26	1.70	1.26	149.9	0.946	1.3	0.0009	0.74	1.95	0.74
2/14/2023	16:53	192.0	0.906	6.2	0.000	1.25	1.69	1.25	149.9	0.946	1.6	0.0010	0.74	1.94	0.74
2/14/2023	16:54	192.1	0.906	5.3	0.000	1.25	1.69	1.25	149.9	0.946	1.7	0.0011	0.73	1.93	0.73
2/14/2023	16:55	192.1	0.906	5.7	0.000	1.26	1.68	1.26	149.9	0.946	1.6	0.0011	0.73	1.94	0.73
2/14/2023	16:56				--				149.9	0.946	1.5	0.0010	0.73	1.94	0.73
2/14/2023	16:57	192.0	0.906	5.7	0.000	1.25	1.68	1.25	149.9	0.946	1.8	0.0012	0.73	1.93	0.73
2/14/2023	16:58	192.1	0.906	10.9	0.001	1.28	1.68	1.28	149.9	0.946	1.8	0.0012	0.73	1.94	0.73
2/14/2023	16:59	192.1	0.907	6.7	0.000	1.26	1.67	1.26	149.9	0.946	1.8	0.0012	0.74	1.93	0.74
2/14/2023	17:00	192.1	0.906	5.3	0.000	1.26	1.68	1.26	149.9	0.946	1.8	0.0012	0.73	1.93	0.73
2/14/2023	17:01	192.1	0.906	4.3	0.000	1.26	1.67	1.26	149.9	0.946	1.6	0.0011	0.73	1.94	0.73
2/14/2023	17:02	192.1	0.906	5.3	0.000	1.26	1.68	1.26	149.9	0.946	1.6	0.0011	0.74	1.94	0.74
2/14/2023	17:03	192.1	0.906	8.3	0.001	1.28	1.67	1.28				--			
2/14/2023	17:04	192.1	0.906	6.8	0.000	1.27	1.67	1.27	149.9	0.946	1.7	0.0012	0.73	1.94	0.73
2/14/2023	17:05	192.0	0.906	932.5	0.052	1.30	1.68	1.30	149.9	0.946	1.8	0.0012	0.74	1.94	0.74
2/14/2023	17:06	192.1	0.906	2,780.9	0.221	1.28	1.68	1.28	149.9	0.946	1.8	0.0012	0.74	1.94	0.74
2/14/2023	17:07	192.0	0.907	10,210.3	0.703	1.34	1.67	1.34	149.9	0.946	1.5	0.0010	0.74	1.93	0.74
2/14/2023	17:08	192.1	0.906	17,983.0	1.012	1.38	1.67	1.38	149.9	0.946	1.6	0.0011	0.74	1.93	0.74
2/14/2023	17:09	192.0	0.906	15,569.4	0.759	1.60	1.67	1.60	149.9	0.946	1.6	0.0011	0.74	1.93	0.74
2/14/2023	17:10	192.0	0.907	20,929.9	1.021	1.31	1.67	1.31	149.9	0.946	1.8	0.0012	0.74	1.92	0.74
2/14/2023	17:11	192.0	0.906	40,394.1	2.547	1.45	1.66	1.45	149.9	0.946	1.8	0.0012	0.74	1.92	0.74
2/14/2023	17:12	192.0	0.907	35,480.1	2.236	1.26	1.67	1.26	149.9	0.946	1.7	0.0012	0.74	1.93	0.74
2/14/2023	17:13	192.0	0.907	32,960.0	2.079	1.95	1.66	1.66	149.9	0.946	1.6	0.0011	0.75	1.92	0.75
2/14/2023	17:14	192.0	0.907	56,293.3	3.168	0.82	1.66	0.82	149.9	0.946	1.5	0.0010	0.74	1.95	0.74
2/14/2023	17:15	192.0	0.907	58,764.0	3.306	0.66	1.70	0.66	149.9	0.946	1.7	0.0012	0.74	2.09	0.74
2/14/2023	17:16	192.0	0.907	55,146.2	3.105	0.91	1.70	0.91	149.9	0.946	1.6	0.0011	0.74	2.08	0.74
2/14/2023	17:17	192.0	0.907	49,430.2	2.785	0.93	1.66	0.93	149.9	0.946	1.8	0.0012	0.74	1.94	0.74
2/14/2023	17:18				--				149.9	0.946	1.9	0.0013	0.74	1.93	0.74
2/14/2023	17:19	192.1	0.907	54,301.8	3.057	0.85	1.65	0.85	149.9	0.946	1.7	0.0012	0.74	1.92	0.74
2/14/2023	17:20	192.0	0.907	61,915.2	3.487	0.68	1.66	0.68	149.9	0.946	1.6	0.0011	0.74	1.93	0.74
2/14/2023	17:21	192.0	0.907	62,274.9	3.505	0.65	1.67	0.65	149.9	0.946	1.9	0.0012	0.75	1.92	0.75
2/14/2023	17:22	192.0	0.907	60,736.3	3.421	0.69	1.66	0.69	149.9	0.946	1.6	0.0011	0.75	1.94	0.75
2/14/2023	17:23	192.0	0.907	51,082.7	2.493	0.89	1.66	0.89	149.9	0.946	1.8	0.0012	0.74	1.92	0.74
2/14/2023	17:24	192.0	0.907	69,724.0	4.386	0.42	1.65	0.42	149.9	0.946	1.6	0.0011	0.74	1.92	0.74
2/14/2023	17:25	192.0	0.907	62,851.0	3.062	0.55	1.65	0.55	149.9	0.946	1.8	0.0012	0.74	1.93	0.74
2/14/2023	17:26	192.0	0.907	67,387.2	3.792	0.25	1.66	0.25				--			
2/14/2023	17:27	192.0	0.907	50,254.6	2.831	0.88	1.65	0.88	149.9	0.946	1.7	0.0011	0.74	1.93	0.74
2/14/2023	17:28	192.0	0.907	64,342.3	3.620	0.65	1.65	0.65	149.9	0.946	1.9	0.0013	0.74	1.93	0.74
2/14/2023	17:29	192.1	0.907	57,118.9	3.216	0.79	1.65	0.79	150.0	0.946	1.8	0.0012	0.74	1.93	0.74
2/14/2023	17:30	192.0	0.907	57,689.6	3.631	0.74	1.65	0.74	150.0	0.946	1.7	0.0011	0.74	1.93	0.74
2/14/2023	17:31	192.0	0.907	63,093.9	3.973	0.61	1.65	0.61	149.9	0.946	1.8	0.0012	0.75	1.93	0.75
2/14/2023	17:32	192.0	0.907	53,174.3	2.993	0.84	1.65	0.84	149.9	0.946	1.9	0.0013	0.74	1.94	0.74
2/14/2023	17:33	192.0	0.907	65,311.9	3.677	0.54	1.66	0.54	149.9	0.946	1.7	0.0011	0.74	1.93	0.74
2/14/2023	17:34	192.0	0.907	66,573.7	4.185	0.40	1.65	0.40	149.9	0.946	1.4	0.0009	0.75	1.93	0.75
2/14/2023	17:35	192.0	0.907	52,755.2	2.973	0.92	1.64	0.92	149.9	0.946	1.8	0.0012	0.74	1.92	0.74
2/14/2023	17:36	192.0	0.907	57,135.0	3.939	0.89	1.65	0.89	149.9	0.946	1.6	0.0011	0.74	1.93	0.74
2/14/2023	17:37	192.0	0.907	54,936.0	3.095	0.74	1.64	0.74	149.9	0.946	1.7	0.0011	0.74	1.93	0.74
2/14/2023	17:38	192.0	0.907	55,756.4	3.140	0.89	1.63	0.89	149.9	0.946	1.7	0.0011	0.73	1.93	0.73
2/14/2023	17:39	192.0	0.907	51,800.4	2.914	0.88	1.63	0.88	149.9	0.946	1.5	0.0010	0.74	1.92	0.74
2/14/2023	17:40				--				149.9	0.946	1.5	0.0010	0.74	1.92	0.74
2/14/2023	17:41	192.0	0.907	71,475.1	4.928	0.47	1.64	0.47	149.9	0.946	1.7	0.0012	0.73	1.93	0.73
2/14/2023	17:42	192.0	0.907	57,385.0	2.796	0.73	1.64	0.73	149.9	0.946	1.5	0.0010	0.73	1.94	0.73
2/14/2023	17:43	192.0	0.907	46,420.4	2.614	0.99	1.64	0.99	149.9	0.946	1.4	0.0010	0.73	1.93	0.73
2/14/2023	17:44	192.0	0.907	60,120.5	2.930	0.65	1.64	0.65	149.9	0.946	1.6	0.0011	0.73	1.92	0.73
2/14/2023	17:45	192.0	0.907	61,144.9	3.438	0.61	1.65	0.61	149.9	0.946	1.5	0.0010	0.73	1.94	0.73
2/14/2023	17:46	192.0	0.907	53,044.6	3.655	0.83	1.64	0.83	149.9	0.946	1.7	0.0012	0.74	1.93	0.74
2/14/2023	17:47	192.0	0.907	62,207.6	4.285	0.49	1.63	0.49	149.9	0.946	1.8	0.0012	0.74	1.92	0.74
2/14/2023	17:48	192.0	0.907	57,236.9	3.601	0.73	1.64	0.73				--			
2/14/2023	17:49	192.0	0.907	47,966.5	3.019	0.97	1.63	0.97	149.9	0.946	1.7	0.0011	0.73	1.93	0.73
2/14/2023	17:50	192.0	0.907	53,087.9	2.986	0.79	1.63	0.79	149.9	0.946	1.6	0.0011	0.73	1.94	0.73
2/14/2023	17:51	192.0	0.907	56,087.7	3.153	0.72	1.63	0.72	149.9	0.946	1.7	0.0012	0.74	1.94	0.74
2/14/2023	17:52	192.0	0.907	50,506.4	2.457	0.92	1.63	0.92	149.9	0.946	1.6	0.0011	0.73	1.93	0.73
2/14/2023	17:53	192.0	0.907	48,673.1	2.733	0.88	1.63	0.88	149.9	0.946	1.7	0.0011	0.73	1.93	0.73
2/14/2023	17:54	192.0	0.907	38,238.5	2.404	1.39	1.64	1.39	149.9	0.946	1.7	0.0011	0.73	1.94	0.73
2/14/2023	17:55	192.0	0.906	18,726.5	1.178	1.43	1.63	1.43	149.9	0.946	1.9	0.0013	0.73	1.93	0.73
2/14/2023	17:56	192.0	0.906	13,717.1	0.771	1.24	1.63	1.24	149.9	0.946	1.7	0.0011	0.73	1.94	0.73
2/14/2023	17:57	192.0	0.907	20,291.9	0.988	1.31	1.63	1.31	149.9	0.947	1.7	0.0011	0.73	1.94	0.73
2/14/2023	17:58	192.1	0.907	34,550.8	1.944	1.20	1.64	1.20	149.9	0.946	1.5	0.0010	0.73	1.93	0.73
2/14/2023	17:59	192.1	0.907	20,459.9	1.150	1.32	1.64	1.32	149.9	0.946	1.8	0.0012	0.73	1.95	0.73
2/14/2023	18:00	192.1	0.907	28,733.4	1.143	1.38	1.64	1.38	149.9	0.946	1.7	0.0011	0.73	1.94	0.73
2/14/2023	18:01	192.1	0.907	35,106.2	2.210	1.36	1.63	1.36	149.9	0.946	1.8	0.0012	0.73	1.94	0.73
2/14/2023	18:02				--				149.9	0.946	1.7	0.0012	0.72	1.93	0.72
2/14/2023	18:03	192.1	0.907	22,842.2	1.114	1.24	1.63	1.24	149.9	0.946	1.9	0.0013	0.73	1.93	0.73
2/14/2023	18:04	192.1	0.907	27,040.7	1.318	1.32	1.62	1.32	149.9	0.946	1.4	0.0009	0.73	1.93	0.73
2/14/2023	18:05	192.0	0.907	42,612.4	2.683	1.16	1.64	1.16	149.9	0.946	1.4	0.0010	0.72	1.93	0.72
2/14/2023	18:06	192.0	0.907	56,654.5	3.189	0.71	1.62	0.71	149.9	0.947	1.7	0.0011	0.72	1.92	0.72
2/14/2023	18:07	192.0	0.907	42,831.4	2.087	1.22	1.62	1.22	149.9	0.946	1.4	0.0010	0.72	1.94	0.72
2/14/2023	18:08	192.0	0.907	40,605.9	2.555	1.19	1.63	1.19	149.9	0.946	1.5	0.0010	0.72	1.94	0.72
2/14/2023	18:09	192.0	0.907	53,345.1	3.000	0.90	1.62	0.90	149.9	0.947	1.3	0.0009	0.72	1.93	0.72
2/14/2023	18:10	192.0	0.907	39,098.3	2.199	1.21	1.63	1.21				--			
2/14/2023	18:11	192.0	0.907	35,069.7	1.708	1.22	1.62	1.22	149.9	0.947	1.5	0.0010	0.72	1.93	0.72
2/14/2023	18:12	192.1	0.906	40,497.9	2.547	1.18	1.61	1.18	149.9	0.946	1.4	0.0010	0.71	1.93	0.71
2/14/2023	18:13	192.1	0.907	32,018.5	1.801	1.21	1.62	1.21	149.9	0.946	1.4	0.0010	0.71	1.93	0.71
2/14/2023	18:14	192.0	0.907	28,680.8	1.613	1.30	1.61	1.30	149.9	0.946	1.4	0.0009	0.71	1.92	0.71

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wt}$**	**BWS - Inlet$_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wt}$**	**BWS - Outlet$_{used}$**
	Unit	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/14/2023	18:15	192.1	0.907	27,775.8	1.562	1.35	1.62	1.35	149.9	0.946	1.4	0.0009	0.71	1.92	0.71
2/14/2023	18:16	192.0	0.907	25,283.4	1.422	1.24	1.60	1.24	149.9	0.946	1.3	0.0009	0.71	1.93	0.71
2/14/2023	18:17	192.0	0.907	19,743.9	1.110	1.28	1.61	1.28	149.9	0.946	1.5	0.0010	0.71	1.92	0.71
2/14/2023	18:18	192.0	0.907	18,751.8	1.179	1.29	1.60	1.29	149.9	0.946	1.4	0.0010	0.70	1.91	0.70
2/14/2023	18:19	192.0	0.907	26,029.4	1.637	1.26	1.61	1.26	149.9	0.947	1.4	0.0010	0.71	1.92	0.71
2/14/2023	18:20	192.1	0.907	18,504.5	1.041	1.26	1.60	1.26	149.9	0.946	1.4	0.0010	0.71	1.92	0.71
2/14/2023	18:21	192.0	0.907	21,827.1	1.373	1.23	1.61	1.23	149.9	0.947	1.5	0.0010	0.71	1.91	0.71
2/14/2023	18:22	192.0	0.907	23,775.3	1.337	1.22	1.60	1.22	149.9	0.946	1.4	0.0009	0.71	1.91	0.71
2/14/2023	18:23	192.0	0.907	24,792.5	1.559	1.30	1.60	1.30	149.9	0.947	1.4	0.0010	0.71	1.90	0.71
2/14/2023	18:24				--				149.9	0.946	1.3	0.0009	0.70	1.92	0.70
2/14/2023	18:25	192.0	0.907	28,096.3	1.580	1.30	1.61	1.30	149.9	0.946	1.6	0.0011	0.71	1.92	0.71
2/14/2023	18:26	192.1	0.907	21,635.6	1.360	1.25	1.60	1.25	149.9	0.947	1.4	0.0010	0.71	1.91	0.71
2/14/2023	18:27	192.0	0.907	18,453.7	1.160	1.26	1.60	1.26	149.9	0.947	1.6	0.0012	0.70	1.91	0.70
2/14/2023	18:28	192.1	0.907	16,600.3	1.043	1.24	1.59	1.24	149.9	0.947	1.4	0.0010	0.70	1.90	0.70
2/14/2023	18:29	192.1	0.907	16,867.5	0.948	1.21	1.59	1.21	149.9	0.946	1.5	0.0010	0.70	1.90	0.70
2/14/2023	18:30	192.0	0.907	20,069.6	1.262	1.22	1.59	1.22	149.9	0.947	1.5	0.0011	0.70	1.90	0.70
2/14/2023	18:31	192.0	0.907	15,348.5	1.057	1.23	1.59	1.23	149.9	0.947	1.5	0.0010	0.70	1.90	0.70
2/14/2023	18:32	192.0	0.907	14,156.9	0.975	1.22	1.59	1.22	149.9	0.947	1.5	0.0010	0.70	1.90	0.70
2/14/2023	18:33	192.1	0.907	16,137.9	0.907	1.23	1.59	1.23				--			
2/14/2023	18:34	192.0	0.907	13,269.5	1.396	1.22	1.59	1.22	149.9	0.947	1.5	0.0011	0.69	1.91	0.69
2/14/2023	18:35	192.0	0.907	12,589.4	0.791	1.22	1.58	1.22	149.9	0.947	1.1	0.0008	0.68	1.89	0.68
2/14/2023	18:36	192.0	0.907	17,400.0	1.093	1.22	1.58	1.22	149.9	0.947	1.4	0.0012	0.68	1.89	0.68
2/14/2023	18:37	192.0	0.907	14,049.7	0.790	1.25	1.58	1.25	149.9	0.947	1.5	0.0011	0.68	1.89	0.68
2/14/2023	18:38	192.0	0.907	6,892.1	0.434	1.15	1.59	1.15	149.9	0.947	1.0	0.0007	0.70	1.90	0.70
2/14/2023	18:39	192.0	0.907	3,849.9	0.361	1.20	1.60	1.20	149.9	0.947	1.5	0.0011	0.69	1.90	0.69
2/14/2023	18:40	192.0	0.907	5,071.7	0.286	1.16	1.58	1.16	149.9	0.946	1.6	0.0013	0.68	1.89	0.68
2/14/2023	18:41	192.0	0.908	3,683.3	0.208	1.34	1.58	1.34	149.9	0.947	1.4	0.0010	0.67	1.89	0.67
2/14/2023	18:42	192.0	0.907	53,642.6	3.027	0.88	1.58	0.88	149.9	0.947	1.6	0.0011	0.68	1.90	0.68
2/14/2023	18:43	192.0	0.907	37,294.8	2.580	1.13	1.58	1.13	149.9	0.947	1.5	0.0010	0.67	1.90	0.67
2/14/2023	18:44	192.1	0.907	38,008.3	2.147	1.15	1.59	1.15	149.9	0.946	1.1	0.0008	0.67	1.89	0.67
2/14/2023	18:45	192.0	0.907	37,085.7	1.477	1.21	1.58	1.21	149.9	0.947	1.7	0.0012	0.66	1.90	0.66
2/14/2023	18:46				--				149.9	0.947	1.5	0.0011	0.66	1.89	0.66
2/14/2023	18:47	192.0	0.907	20,615.8	1.163	1.57	1.58	1.57	149.9	0.947	1.5	0.0011	0.65	1.90	0.65
2/14/2023	18:48	192.0	0.907	25,316.2	1.752	1.62	1.58	1.58	149.9	0.947	1.3	0.0009	0.66	1.91	0.66
2/14/2023	18:49	192.0	0.907	13,136.2	0.745	1.22	1.58	1.22	149.9	0.947	1.5	0.0011	0.65	1.90	0.65
2/14/2023	18:50	192.0	0.907	19,935.1	1.262	1.18	1.58	1.18	149.9	0.946	1.6	0.0011	0.64	1.90	0.64
2/14/2023	18:51	192.0	0.907	20,133.7	1.271	1.18	1.58	1.18	149.9	0.946	1.4	0.0010	0.64	1.91	0.64
2/14/2023	18:52	192.0	0.907	28,941.3	1.830	1.58	1.58	1.58	149.9	0.946	1.4	0.0010	0.64	1.89	0.64
2/14/2023	18:53	192.0	0.907	53,726.8	3.026	0.71	1.58	0.71	149.9	0.947	1.5	0.0010	0.63	1.91	0.63
2/14/2023	18:54	192.0	0.907	28,119.3	1.586	1.52	1.59	1.52	149.9	0.947	1.3	0.0009	0.63	1.91	0.63
2/14/2023	18:55	192.0	0.907	36,513.6	2.300	1.24	1.57	1.24	149.9	0.947	1.5	0.0010	0.63	1.89	0.63
2/14/2023	18:56	192.1	0.907	24,156.0	1.522	1.24	1.58	1.24				--			
2/14/2023	18:57	192.0	0.907	19,704.8	0.962	1.16	1.58	1.16	149.9	0.947	1.5	0.0010	0.63	1.91	0.63
2/14/2023	18:58	192.0	0.907	17,546.8	0.989	1.19	1.58	1.19	149.9	0.947	1.5	0.0011	0.62	1.90	0.62
2/14/2023	18:59	192.0	0.907	17,896.3	1.008	1.17	1.59	1.17	149.9	0.947	1.6	0.0011	0.61	1.91	0.61
2/14/2023	19:00	192.0	0.907	19,641.8	1.107	1.19	1.59	1.19	149.9	0.947	1.4	0.0010	0.61	1.90	0.61
2/14/2023	19:01	192.1	0.907	19,748.4	1.112	1.20	1.59	1.20	149.9	0.947	1.6	0.0011	0.61	1.91	0.61
2/14/2023	19:02	192.0	0.907	21,406.9	1.206	1.14	1.59	1.14	149.9	0.947	1.4	0.0010	0.61	1.91	0.61
2/14/2023	19:03	192.1	0.907	21,520.7	1.212	1.16	1.59	1.16	149.9	0.947	1.3	0.0009	0.61	1.91	0.61
2/14/2023	19:04	192.0	0.907	19,283.1	0.768	1.16	1.59	1.16	150.0	0.947	1.2	0.0008	0.60	1.91	0.60
2/14/2023	19:05	192.0	0.907	21,544.4	1.487	1.16	1.59	1.16	149.9	0.947	1.3	0.0009	0.60	1.91	0.60
2/14/2023	19:06	192.0	0.907	21,888.2	1.379	1.15	1.58	1.15	149.9	0.947	1.3	0.0009	0.60	1.91	0.60
2/14/2023	19:07	192.0	0.907	23,207.0	1.133	1.15	1.60	1.15	149.9	0.947	1.2	0.0008	0.60	1.92	0.60
2/14/2023	19:08				--				149.9	0.947	1.4	0.0010	0.59	1.92	0.59
2/14/2023	19:09	192.0	0.907	25,389.4	1.239	1.13	1.59	1.13	149.9	0.947	1.7	0.0011	0.60	1.92	0.60
2/14/2023	19:10	192.0	0.907	23,580.6	1.328	1.17	1.59	1.17	149.9	0.947	1.5	0.0010	0.59	1.92	0.59
2/14/2023	19:11	192.0	0.907	28,985.3	1.633	1.45	1.59	1.45	149.9	0.947	1.6	0.0011	0.59	1.92	0.59
2/14/2023	19:12	192.0	0.907	25,953.9	1.265	1.13	1.58	1.13	149.9	0.947	1.6	0.0011	0.60	1.92	0.60
2/14/2023	19:13	192.0	0.907	26,883.2	1.310	1.16	1.59	1.16	149.9	0.947	1.4	0.0010	0.59	1.93	0.59
2/14/2023	19:14	192.0	0.907	21,199.2	1.194	1.16	1.59	1.16	149.9	0.947	1.6	0.0011	0.59	1.94	0.59
2/14/2023	19:15	192.0	0.907	20,473.4	1.289	1.17	1.60	1.17	149.9	0.947	1.4	0.0010	0.59	1.94	0.59
2/14/2023	19:16	192.0	0.907	14,924.7	0.841	1.17	1.60	1.17	149.9	0.947	1.4	0.0010	0.59	1.94	0.59
2/14/2023	19:17	192.0	0.907	18,139.1	1.251	1.15	1.60	1.15	149.9	0.947	1.4	0.0010	0.59	1.95	0.59
2/14/2023	19:18	192.0	0.907	20,932.1	1.179	1.14	1.60	1.14	149.9	0.947	1.7	0.0012	0.59	1.93	0.59
2/14/2023	19:19	192.0	0.907	21,202.2	1.335	1.16	1.61	1.16				--			
2/14/2023	19:20	192.1	0.907	21,414.2	1.477	1.17	1.61	1.17	149.9	0.947	1.4	0.0010	0.59	1.94	0.59
2/14/2023	19:21	192.1	0.907	24,055.8	1.173	1.15	1.60	1.15	149.9	0.947	1.6	0.0012	0.59	1.94	0.59
2/14/2023	19:22	192.0	0.907	23,406.0	1.615	1.13	1.61	1.13	149.9	0.947	1.4	0.0010	0.59	1.94	0.59
2/14/2023	19:23	192.1	0.907	23,615.2	1.329	1.13	1.61	1.13	149.9	0.947	1.7	0.0012	0.59	1.94	0.59
2/14/2023	19:24	192.1	0.907	22,706.2	1.108	1.18	1.62	1.18	149.9	0.947	1.4	0.0010	0.59	1.95	0.59
2/14/2023	19:25	192.1	0.907	22,429.8	1.264	1.18	1.61	1.18	149.9	0.947	1.5	0.0010	0.59	1.95	0.59
2/14/2023	19:26	192.0	0.907	21,918.7	1.069	1.16	1.61	1.16	149.9	0.947	1.7	0.0012	0.59	1.94	0.59
2/14/2023	19:27	192.1	0.907	22,730.3	1.431	1.28	1.61	1.28	149.9	0.947	1.6	0.0011	0.59	1.95	0.59
2/14/2023	19:28	192.0	0.907	27,284.5	1.718	1.26	1.62	1.26	149.9	0.947	1.7	0.0012	0.59	1.95	0.59
2/14/2023	19:29	192.1	0.907	24,077.7	1.174	1.15	1.61	1.15	149.9	0.947	1.6	0.0011	0.60	1.94	0.60
2/14/2023	19:30				--				149.9	0.947	1.3	0.0009	0.59	1.94	0.59
2/14/2023	19:31	192.0	0.907	22,508.9	1.267	1.18	1.62	1.18	149.9	0.947	1.2	0.0008	0.59	1.95	0.59
2/14/2023	19:32	192.1	0.908	23,645.2	1.330	1.17	1.62	1.17	149.9	0.947	1.0	0.0007	0.59	1.95	0.59
2/14/2023	19:33	192.0	0.907	24,219.7	1.523	1.18	1.61	1.18	149.9	0.947	1.4	0.0009	0.59	1.95	0.59
2/14/2023	19:34	192.0	0.907	24,056.5	1.172	1.17	1.61	1.17	149.9	0.947	1.5	0.0011	0.59	1.95	0.59
2/14/2023	19:35	192.0	0.907	21,517.8	1.353	1.25	1.62	1.25	149.9	0.947	1.5	0.0010	0.59	1.95	0.59
2/14/2023	19:36	192.0	0.907	17,049.9	0.959	1.21	1.62	1.21	149.9	0.947	1.5	0.0010	0.59	1.95	0.59
2/14/2023	19:37	192.0	0.907	20,997.1	1.562	1.17	1.62	1.17	149.9	0.948	1.4	0.0010	0.59	1.95	0.59
2/14/2023	19:38	192.0	0.907	19,568.6	1.230	1.17	1.63	1.17	149.9	0.948	1.3	0.0009	0.59	1.96	0.59
2/14/2023	19:39	192.0	0.907	21,377.4	1.344	1.18	1.62	1.18	150.0	0.948	1.5	0.0011	0.59	1.96	0.59
2/14/2023	19:40	192.0	0.907	21,578.1	1.357	1.22	1.62	1.22	149.9	0.948	1.4	0.0010	0.59	1.96	0.59
2/14/2023	19:41	192.0	0.907	17,017.1	0.829	1.20	1.62	1.20				--			
2/14/2023	19:42	192.0	0.908	18,457.1	1.161	1.21	1.63	1.21	149.9	0.947	1.4	0.0009	0.58	1.96	0.58
2/14/2023	19:43	192.0	0.908	19,283.0	0.939	1.19	1.62	1.19	149.9	0.948	1.4	0.0010	0.59	1.96	0.59
2/14/2023	19:44	192.1	0.908	18,787.3	1.056	1.17	1.62	1.17	149.9	0.948	1.6	0.0011	0.59	1.96	0.59
2/14/2023	19:45	192.0	0.907	19,698.9	1.108	1.30	1.62	1.30	149.9	0.948	1.4	0.0009	0.59	1.96	0.59
2/14/2023	19:46	192.0	0.907	17,095.4	1.177	1.16	1.62	1.16	149.9	0.948	1.4	0.0010	0.59	1.97	0.59
2/14/2023	19:47	192.1	0.908	17,488.9	1.099	1.17	1.62	1.17	149.9	0.948	1.4	0.0010	0.59	1.97	0.59
2/14/2023	19:48	192.0	0.908	12,857.2	0.808	1.17	1.62	1.17	149.9	0.948	1.7	0.0012	0.59	1.97	0.59
2/14/2023	19:49	192.0	0.907	11,750.1	0.809	1.17	1.62	1.17	149.9	0.948	1.5	0.0010	0.59	1.97	0.59

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet $_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/14/2023	19:50	192.0	0.908	9,989.6	0.628	1.07	1.63	1.07	149.9	0.948	1.6	0.0011	0.58	1.97	0.58
2/14/2023	19:51	192.0	0.908	9,980.6	0.687	1.07	1.62	1.07	149.9	0.948	1.6	0.0011	0.59	1.97	0.59
2/14/2023	19:52				--				149.9	0.948	1.6	0.0011	0.59	1.97	0.59
2/14/2023	19:53	192.0	0.908	11,224.3	0.631	1.14	1.62	1.14	149.9	0.948	1.7	0.0012	0.59	1.96	0.59
2/14/2023	19:54	192.0	0.908	11,655.7	0.802	1.14	1.63	1.14	149.9	0.948	1.6	0.0011	0.59	1.97	0.59
2/14/2023	19:55	192.0	0.908	12,712.5	0.798	1.13	1.63	1.13	149.9	0.948	1.6	0.0011	0.59	1.96	0.59
2/14/2023	19:56	192.0	0.908	12,702.7	0.874	1.15	1.62	1.15	149.9	0.948	1.7	0.0012	0.59	1.96	0.59
2/14/2023	19:57	192.0	0.908	12,019.5	0.675	1.16	1.62	1.16	149.9	0.948	1.7	0.0011	0.59	1.96	0.59
2/14/2023	19:58	192.0	0.907	4,272.2	0.240	1.09	1.63	1.09	149.9	0.948	1.5	0.0010	0.59	1.97	0.59
2/14/2023	19:59	192.0	0.908	2,632.1	0.165	1.09	1.63	1.09	149.9	0.948	1.6	0.0011	0.59	1.98	0.59
2/14/2023	20:00	192.0	0.908	2,199.2	0.138	1.08	1.63	1.08	149.9	0.948	1.5	0.0010	0.60	1.96	0.60
2/14/2023	20:01	192.0	0.908	2,977.9	0.221	1.10	1.62	1.10	149.9	0.948	1.4	0.0010	0.59	1.97	0.59
2/14/2023	20:02	192.0	0.908	2,646.4	0.182	1.11	1.62	1.11	149.9	0.948	1.6	0.0011	0.59	1.97	0.59
2/14/2023	20:03	192.0	0.908	1,457.9	0.082	1.10	1.61	1.10	149.9	0.948	1.7	0.0012	0.59	1.97	0.59
2/14/2023	20:04	192.0	0.908	1,089.0	0.061	1.11	1.63	1.11				--			
2/14/2023	20:05	192.0	0.908	1,085.5	0.061	1.10	1.63	1.10	149.9	0.949	1.4	0.0010	0.59	1.98	0.59
2/14/2023	20:06	192.0	0.908	1,636.9	0.130	1.09	1.62	1.09	149.9	0.948	1.4	0.0010	0.58	1.97	0.58
2/14/2023	20:07	192.0	0.908	1,050.3	0.066	1.10	1.62	1.10	149.9	0.949	1.5	0.0011	0.59	1.97	0.59
2/14/2023	20:08	192.0	0.908	1,377.4	0.086	1.10	1.63	1.10	149.9	0.949	1.8	0.0012	0.59	1.97	0.59
2/14/2023	20:09	192.1	0.908	1,524.1	0.105	1.09	1.62	1.09	149.9	0.949	1.6	0.0011	0.59	1.97	0.59
2/14/2023	20:10	192.1	0.908	1,308.1	0.090	1.10	1.62	1.10	149.9	0.948	1.4	0.0009	0.59	1.99	0.59
2/14/2023	20:11	192.0	0.908	2,237.3	0.154	1.09	1.64	1.09	149.9	0.949	1.4	0.0009	0.59	1.98	0.59
2/14/2023	20:12	192.0	0.908	2,666.1	0.183	1.11	1.62	1.11	149.9	0.948	1.4	0.0009	0.60	1.97	0.60
2/14/2023	20:13	192.0	0.908	1,755.1	0.121	1.10	1.64	1.10	149.9	0.949	1.3	0.0009	0.59	1.99	0.59
2/14/2023	20:14				--				149.9	0.949	1.5	0.0010	0.59	1.98	0.59
2/14/2023	20:15	192.0	0.909	2,006.2	0.138	1.10	1.64	1.10	149.9	0.949	1.4	0.0010	0.60	1.98	0.60
2/14/2023	20:16	192.0	0.909	1,814.7	0.114	1.10	1.64	1.10	149.9	0.949	1.4	0.0009	0.60	1.99	0.60
2/14/2023	20:17	192.1	0.908	1,820.1	0.114	1.10	1.63	1.10	149.9	0.949	1.4	0.0010	0.59	1.98	0.59
2/14/2023	20:18	192.0	0.908	1,567.6	0.108	1.10	1.64	1.10	149.9	0.949	1.5	0.0010	0.59	2.00	0.59
2/14/2023	20:19	192.0	0.909	1,843.4	0.116	1.12	1.63	1.12	149.9	0.949	1.6	0.0011	0.59	1.99	0.59
2/14/2023	20:20	192.0	0.908	739.7	0.046	1.14	1.63	1.14	149.9	0.949	1.5	0.0011	0.58	1.99	0.58
2/14/2023	20:21	192.0	0.908	923.9	0.064	1.14	1.63	1.14	149.9	0.949	1.5	0.0010	0.58	2.00	0.58
2/14/2023	20:22	192.0	0.908	955.7	0.066	1.13	1.63	1.13	149.9	0.949	1.1	0.0008	0.59	1.98	0.59
2/14/2023	20:23	192.0	0.909	1,483.7	0.102	1.11	1.63	1.11	149.9	0.949	1.1	0.0007	0.60	1.99	0.60
2/14/2023	20:24	192.0	0.909	857.6	0.059	1.13	1.63	1.13	149.9	0.949	1.2	0.0008	0.60	2.00	0.60
2/14/2023	20:25	192.0	0.909	1,836.4	0.126	1.11	1.63	1.11	149.9	0.949	1.4	0.0009	0.59	1.97	0.59
2/14/2023	20:26	192.0	0.909	963.7	0.066	1.13	1.64	1.13				--			
2/14/2023	20:27	192.0	0.909	947.9	0.070	1.14	1.63	1.14	149.9	0.949	1.2	0.0008	0.60	1.99	0.60
2/14/2023	20:28	192.0	0.909	1,280.8	0.088	1.12	1.63	1.12	149.9	0.949	1.2	0.0008	0.59	1.99	0.59
2/14/2023	20:29	192.0	0.909	1,807.4	0.134	1.12	1.63	1.12	149.9	0.950	1.4	0.0009	0.59	1.99	0.59
2/14/2023	20:30	192.0	0.909	1,499.5	0.094	1.11	1.63	1.11	149.9	0.949	1.5	0.0010	0.60	1.98	0.60
2/14/2023	20:31	192.1	0.909	1,640.7	0.103	1.13	1.64	1.13	149.9	0.949	1.4	0.0009	0.60	1.98	0.60
2/14/2023	20:32	192.0	0.909	1,644.9	0.113	1.12	1.64	1.12	149.9	0.950	1.2	0.0009	0.60	1.99	0.60
2/14/2023	20:33	192.0	0.909	1,839.9	0.127	1.13	1.63	1.13	149.9	0.950	1.4	0.0010	0.60	1.98	0.60
2/14/2023	20:34	192.0	0.909	1,281.5	0.088	1.12	1.63	1.12	149.9	0.950	1.4	0.0009	0.61	1.99	0.61
2/14/2023	20:35	192.1	0.909	985.6	0.062	1.14	1.62	1.14	149.9	0.950	1.5	0.0010	0.61	2.00	0.61
2/14/2023	20:36				--				149.9	0.950	1.5	0.0010	0.60	2.00	0.60
2/14/2023	20:37	192.0	0.909	525.2	0.039	1.14	1.63	1.14	149.9	0.950	1.3	0.0009	0.60	2.00	0.60
2/14/2023	20:38	192.1	0.909	357.8	0.020	1.15	1.62	1.15	149.9	0.950	1.5	0.0010	0.61	1.99	0.61
2/14/2023	20:39	192.0	0.909	242.8	0.015	1.15	1.63	1.15	149.9	0.950	1.6	0.0011	0.60	1.98	0.60
2/14/2023	20:40	192.0	0.909	236.3	0.018	1.14	1.62	1.14	149.9	0.950	1.4	0.0010	0.59	1.99	0.59
2/14/2023	20:41	192.0	0.909	332.8	0.021	1.15	1.63	1.15	149.9	0.950	1.1	0.0008	0.60	1.98	0.60
2/14/2023	20:42	192.1	0.909	465.2	0.026	1.15	1.62	1.15	149.9	0.950	1.4	0.0010	0.60	1.97	0.60
2/14/2023	20:43	192.0	0.910	786.8	0.049	1.14	1.62	1.14	149.9	0.950	1.5	0.0010	0.60	1.97	0.60
2/14/2023	20:44	192.0	0.910	419.5	0.029	1.14	1.62	1.14	149.9	0.950	1.4	0.0009	0.60	1.97	0.60
2/14/2023	20:45	192.0	0.909	681.6	0.043	1.14	1.62	1.14	149.9	0.950	1.3	0.0009	0.61	1.97	0.61
2/14/2023	20:46	192.1	0.910	921.4	0.068	1.14	1.63	1.14	149.9	0.950	1.4	0.0010	0.61	1.98	0.61
2/14/2023	20:47	192.0	0.910	952.1	0.065	1.15	1.63	1.15	149.9	0.950	1.1	0.0008	0.60	1.97	0.60
2/14/2023	20:48	192.0	0.910	480.6	0.030	1.14	1.61	1.14	149.9	0.950	1.6	0.0011	0.61	1.97	0.61
2/14/2023	20:49	192.0	0.910	731.7	0.050	1.15	1.62	1.15				--			
2/14/2023	20:50	192.0	0.910	741.9	0.051	1.14	1.62	1.14	149.9	0.950	1.3	0.0009	0.61	1.97	0.61
2/14/2023	20:51	192.0	0.910	676.4	0.047	1.14	1.62	1.14	149.9	0.950	1.4	0.0009	0.60	1.97	0.60
2/14/2023	20:52	192.0	0.910	536.1	0.037	1.14	1.62	1.14	149.9	0.950	1.3	0.0008	0.61	1.97	0.61
2/14/2023	20:53	192.0	0.910	265.3	0.017	1.13	1.61	1.13	149.9	0.950	1.1	0.0008	0.61	1.97	0.61
2/14/2023	20:54	192.0	0.910	168.7	0.011	1.11	1.62	1.11	149.9	0.950	1.3	0.0009	0.61	1.97	0.61
2/14/2023	20:55	192.0	0.910	323.4	0.022	1.14	1.62	1.14	149.9	0.950	1.3	0.0009	0.61	1.98	0.61
2/14/2023	20:56	192.0	0.910	473.1	0.030	1.15	1.61	1.15	149.9	0.950	1.1	0.0008	0.61	1.98	0.61
2/14/2023	20:57	192.0	0.910	827.7	0.052	1.15	1.61	1.15	149.9	0.950	1.2	0.0008	0.62	1.98	0.62
2/14/2023	20:58				--				149.9	0.951	1.3	0.0009	0.61	1.97	0.61
2/14/2023	20:59	192.0	0.910	689.4	0.043	1.15	1.61	1.15	149.9	0.951	1.5	0.0010	0.61	1.97	0.61
2/14/2023	21:00	192.0	0.910	283.6	0.020	1.15	1.61	1.15	149.9	0.950	1.3	0.0009	0.61	1.96	0.61
2/14/2023	21:01	192.0	0.910	126.0	0.008	1.12	1.62	1.12	149.9	0.951	1.4	0.0009	0.61	1.96	0.61
2/14/2023	21:02	192.0	0.910	91.0	0.006	1.13	1.61	1.13	149.9	0.951	1.3	0.0009	0.61	1.97	0.61
2/14/2023	21:03	192.0	0.910	75.1	0.005	1.12	1.61	1.12	149.9	0.951	1.3	0.0009	0.61	1.97	0.61
2/14/2023	21:04	192.0	0.910	67.6	0.004	1.12	1.61	1.12	149.9	0.950	1.7	0.0012	0.61	2.09	0.61
2/14/2023	21:05	192.0	0.910	61.5	0.004	1.12	1.61	1.12	149.9	0.951	1.6	0.0011	0.61	2.20	0.61
2/14/2023	21:06	192.0	0.910	57.8	0.003	1.12	1.63	1.12	149.9	0.951	1.6	0.0011	0.61	2.22	0.61
2/14/2023	21:07	192.0	0.910	55.3	0.003	1.13	1.62	1.13	149.9	0.951	1.7	0.0012	0.61	2.22	0.61
2/14/2023	21:08	192.0	0.910	52.0	0.003	1.13	1.62	1.13	149.9	0.951	1.6	0.0011	0.62	2.23	0.62
2/14/2023	21:09	192.0	0.910	49.8	0.003	1.14	1.62	1.14	149.9	0.951	1.3	0.0009	0.61	2.21	0.61
2/14/2023	21:10	192.0	0.910	46.8	0.003	1.13	1.62	1.13	149.9	0.951	1.9	0.0012	0.61	2.23	0.61
2/14/2023	21:11	192.0	0.910	44.4	0.003	1.13	1.62	1.13	149.9	0.951	1.7	0.0012	0.61	2.28	0.61
2/14/2023	21:12	192.0	0.910	43.5	0.002	1.13	1.63	1.13				--			
2/14/2023	21:13	192.0	0.910	40.8	0.003	1.13	1.62	1.13	149.9	0.951	1.7	0.0011	0.61	2.25	0.61
2/14/2023	21:14	192.0	0.911	41.6	0.003	1.13	1.62	1.13	149.9	0.951	1.8	0.0012	0.62	2.26	0.62
2/14/2023	21:15	192.0	0.911	41.5	0.003	1.14	1.62	1.14	149.9	0.951	1.7	0.0011	0.61	2.27	0.61
2/14/2023	21:16	192.0	0.911	40.9	0.002	1.14	1.63	1.14	149.9	0.951	1.4	0.0010	0.63	2.20	0.63
2/14/2023	21:17	192.0	0.911	38.6	0.003	1.14	1.61	1.14	149.9	0.951	1.5	0.0010	0.62	2.23	0.62
2/14/2023	21:18	192.1	0.911	36.2	0.002	1.14	1.62	1.14	149.9	0.951	1.7	0.0011	0.62	2.21	0.62
2/14/2023	21:19	192.1	0.911	449.5	0.025	1.19	1.61	1.19	149.9	0.951	1.5	0.0010	0.63	2.23	0.63
2/14/2023	21:20				--				149.9	0.951	1.4	0.0009	0.62	2.25	0.62
2/14/2023	21:21	192.0	0.911	314.2	0.020	1.16	1.62	1.16	149.9	0.952	1.2	0.0008	0.62	2.25	0.62
2/14/2023	21:22	192.0	0.911	176.2	0.011	1.14	1.62	1.14	149.9	0.951	1.2	0.0008	0.62	2.24	0.62
2/14/2023	21:23	192.0	0.911	121.1	0.008	1.14	1.63	1.14	149.9	0.951	1.3	0.0009	0.62	2.25	0.62
2/14/2023	21:24	192.1	0.911	97.9	0.006	1.15	1.63	1.15	149.9	0.951	1.4	0.0010	0.62	2.22	0.62

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wt}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wt}$**	**BWS - Outlet $_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/14/2023	21:25	192.0	0.911	492.1	0.028	1.17	1.62	1.17	149.9	0.952	1.4	0.0009	0.62	2.25	0.62
2/14/2023	21:26	192.0	0.911	836.2	0.053	1.16	1.61	1.16	149.9	0.952	1.4	0.0010	0.63	2.26	0.63
2/14/2023	21:27	192.0	0.911	940.7	0.053	1.16	1.61	1.16	149.9	0.952	1.5	0.0010	0.62	2.29	0.62
2/14/2023	21:28	192.0	0.911	854.8	0.054	1.16	1.63	1.16	149.9	0.952	1.4	0.0009	0.63	2.23	0.63
2/14/2023	21:29	192.0	0.911	578.4	0.032	1.16	1.62	1.16	149.9	0.952	1.3	0.0009	0.63	2.23	0.63
2/14/2023	21:30	192.0	0.911	368.4	0.021	1.17	1.61	1.17	149.9	0.952	1.7	0.0011	0.63	2.28	0.63
2/14/2023	21:31	192.1	0.911	242.8	0.014	1.17	1.62	1.17	149.9	0.952	1.3	0.0009	0.64	2.27	0.64
2/14/2023	21:32	192.1	0.911	169.0	0.011	1.14	1.61	1.14	149.9	0.952	1.3	0.0009	0.64	2.22	0.64
2/14/2023	21:33	192.0	0.911	142.1	0.008	1.15	1.61	1.15	149.9	0.952	1.2	0.0008	0.64	2.27	0.64
2/14/2023	21:34	192.0	0.911	125.2	0.008	1.15	1.61	1.15	149.9	0.952	1.4	0.0009	0.65	2.23	0.65
2/14/2023	21:35	192.0	0.911	101.7	0.006	1.15	1.62	1.15				--			
2/14/2023	21:36	192.0	0.912	100.2	0.006	1.15	1.61	1.15	149.9	0.952	1.3	0.0009	0.63	2.25	0.63
2/14/2023	21:37	192.0	0.912	84.5	0.006	1.16	1.62	1.16	149.9	0.952	1.4	0.0009	0.63	2.22	0.63
2/14/2023	21:38	192.0	0.912	84.9	0.005	1.16	1.61	1.16	149.9	0.952	1.3	0.0009	0.63	2.23	0.63
2/14/2023	21:39	192.0	0.912	74.9	0.005	1.16	1.63	1.16	149.9	0.952	1.4	0.0009	0.63	2.30	0.63
2/14/2023	21:40	192.0	0.912	71.2	0.004	1.15	1.61	1.15	149.9	0.953	1.2	0.0008	0.63	2.18	0.63
2/14/2023	21:41	192.0	0.912	536.2	0.034	1.19	1.59	1.19	149.9	0.952	1.4	0.0010	0.62	1.97	0.62
2/14/2023	21:42				--				149.9	0.952	1.3	0.0009	0.62	1.97	0.62
2/14/2023	21:43	192.0	0.912	3,633.0	0.177	1.15	1.60	1.15	149.9	0.953	1.3	0.0009	0.62	1.96	0.62
2/14/2023	21:44	192.0	0.912	4,310.4	0.242	1.16	1.60	1.16	149.9	0.953	1.6	0.0011	0.62	1.95	0.62
2/14/2023	21:45	192.1	0.912	5,706.7	0.321	1.13	1.59	1.13	149.9	0.953	1.4	0.0010	0.62	1.95	0.62
2/14/2023	21:46	192.0	0.912	7,485.3	0.470	1.11	1.60	1.11	149.9	0.953	1.4	0.0010	0.61	1.94	0.61
2/14/2023	21:47	192.0	0.913	14,024.2	0.966	1.31	1.59	1.31	149.9	0.953	1.5	0.0011	0.61	1.94	0.61
2/14/2023	21:48	192.0	0.912	15,435.5	0.970	1.17	1.59	1.17	149.9	0.953	1.4	0.0010	0.60	1.94	0.60
2/14/2023	21:49	192.0	0.912	11,642.1	0.732	1.15	1.60	1.15	149.9	0.953	1.4	0.0010	0.61	1.93	0.61
2/14/2023	21:50	192.0	0.912	14,137.6	0.795	1.21	1.58	1.21	149.9	0.953	1.2	0.0008	0.62	1.92	0.62
2/14/2023	21:51	192.0	0.912	13,307.5	0.837	1.15	1.59	1.15	149.9	0.953	1.4	0.0010	0.61	1.92	0.61
2/14/2023	21:52	192.0	0.912	12,565.3	0.707	1.15	1.58	1.15	149.9	0.953	1.3	0.0009	0.62	1.93	0.62
2/14/2023	21:53	192.0	0.913	13,009.4	0.896	1.17	1.59	1.17	149.9	0.953	1.4	0.0010	0.61	1.92	0.61
2/14/2023	21:54	192.0	0.912	12,836.2	0.884	1.17	1.56	1.17	149.9	0.953	1.5	0.0010	0.62	1.92	0.62
2/14/2023	21:55	192.0	0.913	12,136.5	0.763	1.18	1.56	1.18	149.9	0.953	1.6	0.0011	0.62	1.92	0.62
2/14/2023	21:56	192.0	0.912	8,727.7	0.549	1.08	1.56	1.08	149.9	0.953	1.3	0.0009	0.63	1.92	0.63
2/14/2023	21:57	192.0	0.912	9,635.5	0.606	1.05	1.56	1.05				--			
2/14/2023	21:58	192.0	0.912	7,674.5	0.528	1.07	1.56	1.07	149.9	0.953	1.4	0.0010	0.62	1.90	0.62
2/14/2023	21:59	192.0	0.913	5,826.5	0.328	1.08	1.55	1.08	149.9	0.953	1.3	0.0009	0.61	1.89	0.61
2/14/2023	22:00	192.0	0.913	5,945.8	0.409	1.08	1.56	1.08	149.9	0.953	1.5	0.0010	0.61	1.89	0.61
2/14/2023	22:01	192.0	0.913	4,616.5	0.290	1.09	1.54	1.09	149.9	0.953	1.5	0.0011	0.62	1.88	0.62
2/14/2023	22:02	192.0	0.913	3,216.6	0.181	1.08	1.55	1.08	149.9	0.953	1.4	0.0010	0.62	1.87	0.62
2/14/2023	22:03	192.0	0.913	2,275.3	0.143	1.07	1.54	1.07	149.9	0.953	1.4	0.0010	0.62	1.87	0.62
2/14/2023	22:04				--				149.9	0.953	1.3	0.0010	0.63	1.87	0.63
2/14/2023	22:05	192.0	0.913	1,766.6	0.122	1.08	1.53	1.08	149.9	0.953	1.5	0.0011	0.62	1.86	0.62
2/14/2023	22:06	192.0	0.913	1,748.1	0.110	1.09	1.53	1.09	149.9	0.953	1.5	0.0011	0.62	1.86	0.62
2/14/2023	22:07	192.1	0.913	1,925.0	0.108	1.08	1.52	1.08	149.9	0.953	1.1	0.0008	0.63	1.85	0.63
2/14/2023	22:08	192.1	0.913	1,219.9	0.084	1.08	1.52	1.08	149.9	0.953	1.3	0.0010	0.62	1.85	0.62
2/14/2023	22:09	192.0	0.913	1,652.7	0.104	1.08	1.52	1.08	149.9	0.954	1.2	0.0009	0.62	1.84	0.62
2/14/2023	22:10	192.0	0.913	1,149.0	0.072	1.09	1.50	1.09	149.9	0.954	1.5	0.0011	0.63	1.84	0.63
2/14/2023	22:11	192.0	0.913	4,224.0	0.291	1.09	1.50	1.09	149.9	0.954	1.2	0.0009	0.62	1.84	0.62
2/14/2023	22:12	192.0	0.913	2,104.4	0.132	1.06	1.50	1.06	149.9	0.954	1.3	0.0009	0.63	1.83	0.63
2/14/2023	22:13	192.0	0.913	1,455.1	0.082	1.07	1.50	1.07	149.9	0.953	1.1	0.0008	0.63	1.83	0.63
2/14/2023	22:14	192.0	0.913	2,374.5	0.164	1.08	1.50	1.08	149.9	0.954	1.2	0.0009	0.62	1.83	0.62
2/14/2023	22:15	192.0	0.913	1,605.5	0.101	1.07	1.50	1.07	149.9	0.954	1.3	0.0009	0.62	1.81	0.62
2/14/2023	22:16	192.0	0.913	1,304.0	0.090	1.08	1.49	1.08	149.9	0.954	1.6	0.0012	0.62	1.83	0.62
2/14/2023	22:17	192.0	0.913	1,266.1	0.080	1.07	1.49	1.07	150.0	0.954	1.5	0.0011	0.62	1.82	0.62
2/14/2023	22:18	192.0	0.913	895.7	0.056	1.09	1.48	1.09	150.0	0.954	1.4	0.0010	0.62	1.81	0.62
2/14/2023	22:19	192.0	0.913	954.5	0.066	1.09	1.47	1.09	150.1	0.954	1.6	0.0012	0.62	1.81	0.62
2/14/2023	22:20	192.1	0.913	1,387.0	0.087	1.07	1.47	1.07				--			
2/14/2023	22:21	192.1	0.913	1,112.1	0.070	1.06	1.46	1.06	150.1	0.954	1.2	0.0009	0.62	1.82	0.62
2/14/2023	22:22	192.1	0.913	871.5	0.055	1.08	1.47	1.08	150.0	0.954	1.5	0.0011	0.62	1.80	0.62
2/14/2023	22:23	192.1	0.913	585.0	0.037	1.08	1.47	1.08	150.0	0.954	1.4	0.0010	0.62	1.79	0.62
2/14/2023	22:24	192.1	0.914	751.9	0.047	1.09	1.46	1.09	150.0	0.954	1.2	0.0009	0.62	1.79	0.62
2/14/2023	22:25	192.0	0.914	1,068.8	0.067	1.07	1.46	1.07	149.9	0.954	1.6	0.0012	0.62	1.80	0.62
2/14/2023	22:26				--				149.9	0.954	1.2	0.0009	0.62	1.79	0.62
2/14/2023	22:27	192.1	0.914	784.2	0.049	1.08	1.45	1.08	149.9	0.954	1.2	0.0009	0.62	1.79	0.62
2/14/2023	22:28	192.0	0.914	1,046.4	0.066	1.07	1.44	1.07	149.9	0.954	1.3	0.0010	0.62	1.78	0.62
2/14/2023	22:29	192.0	0.913	918.5	0.058	1.08	1.44	1.08	149.9	0.954	1.4	0.0010	0.62	1.78	0.62
2/14/2023	22:30	192.1	0.914	974.1	0.067	1.08	1.43	1.08	149.9	0.954	1.4	0.0011	0.62	1.77	0.62
2/14/2023	22:31	192.0	0.914	407.0	0.026	1.08	1.43	1.08	149.9	0.954	1.5	0.0011	0.62	1.77	0.62
2/14/2023	22:32	192.1	0.914	318.6	0.018	1.09	1.42	1.09	149.9	0.954	1.2	0.0009	0.61	1.77	0.61
2/14/2023	22:33	192.1	0.914	282.0	0.018	1.08	1.43	1.08	149.9	0.954	1.4	0.0010	0.61	1.77	0.61
2/14/2023	22:34	192.0	0.914	499.2	0.031	1.09	1.43	1.09	149.9	0.954	1.4	0.0010	0.61	1.75	0.61
2/14/2023	22:35	192.0	0.914	927.5	0.052	1.07	1.43	1.07	149.9	0.954	1.4	0.0010	0.61	1.77	0.61
2/14/2023	22:36	192.0	0.914	606.7	0.038	1.06	1.42	1.06	149.9	0.954	1.4	0.0011	0.60	1.75	0.60
2/14/2023	22:37	192.0	0.914	316.9	0.018	1.07	1.42	1.07	149.9	0.954	1.5	0.0011	0.61	1.77	0.61
2/14/2023	22:38	192.0	0.914	253.4	0.016	1.07	1.40	1.07	149.9	0.954	1.4	0.0011	0.62	1.77	0.62
2/14/2023	22:39	192.1	0.914	164.3	0.010	1.04	1.42	1.04	149.9	0.954	1.3	0.0010	0.61	1.75	0.61
2/14/2023	22:40	192.0	0.914	139.8	0.010	1.04	1.42	1.04	149.9	0.954	1.4	0.0010	0.61	1.76	0.61
2/14/2023	22:41	192.0	0.914	207.5	0.013	1.04	1.41	1.04				--			
2/14/2023	22:42	192.0	0.914	168.2	0.008	1.04	1.41	1.04	149.9	0.954	1.4	0.0011	0.62	1.74	0.62
2/14/2023	22:43	192.1	0.914	134.8	0.008	1.04	1.41	1.04	149.9	0.954	1.2	0.0009	0.61	1.75	0.61
2/14/2023	22:44	192.0	0.914	176.5	0.011	1.03	1.40	1.03	149.9	0.954	1.4	0.0011	0.60	1.73	0.60
2/14/2023	22:45	192.0	0.914	127.0	0.008	1.04	1.40	1.04	149.9	0.954	1.3	0.0010	0.60	1.74	0.60
2/14/2023	22:46	192.0	0.914	256.8	0.014	1.06	1.40	1.06	149.9	0.954	1.2	0.0009	0.60	1.74	0.60
2/14/2023	22:47	192.0	0.914	266.1	0.017	1.05	1.39	1.05	149.9	0.954	1.3	0.0010	0.60	1.74	0.60
2/14/2023	22:48				--				149.9	0.954	1.3	0.0010	0.60	1.73	0.60
2/14/2023	22:49	192.1	0.914	171.5	0.010	1.03	1.39	1.03	149.9	0.954	1.4	0.0011	0.60	1.73	0.60
2/14/2023	22:50	192.1	0.914	194.0	0.012	1.03	1.39	1.03	149.9	0.954	1.5	0.0011	0.61	1.72	0.61
2/14/2023	22:51	192.0	0.914	210.1	0.013	1.02	1.38	1.02	149.9	0.954	1.3	0.0010	0.61	1.73	0.61
2/14/2023	22:52	192.1	0.914	199.4	0.013	1.02	1.38	1.02	149.9	0.954	1.5	0.0011	0.61	1.72	0.61
2/14/2023	22:53	192.1	0.914	130.9	0.009	1.03	1.38	1.03	149.9	0.954	1.2	0.0010	0.61	1.72	0.61
2/14/2023	22:54	192.0	0.914	1,652.9	0.104	1.05	1.38	1.05	149.9	0.954	1.3	0.0010	0.61	1.72	0.61
2/14/2023	22:55	192.0	0.914	2,244.6	0.142	1.01	1.39	1.01	149.9	0.955	1.2	0.0009	0.61	1.71	0.61
2/14/2023	22:56	192.0	0.914	1,991.2	0.126	1.01	1.38	1.01	150.0	0.954	1.2	0.0009	0.61	1.72	0.61
2/14/2023	22:57	192.0	0.914	1,433.2	0.090	1.07	1.37	1.07	149.9	0.955	1.2	0.0009	0.60	1.71	0.60
2/14/2023	22:58	192.0	0.915	23,997.5	1.514	1.41	1.38	1.38	149.9	0.954	1.3	0.0010	0.60	1.71	0.60
2/14/2023	22:59	192.0	0.914	15,397.3	0.971	1.14	1.39	1.14	149.9	0.954	1.2	0.0010	0.61	1.71	0.61

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet $_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/14/2023	23:00	192.0	0.914	6,889.0	0.388	1.01	1.39	1.01	149.9	0.955	1.4	0.0011	0.60	1.70	0.60
2/14/2023	23:01	192.1	0.914	3,058.8	0.193	1.02	1.37	1.02	149.9	0.955	1.5	0.0011	0.60	1.71	0.60
2/14/2023	23:02	192.1	0.914	2,411.9	0.152	1.03	1.35	1.03	149.9	0.954	1.5	0.0011	0.60	1.71	0.60
2/14/2023	23:03	192.1	0.914	1,774.5	0.087	1.01	1.37	1.01	149.9	0.955	1.4	0.0011	0.60	1.70	0.60
2/14/2023	23:04	192.1	0.914	2,628.2	0.182	1.03	1.35	1.03				--			
2/14/2023	23:05	192.1	0.914	2,150.0	0.136	1.01	1.36	1.01	149.9	0.954	1.3	0.0010	0.61	1.70	0.61
2/14/2023	23:06	192.1	0.914	1,833.0	0.116	1.01	1.35	1.01	149.9	0.954	1.2	0.0009	0.61	1.70	0.61
2/14/2023	23:07	192.0	0.914	1,757.6	0.111	1.01	1.35	1.01	150.0	0.954	1.2	0.0009	0.61	1.70	0.61
2/14/2023	23:08	192.1	0.914	1,356.5	0.086	1.01	1.34	1.01	149.9	0.955	1.5	0.0011	0.60	1.70	0.60
2/14/2023	23:09	192.0	0.914	1,725.0	0.129	1.02	1.34	1.02	150.0	0.955	1.4	0.0011	0.61	1.69	0.61
2/14/2023	23:10				--				149.9	0.954	1.0	0.0008	0.61	1.68	0.61
2/14/2023	23:11	192.1	0.914	2,505.5	0.141	1.02	1.37	1.02	149.9	0.955	1.3	0.0010	0.61	1.68	0.61
2/14/2023	23:12	192.0	0.914	1,363.1	0.094	1.01	1.35	1.01	149.9	0.954	1.6	0.0013	0.60	1.68	0.60
2/14/2023	23:13	192.0	0.914	1,177.5	0.081	1.02	1.34	1.02	150.0	0.954	1.5	0.0011	0.61	1.69	0.61
2/14/2023	23:14	192.1	0.915	960.0	0.066	1.03	1.34	1.03	150.0	0.955	1.4	0.0011	0.61	1.68	0.61
2/14/2023	23:15	192.1	0.914	827.6	0.289	1.03	1.33	1.03	149.9	0.955	1.3	0.0010	0.62	1.80	0.62
2/14/2023	23:16	192.1	0.914	473.0	0.030	1.04	1.34	1.04	149.9	0.955	1.3	0.0010	0.61	1.68	0.61
2/14/2023	23:17	192.1	0.914	602.0	0.042	1.03	1.33	1.03	149.9	0.955	1.3	0.0010	0.61	1.68	0.61
2/14/2023	23:18	192.1	0.914	765.4	0.048	1.03	1.34	1.03	149.9	0.955	1.3	0.0010	0.61	1.68	0.61
2/14/2023	23:19	192.0	0.914	909.8	0.057	1.03	1.33	1.03	149.9	0.955	1.4	0.0011	0.61	1.68	0.61
2/14/2023	23:20	192.0	0.914	1,115.5	0.063	1.02	1.33	1.02	150.0	0.955	1.1	0.0010	0.62	1.68	0.62
2/14/2023	23:21	192.1	0.914	657.2	0.042	1.03	1.34	1.03	150.0	0.955	1.0	0.0008	0.63	1.68	0.63
2/14/2023	23:22	192.1	0.915	378.8	0.022	1.03	1.33	1.03	149.9	0.955	1.1	0.0009	0.62	1.69	0.62
2/14/2023	23:23	192.0	0.914	2,498.4	0.159	1.04	1.33	1.04	150.0	0.955	1.3	0.0011	0.61	1.68	0.61
2/14/2023	23:24	192.0	0.916	3,790.8	0.240	1.20	1.34	1.20	150.0	0.955	1.2	0.0009	0.61	1.66	0.61
2/14/2023	23:25	192.0	0.916	145,196.7	8.203	0.53	1.34	0.53	149.9	0.955	1.2	0.0009	0.61	1.66	0.61
2/14/2023	23:26	192.0	0.916	16,211.8	1.029	1.40	1.33	1.33	150.0	0.955	1.1	0.0009	0.61	1.66	0.61
2/14/2023	23:27	192.1	0.915	10,596.7	0.600	1.06	1.33	1.06				--			
2/14/2023	23:28	192.0	0.915	7,006.4	0.397	0.99	1.33	0.99	149.9	0.955	1.1	0.0008	0.61	1.66	0.61
2/14/2023	23:29	192.1	0.915	8,820.8	0.499	1.35	1.33	1.33	150.0	0.955	1.4	0.0011	0.61	1.66	0.61
2/14/2023	23:30	192.1	0.915	13,489.0	0.857	1.14	1.32	1.14	149.9	0.956	1.0	0.0007	0.62	1.66	0.62
2/14/2023	23:31	192.0	0.915	14,881.7	1.038	1.43	1.33	1.33	150.0	0.955	1.0	0.0008	0.62	1.66	0.62
2/14/2023	23:32				--				149.9	0.955	1.5	0.0012	0.61	1.65	0.61
2/14/2023	23:33	192.0	0.915	20,773.8	1.318	1.07	1.33	1.07	149.9	0.955	1.3	0.0010	0.61	1.66	0.61
2/14/2023	23:34	192.0	0.917	21,375.7	1.212	1.47	1.33	1.33	150.0	0.956	1.2	0.0009	0.61	1.65	0.61
2/14/2023	23:35	192.0	0.916	78,780.7	4.464	1.05	1.32	1.05	150.0	0.955	1.3	0.0011	0.61	1.65	0.61
2/14/2023	23:36	192.0	0.916	46,046.6	2.912	0.86	1.32	0.86	150.0	0.955	1.0	0.0008	0.60	1.65	0.60
2/14/2023	23:37	192.0	0.916	43,045.6	2.720	1.08	1.32	1.08	150.0	0.955	1.3	0.0010	0.60	1.65	0.60
2/14/2023	23:38	192.0	0.916	42,379.2	2.679	1.09	1.33	1.09	150.0	0.955	1.3	0.0010	0.60	1.65	0.60
2/14/2023	23:39	192.0	0.916	34,160.5	1.931	1.08	1.32	1.08	150.0	0.956	1.4	0.0011	0.60	1.66	0.60
2/14/2023	23:40	192.0	0.915	19,169.1	1.328	1.17	1.31	1.17	149.9	0.956	1.2	0.0009	0.60	1.65	0.60
2/14/2023	23:41	192.0	0.915	17,010.8	0.962	1.08	1.32	1.08	150.0	0.956	1.3	0.0010	0.60	1.65	0.60
2/14/2023	23:42	192.0	0.916	17,794.7	1.006	1.05	1.32	1.05	149.9	0.955	1.3	0.0011	0.60	1.65	0.60
2/14/2023	23:43	192.1	0.915	18,379.5	1.374	1.03	1.33	1.03	149.9	0.955	1.2	0.0009	0.60	1.65	0.60
2/14/2023	23:44	192.0	0.915	16,112.2	1.018	1.10	1.31	1.10	150.0	0.956	1.1	0.0009	0.60	1.66	0.60
2/14/2023	23:45	192.1	0.916	19,400.8	1.096	1.01	1.32	1.01	149.9	0.956	1.0	0.0008	0.60	1.69	0.60
2/14/2023	23:46	192.1	0.916	12,435.4	0.861	1.07	1.31	1.07	149.9	0.956	1.2	0.0009	0.59	1.66	0.59
2/14/2023	23:47	192.1	0.916	13,064.4	0.738	1.03	1.31	1.03	150.0	0.956	1.2	0.0010	0.60	1.65	0.60
2/14/2023	23:48	192.1	0.915	16,224.7	1.123	1.02	1.32	1.02	150.0	0.956	1.4	0.0011	0.60	1.65	0.60
2/14/2023	23:49	192.0	0.916	11,760.0	0.664	1.04	1.32	1.04	150.0	0.956	1.3	0.0010	0.60	1.65	0.60
2/14/2023	23:50	192.0	0.915	9,737.2	0.674	0.95	1.31	0.95				--			
2/14/2023	23:51	192.1	0.916	11,487.3	0.795	1.02	1.31	1.02	150.0	0.956	1.4	0.0011	0.60	1.65	0.60
2/14/2023	23:52	192.1	0.915	7,907.8	0.447	0.95	1.32	0.95	149.9	0.956	1.2	0.0010	0.59	1.66	0.59
2/14/2023	23:53	192.1	0.916	11,955.0	0.828	1.03	1.32	1.03	149.9	0.956	1.5	0.0012	0.60	1.65	0.60
2/14/2023	23:54				--				150.0	0.956	1.0	0.0008	0.60	1.65	0.60
2/14/2023	23:55	192.1	0.916	13,209.0	0.915	1.06	1.30	1.06	150.0	0.956	1.1	0.0009	0.60	1.65	0.60
2/14/2023	23:56	192.1	0.916	13,853.4	0.876	1.02	1.31	1.02	150.0	0.956	1.4	0.0012	0.60	1.64	0.60
2/14/2023	23:57	192.0	0.916	14,303.0	0.809	1.01	1.32	1.01	149.9	0.956	1.2	0.0009	0.60	1.65	0.60
2/14/2023	23:58	192.1	0.916	12,975.4	0.734	1.02	1.30	1.02	149.9	0.956	1.1	0.0009	0.60	1.64	0.60
2/14/2023	23:59	192.1	0.916	18,175.5	1.149	1.04	1.31	1.04				--			
2/14/2023	0:00	192.1	0.916	14,941.0	0.944	1.04	1.31	1.04				--			
2/15/2023	0:01	192.1	0.916	19,151.9	1.329	1.06	1.31	1.06				--			
2/15/2023	0:02	192.1	0.916	17,128.6	0.971	1.02	1.30	1.02				--			
2/15/2023	0:03	192.1	0.916	14,490.9	1.006	1.02	1.29	1.02				--			
2/15/2023	0:04	192.1	0.916	11,914.6	0.755	1.03	1.30	1.03				--			
2/15/2023	0:05	192.1	0.916	9,731.9	0.617	0.95	1.29	0.95				--			
2/15/2023	0:06	192.1	0.916	11,144.3	0.706	1.02	1.29	1.02				--			
2/15/2023	0:07	192.1	0.916	11,006.6	0.624	1.01	1.29	1.01				--			
2/15/2023	0:08	192.1	0.916	14,141.6	0.896	1.02	1.30	1.02				--			
2/15/2023	0:09	192.1	0.916	13,353.2	0.847	1.02	1.30	1.02				--			
2/15/2023	0:10	192.0	0.916	17,678.2	1.002	1.07	1.30	1.07				--			
2/15/2023	0:11	192.1	0.916	14,928.5	0.846	1.03	1.29	1.03				--			
2/15/2023	0:12	192.1	0.916	13,544.1	0.767	1.08	1.30	1.08				--			
2/15/2023	0:13	192.1	0.916	12,286.4	0.778	1.02	1.29	1.02				--			
2/15/2023	0:14	192.1	0.916	9,016.7	0.511	0.94	1.30	0.94				--			
2/15/2023	0:15	192.1	0.916	8,099.7	0.459	0.96	1.30	0.96				--			
2/15/2023	0:16				--							--			
2/15/2023	0:17	192.1	0.916	6,892.1	0.437	0.96	1.28	0.96				--			
2/15/2023	0:18	192.1	0.916	5,763.5	0.366	0.97	1.29	0.97				--			
2/15/2023	0:19	192.1	0.916	5,839.6	0.370	0.96	1.29	0.96				--			
2/15/2023	0:20	192.1	0.916	8,983.9	0.570	0.99	1.28	0.99				--			
2/15/2023	0:21	192.1	0.916	17,373.2	1.102	1.04	1.29	1.04				--			
2/15/2023	0:22	192.1	0.916	18,266.2	1.036	1.02	1.29	1.02				--			
2/15/2023	0:23	192.1	0.916	17,441.3	1.106	1.03	1.29	1.03				--			
2/15/2023	0:24	192.0	0.916	15,167.6	0.962	1.01	1.27	1.01				--			
2/15/2023	0:25	192.1	0.916	13,355.4	0.847	1.05	1.28	1.05				--			
2/15/2023	0:26	192.1	0.916	11,213.1	0.711	1.02	1.28	1.02				--			
2/15/2023	0:27	192.1	0.916	12,450.8	0.789	1.01	1.28	1.01				--			
2/15/2023	0:28	192.1	0.916	10,520.4	0.667	1.00	1.28	1.00				--			
2/15/2023	0:29	192.1	0.916	10,770.1	0.611	1.01	1.28	1.01				--			
2/15/2023	0:30	192.1	0.916	12,188.8	0.847	1.01	1.28	1.01				--			
2/15/2023	0:31	192.1	0.916	9,371.8	0.594	0.95	1.28	0.95				--			
2/15/2023	0:32	192.1	0.917	11,764.2	0.747	1.02	1.28	1.02				--			
2/15/2023	0:33	192.1	0.916	10,806.8	0.613	1.00	1.28	1.00				--			
2/15/2023	0:34	192.1	0.916	10,712.5	0.745	1.09	1.28	1.09				--			

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet $_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	0:35	192.1	0.917	19,125.5	1.085	1.01	1.28	1.01				--			
2/15/2023	0:36	192.1	0.917	16,961.3	1.178	1.03	1.28	1.03				--			
2/15/2023	0:37	192.1	0.917	18,368.9	1.165	1.04	1.26	1.04				--			
2/15/2023	0:38				--							--			
2/15/2023	0:39	192.1	0.917	15,714.5	0.996	1.02	1.28	1.02				--			
2/15/2023	0:40	192.1	0.917	12,248.2	0.777	1.01	1.27	1.01				--			
2/15/2023	0:41	192.1	0.916	11,836.3	0.672	1.00	1.27	1.00				--			
2/15/2023	0:42	192.1	0.917	13,514.9	0.767	1.01	1.26	1.01				--			
2/15/2023	0:43	192.1	0.916	12,810.4	0.630	1.02	1.26	1.02				--			
2/15/2023	0:44	192.1	0.917	20,838.9	1.449	1.11	1.26	1.11				--			
2/15/2023	0:45	192.1	0.917	18,523.4	1.288	1.06	1.27	1.06				--			
2/15/2023	0:46	192.1	0.916	15,589.2	0.989	1.03	1.27	1.03				--			
2/15/2023	0:47	192.1	0.917	18,577.0	1.178	1.00	1.28	1.00				--			
2/15/2023	0:48	192.1	0.917	18,200.1	1.155	1.01	1.26	1.01				--			
2/15/2023	0:49	192.1	0.917	19,408.5	1.231	0.98	1.28	0.98				--			
2/15/2023	0:50	192.1	0.916	16,621.6	1.055	1.02	1.27	1.02				--			
2/15/2023	0:51	192.1	0.917	18,541.4	1.176	1.06	1.28	1.06				--			
2/15/2023	0:52	192.1	0.917	16,996.4	1.079	1.02	1.26	1.02				--			
2/15/2023	0:53	192.1	0.917	16,332.6	1.036	1.03	1.28	1.03				--			
2/15/2023	0:54	192.1	0.917	15,280.2	0.970	1.01	1.28	1.01				--			
2/15/2023	0:55	192.1	0.917	12,789.5	0.812	1.11	1.27	1.11				--			
2/15/2023	0:56	192.1	0.917	15,987.0	1.015	1.01	1.26	1.01				--			
2/15/2023	0:57	192.1	0.917	21,835.9	1.519	1.03	1.27	1.03				--			
2/15/2023	0:58	192.0	0.917	23,190.3	1.471	1.09	1.28	1.09				--			
2/15/2023	0:59	192.1	0.917	21,944.2	1.246	1.02	1.26	1.02				--			
2/15/2023	1:00				--							--			
2/15/2023	1:01	192.1	0.917	24,965.3	1.417	1.04	1.26	1.04				--			
2/15/2023	1:02	192.1	0.917	16,729.3	1.061	1.03	1.26	1.03				--			
2/15/2023	1:03	192.1	0.917	20,008.8	1.391	1.05	1.26	1.05				--			
2/15/2023	1:04	192.1	0.917	19,710.6	1.251	0.99	1.26	0.99				--			
2/15/2023	1:05	192.1	0.917	16,410.8	1.042	1.01	1.26	1.01				--			
2/15/2023	1:06	192.1	0.917	17,177.3	1.091	1.01	1.26	1.01				--			
2/15/2023	1:07	192.1	0.917	22,148.3	1.257	0.99	1.26	0.99				--			
2/15/2023	1:08	192.1	0.916	20,756.6	1.444	1.01	1.26	1.01				--			
2/15/2023	1:09	192.1	0.917	26,144.1	1.661	1.09	1.25	1.09				--			
2/15/2023	1:10	192.1	0.917	25,722.3	1.461	1.01	1.26	1.01				--			
2/15/2023	1:11	192.1	0.917	20,731.9	1.177	1.01	1.26	1.01				--			
2/15/2023	1:12	192.1	0.917	31,201.6	1.772	0.98	1.25	0.98				--			
2/15/2023	1:13	192.1	0.917	28,722.1	1.822	1.05	1.25	1.05				--			
2/15/2023	1:14	192.1	0.917	19,001.2	0.934	1.04	1.25	1.04				--			
2/15/2023	1:15	192.1	0.917	27,469.2	1.743	1.08	1.25	1.08				--			
2/15/2023	1:16	192.1	0.917	14,285.5	0.907	1.02	1.25	1.02				--			
2/15/2023	1:17	192.1	0.917	20,234.6	1.149	1.05	1.25	1.05				--			
2/15/2023	1:18	192.1	0.917	13,335.3	0.757	0.99	1.26	0.99				--			
2/15/2023	1:19	192.1	0.917	17,856.0	1.014	1.12	1.24	1.12				--			
2/15/2023	1:20	192.1	0.917	21,978.2	1.529	1.00	1.24	1.00				--			
2/15/2023	1:21	192.1	0.917	16,941.6	0.962	1.00	1.24	1.00				--			
2/15/2023	1:22				--							--			
2/15/2023	1:23	192.1	0.917	22,463.8	1.276	0.97	1.23	0.97				--			
2/15/2023	1:24	192.1	0.917	23,596.7	1.499	1.01	1.22	1.01				--			
2/15/2023	1:25	192.1	0.917	22,606.1	1.284	0.97	1.24	0.97				--			
2/15/2023	1:26	192.1	0.917	20,951.7	1.031	1.00	1.22	1.00				--			
2/15/2023	1:27	192.1	0.917	24,171.2	1.535	0.99	1.22	0.99				--			
2/15/2023	1:28	192.1	0.917	23,216.9	1.319	1.02	1.22	1.02				--			
2/15/2023	1:29	192.1	0.917	22,999.3	1.307	0.98	1.21	0.98				--			
2/15/2023	1:30	192.1	0.917	23,522.1	1.337	1.00	1.22	1.00				--			
2/15/2023	1:31	192.1	0.917	24,933.6	1.417	0.98	1.20	0.98				--			
2/15/2023	1:32	192.1	0.917	27,895.5	1.586	0.97	1.21	0.97				--			
2/15/2023	1:33	192.1	0.917	27,096.4	1.722	1.01	1.21	1.01				--			
2/15/2023	1:34	192.1	0.917	25,144.9	1.598	0.97	1.21	0.97				--			
2/15/2023	1:35	192.1	0.917	27,899.7	1.585	0.97	1.22	0.97				--			
2/15/2023	1:36	192.1	0.917	27,515.5	1.748	1.07	1.21	1.07				--			
2/15/2023	1:37	192.1	0.917	27,142.7	1.543	1.10	1.22	1.10				--			
2/15/2023	1:38	192.1	0.917	29,701.3	1.886	0.97	1.21	0.97				--			
2/15/2023	1:39	192.1	0.917	23,909.5	1.518	0.97	1.21	0.97				--			
2/15/2023	1:40	192.1	0.917	27,021.0	1.717	1.20	1.20	1.20				--			
2/15/2023	1:41	192.1	0.917	22,040.2	1.252	1.02	1.22	1.02				--			
2/15/2023	1:42	192.1	0.917	21,598.6	1.227	1.01	1.20	1.01				--			
2/15/2023	1:43	192.1	0.917	22,131.9	1.406	0.96	1.20	0.96				--			
2/15/2023	1:44				--							--			
2/15/2023	1:45	192.1	0.917	22,987.7	1.305	0.99	1.21	0.99				--			
2/15/2023	1:46	192.1	0.917	23,547.1	1.496	1.01	1.19	1.01				--			
2/15/2023	1:47	192.1	0.917	22,950.8	1.304	1.00	1.20	1.00				--			
2/15/2023	1:48	192.1	0.917	21,575.6	1.370	0.97	1.20	0.97				--			
2/15/2023	1:49	192.1	0.917	21,781.0	1.384	0.99	1.20	0.99				--			
2/15/2023	1:50	192.1	0.917	25,086.9	1.425	1.00	1.20	1.00				--			
2/15/2023	1:51	192.1	0.917	22,045.7	1.252	1.01	1.20	1.01				--			
2/15/2023	1:52	192.1	0.917	24,599.5	1.398	0.99	1.20	0.99				--			
2/15/2023	1:53	192.1	0.917	25,836.2	1.641	1.01	1.20	1.01				--			
2/15/2023	1:54	192.0	0.917	20,049.2	1.139	0.97	1.19	0.97				--			
2/15/2023	1:55	192.1	0.917	26,482.0	1.303	1.33	1.20	1.20				--			
2/15/2023	1:56	192.1	0.917	23,598.3	1.340	1.02	1.20	1.02				--			
2/15/2023	1:57	192.1	0.917	23,731.6	1.348	0.99	1.20	0.99				--			
2/15/2023	1:58	192.1	0.917	19,891.7	3.993	1.01	1.20	1.01				--			
2/15/2023	1:59	192.1	0.917	19,419.6	5.811	1.04	1.19	1.04				--			
2/15/2023	2:00	192.1	0.917	18,517.4	4.904	1.04	1.20	1.04				--			
2/15/2023	2:01	192.1	0.917	16,151.1	4.810	0.99	1.19	0.99				--			
2/15/2023	2:02	192.1	0.917	17,524.6	4.395	1.01	1.20	1.01				--			
2/15/2023	2:03	192.1	0.918	18,025.1	1.024	1.00	1.19	1.00				--			
2/15/2023	2:04	192.1	0.917	16,215.1	1.030	1.01	1.18	1.01				--			
2/15/2023	2:05	192.1	0.917	20,603.2	1.178	1.02	1.20	1.02				--			
2/15/2023	2:06				--							--			
2/15/2023	2:07	192.1	0.918	17,169.4	1.102	1.02	1.20	1.02				--			
2/15/2023	2:08	192.1	0.918	17,580.9	1.010	1.26	1.20	1.20				--			
2/15/2023	2:09	192.1	0.919	25,026.2	1.432	1.54	1.19	1.19				--			

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet $_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	2:10	192.1	0.919	28,676.9	1.635	0.97	1.19	0.97				--			
2/15/2023	2:11	192.1	0.920	41,413.5	2.360	1.04	1.18	1.04				--			
2/15/2023	2:12	192.1	0.919	104,012.8	6.612	0.20	1.18	0.20				--			
2/15/2023	2:13	192.1	0.918	63,611.9	3.620	0.23	1.17	0.23				--			
2/15/2023	2:14	192.1	0.918	49,590.7	3.156	0.56	1.17	0.56				--			
2/15/2023	2:15	192.1	0.918	46,324.5	2.284	0.74	1.18	0.74				--			
2/15/2023	2:16	192.0	0.918	41,783.9	2.380	0.93	1.17	0.93				--			
2/15/2023	2:17	192.1	0.918	45,926.0	2.264	0.74	1.16	0.74				--			
2/15/2023	2:18	192.1	0.918	42,554.0	2.709	0.85	1.16	0.85				--			
2/15/2023	2:19	192.1	0.918	42,311.0	2.692	0.87	1.16	0.87				--			
2/15/2023	2:20	192.1	0.918	38,376.9	1.892	0.90	1.16	0.90				--			
2/15/2023	2:21	192.1	0.918	35,164.4	2.238	0.91	1.16	0.91				--			
2/15/2023	2:22	192.1	0.918	28,750.3	1.638	1.08	1.15	1.08				--			
2/15/2023	2:23	192.1	0.918	34,550.0	1.967	0.92	1.15	0.92				--			
2/15/2023	2:24	192.1	0.918	32,151.6	1.831	1.04	1.15	1.04				--			
2/15/2023	2:25	192.1	0.918	34,732.9	1.978	0.85	1.14	0.85				--			
2/15/2023	2:26	192.1	0.918	33,010.6	1.880	0.91	1.15	0.91				--			
2/15/2023	2:27	192.1	0.918	29,016.8	1.848	0.98	1.13	0.98				--			
2/15/2023	2:28				--							--			
2/15/2023	2:29	192.1	0.918	31,980.9	2.036	0.90	1.14	0.90				--			
2/15/2023	2:30	192.1	0.918	34,868.9	1.985	0.92	1.13	0.92				--			
2/15/2023	2:31	192.1	0.918	31,279.0	1.782	0.95	1.12	0.95				--			
2/15/2023	2:32	192.1	0.918	24,664.0	1.406	0.96	1.12	0.96				--			
2/15/2023	2:33	192.1	0.918	27,906.6	1.589	0.92	1.11	0.92				--			
2/15/2023	2:34	192.1	0.918	25,483.6	1.453	0.92	1.11	0.92				--			
2/15/2023	2:35	192.1	0.918	33,960.9	1.937	0.98	1.11	0.98				--			
2/15/2023	2:36	192.1	0.918	26,967.5	1.718	0.95	1.11	0.95				--			
2/15/2023	2:37	192.1	0.918	28,477.9	1.623	0.97	1.12	0.97				--			
2/15/2023	2:38	192.1	0.919	34,591.2	1.971	0.85	1.11	0.85				--			
2/15/2023	2:39	192.1	0.919	31,763.7	1.569	1.11	1.09	1.09				--			
2/15/2023	2:40	192.1	0.919	28,958.7	1.651	0.98	1.10	0.98				--			
2/15/2023	2:41	192.1	0.919	28,971.6	1.846	0.91	1.09	0.91				--			
2/15/2023	2:42	192.1	0.918	31,156.9	1.776	0.89	1.10	0.89				--			
2/15/2023	2:43	192.1	0.919	34,605.9	2.206	0.87	1.09	0.87				--			
2/15/2023	2:44	192.1	0.919	25,945.5	1.654	0.90	1.08	0.90				--			
2/15/2023	2:45	192.1	0.918	30,081.5	1.715	0.87	1.08	0.87				--			
2/15/2023	2:46	192.1	0.918	30,157.0	1.922	0.88	1.08	0.88				--			
2/15/2023	2:47	192.1	0.918	28,746.2	1.639	0.87	1.08	0.87				--			
2/15/2023	2:48	192.1	0.918	23,367.8	1.491	0.95	1.08	0.95				--			
2/15/2023	2:49	192.1	0.918	26,515.6	4.414	0.93	1.07	0.93				--			
2/15/2023	2:50				--							--			
2/15/2023	2:51	192.1	0.918	30,235.8	15.260	0.84	1.06	0.84				--			
2/15/2023	2:52	192.1	0.919	33,381.2	17.672	0.87	1.05	0.87				--			
2/15/2023	2:53	192.1	0.919	40,519.6	22.474	0.84	1.06	0.84				--			
2/15/2023	2:54	192.1	0.919	37,175.8	21.007	0.87	1.05	0.87				--			
2/15/2023	2:55	192.2	0.919	29,392.3	17.129	0.87	1.04	0.87				--			
2/15/2023	2:56	192.1	0.918	32,045.2	18.861	0.87	1.04	0.87				--			
2/15/2023	2:57	192.1	0.918	32,206.1	19.126	0.86	1.06	0.86				--			
2/15/2023	2:58	192.1	0.919	33,886.6	20.497	0.82	1.07	0.82				--			
2/15/2023	2:59	192.1	0.919	29,930.7	17.867	0.91	1.11	0.91				--			
2/15/2023	3:00	192.1	0.922	10,365.8	6.284	0.20	1.14	0.20				--			
2/15/2023	3:01	192.1	0.922	8,095.5	4.922	0.20	1.21	0.20				--			
2/15/2023	3:02	192.1	0.923	7,060.2	4.281	0.20	1.29	0.20				--			
2/15/2023	3:03	192.1	0.923	5,759.3	3.487	0.20	1.38	0.20				--			
2/15/2023	3:04	192.1	0.923	5,021.5	3.080	0.20	1.46	0.20				--			
2/15/2023	3:05	192.2	0.923	4,399.5	2.682	0.20	1.57	0.20				--			
2/15/2023	3:06	192.1	0.924	3,918.5	2.416	0.20	1.67	0.20				--			
2/15/2023	3:07	192.1	0.924	3,519.7	2.164	0.20	1.77	0.20				--			
2/15/2023	3:08	192.1	0.924	3,164.9	1.964	0.20	1.88	0.20				--			
2/15/2023	3:09	192.2	0.923	2,883.1	1.783	0.20	2.00	0.20				--			
2/15/2023	3:10	192.1	0.924	2,634.2	1.644	0.20	2.14	0.20				--			
2/15/2023	3:11	192.1	0.924	2,427.0	1.512	0.20	2.24	0.20				--			
2/15/2023	3:12				--							--			
2/15/2023	3:13	192.2	0.923	2,266.1	1.421	0.20	2.47	0.20				--			
2/15/2023	3:14	192.1	0.924	2,051.8	1.294	0.20	2.61	0.20				--			
2/15/2023	3:15	192.2	0.924	1,881.4	1.161	0.20	2.70	0.20				--			
2/15/2023	3:16	192.2	0.924	1,883.9	1.167	0.20	2.77	0.20				--			
2/15/2023	3:17	192.1	0.924	1,778.6	1.187	0.20	2.84	0.20				--			
2/15/2023	3:18	192.1	0.924	1,685.9	1.101	0.24	2.93	0.24				--			
2/15/2023	3:19	192.2	0.923	1,598.6	1.035	0.27	3.01	0.27				--			
2/15/2023	3:20	192.1	0.924	1,520.9	0.972	0.30	3.03	0.30				--			
2/15/2023	3:21	192.1	0.924	1,449.5	0.924	0.32	3.09	0.32				--			
2/15/2023	3:22	192.1	0.924	1,379.5	0.883	0.34	3.10	0.34				--			
2/15/2023	3:23	192.1	0.924	1,317.4	0.840	0.37	3.13	0.37				--			
2/15/2023	3:24	192.1	0.924	1,261.0	0.813	0.38	3.15	0.38				--			
2/15/2023	3:25	192.1	0.924	1,209.0	0.783	0.40	3.20	0.40				--			
2/15/2023	3:26	192.1	0.924	1,162.7	0.762	0.41	3.19	0.41				--			
2/15/2023	3:27	192.1	0.923	1,021.2	0.667	2.59	3.21	2.59				--			
2/15/2023	3:28	192.1	0.923	1,056.7	0.687	6.01	3.21	3.21				--			
2/15/2023	3:29	192.1	0.923	1,043.6	0.681	4.97	3.23	3.23				--			
2/15/2023	3:30	192.1	0.924	997.7	0.656	4.29	3.23	3.23				--			
2/15/2023	3:31	192.1	0.924	959.7	0.628	2.33	3.24	2.33				--			
2/15/2023	3:32	192.1	0.924	948.1	0.615	1.72	3.23	1.72				--			
2/15/2023	3:33	192.1	0.923	863.3	0.555	3.52	3.26	3.26				--			
2/15/2023	3:34				--							--			
2/15/2023	3:35	192.1	0.923	857.2	0.554	3.26	3.37	3.26				--			
2/15/2023	3:36	192.1	0.924	828.5	0.528	2.69	3.38	2.69				--			
2/15/2023	3:37	192.1	0.923	821.0	0.529	2.54	3.38	2.54				--			
2/15/2023	3:38	192.1	0.924	797.6	0.511	2.70	3.41	2.70				--			
2/15/2023	3:39	192.1	0.923	759.2	0.495	3.87	3.45	3.45				--			
2/15/2023	3:40	192.1	0.924	734.2	0.473	2.34	3.47	2.34				--			
2/15/2023	3:41	192.1	0.924	709.7	0.456	2.92	3.49	2.92				--			
2/15/2023	3:42	192.1	0.923	669.6	0.435	2.99	3.51	2.99				--			
2/15/2023	3:43	192.2	0.924	666.5	0.435	2.77	3.51	2.77				--			
2/15/2023	3:44	192.2	0.924	664.8	0.430	3.18	3.52	3.18				--			

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet $_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	3:45	192.1	0.923	628.3	0.407	2.89	3.53	2.89				--			
2/15/2023	3:46	192.1	0.924	601.2	0.384	2.87	3.56	2.87				--			
2/15/2023	3:47	192.1	0.924	599.5	0.363	2.94	3.53	2.94				--			
2/15/2023	3:48	192.2	0.924	571.1	0.348	3.03	3.53	3.03				--			
2/15/2023	3:49	192.2	0.924	575.4	0.359	3.16	3.53	3.16				--			
2/15/2023	3:50	192.2	0.924	542.4	0.346	3.42	3.50	3.42				--			
2/15/2023	3:51	192.1	0.924	538.0	0.346	3.30	3.50	3.30				--			
2/15/2023	3:52	192.1	0.924	517.2	0.333	3.05	3.51	3.05				--			
2/15/2023	3:53	192.1	0.924	475.1	0.307	3.56	3.51	3.51				--			
2/15/2023	3:54	192.2	0.924	485.8	0.314	3.03	3.51	3.03				--			
2/15/2023	3:55	192.2	0.924	448.4	0.295	3.59	3.45	3.45				--			
2/15/2023	3:56				--							--			
2/15/2023	3:57	192.2	0.924	466.3	0.304	2.74	3.43	2.74				--			
2/15/2023	3:58	192.2	0.923	449.3	0.292	3.05	3.43	3.05				--			
2/15/2023	3:59	192.1	0.924	449.4	0.296	3.63	3.46	3.46				--			
2/15/2023	4:00	192.1	0.924	433.3	0.279	3.34	3.45	3.34				--			
2/15/2023	4:01	192.2	0.924	407.0	0.263	3.57	3.46	3.46				--			
2/15/2023	4:02	192.1	0.924	424.4	0.272	2.94	3.46	2.94				--			
2/15/2023	4:03	192.1	0.924	360.8	0.231	3.60	3.47	3.47				--			
2/15/2023	4:04	192.1	0.924	402.4	0.258	2.98	3.43	2.98				--			
2/15/2023	4:05	192.2	0.924	375.6	0.241	3.10	3.47	3.10				--			
2/15/2023	4:06	192.2	0.924	358.0	0.234	3.56	3.45	3.45				--			
2/15/2023	4:07	192.2	0.924	361.2	0.237	3.17	3.48	3.17				--			
2/15/2023	4:08	192.2	0.924	346.8	0.225	3.33	3.48	3.33				--			
2/15/2023	4:09	192.1	0.924	328.3	0.213	3.56	3.44	3.44				--			
2/15/2023	4:10	192.1	0.924	330.4	0.210	3.40	3.46	3.40				--			
2/15/2023	4:11	192.1	0.924	310.5	0.199	3.44	3.44	3.44				--			
2/15/2023	4:12	192.2	0.924	320.4	0.206	2.93	3.48	2.93				--			
2/15/2023	4:13	192.1	0.924	290.6	0.185	3.56	3.47	3.47				--			
2/15/2023	4:14	192.2	0.924	284.0	0.184	3.57	3.46	3.46				--			
2/15/2023	4:15	192.1	0.924	283.6	0.183	3.20	3.45	3.20				--			
2/15/2023	4:16	192.2	0.925	289.4	0.189	3.13	3.43	3.13				--			
2/15/2023	4:17	192.1	0.925	265.9	0.171	3.66	3.42	3.42				--			
2/15/2023	4:18				--							--			
2/15/2023	4:19	192.2	0.925	268.3	0.175	3.20	3.41	3.20				--			
2/15/2023	4:20	192.2	0.925	278.6	0.181	3.45	3.39	3.39				--			
2/15/2023	4:21	192.2	0.925	257.2	0.170	3.26	3.38	3.26				--			
2/15/2023	4:22	192.2	0.925	251.0	0.164	3.78	3.37	3.37				--			
2/15/2023	4:23	192.2	0.925	234.9	0.153	3.89	3.37	3.37				--			
2/15/2023	4:24	192.2	0.925	235.9	0.152	3.63	3.33	3.33				--			
2/15/2023	4:25	192.2	0.925	213.6	0.136	3.46	3.37	3.37				--			
2/15/2023	4:26	192.2	0.925	215.0	0.138	3.54	3.37	3.37				--			
2/15/2023	4:27	192.2	0.925	206.3	0.132	3.29	3.35	3.29				--			
2/15/2023	4:28	192.2	0.925	203.5	0.131	3.36	3.34	3.34				--			
2/15/2023	4:29	192.2	0.925	198.1	0.128	3.26	3.33	3.26				--			
2/15/2023	4:30	192.2	0.925	192.6	0.125	3.35	3.31	3.31				--			
2/15/2023	4:31	192.2	0.925	185.5	0.121	3.52	3.31	3.31				--			
2/15/2023	4:32	192.2	0.925	186.5	0.122	3.22	3.26	3.22				--			
2/15/2023	4:33	192.2	0.925	175.5	0.114	3.29	3.21	3.21				--			
2/15/2023	4:34	192.2	0.925	180.2	0.118	3.51	3.20	3.20				--			
2/15/2023	4:35	192.2	0.925	171.4	0.111	3.22	3.17	3.17				--			
2/15/2023	4:36	192.2	0.925	172.6	0.113	3.08	3.13	3.08				--			
2/15/2023	4:37	192.2	0.925	150.5	0.096	3.58	3.10	3.10				--			
2/15/2023	4:38	192.2	0.926	169.8	0.105	2.82	3.07	2.82				--			
2/15/2023	4:39	192.2	0.925	149.4	0.096	3.53	3.05	3.05				--			
2/15/2023	4:40				--							--			
2/15/2023	4:41	192.2	0.925	148.8	0.097	3.03	3.04	3.03				--			
2/15/2023	4:42	192.2	0.926	157.4	0.104	2.65	3.05	2.65				--			
2/15/2023	4:43	192.2	0.925	149.0	0.097	3.20	3.03	3.03				--			
2/15/2023	4:44	192.2	0.926	135.8	0.089	3.18	3.03	3.03				--			
2/15/2023	4:45	192.2	0.925	135.0	0.088	3.19	3.05	3.05				--			
2/15/2023	4:46	192.2	0.926	136.8	0.090	2.84	3.03	2.84				--			
2/15/2023	4:47	192.2	0.926	131.7	0.086	3.08	3.08	3.08				--			
2/15/2023	4:48	192.2	0.926	151.6	0.100	1.37	3.06	1.37				--			
2/15/2023	4:49	192.2	0.926	143.4	0.093	1.06	3.12	1.06				--			
2/15/2023	4:50	192.2	0.926	140.3	0.092	0.96	3.12	0.96				--			
2/15/2023	4:51	192.2	0.926	137.0	0.089	0.85	3.12	0.85				--			
2/15/2023	4:52	192.2	0.926	134.2	0.086	0.83	3.11	0.83				--			
2/15/2023	4:53	192.2	0.926	131.7	0.085	0.83	3.11	0.83				--			
2/15/2023	4:54	192.2	0.924	14.1	0.009	4.39	3.13	3.13				--			
2/15/2023	4:55	192.2	0.925	151.4	0.098	7.17	3.09	3.09				--			
2/15/2023	4:56	192.2	0.926	134.7	0.087	5.15	3.09	3.09				--			
2/15/2023	4:57	192.2	0.926	125.6	0.081	4.20	3.07	3.07				--			
2/15/2023	4:58	192.2	0.926	127.7	0.082	5.22	3.11	3.11				--			
2/15/2023	4:59	192.2	0.926	109.6	0.071	2.47	3.08	2.47				--			
2/15/2023	5:00	192.2	0.925	32.8	0.021	3.33	3.09	3.09				--			
2/15/2023	5:01	192.2	0.925	137.7	0.092	5.21	3.07	3.07				--			
2/15/2023	5:02				--							--			
2/15/2023	5:03	192.2	0.926	97.0	0.064	2.36	3.06	2.36				--			
2/15/2023	5:04	192.3	0.926	89.5	0.058	1.71	3.05	1.71				--			
2/15/2023	5:05	192.2	0.926	79.5	0.051	4.16	3.05	3.05				--			
2/15/2023	5:06	192.2	0.926	105.8	0.069	1.51	3.07	1.51				--			
2/15/2023	5:07	192.2	0.925	47.0	0.031	4.32	3.07	3.07				--			
2/15/2023	5:08	192.2	0.926	104.7	0.069	1.93	3.07	1.93				--			
2/15/2023	5:09	192.2	0.926	27.9	0.018	3.42	3.05	3.05				--			
2/15/2023	5:10	192.2	0.926	69.0	0.046	4.11	3.08	3.08				--			
2/15/2023	5:11	192.2	0.927	95.4	0.063	1.09	3.10	1.09				--			
2/15/2023	5:12	192.2	0.926	690.1	0.452	5.01	3.08	3.08				--			
2/15/2023	5:13	192.2	0.927	135.7	0.089	2.03	3.07	2.03				--			
2/15/2023	5:14	192.2	0.927	110.1	0.072	1.21	3.07	1.21				--			
2/15/2023	5:15	192.2	0.925	105.6	0.069	5.75	3.06	3.06				--			
2/15/2023	5:16	192.2	0.927	66.1	0.043	2.97	3.07	2.97				--			
2/15/2023	5:17	192.2	0.927	91.4	0.060	1.13	3.07	1.13				--			
2/15/2023	5:18	192.3	0.926	0.1	0.000	4.39	3.09	3.09				--			
2/15/2023	5:19	192.2	0.927	67.0	0.044	3.61	3.08	3.08				--			

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{cc}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{cc}$**	**BWS - Outlet $_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	5:20	192.3	0.927	82.2	0.053	1.45	3.07	1.45				--			
2/15/2023	5:21	192.3	0.927	65.9	0.043	1.54	3.10	1.54				--			
2/15/2023	5:22	192.3	0.926	108.2	0.071	6.54	3.13	3.13				--			
2/15/2023	5:23	192.2	0.927	85.7	0.056	4.72	3.10	3.10				--			
2/15/2023	5:24				--							--			
2/15/2023	5:25	192.2	0.927	68.1	0.045	1.68	3.09	1.68				--			
2/15/2023	5:26	192.2	0.927	73.3	0.048	1.01	3.05	1.01				--			
2/15/2023	5:27	192.2	0.926	0.1	0.000	3.79	3.05	3.05				--			
2/15/2023	5:28	192.2	0.926	89.8	0.059	4.92	3.04	3.04				--			
2/15/2023	5:29	192.3	0.927	66.2	0.043	3.53	3.01	3.01				--			
2/15/2023	5:30	192.3	0.927	36.8	0.024	3.85	3.01	3.01				--			
2/15/2023	5:31	192.2	0.927	22.2	0.015	3.26	2.98	2.98				--			
2/15/2023	5:32	192.3	0.927	46.6	0.030	3.78	2.98	2.98				--			
2/15/2023	5:33	192.3	0.927	26.8	0.017	2.96	2.96	2.96				--			
2/15/2023	5:34	192.2	0.927	37.7	0.024	2.41	2.94	2.41				--			
2/15/2023	5:35	192.3	0.927	36.9	0.024	2.55	2.93	2.55				--			
2/15/2023	5:36	192.2	0.927	15.7	0.010	3.25	2.92	2.92				--			
2/15/2023	5:37	192.2	0.927	2.2	0.001	3.48	2.92	2.92				--			
2/15/2023	5:38	192.2	0.927	33.0	0.021	2.32	2.93	2.32				--			
2/15/2023	5:39	192.2	0.927	44.5	0.029	2.42	2.90	2.42				--			
2/15/2023	5:40	192.2	0.927	15.5	0.010	3.52	2.94	2.94				--			
2/15/2023	5:41	192.2	0.927	26.1	0.017	2.71	2.89	2.71				--			
2/15/2023	5:42	192.2	0.927	38.2	0.025	2.77	2.93	2.77				--			
2/15/2023	5:43	192.3	0.927	33.9	0.022	2.71	2.89	2.71				--			
2/15/2023	5:44	192.3	0.927	61.1	0.040	2.23	2.91	2.23				--			
2/15/2023	5:45				--							--			
2/15/2023	5:46	192.3	0.927	23.9	0.015	3.90	2.91	2.91				--			
2/15/2023	5:47	192.2	0.927	49.4	0.032	2.44	2.87	2.44				--			
2/15/2023	5:48	192.3	0.927	9.9	0.006	3.93	2.87	2.87				--			
2/15/2023	5:49	192.3	0.927	15.4	0.010	3.84	2.86	2.86				--			
2/15/2023	5:50	192.3	0.927	49.5	0.032	1.37	2.86	1.37				--			
2/15/2023	5:51	192.3	0.927	0.1	0.000	3.38	2.84	2.84				--			
2/15/2023	5:52	192.3	0.927	14.7	0.010	2.91	2.82	2.82				--			
2/15/2023	5:53	192.3	0.927	25.3	0.016	2.78	2.82	2.78				--			
2/15/2023	5:54	192.2	0.927	18.7	0.012	2.17	2.82	2.17				--			
2/15/2023	5:55	192.2	0.927	22.1	0.014	2.80	2.82	2.80				--			
2/15/2023	5:56	192.2	0.927	0.1	0.000	3.49	2.82	2.82				--			
2/15/2023	5:57	192.3	0.927	34.7	0.023	2.00	2.83	2.00				--			
2/15/2023	5:58	192.3	0.927	10.4	0.007	3.41	2.82	2.82				--			
2/15/2023	5:59	192.3	0.928	43.7	0.029	1.69	2.84	1.69				--			
2/15/2023	6:00	192.3	0.927	10.2	0.007	4.27	2.84	2.84				--			
2/15/2023	6:01	192.3	0.927	28.4	0.019	1.88	2.84	1.88				--			
2/15/2023	6:02	192.3	0.927	11.4	0.007	3.30	2.86	2.86				--			
2/15/2023	6:03	192.3	0.927	8.9	0.006	2.58	2.84	2.58				--			
2/15/2023	6:04	192.2	0.927	13.2	0.009	3.19	2.81	2.81				--			
2/15/2023	6:05	192.3	0.927	9.5	0.006	2.26	2.82	2.26				--			
2/15/2023	6:06	192.3	0.927	10.9	0.007	2.98	2.78	2.78				--			
2/15/2023	6:07				--							--			
2/15/2023	6:08	192.3	0.927	0.1	0.000	2.66	2.80	2.66				--			
2/15/2023	6:09	192.3	0.927	4.8	0.003	2.95	2.79	2.79				--			
2/15/2023	6:10	192.3	0.927	0.1	0.000	2.96	2.78	2.78				--			
2/15/2023	6:11	192.3	0.928	18.1	0.012	2.43	2.79	2.43				--			
2/15/2023	6:12	192.3	0.927	0.1	0.000	3.42	2.77	2.77				--			
2/15/2023	6:13	192.3	0.928	36.3	0.024	1.78	2.76	1.78				--			
2/15/2023	6:14	192.3	0.927	0.1	0.000	3.81	2.76	2.76				--			
2/15/2023	6:15	192.3	0.927	8.6	0.006	2.27	2.77	2.27				--			
2/15/2023	6:16	192.3	0.927	0.1	0.000	3.10	2.76	2.76				--			
2/15/2023	6:17	192.2	0.927	36.8	0.024	1.95	2.76	1.95				--			
2/15/2023	6:18	192.3	0.927	0.1	0.000	4.16	2.77	2.77				--			
2/15/2023	6:19	192.2	0.927	23.5	0.015	1.87	2.75	1.87				--			
2/15/2023	6:20	192.3	0.927	0.1	0.000	3.71	2.76	2.76				--			
2/15/2023	6:21	192.3	0.928	30.6	0.020	1.69	2.78	1.69				--			
2/15/2023	6:22	192.3	0.927	0.1	0.000	3.57	2.78	2.78				--			
2/15/2023	6:23	192.3	0.928	10.3	0.007	2.19	2.79	2.19				--			
2/15/2023	6:24	192.3	0.927	0.1	0.000	3.27	2.79	2.79				--			
2/15/2023	6:25	192.3	0.927	7.8	0.005	2.25	2.76	2.25				--			
2/15/2023	6:26	192.3	0.927	558.1	0.363	2.87	2.80	2.80				--			
2/15/2023	6:27	192.3	0.927	75.9	0.049	2.51	2.82	2.51				--			
2/15/2023	6:28	192.3	0.928	49.7	0.032	1.47	2.81	1.47				--			
2/15/2023	6:29				--							--			
2/15/2023	6:30	192.3	0.928	14.7	0.010	4.34	2.80	2.80				--			
2/15/2023	6:31	192.3	0.928	39.1	0.026	1.45	2.78	1.45				--			
2/15/2023	6:32	192.3	0.928	0.1	0.000	3.87	2.79	2.79				--			
2/15/2023	6:33	192.3	0.928	36.1	0.024	2.12	2.77	2.12				--			
2/15/2023	6:34	192.3	0.928	0.1	0.000	2.63	2.80	2.63				--			
2/15/2023	6:35	192.3	0.928	0.4	0.000	3.85	2.77	2.77				--			
2/15/2023	6:36	192.3	0.928	8.8	0.006	1.79	2.80	1.79				--			
2/15/2023	6:37	192.3	0.927	58.2	0.038	5.70	2.79	2.79				--			
2/15/2023	6:38	192.3	0.928	45.2	0.030	4.63	2.81	2.81				--			
2/15/2023	6:39	192.3	0.928	16.5	0.011	2.49	2.83	2.49				--			
2/15/2023	6:40	192.2	0.928	32.7	0.021	1.21	2.84	1.21				--			
2/15/2023	6:41	192.3	0.929	29.0	0.006	1.00	2.83	1.00				--			
2/15/2023	6:42	192.3	0.928	0.1	0.000	2.36	2.85	2.36				--			
2/15/2023	6:43	192.3	0.928	34.7	0.005	4.65	2.89	2.89				--			
2/15/2023	6:44	192.3	0.929	26.7	0.004	1.24	2.89	1.24				--			
2/15/2023	6:45	192.3	0.928	0.1	0.000	1.81	2.86	1.81				--			
2/15/2023	6:46	192.3	0.928	47.2	0.004	5.51	2.87	2.87				--			
2/15/2023	6:47	192.3	0.928	11.2	0.000	2.29	2.85	2.29				--			
2/15/2023	6:48	192.3	0.929	31.3	0.002	1.10	2.70	1.10				--			
2/15/2023	6:49	192.3	0.928	0.1	0.000	4.54	2.50	2.50				--			
2/15/2023	6:50	192.3	0.927	19.1	0.001	3.71	2.34	2.34				--			
2/15/2023	6:51				--							--			
2/15/2023	6:52	192.3	0.924	84.1	0.007	1.15	2.08	1.15				--			
2/15/2023	6:53	192.3	0.923	0.1	0.000	3.26	1.98	1.98				--			
2/15/2023	6:54	192.2	0.923	84.5	0.008	4.41	1.87	1.87				--			

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wt}$**	**BWS - Inlet$_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wt}$**	**BWS - Outlet$_{used}$**
	Unit	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	6:55	192.3	0.924	80.2	0.007	1.21	1.78	1.21				--			
2/15/2023	6:56	192.3	0.923	22.9	0.002	2.81	1.70	1.70				--			
2/15/2023	6:57	192.3	0.923	98.0	0.009	4.57	1.63	1.63				--			
2/15/2023	6:58	192.3	0.924	83.1	0.007	1.18	1.58	1.18				--			
2/15/2023	6:59	192.3	0.924	71.3	0.007	0.93	1.56	0.93				--			
2/15/2023	7:00	192.3	0.924	62.2	0.006	0.88	1.52	0.88				--			
2/15/2023	7:01	192.3	0.923	53.2	0.005	5.39	1.49	1.49				--			
2/15/2023	7:02	192.3	0.924	109.2	0.010	2.37	1.46	1.46				--			
2/15/2023	7:03	192.3	0.924	189.1	0.017	1.13	1.43	1.13				--			
2/15/2023	7:04	192.3	0.924	167.3	0.014	0.90	1.39	0.90				--			
2/15/2023	7:05	192.3	0.924	145.2	0.013	0.85	1.36	0.85				--			
2/15/2023	7:06	192.3	0.924	118.0	0.010	0.86	1.32	0.86				--			
2/15/2023	7:07	192.3	0.923	8.1	0.001	3.48	1.30	1.30				--			
2/15/2023	7:08	192.3	0.924	67.0	0.006	3.51	1.27	1.27				--			
2/15/2023	7:09	192.3	0.924	81.9	0.007	1.10	1.24	1.10				--			
2/15/2023	7:10	192.4	0.924	78.9	0.007	0.86	1.23	0.86				--			
2/15/2023	7:11	192.3	0.924	80.7	0.007	0.84	1.20	0.84				--			
2/15/2023	7:12	192.3	0.924	76.4	0.007	0.83	1.18	0.83				--			
2/15/2023	7:13				--							--			
2/15/2023	7:14	192.4	0.924	77.5	0.007	0.83	1.14	0.83				--			
2/15/2023	7:15	192.4	0.924	78.3	0.007	0.82	1.13	0.82				--			
2/15/2023	7:16	192.3	0.924	80.2	0.008	0.81	1.10	0.81				--			
2/15/2023	7:17	192.3	0.924	82.0	0.007	0.81	1.10	0.81				--			
2/15/2023	7:18	192.3	0.923	5,748.4	0.543	4.58	1.07	1.07				--			
2/15/2023	7:19	192.4	0.924	2,539.4	0.205	2.57	1.06	1.06				--			
2/15/2023	7:20	192.3	0.924	1,196.3	0.102	1.14	1.04	1.04				--			
2/15/2023	7:21	192.3	0.924	676.7	0.055	0.91	1.03	0.91				--			
2/15/2023	7:22	192.4	0.924	451.5	0.039	0.86	1.00	0.86				--			
2/15/2023	7:23	192.3	0.924	321.5	0.029	0.78	1.00	0.78				--			
2/15/2023	7:24	192.4	0.924	250.9	0.023	0.78	0.99	0.78				--			
2/15/2023	7:25	192.4	0.924	186.3	0.015	0.76	0.98	0.76				--			
2/15/2023	7:26	192.4	0.924	157.9	0.013	0.76	0.97	0.76				--			
2/15/2023	7:27	192.4	0.924	138.7	0.011	0.76	0.96	0.76				--			
2/15/2023	7:28	192.4	0.924	127.8	0.011	0.77	0.95	0.77				--			
2/15/2023	7:29	192.4	0.924	117.0	0.009	0.76	0.94	0.76				--			
2/15/2023	7:30	192.4	0.924	108.4	0.008	0.76	0.93	0.76				--			
2/15/2023	7:31	192.4	0.924	105.2	0.008	0.76	0.92	0.76				--			
2/15/2023	7:32	192.3	0.924	99.7	0.008	0.76	0.92	0.76				--			
2/15/2023	7:33	192.3	0.924	97.1	0.008	0.76	0.91	0.76				--			
2/15/2023	7:34	192.3	0.924	94.1	0.008	0.76	0.91	0.76				--			
2/15/2023	7:35				--							--			
2/15/2023	7:36	192.3	0.924	93.3	0.008	0.77	0.90	0.77				--			
2/15/2023	7:37	192.3	0.924	93.9	0.008	0.77	0.89	0.77				--			
2/15/2023	7:38	192.3	0.924	91.4	0.007	0.78	0.89	0.78				--			
2/15/2023	7:39	192.4	0.924	92.6	0.007	0.78	0.89	0.78				--			
2/15/2023	7:40	192.4	0.924	91.1	0.007	0.78	0.88	0.78				--			
2/15/2023	7:41	192.4	0.924	91.3	0.007	0.79	0.88	0.79				--			
2/15/2023	7:42	192.3	0.924	88.8	0.007	0.78	0.87	0.78				--			
2/15/2023	7:43	192.4	0.924	88.4	0.007	0.79	0.86	0.79				--			
2/15/2023	7:44	192.3	0.923	22.5	0.002	2.94	0.87	0.87				--			
2/15/2023	7:45	192.3	0.924	63.0	0.005	3.47	0.87	0.87				--			
2/15/2023	7:46	192.3	0.924	88.5	0.007	1.06	0.86	0.86				--			
2/15/2023	7:47	192.3	0.924	89.4	0.007	0.95	0.85	0.85				--			
2/15/2023	7:48	192.4	0.924	88.5	0.007	0.86	0.85	0.85				--			
2/15/2023	7:49	192.4	0.924	90.8	0.007	0.80	0.85	0.80	150.2	0.962	1.0	0.0013	0.52	0.89	0.52
2/15/2023	7:50	192.4	0.924	90.1	0.006	0.79	0.85	0.79	150.2	0.962	1.1	0.0014	0.52	0.89	0.52
2/15/2023	7:51	192.4	0.924	90.1	0.006	0.79	0.85	0.79	150.2	0.962	1.2	0.0015	0.52	0.90	0.52
2/15/2023	7:52	192.4	0.924	95.9	0.007	0.80	0.85	0.80	150.2	0.962	0.9	0.0012	0.52	0.90	0.52
2/15/2023	7:53	192.4	0.924	92.8	0.006	0.79	0.85	0.79	150.3	0.962	1.1	0.0014	0.52	0.90	0.52
2/15/2023	7:54	192.5	0.924	94.7	0.006	0.79	0.85	0.79	150.3	0.962	0.9	0.0011	0.53	0.90	0.53
2/15/2023	7:55	192.5	0.924	92.3	0.006	0.79	0.85	0.79	150.2	0.962	1.2	0.0015	0.52	0.90	0.52
2/15/2023	7:56				--				150.2	0.963	0.9	0.0012	0.53	0.90	0.53
2/15/2023	7:57	192.5	0.924	95.3	0.006	0.80	0.85	0.80	150.2	0.962	1.2	0.0014	0.53	0.89	0.53
2/15/2023	7:58	192.4	0.925	1,813.9	0.104	0.84	0.85	0.84	150.2	0.962	1.2	0.0015	0.53	0.90	0.53
2/15/2023	7:59	192.4	0.924	4,458.0	0.312	0.77	0.85	0.77	150.2	0.962	1.1	0.0014	0.53	0.90	0.53
2/15/2023	8:00	192.4	0.925	1,995.4	0.140	0.76	0.85	0.76	150.2	0.962	0.8	0.0010	0.53	0.90	0.53
2/15/2023	8:01	192.4	0.925	1,095.8	0.070	0.78	0.86	0.78	150.2	0.962	1.2	0.0015	0.53	0.90	0.53
2/15/2023	8:02	192.4	0.925	660.7	0.038	0.80	0.86	0.80	150.2	0.963	1.2	0.0014	0.53	0.91	0.53
2/15/2023	8:03	192.4	0.925	464.6	0.030	0.81	0.85	0.81	150.2	0.963	1.2	0.0015	0.54	0.91	0.54
2/15/2023	8:04	192.4	0.925	357.4	0.023	0.81	0.86	0.81	150.2	0.963	0.9	0.0011	0.55	0.91	0.55
2/15/2023	8:05	192.4	0.924	298.6	0.021	0.81	0.86	0.81	150.2	0.962	0.9	0.0011	0.55	0.92	0.55
2/15/2023	8:06	192.4	0.925	255.4	0.016	0.81	0.87	0.81	150.2	0.962	1.1	0.0014	0.54	0.91	0.54
2/15/2023	8:07	192.4	0.925	207.5	0.013	0.81	0.87	0.81				--			
2/15/2023	8:08	192.4	0.925	189.1	0.009	0.81	0.87	0.81	150.2	0.962	1.0	0.0012	0.55	0.92	0.55
2/15/2023	8:09	192.4	0.924	172.0	0.010	0.82	0.88	0.82	150.1	0.962	1.1	0.0014	0.55	0.93	0.55
2/15/2023	8:10	192.4	0.925	163.5	0.010	0.82	0.88	0.82	150.1	0.963	1.0	0.0012	0.56	0.94	0.56
2/15/2023	8:11	192.4	0.925	155.8	0.009	0.83	0.89	0.83	150.2	0.962	1.0	0.0012	0.56	0.94	0.56
2/15/2023	8:12	192.4	0.924	150.4	0.009	0.84	0.89	0.84	150.1	0.962	1.1	0.0013	0.57	0.95	0.57
2/15/2023	8:13	192.4	0.924	145.9	0.008	0.85	0.90	0.85	150.1	0.963	1.0	0.0012	0.57	0.95	0.57
2/15/2023	8:14	192.4	0.924	142.5	0.008	0.87	0.91	0.87	150.1	0.963	1.2	0.0015	0.57	0.96	0.57
2/15/2023	8:15	192.3	0.925	140.9	0.008	0.88	0.91	0.88	150.2	0.963	1.1	0.0013	0.57	0.95	0.57
2/15/2023	8:16	192.4	0.925	138.2	0.009	0.89	0.91	0.89	150.1	0.962	1.0	0.0012	0.57	0.96	0.57
2/15/2023	8:17	192.4	0.925	136.0	0.008	0.91	0.92	0.91	150.2	0.963	1.2	0.0014	0.57	0.96	0.57
2/15/2023	8:18				--				150.2	0.962	1.0	0.0012	0.58	0.97	0.58
2/15/2023	8:19	192.4	0.924	133.6	0.008	0.91	0.94	0.91	150.2	0.963	0.9	0.0011	0.58	0.97	0.58
2/15/2023	8:20	192.4	0.925	133.0	0.008	0.92	0.94	0.92	150.1	0.962	1.0	0.0012	0.58	0.97	0.58
2/15/2023	8:21	192.3	0.925	126.9	0.007	0.92	0.96	0.92	150.1	0.963	1.0	0.0011	0.59	0.98	0.59
2/15/2023	8:22	192.3	0.924	121.2	0.008	0.92	0.96	0.92	150.1	0.963	0.7	0.0009	0.59	0.98	0.59
2/15/2023	8:23	192.3	0.925	115.5	0.007	0.93	0.97	0.93	150.1	0.963	0.9	0.0010	0.60	0.98	0.60
2/15/2023	8:24	192.4	0.925	111.6	0.007	0.93	0.97	0.93	150.1	0.963	1.0	0.0011	0.60	0.99	0.60
2/15/2023	8:25	192.4	0.924	108.8	0.006	0.94	0.97	0.94	150.1	0.963	0.9	0.0011	0.60	1.00	0.60
2/15/2023	8:26	192.4	0.924	105.8	0.007	0.93	0.98	0.93	150.1	0.963	1.3	0.0015	0.60	1.00	0.60
2/15/2023	8:27	192.4	0.924	358.0	0.023	0.95	0.99	0.95	150.1	0.963	1.3	0.0014	0.60	1.01	0.60
2/15/2023	8:28	192.3	0.924	8,086.5	0.461	2.92	1.00	1.00	150.1	0.962	1.1	0.0013	0.61	1.01	0.61
2/15/2023	8:29	192.4	0.924	3,636.8	0.254	1.64	1.00	1.00	150.1	0.963	0.9	0.0011	0.61	1.03	0.61

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet $_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	8:30	192.4	0.924	1,909.9	0.144	1.17	1.01	1.01	150.1	0.963	1.4	0.0016	0.61	1.02	0.61
2/15/2023	8:31	192.4	0.924	1,132.9	0.072	1.09	1.00	1.00				--			
2/15/2023	8:32	192.4	0.924	723.3	0.046	1.04	1.02	1.02	150.1	0.963	1.2	0.0013	0.62	1.03	0.62
2/15/2023	8:33	192.4	0.924	508.3	0.035	0.98	1.02	0.98	150.1	0.963	1.2	0.0013	0.62	1.02	0.62
2/15/2023	8:34	192.4	0.924	378.0	0.022	0.99	1.03	0.99	150.1	0.963	0.9	0.0010	0.62	1.03	0.62
2/15/2023	8:35	192.3	0.924	300.4	0.017	0.99	1.02	0.99	150.1	0.963	1.3	0.0014	0.62	1.03	0.62
2/15/2023	8:36	192.3	0.924	248.8	0.016	0.99	1.03	0.99	150.1	0.963	1.0	0.0011	0.63	1.04	0.63
2/15/2023	8:37	192.4	0.924	196.7	0.013	0.97	1.03	0.97	150.1	0.963	1.1	0.0011	0.63	1.04	0.63
2/15/2023	8:38	192.4	0.924	168.1	0.017	0.98	1.03	0.98	150.1	0.963	1.1	0.0012	0.64	1.04	0.64
2/15/2023	8:39	192.3	0.924	148.1	0.010	0.98	1.05	0.98	150.1	0.963	1.1	0.0012	0.64	1.05	0.64
2/15/2023	8:40				--				150.1	0.963	1.2	0.0013	0.65	1.06	0.65
2/15/2023	8:41	192.3	0.924	132.1	0.008	0.98	1.06	0.98	150.1	0.963	0.9	0.0010	0.65	1.06	0.65
2/15/2023	8:42	192.3	0.924	120.1	0.007	0.99	1.05	0.99	150.1	0.963	0.9	0.0010	0.65	1.06	0.65
2/15/2023	8:43	192.3	0.924	114.3	0.007	0.99	1.07	0.99	150.1	0.963	0.9	0.0010	0.65	1.06	0.65
2/15/2023	8:44	192.3	0.924	108.2	0.008	0.98	1.06	0.98	150.1	0.963	1.1	0.0012	0.65	1.07	0.65
2/15/2023	8:45	192.3	0.924	102.1	0.007	0.98	1.06	0.98	150.1	0.963	1.0	0.0011	0.66	1.06	0.66
2/15/2023	8:46	192.3	0.924	95.3	0.007	0.98	1.07	0.98	150.1	0.963	1.1	0.0011	0.66	1.07	0.66
2/15/2023	8:47	192.3	0.923	90.2	0.006	0.98	1.08	0.98	150.1	0.963	1.3	0.0013	0.67	1.06	0.67
2/15/2023	8:48	192.4	0.924	86.4	0.005	0.99	1.08	0.99	150.1	0.963	1.2	0.0012	0.67	1.07	0.67
2/15/2023	8:49	192.3	0.924	82.0	0.005	0.99	1.09	0.99	150.1	0.963	1.2	0.0013	0.67	1.07	0.67
2/15/2023	8:50	192.3	0.924	3,370.1	0.192	1.13	1.09	1.09	150.1	0.963	1.4	0.0015	0.68	1.08	0.68
2/15/2023	8:51	192.3	0.924	5,191.9	--	0.97	1.10	0.97	150.1	0.963	1.0	0.0011	0.68	1.08	0.68
2/15/2023	8:52	192.3	0.924	2,577.0	--	0.99	1.10	0.99	150.1	0.963	1.3	0.0014	0.68	1.08	0.68
2/15/2023	8:53	192.3	0.924	1,425.6	--	1.00	1.11	1.00	150.1	0.963	1.3	--	0.68	1.09	0.68
2/15/2023	8:54	192.3	0.924	885.6	--	1.03	1.11	1.03				--			
2/15/2023	8:55	192.3	0.924	588.6	--	1.03	1.11	1.03	150.1	0.963	1.0	--	0.67	1.10	0.67
2/15/2023	8:56	192.3	0.924	435.4	--	1.04	1.10	1.04	150.1	0.975	1.3	--	0.67	1.10	0.67
2/15/2023	8:57	192.3	0.924	334.4	--	1.04	1.10	1.04	150.1	0.983	1.2	--	0.67	1.10	0.67
2/15/2023	8:58	192.3	0.937	183.7	--	0.80	1.10	0.80	150.2	0.983	1.1	--	0.68	1.10	0.68
2/15/2023	8:59	192.4	0.959	0.1	--	0.20	1.09	0.20	150.2	0.983	1.4	0.0014	0.67	1.10	0.67
2/15/2023	9:00	192.4	0.959	0.1	0.000	0.20	1.10	0.20	150.2	0.983	1.2	0.0012	0.67	1.10	0.67
2/15/2023	9:01	192.4	0.959	0.1	0.000	0.20	1.09	0.20				--			
2/15/2023	9:02				--							--			
2/15/2023	9:03				--							--			
2/15/2023	9:04				--							--			
2/15/2023	9:05				--							--			
2/15/2023	9:06				--							--			
2/15/2023	9:07				--							--			
2/15/2023	9:08				--							--			
2/15/2023	9:09				--							--			
2/15/2023	9:10				--							--			
2/15/2023	9:11				--							--			
2/15/2023	9:12				--							--			
2/15/2023	9:13				--							--			
2/15/2023	9:14				--							--			
2/15/2023	9:15				--							--			
2/15/2023	9:16				--							--			
2/15/2023	9:17				--							--			
2/15/2023	9:18				--							--			
2/15/2023	9:19				--							--			
2/15/2023	9:20	192.3	0.923	322.3	0.020	1.13	1.24	1.13				--			
2/15/2023	9:21	192.3	0.922	243.0	--	1.86	1.24	1.24				--			
2/15/2023	9:22	192.3	0.922	219.0	--	2.85	1.25	1.25				--			
2/15/2023	9:23	192.3	0.923	206.9	--	1.47	1.23	1.23				--			
2/15/2023	9:24	192.3	0.924	181.5	--	1.17	1.24	1.17	150.1	0.963	0.3	--	0.75	1.19	0.75
2/15/2023	9:25	192.3	0.928	2.4	--	0.78	1.25	0.78	150.1	0.963	0.3	--	0.74	1.19	0.74
2/15/2023	9:26	192.3	0.928	0.1	--	0.63	1.25	0.63	150.1	0.963	0.1	--	0.73	1.19	0.73
2/15/2023	9:27	192.3	0.927	1.1	--	0.56	1.26	0.56	150.0	0.964	0.3	--	0.70	1.18	0.70
2/15/2023	9:28	192.3	0.927	18.8	--	0.62	1.27	0.62	150.1	0.969	0.4	--	0.20	1.19	0.20
2/15/2023	9:29	192.2	0.929	4.9	--	0.55	1.28	0.55	150.0	0.969	0.4	--	0.20	1.19	0.20
2/15/2023	9:30	192.2	0.929	0.1	--	0.50	1.29	0.50	150.0	0.968	0.1	--	0.20	1.20	0.20
2/15/2023	9:31	192.2	0.924	1,964.3	--	0.77	1.30	0.77	150.0	0.966	0.1	--	0.20	1.21	0.20
2/15/2023	9:32	192.2	0.923	2,293.6	--	1.07	1.32	1.07				--			
2/15/2023	9:33	192.3	0.923	1,252.5	0.071	1.11	1.33	1.11	150.0	0.963	0.1	0.0001	0.53	1.19	0.53
2/15/2023	9:34	192.2	0.923	768.3	0.057	1.14	1.34	1.14	150.0	0.963	0.1	0.0001	0.53	1.21	0.53
2/15/2023	9:35	192.2	0.923	534.2	0.045	1.15	1.35	1.15	150.0	0.963	0.1	0.0001	0.53	1.20	0.53
2/15/2023	9:36	192.2	0.923	382.0	0.031	1.18	1.36	1.18	150.0	0.963	0.1	0.0001	0.53	1.21	0.53
2/15/2023	9:37	192.2	0.923	295.5	0.020	1.20	1.38	1.20	150.0	0.963	0.1	0.0001	0.53	1.22	0.53
2/15/2023	9:38	192.3	0.923	238.0	0.013	1.22	1.40	1.22	150.0	0.963	0.1	0.0001	0.54	1.22	0.54
2/15/2023	9:39	192.3	0.923	189.3	0.013	1.21	1.39	1.21	150.0	0.963	0.1	0.0001	0.54	1.22	0.54
2/15/2023	9:40	192.2	0.923	166.9	0.011	1.21	1.40	1.21	150.0	0.963	0.1	0.0001	0.53	1.23	0.53
2/15/2023	9:41				--				150.1	0.963	0.1	0.0001	0.53	1.23	0.53
2/15/2023	9:42	192.2	0.923	151.5	0.012	1.21	1.42	1.21	150.0	0.963	0.1	0.0001	0.54	1.24	0.54
2/15/2023	9:43	192.2	0.923	139.5	0.010	1.20	1.42	1.20	150.0	0.963	0.1	0.0001	0.54	1.24	0.54
2/15/2023	9:44	192.2	0.923	126.9	0.009	1.20	1.43	1.20	150.0	0.963	0.1	0.0001	0.54	1.24	0.54
2/15/2023	9:45	192.3	0.923	5,028.0	0.376	1.35	1.43	1.35	150.0	0.963	0.3	0.0002	0.53	1.24	0.53
2/15/2023	9:46	192.3	0.923	5,955.0	0.476	1.18	1.44	1.18	150.0	0.963	0.1	0.0001	0.54	1.24	0.54
2/15/2023	9:47	192.2	0.923	2,694.9	0.215	1.21	1.44	1.21	150.0	0.963	0.2	0.0002	0.54	1.25	0.54
2/15/2023	9:48	192.2	0.923	1,413.2	0.089	1.20	1.45	1.20	150.0	0.963	0.1	0.0001	0.55	1.26	0.55
2/15/2023	9:49	192.2	0.923	832.0	0.058	1.23	1.46	1.23	150.0	0.964	0.1	0.0001	0.55	1.26	0.55
2/15/2023	9:50	192.3	0.923	524.9	0.033	1.23	1.45	1.23	150.0	0.963	0.4	0.0004	0.54	1.30	0.54
2/15/2023	9:51	192.3	0.923	373.0	0.021	1.24	1.46	1.24	150.0	0.964	0.1	0.0001	0.55	1.27	0.55
2/15/2023	9:52	192.3	0.923	291.7	0.012	1.24	1.46	1.24	150.0	0.963	0.3	0.0003	0.54	1.28	0.54
2/15/2023	9:53	192.2	0.923	251.4	0.016	1.24	1.47	1.24	150.0	0.964	0.3	0.0003	0.54	1.28	0.54
2/15/2023	9:54	192.2	0.923	213.2	0.009	1.21	1.48	1.21	149.9	0.964	0.4	0.0004	0.53	1.28	0.53
2/15/2023	9:55	192.2	0.923	196.3	0.011	1.22	1.49	1.22	150.0	0.964	0.2	0.0002	0.54	1.28	0.54
2/15/2023	9:56	192.2	0.923	180.9	0.014	1.23	1.50	1.23				--			
2/15/2023	9:57	192.2	0.923	1,849.2	0.148	1.38	1.50	1.38	150.0	0.964	0.3	0.0002	0.53	1.29	0.53
2/15/2023	9:58	192.2	0.924	8,321.6	0.742	1.24	1.51	1.24	150.0	0.964	0.1	0.0001	0.53	1.30	0.53
2/15/2023	9:59	192.2	0.923	3,315.5	0.229	1.25	1.53	1.25	150.0	0.964	0.2	0.0001	0.53	1.31	0.53
2/15/2023	10:00	192.2	0.923	1,688.3	0.082	1.25	1.54	1.25	150.0	0.964	0.2	0.0002	0.54	1.33	0.54
2/15/2023	10:01	192.2	0.923	1,027.8	0.077	1.28	1.54	1.28	150.0	0.964	0.1	0.0001	0.55	1.31	0.55
2/15/2023	10:02	192.2	0.924	700.2	0.044	1.31	1.55	1.31	150.0	0.964	0.1	0.0001	0.55	1.31	0.55
2/15/2023	10:03				--				150.0	0.964	0.1	0.0001	0.55	1.32	0.55
2/15/2023	10:04	192.2	0.923	537.3	0.048	1.30	1.58	1.30	150.0	0.964	0.1	0.0001	0.56	1.32	0.56

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{cc}$**	**BWS - Inlet$_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{cc}$**	**BWS - Outlet$_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	10:05	192.2	0.924	430.6	0.032	1.31	1.58	1.31	150.0	0.964	0.1	0.0001	0.54	1.32	0.54
2/15/2023	10:06	192.2	0.924	361.8	0.025	1.32	1.59	1.32	150.0	0.964	0.2	0.0002	0.54	1.33	0.54
2/15/2023	10:07	192.2	0.924	311.1	0.025	1.31	1.59	1.31	150.0	0.964	0.1	0.0001	0.55	1.32	0.55
2/15/2023	10:08	192.2	0.923	514.6	0.038	1.30	1.60	1.30	150.0	0.964	0.3	0.0003	0.53	1.33	0.53
2/15/2023	10:09	192.2	0.923	9,730.3	0.775	1.24	1.61	1.24	150.0	0.964	0.1	0.0001	0.55	1.34	0.55
2/15/2023	10:10	192.2	0.924	4,151.1	0.370	1.28	1.62	1.28	150.0	0.964	0.1	0.0001	0.55	1.34	0.55
2/15/2023	10:11	192.2	0.923	1,990.3	0.137	1.28	1.63	1.28	150.0	0.964	0.2	0.0002	0.54	1.34	0.54
2/15/2023	10:12	192.2	0.923	1,171.6	0.087	1.30	1.62	1.30	149.9	0.964	0.4	0.0004	0.54	1.34	0.54
2/15/2023	10:13	192.2	0.923	775.3	0.053	1.31	1.63	1.31	150.0	0.964	0.3	0.0002	0.54	1.35	0.54
2/15/2023	10:14	192.2	0.923	567.1	0.045	1.31	1.63	1.31	149.9	0.964	0.1	0.0001	0.54	1.36	0.54
2/15/2023	10:15	192.2	0.923	442.5	0.037	1.32	1.63	1.32	149.9	0.964	0.1	0.0001	0.55	1.35	0.55
2/15/2023	10:16	192.2	0.923	377.7	0.026	1.30	1.63	1.30	150.0	0.964	0.2	0.0001	0.54	1.36	0.54
2/15/2023	10:17	192.2	0.923	339.7	0.025	1.30	1.63	1.30	149.9	0.964	0.1	0.0001	0.55	1.36	0.55
2/15/2023	10:18	192.1	0.923	296.6	0.020	1.30	1.64	1.30	149.9	0.964	0.1	0.0001	0.55	1.36	0.55
2/15/2023	10:19	192.2	0.923	5,961.0	0.336	1.47	1.64	1.47				--			
2/15/2023	10:20	192.2	0.923	6,772.6	0.381	1.25	1.62	1.25	150.0	0.964	0.1	0.0001	0.56	1.36	0.56
2/15/2023	10:21	192.2	0.923	3,089.4	0.194	1.26	1.63	1.26	149.9	0.964	0.1	0.0001	0.56	1.36	0.56
2/15/2023	10:22	192.2	0.923	1,705.8	0.107	1.26	1.63	1.26	150.0	0.964	0.1	0.0001	0.55	1.36	0.55
2/15/2023	10:23	192.2	0.923	1,089.2	0.075	1.28	1.63	1.28	149.9	0.964	0.1	0.0001	0.55	1.37	0.55
2/15/2023	10:24	192.2	0.923	756.3	0.052	1.29	1.64	1.29	149.9	0.964	0.2	0.0002	0.54	1.36	0.54
2/15/2023	10:25				--				149.9	0.964	0.2	0.0002	0.54	1.36	0.54
2/15/2023	10:26	192.1	0.923	549.3	0.035	1.28	1.64	1.28	150.0	0.964	0.3	0.0003	0.55	1.37	0.55
2/15/2023	10:27	192.1	0.923	2,436.4	0.069	1.45	1.64	1.45	149.9	0.964	0.1	0.0001	0.55	1.38	0.55
2/15/2023	10:28	192.1	0.923	11,254.9	0.708	1.33	1.65	1.33	149.9	0.964	0.1	0.0001	0.55	1.38	0.55
2/15/2023	10:29	192.1	0.923	4,856.9	0.387	1.26	1.65	1.26	149.9	0.964	0.2	0.0002	0.55	1.39	0.55
2/15/2023	10:30	192.1	0.923	2,502.9	0.211	1.28	1.66	1.28	149.9	0.964	0.1	0.0001	0.55	1.39	0.55
2/15/2023	10:31	192.1	0.923	1,498.3	0.119	1.28	1.66	1.28	150.0	0.964	0.1	0.0001	0.55	1.39	0.55
2/15/2023	10:32	192.1	0.923	992.2	0.068	1.30	1.67	1.30	150.0	0.964	0.1	0.0001	0.56	1.39	0.56
2/15/2023	10:33	192.1	0.922	712.0	0.000	1.33	1.68	1.33	149.9	0.964	0.2	0.0002	0.55	1.40	0.55
2/15/2023	10:34	192.1	0.923	544.9	0.043	1.33	1.68	1.33	149.9	0.964	0.1	0.0001	0.55	1.40	0.55
2/15/2023	10:35	192.1	0.923	441.9	0.012	1.33	1.67	1.33	149.9	0.964	0.1	0.0001	0.56	1.40	0.56
2/15/2023	10:36	192.1	0.922	373.2	0.000	1.31	1.68	1.31	149.9	0.964	0.1	0.0001	0.55	1.40	0.55
2/15/2023	10:37	192.1	0.922	325.7	0.026	1.30	1.68	1.30	149.9	0.964	0.2	0.0002	0.56	1.43	0.56
2/15/2023	10:38	192.1	0.922	292.9	0.022	1.29	1.68	1.29	149.9	0.964	0.4	0.0003	0.56	1.41	0.56
2/15/2023	10:39	192.1	0.922	268.7	0.015	1.28	1.69	1.28	149.9	0.964	0.2	0.0001	0.56	1.42	0.56
2/15/2023	10:40	192.1	0.922	247.8	0.016	1.29	1.69	1.29	149.9	0.964	0.1	0.0001	0.55	1.42	0.55
2/15/2023	10:41	192.1	0.923	206.5	0.013	1.27	1.69	1.27	149.9	0.963	0.2	0.0002	0.55	1.43	0.55
2/15/2023	10:42	192.1	0.922	4,961.3	0.312	1.58	1.71	1.58				--			
2/15/2023	10:43	192.1	0.922	8,919.7	0.709	1.26	1.72	1.26	149.9	0.963	0.2	0.0002	0.55	1.43	0.55
2/15/2023	10:44	192.1	0.923	3,905.9	0.364	1.28	1.72	1.28	149.9	0.964	0.4	0.0003	0.55	1.45	0.55
2/15/2023	10:45	192.1	0.922	2,087.0	0.131	1.28	1.72	1.28	149.9	0.964	0.2	0.0001	0.55	1.56	0.55
2/15/2023	10:46				--				149.9	0.963	0.4	0.0004	0.55	1.68	0.55
2/15/2023	10:47	192.1	0.922	1,283.8	0.095	1.29	1.76	1.29	149.9	0.964	0.2	0.0001	0.55	1.45	0.55
2/15/2023	10:48	192.1	0.922	859.6	0.000	1.33	1.76	1.33	149.9	0.963	0.1	0.0001	0.55	1.46	0.55
2/15/2023	10:49	192.1	0.922	626.0	0.000	1.34	1.77	1.34	149.9	0.963	0.3	0.0002	0.55	1.46	0.55
2/15/2023	10:50	192.1	0.922	484.6	0.045	1.36	1.78	1.36	149.9	0.963	0.1	0.0001	0.55	1.52	0.55
2/15/2023	10:51	192.1	0.922	737.6	0.051	1.38	1.78	1.38	149.9	0.963	0.3	0.0003	0.56	1.65	0.56
2/15/2023	10:52	192.1	0.922	14,557.0	1.156	1.38	1.79	1.38	149.9	0.963	0.2	0.0001	0.55	1.65	0.55
2/15/2023	10:53	192.1	0.922	6,213.7	0.462	1.32	1.80	1.32	149.9	0.963	0.3	0.0003	0.55	1.63	0.55
2/15/2023	10:54	192.1	0.922	2,885.2	0.140	1.33	1.80	1.33	149.9	0.963	0.4	0.0003	0.55	1.58	0.55
2/15/2023	10:55	192.1	0.922	1,638.5	0.065	1.33	1.80	1.33	149.9	0.963	0.4	0.0004	0.55	1.48	0.55
2/15/2023	10:56	192.1	0.922	1,059.8	0.052	1.33	1.80	1.33	149.9	0.963	0.4	0.0003	0.56	1.48	0.56
2/15/2023	10:57	192.1	0.922	732.2	0.046	1.33	1.80	1.33	149.9	0.963	0.2	0.0002	0.57	1.65	0.57
2/15/2023	10:58	192.1	0.922	550.6	0.038	1.33	1.79	1.33	149.9	0.964	0.1	0.0001	0.56	1.55	0.56
2/15/2023	10:59	192.1	0.922	435.6	0.027	1.34	1.79	1.34	149.9	0.964	0.3	0.0002	0.56	1.47	0.56
2/15/2023	11:00	192.0	0.922	360.9	0.023	1.33	1.81	1.33	149.9	0.963	0.2	0.0002	0.57	1.46	0.57
2/15/2023	11:01	192.0	0.922	293.8	0.018	1.34	1.79	1.34	149.9	0.963	0.2	0.0001	0.57	1.48	0.57
2/15/2023	11:02	192.0	0.923	3,972.2	0.193	1.63	1.79	1.63	149.9	0.963	0.1	0.0001	0.56	1.49	0.56
2/15/2023	11:03	192.1	0.922	9,816.0	0.000	1.29	1.79	1.29	149.9	0.963	0.2	0.0002	0.57	1.48	0.57
2/15/2023	11:04	192.1	0.922	4,131.2	0.116	1.31	1.81	1.31	149.9	0.964	0.1	0.0001	0.57	1.48	0.57
2/15/2023	11:05	192.1	0.922	2,116.2	0.084	1.32	1.80	1.32				--			
2/15/2023	11:06	192.1	0.922	1,279.2	0.051	1.34	1.79	1.34	149.9	0.963	0.2	0.0002	0.57	1.50	0.57
2/15/2023	11:07	192.1	0.922	849.7	0.000	1.36	1.80	1.36	149.9	0.963	0.1	0.0001	0.56	1.50	0.56
2/15/2023	11:08				--				149.9	0.963	0.3	0.0003	0.58	1.51	0.58
2/15/2023	11:09	192.1	0.922	614.9	0.039	1.36	1.82	1.36	149.9	0.964	0.3	0.0002	0.59	1.52	0.59
2/15/2023	11:10	192.1	0.922	470.7	0.019	1.38	1.83	1.38	149.9	0.964	0.5	0.0004	0.57	1.53	0.57
2/15/2023	11:11	192.1	0.922	384.1	0.019	1.38	1.82	1.38	149.9	0.964	0.2	0.0002	0.57	1.53	0.57
2/15/2023	11:12	192.1	0.922	805.7	0.023	1.40	1.83	1.40	149.9	0.963	0.2	0.0002	0.57	1.78	0.57
2/15/2023	11:13	192.1	0.922	14,429.7	0.810	1.41	1.84	1.41	149.9	0.963	0.3	0.0002	0.56	1.67	0.56
2/15/2023	11:14	192.0	0.922	5,991.6	0.168	1.37	1.86	1.37	149.9	0.964	0.3	0.0003	0.56	1.54	0.56
2/15/2023	11:15	192.0	0.922	2,741.0	0.203	1.38	1.87	1.38	149.9	0.963	0.2	0.0002	0.57	1.54	0.57
2/15/2023	11:16	192.0	0.922	1,537.6	0.136	1.38	1.88	1.38	149.8	0.963	0.1	0.0001	0.58	1.55	0.58
2/15/2023	11:17	192.1	0.922	972.4	0.061	1.42	1.88	1.42	149.8	0.963	0.1	0.0001	0.56	1.56	0.56
2/15/2023	11:18	192.0	0.922	684.5	0.038	1.42	1.92	1.42	149.9	0.964	0.2	0.0002	0.57	1.55	0.57
2/15/2023	11:19	192.0	0.922	525.6	0.039	1.42	1.93	1.42	149.9	0.963	0.2	0.0002	0.58	1.57	0.58
2/15/2023	11:20	192.0	0.922	426.7	0.034	1.43	1.92	1.43	149.8	0.964	0.1	0.0001	0.58	1.58	0.58
2/15/2023	11:21	192.0	0.922	344.6	0.024	1.44	1.92	1.44	149.8	0.963	0.1	0.0001	0.56	1.59	0.56
2/15/2023	11:22	192.0	0.922	8,370.2	0.575	1.70	1.94	1.70	149.8	0.963	0.3	0.0002	0.57	1.59	0.57
2/15/2023	11:23	192.0	0.922	7,453.2	0.000	1.41	1.95	1.41	149.8	0.963	0.3	0.0003	0.58	1.60	0.58
2/15/2023	11:24	192.0	0.922	3,176.9	0.218	1.42	1.95	1.42	149.9	0.964	0.1	0.0001	0.60	1.62	0.60
2/15/2023	11:25	192.0	0.922	1,721.9	0.128	1.44	1.96	1.44	149.9	0.963	0.2	0.0002	0.60	1.76	0.60
2/15/2023	11:26	192.0	0.922	1,095.6	0.092	1.46	1.97	1.46	149.8	0.963	0.2	0.0002	0.60	1.83	0.60
2/15/2023	11:27	192.0	0.922	762.2	0.057	1.48	2.00	1.48	149.9	0.963	0.2	0.0002	0.60	1.68	0.60
2/15/2023	11:28	192.0	0.922	583.4	0.023	1.48	2.00	1.48	149.8	0.963	0.1	0.0001	0.60	1.63	0.60
2/15/2023	11:29	192.0	0.922	440.5	0.025	1.51	2.02	1.51				--			
2/15/2023	11:30				--				149.8	0.963	0.2	0.0002	0.60	1.64	0.60
2/15/2023	11:31	192.0	0.922	3,925.5	0.156	1.82	2.02	1.82	149.9	0.963	0.5	0.0004	0.60	1.66	0.60
2/15/2023	11:32	192.0	0.922	9,204.8	0.631	1.49	2.03	1.49	149.9	0.963	0.2	0.0002	0.59	1.66	0.59
2/15/2023	11:33	192.0	0.922	3,649.1	0.204	1.48	2.05	1.48	149.9	0.964	0.5	0.0004	0.60	1.67	0.60
2/15/2023	11:34	192.0	0.922	1,871.2	0.105	1.49	2.05	1.49	149.8	0.963	0.1	0.0001	0.59	1.68	0.59
2/15/2023	11:35	192.0	0.922	1,124.5	0.077	1.53	2.06	1.53	149.8	0.963	0.1	0.0001	0.58	1.69	0.58
2/15/2023	11:36	192.0	0.922	749.5	0.056	1.57	2.08	1.57	149.8	0.963	0.1	0.0001	0.58	1.70	0.58
2/15/2023	11:37	192.0	0.922	542.9	0.043	1.58	2.10	1.58	149.8	0.963	0.3	0.0002	0.59	1.90	0.59
2/15/2023	11:38	192.0	0.921	3,213.5	0.201	1.86	2.09	1.86	149.8	0.963	0.3	0.0002	0.58	1.96	0.58
2/15/2023	11:39	192.0	0.922	9,847.9	0.616	1.59	2.11	1.59	149.8	0.963	0.3	0.0003	0.59	1.99	0.59

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wt}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wt}$**	**BWS - Outlet $_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	11:40	192.0	0.922	3,849.6	0.241	1.58	2.13	1.58	149.8	0.963	0.3	0.0002	0.60	1.74	0.60
2/15/2023	11:41	192.0	0.922	1,914.6	0.142	1.57	2.13	1.57	149.8	0.963	0.1	0.0001	0.61	1.72	0.61
2/15/2023	11:42	192.0	0.922	1,172.3	0.046	1.58	2.14	1.58	149.8	0.963	0.2	0.0002	0.60	1.73	0.60
2/15/2023	11:43	192.0	0.921	834.6	0.040	1.58	2.14	1.58	149.9	0.963	0.1	0.0001	0.60	1.74	0.60
2/15/2023	11:44	192.0	0.921	576.1	0.039	1.56	2.15	1.56	149.9	0.963	0.2	0.0002	0.60	1.74	0.60
2/15/2023	11:45	192.0	0.922	10,197.5	0.571	1.84	2.15	1.84	149.9	0.963	0.3	0.0003	0.59	1.96	0.59
2/15/2023	11:46	192.0	0.921	6,992.3	0.479	1.54	2.16	1.54	149.9	0.963	0.3	0.0003	0.60	1.77	0.60
2/15/2023	11:47	192.0	0.921	2,882.4	0.000	1.54	2.17	1.54	150.0	0.963	0.1	0.0001	0.62	1.78	0.62
2/15/2023	11:48	192.0	0.921	1,590.9	0.100	1.56	2.19	1.56	150.0	0.963	0.1	0.0001	0.62	1.79	0.62
2/15/2023	11:49	192.1	0.921	1,005.7	0.040	1.58	2.19	1.58	150.0	0.963	0.2	0.0002	0.60	1.80	0.60
2/15/2023	11:50	192.1	0.921	675.6	0.019	1.60	2.19	1.60	150.0	0.963	0.1	0.0001	0.60	1.79	0.60
2/15/2023	11:51	192.1	0.921	3,369.2	0.283	1.90	2.20	1.90				--			
2/15/2023	11:52				--				150.0	0.963	0.2	0.0001	0.60	1.82	0.60
2/15/2023	11:53	192.1	0.921	9,957.3	0.556	1.60	2.22	1.60	150.1	0.963	0.1	0.0001	0.61	1.82	0.61
2/15/2023	11:54	192.1	0.921	3,771.1	0.333	1.59	2.23	1.59	150.0	0.963	0.3	0.0002	0.60	1.83	0.60
2/15/2023	11:55	192.1	0.921	1,898.6	0.130	1.59	2.24	1.59	150.1	0.963	0.1	0.0001	0.61	1.84	0.61
2/15/2023	11:56	192.1	0.921	1,158.3	0.079	1.62	2.25	1.62	150.1	0.963	0.2	0.0001	0.61	1.84	0.61
2/15/2023	11:57	192.1	0.921	781.9	0.072	1.63	2.24	1.63	150.1	0.963	0.3	0.0002	0.61	1.86	0.61
2/15/2023	11:58	192.1	0.921	933.7	0.064	1.66	2.26	1.66	150.1	0.963	0.4	0.0003	0.62	1.87	0.62
2/15/2023	11:59	192.1	0.921	15,415.5	0.963	1.68	2.26	1.68	150.1	0.963	0.2	0.0002	0.61	1.88	0.61
2/15/2023	12:00	192.1	0.921	5,553.6	0.269	1.60	2.27	1.60	150.1	0.963	0.3	0.0002	0.62	1.89	0.62
2/15/2023	12:01	192.1	0.921	2,535.9	0.200	1.61	2.25	1.61	150.1	0.963	0.3	0.0002	0.62	1.91	0.62
2/15/2023	12:02	192.1	0.921	1,438.2	0.070	1.61	2.26	1.61	150.0	0.963	0.1	0.0001	0.63	1.91	0.63
2/15/2023	12:03	192.2	0.921	924.8	0.000	1.65	2.26	1.65	150.0	0.963	0.4	0.0003	0.62	1.90	0.62
2/15/2023	12:04	192.1	0.921	636.3	0.000	1.65	2.27	1.65	149.9	0.963	0.3	0.0002	0.61	1.89	0.61
2/15/2023	12:05	192.1	0.921	4,012.8	0.275	2.03	2.25	2.03	149.9	0.963	0.2	0.0001	0.61	1.90	0.61
2/15/2023	12:06	192.1	0.921	9,291.8	0.449	1.64	2.26	1.64	149.9	0.963	0.2	0.0002	0.60	1.90	0.60
2/15/2023	12:07	192.1	0.921	3,640.6	0.203	1.59	2.26	1.59	149.9	0.963	0.1	0.0001	0.61	1.91	0.61
2/15/2023	12:08	192.1	0.921	1,854.1	0.073	1.59	2.27	1.59	149.9	0.963	0.2	0.0001	0.62	1.90	0.62
2/15/2023	12:09	192.1	0.921	1,130.4	0.063	1.61	2.28	1.61	149.9	0.963	0.4	0.0003	0.62	1.92	0.62
2/15/2023	12:10	192.0	0.921	769.6	0.048	1.64	2.28	1.64	149.9	0.963	0.2	0.0002	0.61	1.92	0.61
2/15/2023	12:11	192.0	0.921	1,696.4	0.157	1.73	2.27	1.73	149.9	0.963	0.1	0.0001	0.61	1.91	0.61
2/15/2023	12:12	192.1	0.922	14,242.1	0.796	1.75	2.26	1.75	149.9	0.963	0.1	0.0001	0.60	1.92	0.60
2/15/2023	12:13	192.1	0.921	5,075.5	0.567	1.61	2.28	1.61	149.9	0.963	0.1	0.0001	0.61	1.91	0.61
2/15/2023	12:14				--				149.9	0.963	0.2	0.0002	0.63	1.93	0.63
2/15/2023	12:15	192.1	0.921	2,349.1	0.161	1.64	2.29	1.64				--			
2/15/2023	12:16	192.1	0.921	1,301.4	0.063	1.66	2.30	1.66	149.8	0.963	0.3	0.0002	0.62	1.92	0.62
2/15/2023	12:17	192.0	0.921	842.9	0.058	1.69	2.30	1.69	149.8	0.963	0.1	0.0001	0.62	1.93	0.62
2/15/2023	12:18	192.0	0.921	582.0	0.040	1.68	2.32	1.68	149.8	0.963	0.3	0.0002	0.62	1.93	0.62
2/15/2023	12:19	192.0	0.921	10,623.6	0.664	1.92	2.31	1.92	149.8	0.963	0.3	0.0003	0.62	1.94	0.62
2/15/2023	12:20	192.0	0.922	46,583.5	1.841	1.72	2.30	1.72	149.8	0.963	0.3	0.0003	0.63	1.96	0.63
2/15/2023	12:21	192.0	0.921	70,026.3	3.908	0.84	2.31	0.84	149.8	0.963	0.3	0.0002	0.62	1.95	0.62
2/15/2023	12:22	192.0	0.921	40,322.1	3.190	2.11	2.31	2.11	149.8	0.963	0.3	0.0003	0.61	1.95	0.61
2/15/2023	12:23	192.0	0.921	13,218.0	0.000	1.81	2.31	1.81	149.8	0.963	0.1	0.0001	0.61	1.96	0.61
2/15/2023	12:24	192.0	0.921	6,569.9	0.184	1.66	2.32	1.66	149.8	0.963	0.3	0.0003	0.62	1.96	0.62
2/15/2023	12:25	192.0	0.921	3,919.4	0.190	1.68	2.32	1.68	149.8	0.963	0.2	0.0001	0.63	1.95	0.63
2/15/2023	12:26	192.0	0.921	2,599.2	0.103	1.68	2.32	1.68	149.8	0.963	0.1	0.0001	0.64	1.96	0.64
2/15/2023	12:27	192.0	0.921	1,836.3	0.000	1.68	2.31	1.68	149.9	0.963	0.1	0.0001	0.62	1.97	0.62
2/15/2023	12:28	192.0	0.921	1,418.4	0.000	1.69	2.32	1.69	149.8	0.963	0.1	0.0001	0.63	1.97	0.63
2/15/2023	12:29	192.0	0.921	1,136.9	0.000	1.69	2.32	1.69	149.8	0.963	0.2	0.0001	0.64	1.97	0.64
2/15/2023	12:30	192.0	0.921	943.7	0.000	1.71	2.33	1.71	149.8	0.963	0.3	0.0002	0.61	1.97	0.61
2/15/2023	12:31	192.0	0.921	806.5	0.039	1.70	2.32	1.70	149.8	0.963	0.3	0.0002	0.61	1.98	0.61
2/15/2023	12:32	192.0	0.920	716.8	0.000	1.70	2.32	1.70	149.8	0.963	0.1	0.0001	0.62	1.98	0.62
2/15/2023	12:33	192.0	0.921	633.1	0.000	1.70	2.33	1.70	149.8	0.963	0.1	0.0001	0.62	2.00	0.62
2/15/2023	12:34	192.0	0.920	570.7	0.032	1.72	2.33	1.72	149.8	0.963	0.1	0.0001	0.63	2.01	0.63
2/15/2023	12:35	192.0	0.920	520.7	0.021	1.73	2.36	1.73	149.8	0.962	0.1	0.0001	0.62	2.02	0.62
2/15/2023	12:36				--				149.8	0.963	0.3	0.0002	0.62	2.03	0.62
2/15/2023	12:37	192.0	0.920	474.0	0.040	1.76	2.36	1.76				--			
2/15/2023	12:38	192.0	0.920	440.3	0.000	1.76	2.39	1.76	149.8	0.963	0.2	0.0001	0.62	2.06	0.62
2/15/2023	12:39	192.0	0.920	413.8	0.012	1.77	2.38	1.77	149.8	0.962	0.3	0.0002	0.63	2.08	0.63
2/15/2023	12:40	192.0	0.920	390.8	0.022	1.80	2.42	1.80	149.8	0.962	0.3	0.0002	0.64	2.07	0.64
2/15/2023	12:41	192.0	0.920	369.4	0.010	1.82	2.41	1.82	149.8	0.962	0.2	0.0001	0.64	2.08	0.64
2/15/2023	12:42	192.0	0.920	350.7	0.024	1.84	2.41	1.84	149.8	0.962	0.4	0.0003	0.62	2.08	0.62
2/15/2023	12:43	192.0	0.920	338.6	0.019	1.84	2.40	1.84	149.8	0.962	0.1	0.0001	0.64	2.09	0.64
2/15/2023	12:44	192.0	0.920	306.1	0.019	1.81	2.40	1.81	149.8	0.962	0.5	0.0003	0.62	2.09	0.62
2/15/2023	12:45	192.0	0.920	318.8	0.027	1.82	2.40	1.82	149.8	0.962	0.4	0.0003	0.62	2.10	0.62
2/15/2023	12:46	191.9	0.920	336.4	0.030	1.82	2.40	1.82	149.8	0.962	0.2	0.0002	0.63	2.11	0.63
2/15/2023	12:47	192.0	0.920	344.5	0.019	1.81	2.42	1.81	149.7	0.962	0.3	0.0002	0.65	2.10	0.65
2/15/2023	12:48	192.0	0.920	358.6	0.022	1.81	2.40	1.81	149.8	0.962	0.2	0.0001	0.66	2.10	0.66
2/15/2023	12:49	192.0	0.920	357.4	0.000	1.79	2.40	1.79	149.8	0.962	0.2	0.0001	0.65	2.11	0.65
2/15/2023	12:50	192.0	0.920	782.0	0.022	1.79	2.38	1.79	149.8	0.962	0.1	0.0001	0.65	2.10	0.65
2/15/2023	12:51	192.0	0.919	426.7	0.000	1.80	2.38	1.80	149.8	0.962	0.2	0.0001	0.65	2.09	0.65
2/15/2023	12:52	191.9	0.919	340.7	0.013	1.77	2.36	1.77	149.8	0.962	0.1	0.0001	0.64	2.10	0.64
2/15/2023	12:53	192.0	0.919	327.8	0.013	1.76	2.35	1.76	149.8	0.962	0.2	0.0002	0.63	2.09	0.63
2/15/2023	12:54	192.0	0.920	319.2	0.022	1.76	2.34	1.76	149.8	0.962	0.2	0.0001	0.63	2.10	0.63
2/15/2023	12:55	192.0	0.919	4,283.7	0.000	1.95	2.34	1.95	149.7	0.962	0.2	0.0001	0.65	2.11	0.65
2/15/2023	12:56	192.0	0.919	10,637.1	0.733	1.82	2.35	1.82	149.7	0.962	0.3	0.0002	0.65	2.11	0.65
2/15/2023	12:57	191.9	0.920	39,815.7	2.961	2.19	2.35	2.19	149.7	0.962	0.2	0.0002	0.66	2.11	0.66
2/15/2023	12:58				--				149.8	0.962	0.2	0.0001	0.65	2.11	0.65
2/15/2023	12:59	191.9	0.920	97,727.5	8.253	2.41	2.36	2.36	149.7	0.962	0.3	0.0002	0.65	2.11	0.65
2/15/2023	13:00	191.9	0.921	134,394.8	16.452	2.21	2.38	2.21				--			
2/15/2023	13:01	191.9	0.921	113,172.4	82.183	0.20	2.38	0.20	149.8	0.962	0.3	0.0002	0.64	2.13	0.64
2/15/2023	13:02	191.8	0.918	154,760.6	102.866	8.35	2.38	2.38	149.8	0.962	0.2	0.0001	0.63	2.14	0.63
2/15/2023	13:03	191.8	0.920	153,694.4	0.000	13.37	2.40	2.40	149.7	0.962	0.3	0.0003	0.65	2.15	0.65
2/15/2023	13:04	191.9	0.921	105,449.0	2.950	6.35	2.45	2.45	149.8	0.962	0.2	0.0002	0.66	2.15	0.66
2/15/2023	13:05	191.8	0.921	139,306.3	3.900	6.45	2.69	2.69	149.7	0.962	11.2	0.0079	0.78	2.17	0.78
2/15/2023	13:06	191.8	0.922	108,889.8	6.079	1.40	2.83	1.40	149.8	0.962	354.3	0.2530	0.76	2.16	0.76
2/15/2023	13:07	191.8	0.922	19,941.7	1.365	2.47	2.67	2.47	149.8	0.962	157.0	0.1142	0.68	2.17	0.68
2/15/2023	13:08	191.9	0.925	8,890.1	0.655	0.95	2.62	0.95	149.8	0.963	2.6	0.0019	0.66	2.19	0.66
2/15/2023	13:09	191.8	0.924	369,195.7	14.517	0.20	2.58	0.20	149.8	0.962	1.0	0.0008	0.63	2.18	0.63
2/15/2023	13:10	191.8	0.922	211,691.3	15.573	0.20	2.55	0.20	149.8	0.962	1.1	0.0009	0.62	2.20	0.62
2/15/2023	13:11	191.9	0.922	157,199.9	9.817	9.53	2.54	2.54	149.9	0.962	1.1	0.0008	0.62	2.19	0.62
2/15/2023	13:12	191.9	0.921	115,024.6	7.839	0.73	2.56	0.73	149.9	0.962	1.6	0.0012	0.62	2.20	0.62
2/15/2023	13:13	192.0	0.921	95,243.5	6.503	1.68	2.54	1.68	149.9	0.962	2.3	0.0018	0.62	2.21	0.62
2/15/2023	13:14	192.0	0.921	84,091.8	4.684	1.24	2.54	1.24	150.0	0.963	3.3	0.0026	0.63	2.24	0.63

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet $_{wet}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet $_{used}$**
	Unit	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	13:15	192.0	0.921	76,246.0	4.246	1.21	2.55	1.21	149.9	0.963	4.6	0.0035	0.64	2.21	0.64
2/15/2023	13:16	192.0	0.920	69,384.4	4.730	0.93	2.54	0.93	149.9	0.962	7.3	0.0056	0.63	2.21	0.63
2/15/2023	13:17	192.0	0.921	63,107.0	3.928	1.05	2.55	1.05	149.8	0.962	9.0	0.0069	0.63	2.25	0.63
2/15/2023	13:18	192.0	0.920	59,056.1	4.029	1.28	2.53	1.28	149.8	0.962	11.1	0.0086	0.63	2.21	0.63
2/15/2023	13:19	192.0	0.920	55,578.2	4.097	1.36	2.50	1.36	149.8	0.962	14.0	0.0109	0.65	2.21	0.65
2/15/2023	13:20				--				149.7	0.962	14.7	0.0111	0.67	2.19	0.67
2/15/2023	13:21	191.9	0.920	52,355.6	3.261	1.40	2.51	1.40	149.7	0.962	13.7	0.0102	0.65	2.20	0.65
2/15/2023	13:22	191.9	0.920	49,023.1	2.365	1.43	2.51	1.43				--			
2/15/2023	13:23	191.8	0.921	46,749.0	2.606	1.62	2.48	1.62	149.8	0.962	12.3	0.0089	0.66	2.20	0.66
2/15/2023	13:24	191.8	0.921	44,423.9	2.768	1.59	2.50	1.59	149.7	0.962	12.7	0.0096	0.65	2.19	0.65
2/15/2023	13:25	191.8	0.920	41,157.7	2.295	1.67	2.48	1.67	149.7	0.962	13.3	0.0097	0.65	2.19	0.65
2/15/2023	13:26	191.8	0.920	39,558.6	1.560	1.70	2.47	1.70	149.7	0.962	13.0	0.0094	0.63	2.20	0.63
2/15/2023	13:27	191.8	0.920	38,222.3	1.066	1.69	2.46	1.69	149.7	0.962	26.2	0.0187	0.63	2.20	0.63
2/15/2023	13:28	191.8	0.920	37,249.4	1.800	1.73	2.46	1.73	149.7	0.962	10.5	0.0075	0.65	2.20	0.65
2/15/2023	13:29	191.8	0.920	36,516.6	0.000	1.72	2.46	1.72	149.7	0.962	9.7	0.0070	0.64	2.20	0.64
2/15/2023	13:30	191.8	0.920	50,745.6	2.829	1.47	2.46	1.47	149.7	0.962	8.6	0.0061	0.65	2.20	0.65
2/15/2023	13:31	191.8	0.920	45,119.7	2.180	1.61	2.45	1.61	149.7	0.962	12.8	0.0090	0.65	2.22	0.65
2/15/2023	13:32	191.8	0.920	39,902.2	1.574	1.74	2.47	1.74	149.7	0.962	6.8	0.0048	0.64	2.22	0.64
2/15/2023	13:33	191.8	0.919	38,497.6	0.000	1.71	2.46	1.71	149.7	0.962	5.2	0.0035	0.64	2.22	0.64
2/15/2023	13:34	191.8	0.920	42,580.8	2.377	1.87	2.46	1.87	149.7	0.962	7.3	0.0050	0.65	2.25	0.65
2/15/2023	13:35	191.8	0.919	50,092.8	3.123	1.45	2.46	1.45	149.7	0.962	2.9	0.0021	0.65	2.25	0.65
2/15/2023	13:36	191.8	0.919	44,043.7	2.129	1.66	2.47	1.66	149.7	0.962	3.7	0.0027	0.64	2.25	0.64
2/15/2023	13:37	191.8	0.919	59,946.5	0.000	1.23	2.47	1.23	149.7	0.962	3.2	0.0022	0.64	2.26	0.64
2/15/2023	13:38	191.8	0.920	54,146.9	2.144	1.39	2.47	1.39	149.7	0.962	2.9	0.0020	0.64	2.27	0.64
2/15/2023	13:39	191.8	0.920	74,463.7	4.169	1.27	2.49	1.27	149.7	0.962	1.8	0.0012	0.66	2.26	0.66
2/15/2023	13:40	191.8	0.920	104,900.1	0.000	1.59	2.48	1.59	149.7	0.962	1.3	0.0009	0.66	2.27	0.66
2/15/2023	13:41	191.8	0.920	132,637.5	8.308	1.92	2.49	1.92	149.7	0.962	1.0	0.0007	0.65	2.27	0.65
2/15/2023	13:42				--				149.7	0.961	0.8	0.0005	0.65	2.28	0.65
2/15/2023	13:43	191.8	0.920	149,337.3	10.257	2.50	2.49	2.49	149.7	0.961	1.0	0.0007	0.65	2.27	0.65
2/15/2023	13:44	191.7	0.920	160,262.2	16.805	5.52	2.51	2.51				--			
2/15/2023	13:45	191.8	0.920	162,613.7	7.895	8.40	2.51	2.51	149.7	0.961	1.0	0.0007	0.64	2.29	0.64
2/15/2023	13:46	191.8	0.921	197,943.3	9.572	0.20	2.50	0.20	149.7	0.962	0.5	0.0004	0.67	2.29	0.67
2/15/2023	13:47	191.8	0.921	223,976.2	13.970	0.20	2.50	0.20	149.7	0.961	0.5	0.0003	0.68	2.29	0.68
2/15/2023	13:48	191.8	0.921	226,297.6	12.609	0.20	2.51	0.20	149.7	0.961	0.3	0.0002	0.66	2.28	0.66
2/15/2023	13:49	191.8	0.921	203,610.1	13.892	0.20	2.50	0.20	149.7	0.961	0.6	0.0004	0.67	2.28	0.67
2/15/2023	13:50	191.8	0.920	192,691.8	10.738	0.20	2.50	0.20	149.7	0.961	0.3	0.0002	0.67	2.28	0.67
2/15/2023	13:51	191.8	0.920	167,827.2	9.403	27.26	2.48	2.48	149.7	0.961	0.7	0.0005	0.68	2.28	0.68
2/15/2023	13:52	191.8	0.919	140,643.9	9.640	5.52	2.46	2.46	149.7	0.961	0.2	0.0001	0.68	2.27	0.68
2/15/2023	13:53	191.8	0.919	116,818.6	3.253	0.27	2.46	0.27	149.8	0.961	0.4	0.0003	0.68	2.28	0.68
2/15/2023	13:54	191.8	0.919	103,052.7	4.985	1.90	2.48	1.90	149.8	0.961	0.6	0.0004	0.69	2.28	0.69
2/15/2023	13:55	191.8	0.919	89,224.8	0.000	1.61	2.45	1.61	149.8	0.961	0.5	0.0003	0.71	2.28	0.71
2/15/2023	13:56	191.8	0.919	73,014.4	2.039	1.47	2.45	1.47	149.8	0.961	0.4	0.0003	0.71	2.30	0.71
2/15/2023	13:57	191.8	0.918	63,144.6	3.057	1.40	2.43	1.40	149.7	0.961	0.6	0.0004	0.67	2.30	0.67
2/15/2023	13:58	191.8	0.918	58,460.8	3.999	1.45	2.45	1.45	149.7	0.961	0.5	0.0004	0.65	2.30	0.65
2/15/2023	13:59	191.8	0.918	58,500.3	3.266	1.41	2.43	1.41	149.7	0.961	0.5	0.0003	0.65	2.31	0.65
2/15/2023	14:00	191.8	0.918	67,044.6	5.609	1.07	2.44	1.07	149.7	0.961	0.7	0.0004	0.64	2.32	0.64
2/15/2023	14:01	191.8	0.919	56,803.5	4.489	1.43	2.43	1.43	149.7	0.961	0.3	0.0002	0.65	2.32	0.65
2/15/2023	14:02	191.8	0.918	44,247.2	1.237	1.84	2.43	1.84	149.7	0.961	0.4	0.0002	0.64	2.32	0.64
2/15/2023	14:03	191.7	0.918	40,691.5	2.274	1.96	2.43	1.96	149.7	0.961	0.2	0.0002	0.67	2.34	0.67
2/15/2023	14:04				--				149.7	0.961	0.2	0.0001	0.67	2.33	0.67
2/15/2023	14:05	191.7	0.918	52,476.8	1.465	1.51	2.45	1.51	149.7	0.961	0.2	0.0001	0.68	2.32	0.68
2/15/2023	14:06	191.7	0.919	52,365.4	2.926	1.56	2.46	1.56				--			
2/15/2023	14:07	191.8	0.918	41,744.1	2.332	1.92	2.44	1.92	149.7	0.961	0.1	0.0001	0.67	2.33	0.67
2/15/2023	14:08	191.7	0.918	32,716.1	0.000	2.03	2.45	2.03	149.7	0.961	0.2	0.0001	0.65	2.35	0.65
2/15/2023	14:09	191.8	0.918	35,784.1	1.738	1.90	2.46	1.90	149.7	0.961	0.4	0.0003	0.67	2.35	0.67
2/15/2023	14:10	191.7	0.918	48,262.6	1.908	1.64	2.45	1.64	149.7	0.961	0.4	0.0003	0.68	2.35	0.68
2/15/2023	14:11	191.7	0.918	24,877.2	1.704	2.20	2.45	2.20	149.7	0.960	0.4	0.0003	0.69	2.36	0.69
2/15/2023	14:12	191.7	0.918	90,204.4	4.366	2.93	2.47	2.47	149.7	0.961	0.1	0.0001	0.71	2.33	0.71
2/15/2023	14:13	191.7	0.919	85,312.1	3.371	2.98	2.45	2.45	149.7	0.961	0.3	0.0002	0.69	2.33	0.69
2/15/2023	14:14	191.7	0.918	55,620.9	2.195	1.52	2.45	1.52	149.7	0.961	0.2	0.0002	0.68	2.33	0.68
2/15/2023	14:15	191.7	0.918	30,358.1	1.696	2.13	2.43	2.13	149.7	0.961	0.3	0.0002	0.70	2.34	0.70
2/15/2023	14:16	191.7	0.918	20,775.1	1.005	2.04	2.43	2.04	149.7	0.961	0.3	0.0002	0.71	2.33	0.71
2/15/2023	14:17	191.7	0.918	21,830.7	0.610	1.99	2.41	1.99	149.7	0.961	0.3	0.0002	0.68	2.33	0.68
2/15/2023	14:18	191.7	0.918	18,516.3	0.000	1.96	2.41	1.96	149.7	0.961	0.3	0.0002	0.68	2.33	0.68
2/15/2023	14:19	191.7	0.918	16,197.8	0.000	1.93	2.41	1.93	149.7	0.961	0.1	0.0001	0.69	2.33	0.69
2/15/2023	14:20	191.7	0.918	14,946.2	0.723	1.82	2.39	1.82	149.7	0.961	0.1	0.0001	0.68	2.34	0.68
2/15/2023	14:21	191.7	0.918	14,448.6	0.699	1.74	2.39	1.74	149.7	0.961	0.2	0.0001	0.68	2.34	0.68
2/15/2023	14:22	191.7	0.918	14,748.1	0.921	1.69	2.39	1.69	149.7	0.960	0.3	0.0002	0.68	2.33	0.68
2/15/2023	14:23	191.8	0.918	15,000.3	0.419	1.64	2.39	1.64	149.7	0.960	0.2	0.0001	0.70	2.34	0.70
2/15/2023	14:24	191.7	0.918	14,698.3	0.711	1.57	2.38	1.57	149.7	0.961	0.4	0.0002	0.68	2.34	0.68
2/15/2023	14:25				--				149.7	0.960	0.4	0.0003	0.68	2.36	0.68
2/15/2023	14:26	191.7	0.917	13,914.5	1.098	1.46	2.41	1.46	149.7	0.960	0.3	0.0002	0.69	2.38	0.69
2/15/2023	14:27	191.7	0.917	13,460.3	0.920	1.41	2.38	1.41	149.7	0.960	0.2	0.0001	0.67	2.39	0.67
2/15/2023	14:28	191.7	0.917	13,393.5	0.747	1.30	2.41	1.30				--			
2/15/2023	14:29	191.8	0.917	12,984.3	0.724	1.29	2.41	1.29	149.7	0.960	0.2	0.0001	0.67	2.38	0.67
2/15/2023	14:30	191.8	0.917	13,153.5	1.100	1.24	2.41	1.24	149.7	0.960	0.3	0.0002	0.67	2.39	0.67
2/15/2023	14:31	191.8	0.917	8,080.0	0.596	1.47	2.41	1.47	149.7	0.960	0.2	0.0001	0.67	2.39	0.67
2/15/2023	14:32	191.8	0.917	10,094.5	0.488	1.59	2.38	1.59	149.7	0.961	0.1	0.0001	0.68	2.39	0.68
2/15/2023	14:33	191.7	0.917	9,605.6	0.379	1.68	2.38	1.68	149.7	0.960	0.1	0.0001	0.69	2.39	0.69
2/15/2023	14:34	191.8	0.917	11,656.8	0.651	1.78	2.40	1.78	149.7	0.960	0.2	0.0001	0.67	2.37	0.67
2/15/2023	14:35	191.8	0.917	8,087.4	0.226	1.73	2.38	1.73	149.7	0.960	0.1	0.0001	0.67	2.37	0.67
2/15/2023	14:36	191.8	0.917	9,187.8	0.678	1.74	2.37	1.74	149.7	0.960	0.2	0.0001	0.67	2.37	0.67
2/15/2023	14:37	191.8	0.917	11,680.5	0.729	1.85	2.37	1.85	149.7	0.960	0.1	0.0001	0.68	2.38	0.68
2/15/2023	14:38	191.8	0.917	8,604.3	0.720	1.75	2.35	1.75	149.7	0.960	0.4	0.0003	0.68	2.39	0.68
2/15/2023	14:39	191.8	0.917	8,396.0	0.525	1.75	2.37	1.75	149.7	0.960	0.3	0.0002	0.69	2.38	0.69
2/15/2023	14:40	191.8	0.917	8,237.0	0.516	1.77	2.35	1.77	149.8	0.960	0.3	0.0002	0.69	2.40	0.69
2/15/2023	14:41	191.8	0.917	10,082.2	0.631	1.74	2.36	1.74	149.8	0.960	0.2	0.0001	0.69	2.40	0.69
2/15/2023	14:42	191.9	0.917	17,581.4	1.101	2.56	2.37	2.37	149.7	0.960	0.1	0.0000	0.69	2.40	0.69
2/15/2023	14:43	191.8	0.917	57,725.8	3.613	1.29	2.36	1.29	149.8	0.960	0.5	0.0003	0.70	2.41	0.70
2/15/2023	14:44	191.8	0.917	72,831.5	4.559	1.29	2.37	1.29	149.8	0.960	0.3	0.0002	0.70	2.40	0.70
2/15/2023	14:45	191.8	0.917	51,952.5	4.108	1.42	2.36	1.42	149.7	0.960	0.1	0.0001	0.68	2.40	0.68
2/15/2023	14:46	191.8	0.917	75,895.9	3.008	1.73	2.38	1.73	149.7	0.960	0.1	0.0000	0.69	2.39	0.69
2/15/2023	14:47				--				149.7	0.960	0.1	0.0001	0.69	2.40	0.69
2/15/2023	14:48	191.8	0.917	70,883.0	4.851	1.30	2.38	1.30	149.7	0.960	0.1	0.0000	0.69	2.39	0.69
2/15/2023	14:49	191.8	0.917	46,682.3	2.917	1.55	2.37	1.55	149.7	0.960	0.1	0.0000	0.69	2.39	0.69

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet$_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet$_{used}$**
	Unit	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	14:50	191.8	0.917	93,678.4	2.617	1.64	2.35	1.64				--			
2/15/2023	14:51	191.8	0.917	66,994.6	1.870	1.21	2.38	1.21	149.9	0.960	0.1	0.0000	0.69	2.41	0.69
2/15/2023	14:52	191.8	0.917	49,900.6	3.685	1.35	2.36	1.35	150.1	0.960	0.1	0.0000	0.69	2.45	0.69
2/15/2023	14:53	191.8	0.917	33,784.9	1.634	1.77	2.36	1.77	150.3	0.960	0.1	0.0000	0.68	2.41	0.68
2/15/2023	14:54	191.9	0.917	33,150.4	1.603	1.74	2.34	1.74	150.3	0.960	0.1	0.0000	0.67	2.41	0.67
2/15/2023	14:55	192.0	0.917	27,443.7	1.533	1.77	2.34	1.77	150.3	0.960	0.1	0.0000	0.68	2.39	0.68
2/15/2023	14:56	192.0	0.917	20,210.2	1.382	1.80	2.34	1.80	150.3	0.960	0.1	0.0000	0.67	2.38	0.67
2/15/2023	14:57	192.1	0.917	12,214.7	0.682	1.76	2.34	1.76	150.3	0.960	0.2	0.0001	0.68	2.39	0.68
2/15/2023	14:58	192.1	0.917	15,686.0	0.980	1.81	2.33	1.81	150.3	0.960	0.1	0.0000	0.68	2.39	0.68
2/15/2023	14:59	192.1	0.917	14,369.6	0.803	1.85	2.34	1.85	150.3	0.960	0.1	0.0000	0.68	2.39	0.68
2/15/2023	15:00	192.1	0.917	8,637.7	0.482	1.71	2.34	1.71	150.3	0.960	0.1	0.0000	0.67	2.38	0.67
2/15/2023	15:01	192.1	0.917	10,563.4	0.660	1.82	2.34	1.82	150.3	0.960	0.1	0.0000	0.66	2.39	0.66
2/15/2023	15:02	192.1	0.917	11,273.7	0.445	1.85	2.33	1.85	150.3	0.960	0.1	0.0000	0.66	2.39	0.66
2/15/2023	15:03	192.1	0.917	10,573.5	0.660	1.83	2.34	1.83	150.3	0.960	0.1	0.0000	0.67	2.36	0.67
2/15/2023	15:04	192.1	0.917	9,266.2	0.579	1.77	2.33	1.77	150.3	0.960	0.1	0.0000	0.67	2.50	0.67
2/15/2023	15:05	192.1	0.917	7,795.2	0.435	1.77	2.33	1.77	150.2	0.960	0.1	0.0001	0.67	2.36	0.67
2/15/2023	15:06	192.1	0.917	7,627.6	0.426	1.79	2.33	1.79	150.2	0.960	0.1	0.0000	0.67	2.38	0.67
2/15/2023	15:07	192.1	0.917	6,819.1	0.381	1.77	2.32	1.77	150.2	0.960	0.1	0.0000	0.67	2.36	0.67
2/15/2023	15:08	192.1	0.918	6,778.0	0.464	1.77	2.32	1.77	150.2	0.960	0.1	0.0000	0.67	2.37	0.67
2/15/2023	15:09				--				150.1	0.960	0.2	0.0001	0.66	2.36	0.66
2/15/2023	15:10	192.2	0.917	6,143.1	0.384	1.76	2.32	1.76	150.1	0.960	0.1	0.0001	0.66	2.36	0.66
2/15/2023	15:11	192.2	0.918	6,763.3	0.500	1.78	2.31	1.78	150.1	0.960	0.2	0.0001	0.67	2.34	0.67
2/15/2023	15:12	192.2	0.918	5,528.0	0.408	1.76	2.30	1.76				--			
2/15/2023	15:13	192.3	0.918	5,399.7	0.399	1.74	2.31	1.74	150.1	0.960	0.1	0.0000	0.67	2.34	0.67
2/15/2023	15:14	192.2	0.918	4,435.0	0.328	1.73	2.32	1.73	150.1	0.960	0.3	0.0002	0.66	2.34	0.66
2/15/2023	15:15	192.3	0.918	4,827.4	0.330	1.73	2.32	1.73	150.1	0.960	0.1	0.0000	0.68	2.33	0.68
2/15/2023	15:16	192.3	0.918	6,180.5	0.457	1.72	2.29	1.72	150.0	0.960	0.1	0.0000	0.68	2.34	0.68
2/15/2023	15:17	192.2	0.918	4,242.5	0.313	1.72	2.31	1.72	150.0	0.960	0.1	0.0001	0.68	2.34	0.68
2/15/2023	15:18	192.2	0.918	5,466.4	0.341	1.71	2.30	1.71	150.0	0.960	0.1	0.0000	0.68	2.34	0.68
2/15/2023	15:19	192.2	0.918	6,517.0	0.364	1.73	2.31	1.73	150.0	0.960	0.1	0.0000	0.67	2.33	0.67
2/15/2023	15:20	192.2	0.918	4,683.7	0.227	1.73	2.30	1.73	150.0	0.960	0.3	0.0002	0.66	2.33	0.66
2/15/2023	15:21	192.2	0.918	3,930.3	0.245	1.71	2.30	1.71	150.0	0.960	0.1	0.0001	0.67	2.32	0.67
2/15/2023	15:22	192.2	0.918	4,396.6	0.275	1.69	2.29	1.69	150.0	0.960	0.1	0.0000	0.67	2.34	0.67
2/15/2023	15:23	192.2	0.918	3,716.3	0.275	1.69	2.30	1.69	149.9	0.960	0.5	0.0003	0.66	2.34	0.66
2/15/2023	15:24	192.2	0.918	3,846.2	0.263	1.67	2.29	1.67	150.0	0.960	0.2	0.0001	0.66	2.33	0.66
2/15/2023	15:25	192.2	0.918	5,202.3	0.291	1.66	2.29	1.66	150.0	0.960	0.1	0.0001	0.66	2.34	0.66
2/15/2023	15:26	192.2	0.918	3,748.7	0.256	1.66	2.30	1.66	150.0	0.960	0.4	0.0002	0.67	2.32	0.67
2/15/2023	15:27	192.2	0.918	4,474.0	0.306	1.64	2.29	1.64	149.9	0.960	0.3	0.0002	0.67	2.32	0.67
2/15/2023	15:28	192.2	0.918	5,625.2	0.351	1.64	2.29	1.64	150.0	0.959	0.2	0.0001	0.67	2.32	0.67
2/15/2023	15:29	192.1	0.918	4,519.7	0.252	1.66	2.30	1.66	149.9	0.960	0.4	0.0002	0.67	2.31	0.67
2/15/2023	15:30	192.1	0.918	4,567.6	0.285	1.64	2.29	1.64	150.0	0.959	0.2	0.0001	0.68	2.32	0.68
2/15/2023	15:31				--				149.9	0.960	0.1	0.0000	0.66	2.32	0.66
2/15/2023	15:32	192.2	0.918	4,732.9	0.264	1.63	2.30	1.63	149.9	0.960	0.2	0.0001	0.66	2.31	0.66
2/15/2023	15:33	192.1	0.918	4,301.4	0.208	1.64	2.29	1.64	149.9	0.960	0.1	0.0000	0.66	2.32	0.66
2/15/2023	15:34	192.1	0.918	2,729.3	0.170	1.60	2.30	1.60				--			
2/15/2023	15:35	192.1	0.918	3,909.5	0.267	1.60	2.30	1.60	149.9	0.960	0.1	0.0001	0.66	2.32	0.66
2/15/2023	15:36	192.1	0.918	5,137.1	0.287	1.59	2.30	1.59	149.9	0.960	0.1	0.0001	0.66	2.32	0.66
2/15/2023	15:37	192.1	0.918	3,551.5	0.222	1.61	2.30	1.61	149.9	0.960	0.1	0.0000	0.66	2.33	0.66
2/15/2023	15:38	192.1	0.918	4,087.3	0.255	1.60	2.30	1.60	149.9	0.960	0.2	0.0001	0.66	2.33	0.66
2/15/2023	15:39	192.1	0.918	4,635.3	0.289	1.60	2.29	1.60	149.9	0.960	0.2	0.0001	0.67	2.33	0.67
2/15/2023	15:40	192.1	0.918	4,560.5	0.312	1.59	2.30	1.59	149.9	0.960	0.1	0.0000	0.67	2.32	0.67
2/15/2023	15:41	192.1	0.918	2,868.2	0.139	1.60	2.28	1.60	149.9	0.960	0.3	0.0002	0.66	2.31	0.66
2/15/2023	15:42	192.1	0.918	3,464.9	0.193	1.59	2.30	1.59	149.9	0.960	0.1	0.0000	0.67	2.30	0.67
2/15/2023	15:43	192.1	0.918	3,682.7	0.308	1.58	2.29	1.58	149.9	0.960	0.2	0.0001	0.67	2.32	0.67
2/15/2023	15:44	192.1	0.918	3,414.5	0.213	1.57	2.28	1.57	149.9	0.960	0.1	0.0001	0.66	2.32	0.66
2/15/2023	15:45	192.1	0.918	2,383.5	0.149	1.59	2.27	1.59	149.9	0.959	0.1	0.0000	0.66	2.33	0.66
2/15/2023	15:46	192.1	0.918	2,258.8	0.141	1.54	2.28	1.54	149.9	0.960	0.2	0.0001	0.67	2.32	0.67
2/15/2023	15:47	192.1	0.918	2,964.9	0.185	1.55	2.27	1.55	149.9	0.959	0.2	0.0001	0.65	2.33	0.65
2/15/2023	15:48	192.1	0.917	4,396.7	0.275	1.57	2.27	1.57	149.9	0.959	0.1	0.0001	0.66	2.32	0.66
2/15/2023	15:49	192.1	0.918	2,618.6	0.179	1.57	2.26	1.57	149.9	0.960	0.1	0.0000	0.66	2.34	0.66
2/15/2023	15:50	192.1	0.917	3,200.7	0.200	1.57	2.28	1.57	149.9	0.960	0.1	0.0000	0.67	2.33	0.67
2/15/2023	15:51	192.1	0.918	3,955.8	0.247	1.56	2.27	1.56	149.9	0.960	0.1	0.0001	0.66	2.40	0.66
2/15/2023	15:52	192.1	0.918	4,366.3	0.211	1.56	2.24	1.56	149.9	0.960	0.1	0.0000	0.67	2.75	0.67
2/15/2023	15:53				--				149.9	0.960	0.2	0.0001	0.67	2.73	0.67
2/15/2023	15:54	192.1	0.918	3,031.5	0.208	1.59	2.23	1.59	149.9	0.960	0.1	0.0000	0.67	2.72	0.67
2/15/2023	15:55	192.1	0.918	2,286.1	0.143	1.53	2.22	1.53	149.9	0.960	0.1	0.0001	0.67	2.67	0.67
2/15/2023	15:56	192.1	0.918	2,695.2	0.168	1.55	2.24	1.55				--			
2/15/2023	15:57	192.1	0.918	2,744.6	0.171	1.55	2.24	1.55	149.9	0.960	0.1	0.0000	0.68	2.69	0.68
2/15/2023	15:58	192.1	0.918	2,406.1	0.150	1.55	2.24	1.55	149.9	0.960	0.1	0.0000	0.67	2.66	0.67
2/15/2023	15:59	192.1	0.918	1,668.6	0.104	1.53	2.24	1.53	149.9	0.960	0.1	0.0001	0.66	2.50	0.66
2/15/2023	16:00	192.1	0.918	2,341.4	0.146	1.52	2.25	1.52	149.9	0.960	0.1	0.0000	0.65	2.33	0.65
2/15/2023	16:01	192.1	0.918	3,140.4	0.215	1.53	2.25	1.53	149.9	0.960	0.1	0.0000	0.67	2.33	0.67
2/15/2023	16:02	192.1	0.918	3,167.7	0.198	1.54	2.24	1.54	149.9	0.960	0.3	0.0002	0.66	2.62	0.66
2/15/2023	16:03	192.1	0.918	1,583.0	0.099	1.50	2.21	1.50	149.9	0.960	0.1	0.0000	0.66	2.70	0.66
2/15/2023	16:04	192.1	0.918	2,114.9	0.132	1.50	2.22	1.50	149.9	0.960	0.1	0.0000	0.66	2.66	0.66
2/15/2023	16:05	192.1	0.918	1,791.7	0.112	1.48	2.22	1.48	149.9	0.960	0.1	0.0000	0.66	2.40	0.66
2/15/2023	16:06	192.1	0.918	2,410.9	0.165	1.50	2.23	1.50	149.9	0.960	0.2	0.0001	0.66	2.31	0.66
2/15/2023	16:07	192.1	0.918	1,736.3	0.108	1.50	2.23	1.50	149.9	0.960	0.1	0.0000	0.66	2.33	0.66
2/15/2023	16:08	192.1	0.918	2,653.5	0.166	1.51	2.22	1.51	149.9	0.960	0.3	0.0002	0.67	2.33	0.67
2/15/2023	16:09	192.1	0.918	2,827.5	0.177	1.50	2.22	1.50	149.9	0.960	0.2	0.0001	0.66	2.32	0.66
2/15/2023	16:10	192.1	0.918	2,203.0	0.138	1.48	2.21	1.48	149.9	0.960	0.1	0.0000	0.66	2.31	0.66
2/15/2023	16:11	192.1	0.918	1,652.0	0.103	1.50	2.21	1.50	149.9	0.960	0.1	0.0000	0.67	2.32	0.67
2/15/2023	16:12	192.1	0.918	1,265.6	0.079	1.48	2.21	1.48	149.9	0.960	0.2	0.0001	0.66	2.31	0.66
2/15/2023	16:13	192.1	0.918	2,382.6	0.149	1.51	2.21	1.51	149.9	0.960	0.2	0.0001	0.65	2.32	0.65
2/15/2023	16:14	192.1	0.918	1,521.3	0.095	1.47	2.22	1.47	149.9	0.960	0.1	0.0000	0.65	2.30	0.65
2/15/2023	16:15				--				149.9	0.960	0.1	0.0000	0.67	2.31	0.67
2/15/2023	16:16	192.1	0.918	1,994.6	0.137	1.48	2.21	1.48	149.9	0.960	0.3	0.0001	0.66	2.31	0.66
2/15/2023	16:17	192.0	0.918	1,025.1	0.064	1.47	2.19	1.47	149.9	0.960	0.4	0.0002	0.66	2.31	0.66
2/15/2023	16:18	192.1	0.918	752.7	0.042	1.47	2.18	1.47				--			
2/15/2023	16:19	192.1	0.918	1,484.9	0.093	1.46	2.20	1.46	149.9	0.960	0.1	0.0000	0.65	2.31	0.65
2/15/2023	16:20	192.1	0.918	2,775.1	0.190	1.49	2.18	1.49	149.9	0.960	0.1	0.0000	0.65	2.30	0.65
2/15/2023	16:21	192.1	0.918	1,649.4	0.092	1.47	2.17	1.47	149.9	0.959	0.4	0.0002	0.66	2.30	0.66
2/15/2023	16:22	192.1	0.918	1,787.7	0.087	1.46	2.16	1.46	149.9	0.960	0.1	0.0001	0.67	2.29	0.67
2/15/2023	16:23	192.1	0.918	1,751.4	0.110	1.45	2.15	1.45	149.9	0.959	0.1	0.0001	0.67	2.29	0.67
2/15/2023	16:24	192.1	0.918	2,252.4	0.154	1.46	2.14	1.46	149.9	0.960	0.6	0.0003	0.67	2.32	0.67

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wt}$**	**BWS - Inlet$_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wt}$**	**BWS - Outlet$_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	16:25	192.1	0.918	2,436.6	0.152	1.49	2.13	1.49	149.9	0.960	0.1	0.0001	0.67	2.31	0.67
2/15/2023	16:26	192.1	0.918	1,127.2	0.071	1.45	2.12	1.45	149.9	0.960	0.3	0.0002	0.67	2.32	0.67
2/15/2023	16:27	192.1	0.918	1,848.1	0.116	1.45	2.10	1.45	149.9	0.960	0.1	0.0000	0.67	2.31	0.67
2/15/2023	16:28	192.1	0.918	1,948.3	0.134	1.44	2.10	1.44	149.9	0.960	0.2	0.0001	0.66	2.31	0.66
2/15/2023	16:29	192.1	0.918	1,528.1	0.096	1.43	2.08	1.43	149.9	0.960	0.1	0.0000	0.66	2.28	0.66
2/15/2023	16:30	192.1	0.918	995.6	0.068	1.43	2.08	1.43	149.9	0.960	0.1	0.0000	0.66	2.27	0.66
2/15/2023	16:31	192.1	0.918	1,137.1	0.071	1.42	2.05	1.42	149.9	0.960	0.3	0.0002	0.67	2.28	0.67
2/15/2023	16:32	192.1	0.918	2,098.7	0.117	1.43	2.06	1.43	149.9	0.960	0.3	0.0002	0.66	2.28	0.66
2/15/2023	16:33	192.1	0.918	983.5	0.067	1.43	2.04	1.43	149.9	0.960	0.1	0.0000	0.66	2.28	0.66
2/15/2023	16:34	192.1	0.918	963.5	0.060	1.43	2.05	1.43	149.9	0.959	0.1	0.0000	0.66	2.30	0.66
2/15/2023	16:35	192.1	0.918	784.1	0.049	1.43	2.02	1.43	149.9	0.959	0.1	0.0000	0.66	2.31	0.66
2/15/2023	16:36	192.0	0.917	837.4	0.052	1.42	2.02	1.42	149.9	0.959	0.1	0.0000	0.67	2.31	0.67
2/15/2023	16:37				--				149.9	0.960	0.2	0.0001	0.66	2.31	0.66
2/15/2023	16:38	192.1	0.918	1,023.5	0.064	1.40	2.01	1.40	149.9	0.959	0.2	0.0001	0.66	2.29	0.66
2/15/2023	16:39	192.1	0.918	1,024.9	0.057	1.39	1.99	1.39	149.9	0.960	0.1	0.0000	0.66	2.30	0.66
2/15/2023	16:40	192.0	0.918	812.5	0.046	1.43	1.99	1.43				--			
2/15/2023	16:41	192.1	0.918	1,010.3	0.057	1.40	1.99	1.40	149.9	0.959	0.1	0.0000	0.66	2.28	0.66
2/15/2023	16:42	192.1	0.918	1,155.9	0.072	1.40	1.98	1.40	149.9	0.959	0.1	0.0000	0.67	2.29	0.67
2/15/2023	16:43	192.1	0.918	1,047.4	0.051	1.38	1.98	1.38	149.9	0.959	0.2	0.0001	0.67	2.27	0.67
2/15/2023	16:44	192.1	0.918	704.5	0.044	1.40	1.96	1.40	149.9	0.960	0.4	0.0003	0.67	2.27	0.67
2/15/2023	16:45	192.0	0.918	550.9	0.035	1.40	1.97	1.40	149.9	0.959	0.2	0.0001	0.67	2.26	0.67
2/15/2023	16:46	192.1	0.918	409.8	0.023	1.41	1.96	1.41	149.9	0.960	0.5	0.0003	0.67	2.26	0.67
2/15/2023	16:47	192.0	0.918	331.1	0.021	1.40	1.96	1.40	149.9	0.959	0.3	0.0002	0.67	2.26	0.67
2/15/2023	16:48	192.1	0.918	315.1	0.020	1.39	1.96	1.39	149.9	0.959	0.3	0.0002	0.67	2.26	0.67
2/15/2023	16:49	192.1	0.918	520.3	0.025	1.40	1.96	1.40	149.9	0.959	0.5	0.0003	0.67	2.26	0.67
2/15/2023	16:50	192.0	0.918	433.0	0.021	1.40	1.97	1.40	149.9	0.959	0.3	0.0002	0.67	2.25	0.67
2/15/2023	16:51	192.1	0.918	298.3	0.014	1.39	1.95	1.39	149.9	0.959	0.2	0.0001	0.67	2.25	0.67
2/15/2023	16:52	192.1	0.918	332.6	0.013	1.38	1.95	1.38	149.9	0.959	0.2	0.0001	0.67	2.26	0.67
2/15/2023	16:53	192.0	0.918	294.4	0.014	1.38	1.95	1.38	149.9	0.959	0.3	0.0002	0.67	2.24	0.67
2/15/2023	16:54	192.1	0.918	2,488.6	0.156	1.40	1.96	1.40	149.9	0.960	0.4	0.0002	0.66	2.24	0.66
2/15/2023	16:55	192.1	0.918	3,042.3	0.148	1.37	1.95	1.37	149.9	0.959	0.2	0.0001	0.66	2.23	0.66
2/15/2023	16:56	192.1	0.918	2,767.6	0.134	1.38	1.94	1.38	149.9	0.959	0.6	0.0004	0.66	2.24	0.66
2/15/2023	16:57	192.1	0.918	7,773.0	0.488	1.32	1.93	1.32	149.9	0.959	0.2	0.0001	0.66	2.47	0.66
2/15/2023	16:58	192.1	0.918	6,332.1	0.308	1.32	1.93	1.32	149.9	0.959	0.1	0.0000	0.67	2.47	0.67
2/15/2023	16:59				--				149.9	0.959	0.3	0.0002	0.66	2.25	0.66
2/15/2023	17:00	192.0	0.918	16,632.4	0.934	1.45	1.91	1.45	149.9	0.960	0.2	0.0001	0.66	2.23	0.66
2/15/2023	17:01	192.0	0.918	15,392.3	0.864	1.38	1.90	1.38	149.9	0.959	0.5	0.0003	0.66	2.26	0.66
2/15/2023	17:02	192.0	0.918	8,496.0	0.337	1.33	1.91	1.33	149.9	0.960	0.2	0.0001	0.66	2.22	0.66
2/15/2023	17:03	192.0	0.917	11,243.1	0.631	1.47	1.89	1.47				--			
2/15/2023	17:04	192.1	0.917	15,655.0	0.761	1.48	1.89	1.48	149.9	0.959	0.4	0.0003	0.66	2.22	0.66
2/15/2023	17:05	192.1	0.918	19,050.4	1.070	1.42	1.89	1.42	149.9	0.959	0.1	0.0001	0.67	2.22	0.67
2/15/2023	17:06	192.0	0.918	14,481.7	0.814	1.42	1.87	1.42	149.9	0.959	0.1	0.0000	0.66	2.21	0.66
2/15/2023	17:07	192.1	0.918	13,596.0	0.764	1.39	1.87	1.39	149.9	0.959	0.3	0.0002	0.67	2.20	0.67
2/15/2023	17:08	192.1	0.918	17,530.1	0.985	1.36	1.86	1.36	149.9	0.959	0.2	0.0001	0.66	2.20	0.66
2/15/2023	17:09	192.1	0.918	19,491.1	0.949	1.58	1.87	1.58	149.9	0.959	0.1	0.0001	0.67	2.21	0.67
2/15/2023	17:10	192.1	0.918	20,222.9	1.136	1.43	1.87	1.43	149.9	0.959	0.3	0.0002	0.66	2.20	0.66
2/15/2023	17:11	192.1	0.918	18,748.5	0.913	1.35	1.86	1.35	149.9	0.959	0.1	0.0000	0.67	2.20	0.67
2/15/2023	17:12	192.0	0.918	18,285.4	1.028	1.37	1.85	1.37	149.9	0.959	0.3	0.0002	0.67	2.20	0.67
2/15/2023	17:13	192.1	0.918	19,247.1	0.937	1.41	1.85	1.41	149.9	0.959	0.1	0.0001	0.66	2.19	0.66
2/15/2023	17:14	192.1	0.918	22,341.6	1.088	1.57	1.83	1.57	149.9	0.959	0.2	0.0002	0.67	2.20	0.67
2/15/2023	17:15	192.1	0.917	27,607.0	1.552	1.37	1.84	1.37	149.9	0.959	0.1	0.0001	0.68	2.19	0.68
2/15/2023	17:16	192.1	0.918	24,066.9	1.173	1.34	1.85	1.34	149.9	0.959	0.1	0.0001	0.68	2.19	0.68
2/15/2023	17:17	192.1	0.918	21,799.5	1.226	1.41	1.83	1.41	149.9	0.959	0.2	0.0001	0.68	2.19	0.68
2/15/2023	17:18	192.1	0.917	23,648.3	1.330	1.36	1.83	1.36	149.9	0.959	0.2	0.0001	0.68	2.18	0.68
2/15/2023	17:19	192.0	0.918	33,512.6	1.634	1.67	1.82	1.67	149.9	0.959	0.1	0.0001	0.67	2.16	0.67
2/15/2023	17:20	192.1	0.918	32,306.3	1.817	1.34	1.81	1.34	149.9	0.959	0.4	0.0002	0.67	2.14	0.67
2/15/2023	17:21				--				149.9	0.959	0.2	0.0002	0.67	2.14	0.67
2/15/2023	17:22	192.1	0.917	28,140.1	1.584	1.34	1.80	1.34	149.9	0.959	0.3	0.0002	0.67	2.13	0.67
2/15/2023	17:23	192.1	0.917	35,058.4	1.708	1.33	1.80	1.33	149.9	0.959	0.2	0.0002	0.67	2.12	0.67
2/15/2023	17:24	192.1	0.918	26,955.1	1.313	1.36	1.79	1.36	149.9	0.959	0.2	0.0001	0.68	2.11	0.68
2/15/2023	17:25	192.1	0.918	32,051.3	1.562	1.56	1.78	1.56				--			
2/15/2023	17:26	192.0	0.918	31,384.6	1.530	1.46	1.77	1.46	149.9	0.960	0.1	0.0001	0.67	2.09	0.67
2/15/2023	17:27	192.1	0.918	27,017.1	1.521	1.32	1.77	1.32	149.9	0.959	0.3	0.0002	0.67	2.09	0.67
2/15/2023	17:28	192.1	0.918	20,895.4	1.177	1.32	1.77	1.32	149.9	0.959	0.1	0.0001	0.67	2.08	0.67
2/15/2023	17:29	192.1	0.918	23,433.8	1.142	1.31	1.76	1.31	149.9	0.959	0.5	0.0003	0.67	2.07	0.67
2/15/2023	17:30	192.1	0.918	21,629.1	1.218	1.31	1.76	1.31	149.9	0.959	0.2	0.0001	0.66	2.06	0.66
2/15/2023	17:31	192.1	0.918	31,417.8	1.771	1.59	1.74	1.59	149.9	0.960	0.2	0.0001	0.67	2.05	0.67
2/15/2023	17:32	192.1	0.918	32,448.0	2.043	1.31	1.74	1.31	149.9	0.960	0.1	0.0001	0.67	2.07	0.67
2/15/2023	17:33	192.1	0.918	27,202.4	1.533	1.35	1.73	1.35	149.9	0.960	0.3	0.0002	0.67	2.06	0.67
2/15/2023	17:34	192.1	0.918	36,123.3	2.275	1.26	1.73	1.26	149.9	0.960	0.1	0.0001	0.66	2.06	0.66
2/15/2023	17:35	192.1	0.918	30,776.2	1.734	1.32	1.73	1.32	149.9	0.959	0.2	0.0001	0.67	2.06	0.67
2/15/2023	17:36	192.1	0.918	29,446.8	1.660	1.42	1.71	1.42	149.9	0.960	0.4	0.0003	0.66	2.04	0.66
2/15/2023	17:37	192.0	0.918	37,014.9	1.805	1.21	1.72	1.21	149.9	0.959	0.1	0.0001	0.67	2.02	0.67
2/15/2023	17:38	192.1	0.918	34,762.4	2.398	1.23	1.70	1.23	149.9	0.960	0.4	0.0002	0.66	2.03	0.66
2/15/2023	17:39	192.1	0.918	33,433.2	1.332	1.25	1.69	1.25	149.9	0.960	0.1	0.0001	0.66	2.01	0.66
2/15/2023	17:40	192.1	0.918	28,502.4	1.391	1.30	1.69	1.30	149.9	0.960	0.1	0.0001	0.67	1.99	0.67
2/15/2023	17:41	192.1	0.918	27,507.6	1.343	1.27	1.67	1.27	149.9	0.960	0.3	0.0002	0.66	2.00	0.66
2/15/2023	17:42	192.1	0.918	21,627.6	1.055	1.35	1.68	1.35	149.9	0.960	0.1	0.0001	0.66	1.98	0.66
2/15/2023	17:43				--				149.9	0.960	0.2	0.0001	0.66	1.98	0.66
2/15/2023	17:44	192.1	0.918	30,684.2	1.730	1.35	1.66	1.35	149.9	0.960	0.4	0.0003	0.67	1.96	0.67
2/15/2023	17:45	192.1	0.918	25,573.1	1.248	1.30	1.66	1.30	149.9	0.960	0.1	0.0001	0.67	1.96	0.67
2/15/2023	17:46	192.1	0.918	19,393.3	0.947	1.27	1.65	1.27	149.9	0.960	0.2	0.0001	0.66	1.95	0.66
2/15/2023	17:47	192.1	0.918	21,976.0	1.239	1.32	1.65	1.32				--			
2/15/2023	17:48	192.1	0.918	20,171.0	1.138	1.40	1.64	1.40	149.9	0.960	0.2	0.0001	0.66	1.92	0.66
2/15/2023	17:49	192.1	0.918	19,385.5	1.222	1.26	1.63	1.26	149.9	0.960	0.1	0.0001	0.66	1.92	0.66
2/15/2023	17:50	192.1	0.918	34,197.2	1.929	1.44	1.62	1.44	149.9	0.960	0.2	0.0001	0.66	1.92	0.66
2/15/2023	17:51	192.1	0.918	24,412.4	1.540	1.28	1.62	1.28	149.9	0.960	0.2	0.0002	0.67	1.90	0.67
2/15/2023	17:52	192.1	0.918	28,886.9	1.629	1.26	1.62	1.26	149.9	0.960	0.1	0.0001	0.67	1.90	0.67
2/15/2023	17:53	192.0	0.918	29,126.4	1.424	1.28	1.62	1.28	149.9	0.960	0.1	0.0001	0.67	1.89	0.67
2/15/2023	17:54	192.0	0.918	28,165.5	1.589	1.22	1.60	1.22	149.9	0.960	0.1	0.0001	0.67	1.90	0.67
2/15/2023	17:55	192.0	0.918	18,288.6	0.894	1.38	1.59	1.38	149.9	0.960	0.1	0.0001	0.67	1.89	0.67
2/15/2023	17:56	192.0	0.918	27,138.6	1.532	1.58	1.60	1.58	149.9	0.960	0.2	0.0002	0.67	1.87	0.67
2/15/2023	17:57	192.1	0.918	28,240.2	1.595	1.40	1.57	1.40	149.9	0.960	0.3	0.0003	0.66	2.05	0.66
2/15/2023	17:58	192.1	0.919	35,735.0	1.747	1.17	1.58	1.17	149.9	0.960	0.1	0.0001	0.66	1.91	0.66
2/15/2023	17:59	192.1	0.919	28,020.5	1.118	1.23	1.58	1.23	149.9	0.960	0.1	0.0001	0.67	1.84	0.67

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet$_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet$_{used}$**
	Unit	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	18:00	192.1	0.919	25,901.3	1.267	1.26	1.57	1.26	149.9	0.960	0.1	0.0001	0.66	1.83	0.66
2/15/2023	18:01	192.1	0.919	31,141.8	1.244	1.21	1.57	1.21	149.9	0.960	0.2	0.0001	0.66	1.82	0.66
2/15/2023	18:02	192.1	0.919	30,303.5	1.914	1.19	1.55	1.19	149.9	0.960	0.2	0.0001	0.66	1.82	0.66
2/15/2023	18:03	192.1	0.919	34,477.4	1.948	1.41	1.55	1.41	149.9	0.960	0.1	0.0001	0.66	1.81	0.66
2/15/2023	18:04	192.1	0.918	39,082.6	2.208	1.13	1.55	1.13	149.9	0.960	0.3	0.0002	0.66	1.81	0.66
2/15/2023	18:05				--				149.9	0.960	0.2	0.0002	0.66	1.79	0.66
2/15/2023	18:06	192.1	0.919	36,142.4	2.282	1.11	1.53	1.11	149.9	0.960	0.2	0.0002	0.66	1.79	0.66
2/15/2023	18:07	192.1	0.919	30,623.5	1.732	1.21	1.53	1.21	149.9	0.960	0.3	0.0002	0.66	1.78	0.66
2/15/2023	18:08	192.1	0.919	38,255.8	1.872	1.11	1.52	1.11	149.9	0.960	0.2	0.0002	0.66	1.77	0.66
2/15/2023	18:09	192.1	0.919	30,373.4	1.717	1.20	1.51	1.20	149.9	0.960	0.5	0.0004	0.65	1.78	0.65
2/15/2023	18:10	192.1	0.918	32,676.8	1.847	1.36	1.51	1.36				--			
2/15/2023	18:11	192.1	0.919	36,425.3	2.059	1.32	1.51	1.32	149.9	0.960	0.2	0.0002	0.65	1.76	0.65
2/15/2023	18:12	192.1	0.918	31,959.7	1.806	1.17	1.50	1.17	149.9	0.960	0.1	0.0001	0.66	1.78	0.66
2/15/2023	18:13	192.1	0.918	31,975.9	1.566	1.22	1.49	1.22	149.9	0.960	0.2	0.0001	0.66	1.76	0.66
2/15/2023	18:14	192.1	0.919	31,956.2	1.565	1.16	1.49	1.16	149.9	0.960	0.1	0.0001	0.66	1.75	0.66
2/15/2023	18:15	192.1	0.919	28,445.3	1.392	1.18	1.49	1.18	149.9	0.960	0.1	0.0001	0.67	1.75	0.67
2/15/2023	18:16	192.1	0.919	27,823.0	1.362	1.26	1.49	1.26	149.9	0.960	0.1	0.0001	0.67	1.74	0.67
2/15/2023	18:17	192.1	0.919	37,671.7	1.506	1.28	1.47	1.28	149.9	0.960	0.2	0.0002	0.66	1.74	0.66
2/15/2023	18:18	192.0	0.918	27,227.7	1.333	1.20	1.47	1.20	149.9	0.960	0.3	0.0002	0.67	1.73	0.67
2/15/2023	18:19	192.0	0.919	31,034.7	1.520	1.21	1.46	1.21	149.9	0.960	0.2	0.0001	0.66	1.72	0.66
2/15/2023	18:20	192.1	0.918	28,786.6	1.411	1.21	1.46	1.21	149.9	0.960	0.1	0.0001	0.66	1.73	0.66
2/15/2023	18:21	192.1	0.918	30,287.9	1.713	1.15	1.46	1.15	149.9	0.960	0.1	0.0001	0.66	1.71	0.66
2/15/2023	18:22	192.0	0.918	24,546.5	1.389	1.35	1.45	1.35	149.9	0.960	0.1	0.0001	0.66	1.71	0.66
2/15/2023	18:23	192.0	0.919	28,460.6	1.395	1.59	1.45	1.45	149.9	0.960	0.1	0.0001	0.66	1.71	0.66
2/15/2023	18:24	192.0	0.919	30,073.3	1.473	1.32	1.45	1.32	149.9	0.960	0.1	0.0001	0.66	1.69	0.66
2/15/2023	18:25	192.0	0.918	25,597.8	1.448	1.17	1.44	1.17	149.9	0.960	0.1	0.0001	0.65	1.69	0.65
2/15/2023	18:26	192.0	0.918	29,799.0	1.686	1.17	1.43	1.17	149.9	0.960	0.2	0.0001	0.65	1.69	0.65
2/15/2023	18:27				--				149.9	0.960	0.1	0.0001	0.65	1.68	0.65
2/15/2023	18:28	192.0	0.918	22,130.5	1.085	1.18	1.43	1.18	149.8	0.960	0.1	0.0001	0.65	1.69	0.65
2/15/2023	18:29	192.1	0.919	21,314.2	1.044	1.23	1.43	1.23	149.9	0.960	0.1	0.0001	0.64	1.68	0.64
2/15/2023	18:30	192.1	0.919	25,642.5	1.257	1.36	1.42	1.36	149.9	0.960	0.4	0.0003	0.64	1.67	0.64
2/15/2023	18:31	192.1	0.918	32,996.4	1.617	1.19	1.41	1.19	149.9	0.960	0.1	0.0001	0.64	1.67	0.64
2/15/2023	18:32	192.1	0.918	21,347.3	1.208	1.31	1.42	1.31				--			
2/15/2023	18:33	192.0	0.919	23,593.6	1.335	1.16	1.40	1.16	149.9	0.960	0.3	0.0002	0.64	1.66	0.64
2/15/2023	18:34	192.0	0.918	22,815.2	1.119	1.22	1.41	1.22	149.9	0.960	0.2	0.0002	0.64	1.65	0.64
2/15/2023	18:35	192.0	0.918	21,697.0	1.228	1.19	1.40	1.19	149.9	0.960	0.3	0.0002	0.64	1.65	0.64
2/15/2023	18:36	192.0	0.919	25,273.9	1.431	1.17	1.39	1.17	149.9	0.960	0.2	0.0001	0.65	1.64	0.65
2/15/2023	18:37	192.0	0.919	24,647.0	1.209	1.50	1.39	1.39	149.9	0.960	0.2	0.0001	0.64	1.65	0.64
2/15/2023	18:38	192.0	0.918	27,071.3	1.532	1.22	1.39	1.22	149.9	0.960	0.3	0.0002	0.64	1.62	0.64
2/15/2023	18:39	192.0	0.919	31,319.7	1.536	1.17	1.38	1.17	149.9	0.960	0.3	0.0002	0.64	1.64	0.64
2/15/2023	18:40	192.1	0.918	28,245.2	1.385	1.26	1.38	1.26	149.9	0.960	0.2	0.0001	0.64	1.61	0.64
2/15/2023	18:41	192.1	0.918	16,276.7	0.652	1.17	1.37	1.17	149.9	0.960	0.3	0.0002	0.64	1.62	0.64
2/15/2023	18:42	192.1	0.918	23,057.3	1.131	1.20	1.37	1.20	149.9	0.960	0.3	0.0003	0.64	1.61	0.64
2/15/2023	18:43	192.1	0.918	21,731.4	1.066	1.21	1.37	1.21	149.9	0.960	0.4	0.0003	0.64	1.61	0.64
2/15/2023	18:44	192.0	0.919	33,062.6	1.874	1.36	1.37	1.36	149.9	0.960	0.3	0.0002	0.65	1.62	0.65
2/15/2023	18:45	192.1	0.919	29,343.0	1.440	1.19	1.37	1.19	149.9	0.960	0.4	0.0003	0.65	1.62	0.65
2/15/2023	18:46	192.1	0.919	30,545.0	1.499	1.23	1.37	1.23	149.9	0.960	0.1	0.0001	0.65	1.62	0.65
2/15/2023	18:47	192.0	0.919	27,912.0	1.370	1.23	1.36	1.23	149.9	0.960	0.3	0.0003	0.65	1.63	0.65
2/15/2023	18:48				--				149.9	0.960	0.1	0.0001	0.65	1.62	0.65
2/15/2023	18:49	192.0	0.919	31,526.4	1.548	1.22	1.37	1.22	149.9	0.960	0.1	0.0001	0.66	1.64	0.66
2/15/2023	18:50	192.0	0.919	25,050.8	1.587	1.19	1.37	1.19	149.9	0.960	0.1	0.0001	0.65	1.63	0.65
2/15/2023	18:51	192.0	0.918	25,875.6	1.037	1.20	1.37	1.20	149.9	0.960	0.1	0.0001	0.66	1.63	0.66
2/15/2023	18:52	192.0	0.918	32,702.2	1.854	1.62	1.37	1.37	149.9	0.960	0.2	0.0001	0.66	1.64	0.66
2/15/2023	18:53	192.0	0.918	32,412.8	1.837	1.22	1.36	1.22	149.9	0.960	0.1	0.0001	0.66	1.66	0.66
2/15/2023	18:54	192.0	0.918	28,793.4	1.413	1.23	1.38	1.23				--			
2/15/2023	18:55	192.1	0.919	30,395.0	1.218	1.22	1.37	1.22	149.9	0.960	0.1	0.0001	0.66	1.65	0.66
2/15/2023	18:56	192.0	0.919	30,010.4	1.473	1.26	1.37	1.26	149.9	0.960	0.3	0.0002	0.66	1.66	0.66
2/15/2023	18:57	192.1	0.918	32,696.3	1.605	1.28	1.37	1.28	149.9	0.960	0.1	0.0001	0.66	1.67	0.66
2/15/2023	18:58	192.1	0.918	29,908.8	1.695	1.26	1.37	1.26	149.9	0.960	0.1	0.0001	0.66	1.66	0.66
2/15/2023	18:59	192.1	0.918	36,940.5	1.480	1.40	1.37	1.37	149.9	0.960	0.1	0.0001	0.67	1.67	0.67
2/15/2023	19:00	192.0	0.919	26,378.7	1.495	1.27	1.37	1.27	149.9	0.960	0.1	0.0001	0.67	1.67	0.67
2/15/2023	19:01	192.1	0.918	28,094.5	1.125	1.27	1.37	1.27	149.9	0.960	0.1	0.0001	0.66	1.66	0.66
2/15/2023	19:02	192.1	0.918	23,387.2	0.937	1.25	1.37	1.25	150.0	0.960	0.3	0.0002	0.66	1.66	0.66
2/15/2023	19:03	192.1	0.919	28,280.8	1.133	1.27	1.36	1.27	149.9	0.960	0.1	0.0001	0.67	1.66	0.67
2/15/2023	19:04	192.1	0.918	21,812.4	1.071	1.32	1.37	1.32	149.9	0.960	0.1	0.0001	0.66	1.66	0.66
2/15/2023	19:05	192.1	0.919	22,070.3	1.083	1.27	1.36	1.27	150.0	0.960	0.1	0.0001	0.67	1.67	0.67
2/15/2023	19:06	192.1	0.918	16,506.9	0.935	1.22	1.37	1.22	149.9	0.960	0.1	0.0001	0.66	1.67	0.66
2/15/2023	19:07	192.1	0.918	30,671.6	1.739	1.42	1.37	1.37	149.9	0.960	0.1	0.0001	0.66	1.67	0.66
2/15/2023	19:08	192.1	0.918	21,495.2	0.861	1.28	1.35	1.28	149.9	0.960	0.1	0.0001	0.66	1.67	0.66
2/15/2023	19:09	192.1	0.919	23,192.4	1.138	1.27	1.36	1.27	149.9	0.960	0.1	0.0001	0.66	1.66	0.66
2/15/2023	19:10				--				149.9	0.960	0.1	0.0001	0.66	1.67	0.66
2/15/2023	19:11	192.1	0.918	27,424.9	1.347	1.32	1.35	1.32	150.0	0.960	0.1	0.0001	0.66	1.68	0.66
2/15/2023	19:12	192.1	0.918	20,643.6	0.827	1.28	1.36	1.28	150.0	0.960	0.1	0.0001	0.67	1.66	0.67
2/15/2023	19:13	192.1	0.918	21,820.3	1.237	1.26	1.36	1.26	149.9	0.960	0.1	0.0001	0.66	1.66	0.66
2/15/2023	19:14	192.1	0.918	19,700.7	0.967	1.24	1.36	1.24	150.0	0.960	0.1	0.0001	0.67	1.66	0.67
2/15/2023	19:15	192.1	0.918	27,409.8	1.553	1.54	1.36	1.36	149.9	0.960	0.1	0.0001	0.66	1.66	0.66
2/15/2023	19:16	192.1	0.918	23,210.3	1.315	1.26	1.37	1.26				--			
2/15/2023	19:17	192.1	0.918	24,491.9	1.388	1.24	1.36	1.24	149.9	0.960	0.1	0.0001	0.66	1.66	0.66
2/15/2023	19:18	192.1	0.918	20,755.4	1.176	1.25	1.36	1.25	150.0	0.960	0.1	0.0001	0.66	1.66	0.66
2/15/2023	19:19	192.1	0.918	18,791.4	0.753	1.24	1.36	1.24	150.0	0.960	0.1	0.0001	0.66	1.66	0.66
2/15/2023	19:20	192.1	0.918	19,492.7	0.781	1.24	1.36	1.24	149.9	0.960	0.1	0.0001	0.66	1.65	0.66
2/15/2023	19:21	192.1	0.918	19,632.3	0.787	1.23	1.35	1.23	149.9	0.960	0.1	0.0001	0.66	1.65	0.66
2/15/2023	19:22	192.1	0.918	22,358.0	1.097	1.49	1.36	1.36	149.9	0.960	0.1	0.0001	0.65	1.64	0.65
2/15/2023	19:23	192.1	0.918	21,035.7	1.033	1.23	1.35	1.23	149.9	0.960	0.1	0.0001	0.66	1.68	0.66
2/15/2023	19:24	192.1	0.918	23,180.3	1.314	1.24	1.36	1.24	149.9	0.960	0.1	0.0001	0.65	1.66	0.65
2/15/2023	19:25	192.1	0.918	24,061.4	0.964	1.27	1.36	1.27	149.9	0.960	0.1	0.0001	0.65	1.64	0.65
2/15/2023	19:26	192.1	0.919	25,232.4	1.430	1.28	1.35	1.28	149.9	0.960	0.1	0.0001	0.65	1.65	0.65
2/15/2023	19:27	192.0	0.918	23,675.6	1.163	1.26	1.35	1.26	149.9	0.960	0.1	0.0001	0.65	1.65	0.65
2/15/2023	19:28	192.1	0.918	23,738.9	1.165	1.25	1.36	1.25	149.9	0.960	0.1	0.0001	0.64	1.64	0.64
2/15/2023	19:29	192.1	0.918	19,471.6	0.780	1.23	1.35	1.23	149.9	0.960	0.1	0.0001	0.65	1.71	0.65
2/15/2023	19:30	192.0	0.919	28,330.1	1.391	1.45	1.36	1.36	149.9	0.960	0.2	0.0001	0.64	1.64	0.64
2/15/2023	19:31	192.0	0.918	25,646.3	1.259	1.24	1.34	1.24	149.9	0.960	0.2	0.0002	0.64	1.64	0.64
2/15/2023	19:32				--				149.9	0.960	0.2	0.0001	0.64	1.65	0.64
2/15/2023	19:33	192.0	0.918	26,407.3	1.296	1.28	1.35	1.28	149.9	0.960	0.1	0.0001	0.63	1.64	0.63
2/15/2023	19:34	192.0	0.919	24,159.0	0.968	1.43	1.34	1.34	149.9	0.960	0.1	0.0001	0.64	1.65	0.64

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet $_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	19:35	192.0	0.919	21,315.6	0.855	1.24	1.35	1.24	149.9	0.960	0.1	0.0001	0.63	1.64	0.63
2/15/2023	19:36	192.1	0.918	18,252.1	0.896	1.22	1.34	1.22	149.9	0.960	0.1	0.0001	0.63	1.64	0.63
2/15/2023	19:37	192.1	0.919	19,614.5	0.963	1.23	1.34	1.23	149.9	0.961	0.1	0.0001	0.63	1.64	0.63
2/15/2023	19:38	192.1	0.919	18,706.1	0.750	1.22	1.33	1.22	149.9	0.960	0.1	0.0001	0.63	1.63	0.63
2/15/2023	19:39	192.0	0.918	29,508.4	1.449	1.37	1.33	1.33				--			
2/15/2023	19:40	192.0	0.918	20,324.9	1.152	1.22	1.34	1.22	149.9	0.960	0.1	0.0001	0.63	1.63	0.63
2/15/2023	19:41	192.0	0.919	23,251.2	1.142	1.25	1.33	1.25	149.9	0.961	0.1	0.0001	0.63	1.62	0.63
2/15/2023	19:42	192.1	0.918	21,567.8	1.223	1.24	1.32	1.24	149.9	0.960	0.1	0.0001	0.63	1.62	0.63
2/15/2023	19:43	192.1	0.919	23,646.5	1.162	1.25	1.33	1.25	149.9	0.960	0.4	0.0003	0.64	1.62	0.64
2/15/2023	19:44	192.1	0.918	21,570.3	1.059	1.25	1.33	1.25	149.9	0.960	0.1	0.0001	0.63	1.61	0.63
2/15/2023	19:45	192.1	0.918	16,883.8	0.677	1.23	1.32	1.23	149.9	0.960	0.1	0.0001	0.64	1.61	0.64
2/15/2023	19:46	192.1	0.918	24,750.0	1.404	1.51	1.32	1.32	149.9	0.960	0.1	0.0001	0.63	1.61	0.63
2/15/2023	19:47	192.1	0.919	21,059.3	1.034	1.23	1.31	1.23	149.9	0.960	0.3	0.0003	0.63	1.61	0.63
2/15/2023	19:48	192.1	0.919	21,093.9	1.036	1.24	1.31	1.24	149.9	0.960	0.1	0.0001	0.63	1.61	0.63
2/15/2023	19:49	192.1	0.919	21,955.4	1.392	1.23	1.32	1.23	149.9	0.960	0.2	0.0001	0.63	1.60	0.63
2/15/2023	19:50	192.1	0.919	19,820.7	0.795	1.23	1.31	1.23	149.9	0.960	0.1	0.0001	0.63	1.60	0.63
2/15/2023	19:51	192.0	0.919	21,630.9	1.227	1.25	1.32	1.25	149.9	0.960	0.2	0.0002	0.63	1.59	0.63
2/15/2023	19:52	192.0	0.918	20,644.5	1.171	1.25	1.31	1.25	149.9	0.960	0.1	0.0001	0.63	1.59	0.63
2/15/2023	19:53	192.0	0.919	26,379.4	1.496	1.46	1.30	1.30	149.9	0.960	0.2	0.0002	0.62	1.58	0.62
2/15/2023	19:54				--				149.9	0.960	0.1	0.0001	0.63	1.58	0.63
2/15/2023	19:55	192.1	0.918	23,041.5	1.131	1.24	1.30	1.24	149.9	0.960	0.3	0.0002	0.62	1.59	0.62
2/15/2023	19:56	192.1	0.918	21,754.3	1.069	1.25	1.30	1.25	149.9	0.960	0.3	0.0002	0.63	1.59	0.63
2/15/2023	19:57	192.0	0.918	18,982.7	0.932	1.21	1.31	1.21	149.9	0.960	0.4	0.0003	0.63	1.58	0.63
2/15/2023	19:58	192.1	0.918	14,291.7	0.703	1.18	1.29	1.18	149.9	0.960	0.1	0.0001	0.63	1.59	0.63
2/15/2023	19:59	192.0	0.918	14,957.3	0.735	1.23	1.30	1.23	149.9	0.960	0.1	0.0001	0.63	1.57	0.63
2/15/2023	20:00	192.0	0.918	17,458.7	0.858	1.21	1.30	1.21	149.9	0.960	0.3	0.0002	0.63	1.57	0.63
2/15/2023	20:01	192.1	0.918	16,765.3	0.824	1.29	1.29	1.29				--			
2/15/2023	20:02	192.0	0.918	26,716.5	1.313	1.32	1.29	1.29	149.9	0.960	0.1	0.0001	0.63	1.56	0.63
2/15/2023	20:03	192.0	0.918	16,448.7	0.933	1.23	1.29	1.23	149.9	0.960	0.2	0.0001	0.63	1.57	0.63
2/15/2023	20:04	192.0	0.918	18,316.3	0.900	1.22	1.29	1.22	149.9	0.960	0.2	0.0001	0.63	1.57	0.63
2/15/2023	20:05	192.0	0.918	20,143.1	0.990	1.22	1.28	1.22	149.9	0.960	0.1	0.0001	0.63	1.56	0.63
2/15/2023	20:06	192.0	0.918	17,785.8	1.010	1.22	1.29	1.22	149.9	0.960	0.2	0.0002	0.62	1.56	0.62
2/15/2023	20:07	192.1	0.918	18,510.0	0.910	1.22	1.29	1.22	149.9	0.960	0.2	0.0002	0.62	1.56	0.62
2/15/2023	20:08	192.1	0.918	20,276.5	0.997	1.21	1.28	1.21	149.9	0.961	0.1	0.0001	0.62	1.56	0.62
2/15/2023	20:09	192.1	0.918	19,561.8	1.469	1.33	1.28	1.28	149.9	0.960	0.3	0.0002	0.62	1.56	0.62
2/15/2023	20:10	192.0	0.918	26,304.5	1.493	1.27	1.27	1.27	149.9	0.961	0.2	0.0002	0.62	1.56	0.62
2/15/2023	20:11	192.0	0.918	21,405.2	1.052	1.23	1.27	1.23	149.9	0.960	0.1	0.0001	0.62	1.57	0.62
2/15/2023	20:12	192.0	0.918	22,951.0	1.128	1.22	1.28	1.22	149.9	0.960	0.1	0.0001	0.62	1.68	0.62
2/15/2023	20:13	192.0	0.918	18,761.1	0.922	1.24	1.27	1.24	149.9	0.960	0.1	0.0001	0.62	1.67	0.62
2/15/2023	20:14	192.0	0.918	16,132.2	0.793	1.21	1.28	1.21	149.9	0.960	0.1	0.0001	0.62	1.57	0.62
2/15/2023	20:15	192.1	0.918	14,583.3	0.828	1.18	1.27	1.18	149.9	0.961	0.2	0.0002	0.62	1.56	0.62
2/15/2023	20:16				--				149.9	0.961	0.2	0.0001	0.62	1.56	0.62
2/15/2023	20:17	192.0	0.919	16,176.7	0.918	1.23	1.26	1.23	149.9	0.961	0.1	0.0001	0.62	1.55	0.62
2/15/2023	20:18	192.1	0.918	20,213.5	0.994	1.38	1.27	1.27	149.9	0.961	0.1	0.0001	0.62	1.55	0.62
2/15/2023	20:19	192.0	0.919	20,727.8	1.019	1.23	1.26	1.23	149.9	0.960	0.1	0.0001	0.61	1.55	0.61
2/15/2023	20:20	192.1	0.918	21,296.9	0.855	1.26	1.27	1.26	149.9	0.961	0.1	0.0001	0.61	1.53	0.61
2/15/2023	20:21	192.0	0.918	16,501.8	0.937	1.19	1.26	1.19	149.9	0.961	0.1	0.0001	0.62	1.52	0.62
2/15/2023	20:22	192.0	0.918	18,588.4	1.055	1.20	1.26	1.20	149.9	0.961	0.1	0.0001	0.61	1.53	0.61
2/15/2023	20:23	192.1	0.918	17,352.1	0.854	1.20	1.25	1.20				--			
2/15/2023	20:24	192.1	0.918	15,864.5	0.780	1.19	1.25	1.19	149.9	0.961	0.1	0.0001	0.61	1.52	0.61
2/15/2023	20:25	192.0	0.918	15,724.0	0.893	1.18	1.24	1.18	149.9	0.961	0.1	0.0001	0.61	1.57	0.61
2/15/2023	20:26	192.1	0.919	21,525.6	0.865	1.49	1.24	1.24	149.9	0.961	0.1	0.0001	0.61	1.52	0.61
2/15/2023	20:27	192.1	0.919	22,334.4	1.098	1.20	1.25	1.20	149.9	0.961	0.1	0.0001	0.61	1.52	0.61
2/15/2023	20:28	192.0	0.918	18,716.5	0.752	1.18	1.23	1.18	149.9	0.960	0.1	0.0001	0.62	1.72	0.62
2/15/2023	20:29	192.1	0.919	21,132.3	1.040	1.22	1.22	1.22	149.9	0.960	0.1	0.0001	0.61	1.72	0.61
2/15/2023	20:30	192.0	0.918	17,787.7	1.011	1.18	1.21	1.18	149.9	0.960	0.1	0.0001	0.61	1.73	0.61
2/15/2023	20:31	192.1	0.919	19,423.3	0.956	1.20	1.22	1.20	149.9	0.960	0.1	0.0001	0.62	1.61	0.62
2/15/2023	20:32	192.0	0.918	17,451.2	0.859	1.20	1.24	1.20	149.9	0.960	0.1	0.0001	0.61	1.49	0.61
2/15/2023	20:33	192.1	0.918	16,361.5	0.805	1.17	1.23	1.17	149.9	0.960	0.1	0.0001	0.61	1.49	0.61
2/15/2023	20:34	192.0	0.919	22,220.4	1.094	1.34	1.23	1.23	149.9	0.960	0.1	0.0001	0.62	1.48	0.62
2/15/2023	20:35	192.1	0.919	20,243.1	0.996	1.20	1.22	1.20	149.9	0.960	0.1	0.0001	0.61	1.49	0.61
2/15/2023	20:36	192.1	0.918	21,677.7	1.067	1.24	1.22	1.22	149.9	0.961	0.1	0.0001	0.61	1.48	0.61
2/15/2023	20:37	192.1	0.918	21,952.2	1.080	1.24	1.22	1.22	149.9	0.960	0.1	0.0001	0.61	1.48	0.61
2/15/2023	20:38				--				149.9	0.960	0.1	0.0001	0.62	1.48	0.62
2/15/2023	20:39	192.1	0.919	16,996.9	0.683	1.19	1.23	1.19	149.9	0.960	0.1	0.0001	0.62	1.47	0.62
2/15/2023	20:40	192.1	0.919	18,546.3	1.054	1.20	1.22	1.20	149.9	0.960	0.1	0.0001	0.61	1.47	0.61
2/15/2023	20:41	192.1	0.918	17,127.2	0.843	1.19	1.22	1.19	149.9	0.960	0.1	0.0001	0.61	1.47	0.61
2/15/2023	20:42	192.1	0.918	15,933.4	0.640	1.26	1.22	1.22	149.9	0.960	0.1	0.0001	0.61	1.47	0.61
2/15/2023	20:43	192.0	0.918	22,430.2	0.901	1.26	1.21	1.21	149.9	0.960	0.1	0.0001	0.62	1.48	0.62
2/15/2023	20:44	192.0	0.919	17,858.5	0.879	1.19	1.21	1.19	149.9	0.960	0.1	0.0001	0.61	1.47	0.61
2/15/2023	20:45	192.1	0.919	18,992.3	0.763	1.19	1.21	1.19				--			
2/15/2023	20:46	192.1	0.918	19,915.6	0.980	1.21	1.21	1.21	149.9	0.960	0.1	0.0001	0.62	1.47	0.62
2/15/2023	20:47	192.1	0.919	16,660.7	0.670	1.21	1.21	1.21	149.9	0.960	0.1	0.0001	0.62	1.45	0.62
2/15/2023	20:48	192.1	0.918	16,838.3	0.677	1.21	1.21	1.21	149.9	0.960	0.1	0.0001	0.62	1.45	0.62
2/15/2023	20:49	192.1	0.918	17,682.0	0.870	1.19	1.20	1.19	149.9	0.960	0.1	0.0001	0.62	1.46	0.62
2/15/2023	20:50	192.1	0.918	17,870.5	0.880	1.18	1.19	1.18	149.9	0.960	0.1	0.0001	0.62	1.44	0.62
2/15/2023	20:51	192.1	0.918	21,023.0	1.195	1.35	1.20	1.20	149.9	0.960	0.1	0.0001	0.62	1.44	0.62
2/15/2023	20:52	192.0	0.918	17,604.7	1.001	1.18	1.20	1.18	149.9	0.960	0.1	0.0001	0.61	1.43	0.61
2/15/2023	20:53	192.1	0.918	15,607.9	0.768	1.17	1.19	1.17	149.9	0.960	0.1	0.0001	0.61	1.43	0.61
2/15/2023	20:54	192.1	0.918	14,676.0	0.723	1.18	1.19	1.18	149.9	0.960	0.1	0.0001	0.61	1.43	0.61
2/15/2023	20:55	192.0	0.918	16,264.6	0.654	1.19	1.19	1.19	149.9	0.960	0.1	0.0001	0.61	1.42	0.61
2/15/2023	20:56	192.0	0.918	15,440.7	0.621	1.18	1.19	1.18	149.9	0.960	0.3	0.0002	0.61	1.44	0.61
2/15/2023	20:57	192.0	0.918	17,803.6	0.877	1.20	1.19	1.19	149.9	0.960	0.1	0.0001	0.61	1.44	0.61
2/15/2023	20:58	192.0	0.918	16,665.5	0.670	1.18	1.19	1.18	149.9	0.960	0.1	0.0001	0.61	1.44	0.61
2/15/2023	20:59	192.1	0.918	19,209.2	1.092	1.36	1.19	1.19	149.9	0.960	0.1	0.0001	0.61	1.44	0.61
2/15/2023	21:00				--				149.9	0.960	0.1	0.0001	0.61	1.43	0.61
2/15/2023	21:01	192.1	0.918	20,185.4	0.812	1.20	1.17	1.17	149.9	0.960	0.1	0.0001	0.61	1.44	0.61
2/15/2023	21:02	192.1	0.918	18,636.3	0.918	1.19	1.18	1.18	149.9	0.960	0.1	0.0001	0.62	1.43	0.62
2/15/2023	21:03	192.1	0.918	16,676.4	0.821	1.18	1.18	1.18	149.9	0.960	0.1	0.0001	0.61	1.42	0.61
2/15/2023	21:04	192.1	0.918	15,186.8	0.748	1.17	1.18	1.17	149.9	0.960	0.1	0.0001	0.61	1.42	0.61
2/15/2023	21:05	192.1	0.918	14,958.7	0.851	1.17	1.17	1.17	149.9	0.960	0.1	0.0001	0.62	1.41	0.62
2/15/2023	21:06	192.1	0.918	18,235.3	0.898	1.20	1.18	1.18	149.9	0.960	0.1	0.0001	0.61	1.41	0.61
2/15/2023	21:07	192.1	0.918	17,722.7	0.873	1.18	1.16	1.16	149.9	0.960	0.1	0.0001	0.61	1.41	0.61
2/15/2023	21:08	192.1	0.918	20,651.1	1.017	1.32	1.17	1.17				--			
2/15/2023	21:09	192.1	0.918	17,050.3	0.969	1.17	1.17	1.17	149.9	0.960	0.1	0.0001	0.61	1.41	0.61

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet $_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	21:10	192.1	0.918	18,122.6	1.031	1.20	1.17	1.17	149.9	0.960	0.1	0.0001	0.61	1.41	0.61
2/15/2023	21:11	192.0	0.918	14,433.1	0.821	1.17	1.17	1.17	149.9	0.960	0.1	0.0001	0.61	1.40	0.61
2/15/2023	21:12	192.1	0.918	12,854.9	0.633	1.14	1.17	1.14	149.9	0.960	0.1	0.0001	0.61	1.40	0.61
2/15/2023	21:13	192.1	0.918	13,710.4	0.676	1.17	1.16	1.16	149.9	0.960	0.3	0.0002	0.60	1.40	0.60
2/15/2023	21:14	192.1	0.918	13,578.2	0.772	1.17	1.16	1.16	149.9	0.960	0.1	0.0001	0.61	1.40	0.61
2/15/2023	21:15	192.1	0.918	13,840.5	0.786	1.17	1.16	1.16	149.9	0.960	0.2	0.0002	0.61	1.40	0.61
2/15/2023	21:16	192.1	0.918	18,272.2	0.899	1.26	1.16	1.16	149.9	0.960	0.1	0.0001	0.60	1.40	0.60
2/15/2023	21:17	192.1	0.918	8,336.4	0.474	1.07	1.14	1.07	149.9	0.960	0.1	0.0001	0.61	1.40	0.61
2/15/2023	21:18	192.1	0.918	3,714.4	0.211	0.99	1.15	0.99	149.9	0.960	0.1	0.0001	0.61	1.41	0.61
2/15/2023	21:19	192.1	0.917	2,460.0	0.140	0.98	1.15	0.98	149.9	0.960	0.4	0.0004	0.61	1.41	0.61
2/15/2023	21:20	192.1	0.917	1,919.9	0.134	0.96	1.15	0.96	149.9	0.960	0.2	0.0002	0.61	1.41	0.61
2/15/2023	21:21	192.1	0.917	1,620.1	0.092	0.97	1.16	0.97	149.9	0.960	0.1	0.0001	0.61	1.41	0.61
2/15/2023	21:22				--				149.9	0.959	0.1	0.0001	0.61	1.41	0.61
2/15/2023	21:23	192.1	0.917	1,515.4	0.075	0.96	1.15	0.96	149.9	0.960	0.2	0.0001	0.60	1.41	0.60
2/15/2023	21:24	192.1	0.917	1,379.3	0.078	0.96	1.14	0.96	149.9	0.960	0.1	0.0001	0.60	1.40	0.60
2/15/2023	21:25	192.1	0.917	2,093.3	0.119	0.97	1.15	0.97	149.9	0.959	0.1	0.0001	0.60	1.39	0.60
2/15/2023	21:26	192.1	0.917	2,107.6	0.120	0.96	1.14	0.96	149.9	0.959	0.3	0.0002	0.60	1.39	0.60
2/15/2023	21:27	192.1	0.917	1,386.8	0.079	0.96	1.14	0.96	149.9	0.959	0.1	0.0001	0.61	1.39	0.61
2/15/2023	21:28	192.1	0.917	1,259.6	0.072	0.96	1.14	0.96	149.9	0.960	0.1	0.0001	0.60	1.39	0.60
2/15/2023	21:29	192.1	0.917	1,200.3	0.068	0.96	1.14	0.96	149.9	0.960	0.2	0.0002	0.60	1.39	0.60
2/15/2023	21:30	192.1	0.917	1,169.0	0.066	0.96	1.14	0.96				--			
2/15/2023	21:31	192.1	0.918	1,150.5	0.073	0.96	1.14	0.96	149.9	0.960	0.1	0.0001	0.60	1.39	0.60
2/15/2023	21:32	192.1	0.917	1,156.7	0.073	0.96	1.14	0.96	149.9	0.959	0.1	0.0001	0.60	1.38	0.60
2/15/2023	21:33	192.1	0.917	1,361.8	0.067	0.96	1.14	0.96	149.9	0.960	0.1	0.0001	0.60	1.38	0.60
2/15/2023	21:34	192.1	0.917	2,056.6	0.101	0.95	1.14	0.95	149.9	0.960	0.1	0.0001	0.60	1.39	0.60
2/15/2023	21:35	192.1	0.917	1,265.5	0.072	0.96	1.14	0.96	149.9	0.960	0.2	0.0001	0.60	1.38	0.60
2/15/2023	21:36	192.1	0.917	1,089.2	0.069	0.96	1.13	0.96	149.9	0.960	0.1	0.0001	0.60	1.38	0.60
2/15/2023	21:37	192.1	0.917	1,029.7	0.058	0.96	1.14	0.96	149.9	0.960	0.1	0.0001	0.60	1.38	0.60
2/15/2023	21:38	192.0	0.918	1,021.7	0.050	0.96	1.14	0.96	149.9	0.960	0.2	0.0002	0.60	1.38	0.60
2/15/2023	21:39	192.1	0.918	949.4	0.060	0.97	1.14	0.97	149.9	0.960	0.1	0.0001	0.60	1.38	0.60
2/15/2023	21:40	192.1	0.918	936.7	0.046	0.97	1.13	0.97	149.9	0.960	0.2	0.0002	0.60	1.37	0.60
2/15/2023	21:41	192.1	0.918	927.8	0.046	0.97	1.13	0.97	149.9	0.960	0.1	0.0001	0.61	1.38	0.61
2/15/2023	21:42	192.1	0.917	2,050.3	0.117	0.95	1.13	0.95	149.9	0.960	0.1	0.0001	0.60	1.38	0.60
2/15/2023	21:43	192.1	0.918	1,175.9	0.067	0.96	1.14	0.96	149.9	0.960	0.1	0.0001	0.60	1.37	0.60
2/15/2023	21:44				--				149.9	0.960	0.1	0.0001	0.60	1.39	0.60
2/15/2023	21:45	192.1	0.918	955.5	0.054	0.97	1.12	0.97	149.9	0.960	0.1	0.0001	0.60	1.37	0.60
2/15/2023	21:46	192.1	0.918	881.6	0.050	0.97	1.13	0.97	149.9	0.960	0.1	0.0001	0.59	1.37	0.59
2/15/2023	21:47	192.1	0.918	854.3	0.049	0.97	1.12	0.97	149.9	0.960	0.1	0.0001	0.60	1.37	0.60
2/15/2023	21:48	192.1	0.918	824.8	0.041	0.97	1.13	0.97	149.9	0.960	0.1	0.0001	0.60	1.37	0.60
2/15/2023	21:49	192.1	0.917	818.7	0.047	0.97	1.13	0.97	149.9	0.960	0.1	0.0001	0.60	1.38	0.60
2/15/2023	21:50	192.1	0.917	801.6	0.046	0.97	1.13	0.97	149.9	0.960	0.1	0.0001	0.59	1.38	0.59
2/15/2023	21:51	192.1	0.918	1,221.8	0.069	0.95	1.13	0.95	149.9	0.960	0.1	0.0001	0.60	1.38	0.60
2/15/2023	21:52	192.1	0.918	1,423.6	0.070	0.95	1.13	0.95				--			
2/15/2023	21:53	192.1	0.918	919.1	0.045	0.97	1.12	0.97	149.9	0.960	0.2	0.0002	0.60	1.38	0.60
2/15/2023	21:54	192.1	0.918	788.5	0.039	0.97	1.12	0.97	149.9	0.960	0.2	0.0002	0.59	1.37	0.59
2/15/2023	21:55	192.1	0.918	751.9	0.043	0.97	1.12	0.97	149.9	0.960	0.1	0.0001	0.59	1.37	0.59
2/15/2023	21:56	192.1	0.918	707.1	0.035	0.96	1.12	0.96	149.9	0.960	0.2	0.0002	0.59	1.36	0.59
2/15/2023	21:57	192.1	0.918	704.2	0.040	0.96	1.12	0.96	149.9	0.960	0.1	0.0001	0.60	1.36	0.60
2/15/2023	21:58	192.1	0.918	689.4	0.044	0.96	1.13	0.96	149.9	0.960	0.1	0.0001	0.60	1.37	0.60
2/15/2023	21:59	192.1	0.918	666.0	0.042	0.96	1.12	0.96	149.9	0.960	0.3	0.0003	0.60	1.36	0.60
2/15/2023	22:00	192.1	0.918	1,472.8	0.084	0.95	1.12	0.95	149.9	0.960	0.1	0.0001	0.60	1.37	0.60
2/15/2023	22:01	192.1	0.918	1,017.7	0.065	0.95	1.12	0.95	149.9	0.960	0.2	0.0002	0.60	1.37	0.60
2/15/2023	22:02	192.1	0.918	744.3	0.042	0.96	1.12	0.96	149.9	0.960	0.2	0.0002	0.60	1.36	0.60
2/15/2023	22:03	192.1	0.918	710.2	0.049	0.97	1.12	0.97	149.9	0.960	0.1	0.0001	0.60	1.37	0.60
2/15/2023	22:04	192.1	0.918	662.4	0.042	0.96	1.13	0.96	149.9	0.960	0.1	0.0001	0.60	1.37	0.60
2/15/2023	22:05	192.1	0.918	635.8	0.040	0.97	1.12	0.97	149.9	0.960	0.4	0.0003	0.60	1.37	0.60
2/15/2023	22:06				--				149.9	0.960	0.1	0.0001	0.60	1.37	0.60
2/15/2023	22:07	192.1	0.918	2,354.0	0.134	0.97	1.13	0.97	149.9	0.960	0.1	0.0001	0.61	1.37	0.61
2/15/2023	22:08	192.1	0.918	2,891.4	0.184	1.00	1.12	1.00	149.9	0.960	0.1	0.0001	0.61	1.38	0.61
2/15/2023	22:09	192.1	0.918	1,699.7	0.118	1.03	1.12	1.03	149.9	0.960	0.1	0.0001	0.60	1.37	0.60
2/15/2023	22:10	192.1	0.918	1,629.4	0.104	1.05	1.13	1.05	149.9	0.960	0.1	0.0001	0.60	1.37	0.60
2/15/2023	22:11	192.1	0.918	1,339.1	0.085	1.07	1.13	1.07	149.9	0.960	0.1	0.0001	0.60	1.38	0.60
2/15/2023	22:12	192.1	0.918	1,188.1	0.068	1.08	1.13	1.08	149.9	0.960	0.1	0.0001	0.60	1.37	0.60
2/15/2023	22:13	192.1	0.918	1,119.6	0.071	1.09	1.12	1.09	149.9	0.959	0.1	0.0001	0.60	1.38	0.60
2/15/2023	22:14	192.1	0.918	1,080.6	0.061	1.10	1.13	1.10	149.9	0.960	0.1	0.0001	0.60	1.38	0.60
2/15/2023	22:15	192.1	0.918	997.1	0.057	1.11	1.13	1.11				--			
2/15/2023	22:16	192.1	0.917	928.6	0.053	1.12	1.13	1.12	149.9	0.959	0.3	0.0002	0.60	1.38	0.60
2/15/2023	22:17	192.1	0.917	1,088.4	0.076	1.10	1.13	1.10	149.9	0.959	0.2	0.0001	0.61	1.38	0.61
2/15/2023	22:18	192.1	0.917	1,029.3	0.059	1.08	1.13	1.08	149.9	0.959	0.1	0.0001	0.60	1.38	0.60
2/15/2023	22:19	192.1	0.917	1,110.6	0.045	1.09	1.14	1.09	149.9	0.959	0.1	0.0001	0.60	1.39	0.60
2/15/2023	22:20	192.1	0.917	969.5	0.039	1.13	1.14	1.13	149.9	0.959	0.5	0.0004	0.60	1.39	0.60
2/15/2023	22:21	192.1	0.917	922.7	0.037	1.13	1.13	1.13	149.9	0.959	0.2	0.0002	0.60	1.40	0.60
2/15/2023	22:22	192.1	0.917	898.1	0.036	1.14	1.13	1.13	149.9	0.959	0.1	0.0001	0.60	1.39	0.60
2/15/2023	22:23	192.1	0.917	848.3	0.042	1.13	1.13	1.13	149.9	0.959	0.1	0.0001	0.61	1.40	0.61
2/15/2023	22:24	192.1	0.917	909.5	0.045	1.13	1.14	1.13	149.9	0.959	0.3	0.0003	0.61	1.41	0.61
2/15/2023	22:25	192.1	0.917	831.1	0.053	1.13	1.13	1.13	149.9	0.959	0.1	0.0001	0.61	1.39	0.61
2/15/2023	22:26	192.1	0.917	847.8	0.048	1.13	1.13	1.13	149.9	0.959	0.1	0.0001	0.62	1.40	0.62
2/15/2023	22:27	192.1	0.917	916.0	0.052	1.11	1.13	1.11	149.9	0.959	0.1	0.0001	0.63	1.39	0.63
2/15/2023	22:28				--				150.0	0.959	0.1	0.0001	0.63	1.38	0.63
2/15/2023	22:29	192.1	0.917	976.3	0.048	1.11	1.12	1.11	150.0	0.959	0.1	0.0001	0.63	1.38	0.63
2/15/2023	22:30	192.1	0.917	658.7	0.037	1.04	1.12	1.04	150.0	0.959	0.1	0.0001	0.63	1.37	0.63
2/15/2023	22:31	192.1	0.917	622.9	0.035	1.01	1.11	1.01	150.0	0.959	0.1	0.0001	0.64	1.36	0.64
2/15/2023	22:32	192.1	0.917	647.5	0.032	1.00	1.11	1.00	149.9	0.959	0.1	0.0001	0.63	1.35	0.63
2/15/2023	22:33	192.1	0.917	669.1	0.033	1.00	1.11	1.00	150.0	0.959	0.1	0.0001	0.63	1.35	0.63
2/15/2023	22:34	192.1	0.917	834.7	0.041	1.00	1.10	1.00	150.0	0.959	0.1	0.0001	0.64	1.34	0.64
2/15/2023	22:35	192.1	0.917	1,826.3	0.137	0.99	1.10	0.99	150.0	0.959	0.1	0.0001	0.64	1.34	0.64
2/15/2023	22:36	192.1	0.917	957.9	0.047	1.00	1.10	1.00	150.0	0.959	0.1	0.0001	0.64	1.33	0.64
2/15/2023	22:37	192.1	0.916	796.5	0.039	1.00	1.10	1.00				--			
2/15/2023	22:38	192.1	0.917	762.0	0.031	0.99	1.10	0.99	150.0	0.959	0.1	0.0001	0.64	1.33	0.64
2/15/2023	22:39	192.1	0.917	811.7	0.040	0.99	1.09	0.99	149.9	0.959	0.1	0.0001	0.64	1.32	0.64
2/15/2023	22:40	192.1	0.917	797.5	0.039	0.99	1.09	0.99	149.9	0.959	0.1	0.0001	0.64	1.32	0.64
2/15/2023	22:41	192.1	0.917	866.3	0.043	0.99	1.09	0.99	149.9	0.959	0.4	0.0004	0.64	1.32	0.64
2/15/2023	22:42	192.1	0.917	886.6	0.036	0.99	1.09	0.99	149.9	0.959	0.1	0.0001	0.64	1.31	0.64
2/15/2023	22:43	192.1	0.917	835.3	0.048	0.99	1.09	0.99	150.0	0.958	0.1	0.0001	0.65	1.31	0.65
2/15/2023	22:44	192.1	0.917	1,916.3	0.094	0.99	1.08	0.99	149.9	0.959	0.1	0.0001	0.65	1.31	0.65

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet Temperature - Inlet	Inlet Pressure - Inlet	Inlet Ethylene Oxide - Inlet	Inlet Ethylene Oxide - Inlet	Inlet BWS - Inlet	Inlet BWS - Inlet$_{wet}$	Inlet BWS - Inlet$_{used}$	Outlet Temperature - Outlet	Outlet Pressure - Outlet	Outlet Ethylene Oxide - Outlet	Outlet Ethylene Oxide - Outlet	Outlet BWS - Outlet	Outlet BWS - Outlet$_{wet}$	Outlet BWS - Outlet$_{used}$
	Unit	°C	atm	ppmvw	lb/hr	% (wet)	% (wet)	% (wet)	°C	atm	ppmvw	lb/hr	% (wet)	% (wet)	% (wet)
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	22:45	192.1	0.917	2,675.4	0.132	0.98	1.08	0.98	149.9	0.959	0.1	0.0001	0.65	1.31	0.65
2/15/2023	22:46	192.1	0.916	1,730.4	0.085	0.97	1.08	0.97	149.9	0.959	0.1	0.0001	0.65	1.31	0.65
2/15/2023	22:47	192.1	0.917	1,457.9	0.072	0.97	1.08	0.97	150.0	0.958	0.1	0.0001	0.64	1.31	0.64
2/15/2023	22:48	192.1	0.917	1,295.0	0.064	0.97	1.08	0.97	149.9	0.958	0.2	0.0001	0.65	1.30	0.65
2/15/2023	22:49	192.1	0.917	1,590.7	0.078	0.97	1.08	0.97	149.9	0.958	0.1	0.0001	0.65	1.31	0.65
2/15/2023	22:50				--				149.9	0.958	0.1	0.0001	0.65	1.31	0.65
2/15/2023	22:51	192.1	0.916	1,969.0	0.097	0.96	1.07	0.96	150.0	0.958	0.1	0.0001	0.65	1.31	0.65
2/15/2023	22:52	192.1	0.916	2,015.4	0.099	0.96	1.08	0.96	149.9	0.958	0.1	0.0001	0.65	1.31	0.65
2/15/2023	22:53	192.1	0.916	2,102.0	0.120	0.97	1.08	0.97	149.9	0.959	0.1	0.0001	0.65	1.32	0.65
2/15/2023	22:54	192.1	0.916	2,082.6	0.103	0.96	1.08	0.96	149.9	0.959	0.3	0.0002	0.65	1.31	0.65
2/15/2023	22:55	192.1	0.916	1,989.8	0.113	0.96	1.08	0.96	149.9	0.959	0.1	0.0001	0.65	1.32	0.65
2/15/2023	22:56	192.1	0.917	1,955.2	0.096	0.96	1.08	0.96	149.9	0.959	0.3	0.0002	0.65	1.32	0.65
2/15/2023	22:57	192.1	0.917	3,230.0	0.159	1.05	1.07	1.05	149.9	0.959	0.2	0.0002	0.65	1.33	0.65
2/15/2023	22:58	192.1	0.917	5,078.5	0.289	0.97	1.07	0.97	149.9	0.958	0.1	0.0001	0.66	1.33	0.66
2/15/2023	22:59	192.1	0.917	3,293.5	0.187	0.98	1.08	0.98				--			
2/15/2023	23:00	192.1	0.916	2,998.8	0.148	0.98	1.08	0.98	149.9	0.958	0.1	0.0001	0.65	1.32	0.65
2/15/2023	23:01	192.1	0.916	3,588.0	0.204	0.98	1.08	0.98	149.9	0.958	0.1	0.0001	0.65	1.33	0.65
2/15/2023	23:02	192.1	0.916	4,571.7	0.225	0.97	1.08	0.97	150.0	0.958	0.1	0.0001	0.65	1.33	0.65
2/15/2023	23:03	192.1	0.916	4,815.7	0.237	0.97	1.08	0.97	150.0	0.958	0.1	0.0001	0.65	1.33	0.65
2/15/2023	23:04	192.1	0.916	4,927.7	0.281	0.97	1.08	0.97	149.9	0.958	0.1	0.0001	0.65	1.32	0.65
2/15/2023	23:05	192.1	0.916	4,672.2	0.266	0.97	1.08	0.97	149.9	0.958	0.1	0.0001	0.65	1.32	0.65
2/15/2023	23:06	192.1	0.916	5,066.2	0.288	1.00	1.08	1.00	150.0	0.958	0.1	0.0001	0.66	1.32	0.66
2/15/2023	23:07	192.1	0.916	10,626.3	0.524	1.06	1.08	1.06	149.9	0.958	0.1	0.0001	0.66	1.32	0.66
2/15/2023	23:08	192.1	0.916	7,301.7	0.360	0.95	1.09	0.95	149.9	0.958	0.1	0.0001	0.66	1.32	0.66
2/15/2023	23:09	192.1	0.916	6,517.1	0.321	0.94	1.08	0.94	150.0	0.958	0.1	0.0001	0.65	1.32	0.65
2/15/2023	23:10	192.1	0.916	6,685.6	0.330	0.94	1.08	0.94	150.0	0.958	0.1	0.0001	0.66	1.32	0.66
2/15/2023	23:11	192.1	0.916	7,165.3	0.408	0.94	1.09	0.94	150.0	0.959	0.1	0.0001	0.65	1.31	0.65
2/15/2023	23:12				--				150.0	0.958	0.1	0.0001	0.66	1.31	0.66
2/15/2023	23:13	192.1	0.916	7,313.2	0.416	0.94	1.08	0.94	149.9	0.958	0.1	0.0001	0.66	1.31	0.66
2/15/2023	23:14	192.1	0.916	8,587.9	0.489	1.10	1.08	1.08	150.0	0.959	0.1	0.0001	0.66	1.30	0.66
2/15/2023	23:15	192.1	0.916	12,691.2	0.626	1.01	1.08	1.01	149.9	0.959	0.1	0.0001	0.66	1.30	0.66
2/15/2023	23:16	192.1	0.916	9,800.6	0.483	0.92	1.08	0.92	149.9	0.959	0.2	0.0001	0.66	1.29	0.66
2/15/2023	23:17	192.1	0.916	9,274.8	0.528	0.93	1.07	0.93	149.9	0.959	0.1	0.0001	0.66	1.29	0.66
2/15/2023	23:18	192.1	0.916	9,483.6	0.468	0.92	1.08	0.92	149.9	0.959	0.1	0.0001	0.66	1.30	0.66
2/15/2023	23:19	192.1	0.917	9,729.1	0.480	0.92	1.08	0.92	150.0	0.959	0.1	0.0001	0.66	1.29	0.66
2/15/2023	23:20	192.1	0.917	9,698.9	0.617	0.92	1.07	0.92	149.9	0.959	0.1	0.0001	0.66	1.28	0.66
2/15/2023	23:21	192.1	0.917	9,304.7	0.592	0.92	1.07	0.92	149.9	0.959	0.1	0.0001	0.66	1.28	0.66
2/15/2023	23:22	192.1	0.917	8,970.1	0.571	0.92	1.08	0.92				--			
2/15/2023	23:23	192.1	0.917	8,707.3	0.496	0.92	1.08	0.92	149.9	0.959	0.1	0.0001	0.65	1.27	0.65
2/15/2023	23:24	192.1	0.917	8,281.3	0.471	0.93	1.08	0.93	149.9	0.959	0.1	0.0001	0.65	1.26	0.65
2/15/2023	23:25	192.1	0.917	15,328.9	0.873	1.12	1.07	1.07	150.0	0.959	0.1	0.0001	0.65	1.25	0.65
2/15/2023	23:26	192.1	0.917	11,902.9	0.678	0.98	1.08	0.98	150.0	0.959	0.1	0.0001	0.65	1.25	0.65
2/15/2023	23:27	192.1	0.917	10,470.0	0.730	0.98	1.08	0.98	149.9	0.959	0.1	0.0001	0.65	1.24	0.65
2/15/2023	23:28	192.1	0.917	10,320.0	0.657	0.97	1.08	0.97	149.9	0.959	0.1	0.0001	0.66	1.23	0.66
2/15/2023	23:29	192.1	0.917	10,960.8	0.697	0.97	1.09	0.97	150.0	0.959	0.2	0.0002	0.66	1.22	0.66
2/15/2023	23:30	192.1	0.917	10,668.8	0.607	0.96	1.09	0.96	149.9	0.960	0.1	0.0001	0.66	1.22	0.66
2/15/2023	23:31	192.1	0.917	10,358.9	0.590	0.96	1.09	0.96	149.9	0.960	0.1	0.0001	0.68	1.21	0.68
2/15/2023	23:32	192.1	0.918	10,282.9	0.828	0.97	1.08	0.97	149.9	0.960	0.1	0.0001	0.67	1.20	0.67
2/15/2023	23:33	192.1	0.918	9,814.5	0.625	0.89	1.08	0.89	149.9	0.960	0.1	0.0001	0.67	1.19	0.67
2/15/2023	23:34				--				150.0	0.960	0.4	0.0004	0.67	1.17	0.67
2/15/2023	23:35	192.1	0.918	9,355.7	0.533	0.88	1.07	0.88	149.9	0.960	0.1	0.0001	0.67	1.17	0.67
2/15/2023	23:36	192.1	0.918	8,903.9	0.439	0.88	1.08	0.88	149.9	0.960	0.1	0.0001	0.66	1.16	0.66
2/15/2023	23:37	192.1	0.918	16,347.3	1.041	1.07	1.08	1.07	149.9	0.960	0.1	0.0001	0.67	1.14	0.67
2/15/2023	23:38	192.1	0.918	12,766.2	0.515	0.94	1.08	0.94	149.9	0.960	0.1	0.0001	0.66	1.13	0.66
2/15/2023	23:39	192.1	0.918	11,456.9	0.731	0.94	1.10	0.94	149.9	0.960	0.1	0.0001	0.66	1.13	0.66
2/15/2023	23:40	192.1	0.918	11,437.2	0.565	0.94	1.12	0.94	150.0	0.960	0.1	0.0001	0.66	1.12	0.66
2/15/2023	23:41	192.2	0.918	12,154.6	0.692	0.97	1.16	0.97	150.0	0.959	0.1	0.0001	0.65	1.12	0.65
2/15/2023	23:42	192.1	0.918	33,880.4	1.669	1.22	1.19	1.19	149.9	0.959	0.3	0.0003	0.65	1.10	0.65
2/15/2023	23:43	192.1	0.918	47,983.0	3.043	0.64	1.25	0.64	150.0	0.958	0.1	0.0001	0.65	1.05	0.65
2/15/2023	23:44	192.1	0.918	49,724.8	2.818	0.57	1.28	0.57				--			
2/15/2023	23:45	192.1	0.917	31,913.2	1.810	1.20	1.29	1.20	149.9	0.959	0.1	0.0001	0.65	1.03	0.65
2/15/2023	23:46	192.1	0.917	25,182.6	1.427	1.06	1.29	1.06	150.0	0.958	0.2	0.0002	0.65	1.05	0.65
2/15/2023	23:47	192.1	0.916	19,620.8	0.963	1.01	1.28	1.01	150.0	0.958	0.1	0.0001	0.65	1.05	0.65
2/15/2023	23:48	192.1	0.917	17,889.2	1.014	0.96	1.28	0.96	150.0	0.958	0.1	0.0001	0.64	1.04	0.64
2/15/2023	23:49	192.1	0.916	12,385.5	0.609	0.97	1.27	0.97	150.0	0.958	0.2	0.0002	0.64	1.04	0.64
2/15/2023	23:50	192.1	0.916	10,630.4	0.523	0.96	1.26	0.96	150.0	0.958	0.3	0.0003	0.64	1.02	0.64
2/15/2023	23:51	192.1	0.916	12,221.5	0.776	1.07	1.26	1.07	150.0	0.958	0.1	0.0001	0.64	1.01	0.64
2/15/2023	23:52	192.1	0.916	21,232.3	1.044	1.03	1.24	1.03	150.0	0.958	0.1	0.0001	0.64	1.02	0.64
2/15/2023	23:53	192.1	0.916	20,863.1	1.026	1.06	1.25	1.06	149.9	0.959	0.1	0.0001	0.64	0.99	0.64
2/15/2023	23:54	192.1	0.916	22,802.8	1.121	1.12	1.24	1.12	149.9	0.959	0.1	0.0001	0.64	1.00	0.64
2/15/2023	23:55	192.1	0.916	20,858.0	1.184	1.17	1.26	1.17	149.9	0.959	0.1	0.0001	0.64	0.99	0.64
2/15/2023	23:56				--				149.9	0.959	0.1	0.0001	0.64	0.97	0.64
2/15/2023	23:57	192.1	0.916	17,289.1	0.694	1.23	1.27	1.23	149.9	0.959	0.1	0.0001	0.63	0.96	0.63
2/15/2023	23:58	192.1	0.917	11,635.4	0.572	1.24	1.27	1.24	150.0	0.960	0.2	0.0002	0.64	0.95	0.64
2/15/2023	23:59	192.1	0.917	9,199.0	0.452	1.12	1.25	1.12	150.0	0.960	0.1	0.0001	0.63	0.96	0.63
2/15/2023	0:00	192.1	0.917	7,255.9	0.357	1.12	1.23	1.12	149.9	0.960	0.1	0.0001	0.63	0.95	0.63
2/16/2023	0:01	192.1	0.917	6,788.4	0.387	1.14	1.22	1.14	149.9	0.960	0.1	0.0001	0.64	0.91	0.64
2/16/2023	0:02	192.1	0.917	5,327.6	0.263	1.13	1.22	1.13	149.9	0.960	0.2	0.0002	0.63	0.93	0.63
2/16/2023	0:03	192.1	0.918	5,847.7	0.236	1.10	1.22	1.10	149.9	0.960	0.1	0.0001	0.63	0.93	0.63
2/16/2023	0:04	192.1	0.918	13,049.9	0.644	1.23	1.23	1.23	149.9	0.959	0.3	0.0003	0.63	0.92	0.63
2/16/2023	0:05	192.1	0.918	18,141.0	0.896	1.10	1.21	1.10	149.9	0.959	0.1	0.0001	0.63	0.93	0.63
2/16/2023	0:06	192.1	0.917	19,783.1	0.000	1.10	1.20	1.10				--			
2/16/2023	0:07	192.0	0.917	17,966.9	0.887	1.11	1.20	1.11	149.9	0.959	0.1	0.0001	0.63	0.92	0.63
2/16/2023	0:08	192.0	0.917	13,010.4	0.642	1.12	1.21	1.12	149.9	0.960	0.2	0.0002	0.63	0.93	0.63
2/16/2023	0:09	192.0	0.917	10,042.5	0.572	1.05	1.21	1.05	149.9	0.960	0.3	0.0002	0.63	0.93	0.63
2/16/2023	0:10	192.0	0.917	7,262.2	0.414	1.03	1.19	1.03	149.9	0.960	0.2	0.0002	0.63	0.93	0.63
2/16/2023	0:11	192.0	0.917	5,956.5	0.294	1.03	1.21	1.03	149.9	0.959	0.2	0.0002	0.63	0.90	0.63
2/16/2023	0:12	192.1	0.917	5,324.5	0.152	1.03	1.17	1.03	149.9	0.959	0.2	0.0001	0.63	0.92	0.63
2/16/2023	0:13	192.1	0.917	4,137.0	0.204	1.03	1.20	1.03	149.9	0.959	0.4	0.0003	0.63	0.91	0.63
2/16/2023	0:14	192.1	0.917	4,126.7	0.235	1.00	1.21	1.00	150.0	0.959	0.1	0.0001	0.63	0.91	0.63
2/16/2023	0:15	192.1	0.916	7,877.9	0.318	0.98	1.20	0.98	149.9	0.959	0.2	0.0002	0.63	0.94	0.63
2/16/2023	0:16	192.1	0.917	15,543.0	0.768	1.03	1.21	1.03	149.9	0.959	0.1	0.0001	0.63	0.93	0.63
2/16/2023	0:17	192.1	0.917	17,868.4	0.883	1.01	1.19	1.01	149.9	0.959	0.1	0.0001	0.63	0.94	0.63
2/16/2023	0:18				--				150.0	0.959	0.2	0.0002	0.63	0.93	0.63
2/16/2023	0:19	192.1	0.917	17,706.6	0.874	1.01	1.21	1.01	149.9	0.958	0.3	0.0003	0.63	0.93	0.63

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wt}$**	**BWS - Inlet$_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wt}$**	**BWS - Outlet$_{used}$**
	Unit	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/16/2023	0:20	192.1	0.917	15,568.8	0.768	1.03	1.21	1.03	149.9	0.958	0.2	0.0002	0.63	0.93	0.63
2/16/2023	0:21	192.1	0.916	10,896.1	0.439	1.03	1.21	1.03	149.9	0.958	0.1	0.0001	0.63	0.94	0.63
2/16/2023	0:22	192.1	0.917	8,626.9	0.426	0.94	1.20	0.94	149.9	0.958	0.2	0.0002	0.63	0.93	0.63
2/16/2023	0:23	192.0	0.916	6,502.1	0.321	0.96	1.20	0.96	149.9	0.958	0.1	0.0001	0.63	0.93	0.63
2/16/2023	0:24	192.1	0.916	4,696.2	0.189	0.95	1.20	0.95	149.9	0.958	0.2	0.0002	0.63	0.93	0.63
2/16/2023	0:25	192.1	0.916	4,066.4	0.201	0.95	1.21	0.95	149.9	0.958	0.3	0.0003	0.63	0.92	0.63
2/16/2023	0:26	192.1	0.916	3,788.4	0.153	0.94	1.24	0.94	149.9	0.958	0.1	0.0001	0.63	0.91	0.63
2/16/2023	0:27	192.1	0.916	7,116.2	0.287	0.96	1.22	0.96	149.9	0.958	0.1	0.0001	0.63	0.94	0.63
2/16/2023	0:28	192.1	0.916	13,976.6	0.564	0.99	1.20	0.99	149.9	0.958	0.1	0.0001	0.63	0.93	0.63
2/16/2023	0:29	192.1	0.916	16,019.7	0.645	0.96	1.26	0.96				--			
2/16/2023	0:30	192.1	0.916	17,701.5	1.009	0.98	1.20	0.98	149.9	0.958	0.1	0.0001	0.64	0.94	0.64
2/16/2023	0:31	192.1	0.916	16,171.0	0.798	0.98	1.21	0.98	149.9	0.958	0.1	0.0001	0.64	0.94	0.64
2/16/2023	0:32	192.1	0.916	11,326.9	0.646	0.98	1.20	0.98	150.0	0.958	0.2	0.0002	0.64	0.95	0.64
2/16/2023	0:33	192.1	0.916	8,514.7	0.420	0.91	1.25	0.91	149.9	0.958	0.3	0.0003	0.63	0.93	0.63
2/16/2023	0:34	192.1	0.916	6,378.0	0.257	0.92	1.23	0.92	149.9	0.958	0.3	0.0003	0.63	0.94	0.63
2/16/2023	0:35	192.1	0.916	5,392.4	0.266	0.93	1.22	0.93	149.9	0.958	0.1	0.0001	0.64	0.94	0.64
2/16/2023	0:36	192.1	0.916	4,335.9	0.175	0.93	1.22	0.93	149.9	0.958	0.2	0.0002	0.63	0.94	0.63
2/16/2023	0:37	192.1	0.915	3,362.0	0.166	0.91	1.22	0.91	149.9	0.958	0.1	0.0001	0.63	0.95	0.63
2/16/2023	0:38	192.1	0.915	3,324.6	0.212	0.92	1.24	0.92	149.9	0.958	0.1	0.0001	0.64	0.94	0.64
2/16/2023	0:39	192.1	0.916	5,435.2	0.219	0.94	1.27	0.94	150.0	0.958	0.1	0.0001	0.64	0.95	0.64
2/16/2023	0:40				--				149.9	0.958	0.2	0.0002	0.64	0.95	0.64
2/16/2023	0:41	192.1	0.916	12,455.9	0.000	0.97	1.28	0.97	149.9	0.958	0.2	0.0002	0.64	0.94	0.64
2/16/2023	0:42	192.1	0.916	15,663.6	0.446	0.96	1.30	0.96	150.0	0.957	0.2	0.0002	0.64	0.95	0.64
2/16/2023	0:43	192.1	0.916	18,805.1	0.927	0.96	1.24	0.96	149.9	0.957	0.2	0.0002	0.64	0.93	0.64
2/16/2023	0:44	192.1	0.916	17,819.6	1.244	0.97	1.21	0.97	149.9	0.957	0.1	0.0001	0.64	0.94	0.64
2/16/2023	0:45	192.1	0.915	15,276.8	0.870	0.97	1.23	0.97	149.9	0.957	0.2	0.0002	0.64	0.93	0.64
2/16/2023	0:46	192.1	0.915	10,527.5	0.424	0.99	1.22	0.99	149.9	0.958	0.1	0.0001	0.64	0.93	0.64
2/16/2023	0:47	192.1	0.915	7,352.3	0.363	0.90	1.21	0.90	150.0	0.958	0.1	0.0001	0.65	0.96	0.65
2/16/2023	0:48	192.1	0.915	5,439.7	0.268	0.91	1.22	0.91	150.0	0.957	0.1	0.0001	0.64	0.93	0.64
2/16/2023	0:49	192.1	0.915	4,605.1	0.186	0.93	1.21	0.93	150.0	0.957	0.2	0.0002	0.64	0.92	0.64
2/16/2023	0:50	192.0	0.915	3,560.2	0.203	0.92	1.22	0.92	150.0	0.957	0.2	0.0002	0.64	0.92	0.64
2/16/2023	0:51	192.1	0.915	3,330.1	0.095	0.92	1.22	0.92				--			
2/16/2023	0:52	192.1	0.915	5,627.3	0.454	0.93	1.21	0.93	150.0	0.957	0.1	0.0001	0.65	0.95	0.65
2/16/2023	0:53	192.1	0.915	12,685.6	0.511	0.95	1.18	0.95	150.0	0.957	0.2	0.0002	0.64	0.96	0.64
2/16/2023	0:54	192.1	0.915	17,202.8	0.848	0.95	1.22	0.95	149.9	0.957	0.1	0.0001	0.65	0.94	0.65
2/16/2023	0:55	192.1	0.915	19,366.3	0.779	0.95	1.25	0.95	150.0	0.956	0.1	0.0001	0.64	0.94	0.64
2/16/2023	0:56	192.1	0.914	11,380.4	0.458	0.98	1.26	0.98	150.0	0.955	0.1	0.0001	0.64	0.94	0.64
2/16/2023	0:57	192.1	0.914	6,653.8	0.268	0.86	1.23	0.86	149.9	0.955	0.3	0.0003	0.64	0.94	0.64
2/16/2023	0:58	192.1	0.913	5,204.6	0.209	0.87	1.24	0.87	149.9	0.954	0.2	0.0002	0.65	0.95	0.65
2/16/2023	0:59	192.1	0.912	4,339.8	0.214	0.88	1.25	0.88	149.9	0.955	0.2	0.0002	0.65	0.93	0.65
2/16/2023	1:00	192.1	0.912	3,786.9	0.187	0.89	1.20	0.89	150.0	0.955	0.4	0.0004	0.65	0.94	0.65
2/16/2023	1:01	192.1	0.912	3,365.1	0.166	0.90	1.20	0.90	149.9	0.955	0.2	0.0002	0.65	0.95	0.65
2/16/2023	1:02				--				149.9	0.956	0.3	0.0003	0.64	0.95	0.64
2/16/2023	1:03	192.2	0.913	7,187.2	0.289	0.96	1.20	0.96	150.0	0.956	0.5	0.0004	0.65	0.94	0.65
2/16/2023	1:04	192.1	0.913	3,978.3	0.320	0.91	1.20	0.91	149.9	0.957	0.2	0.0002	0.65	0.95	0.65
2/16/2023	1:05	192.1	0.914	2,962.4	0.146	0.91	1.22	0.91	149.9	0.957	0.1	0.0001	0.66	0.96	0.66
2/16/2023	1:06	192.1	0.914	2,571.7	0.127	0.92	1.19	0.92	150.0	0.956	0.1	0.0001	0.66	0.95	0.66
2/16/2023	1:07	192.1	0.914	2,420.7	0.119	0.92	1.19	0.92	149.9	0.956	0.1	0.0001	0.66	0.98	0.66
2/16/2023	1:08	192.1	0.914	2,315.7	0.093	0.90	1.19	0.90	149.9	0.956	0.3	0.0003	0.66	0.97	0.66
2/16/2023	1:09	192.1	0.914	2,244.6	0.091	0.91	1.20	0.91	149.9	0.956	0.3	0.0002	0.66	0.97	0.66
2/16/2023	1:10	192.1	0.914	2,244.1	0.091	0.92	1.19	0.92	149.9	0.956	0.2	0.0002	0.67	0.97	0.67
2/16/2023	1:11	192.1	0.914	3,373.4	0.289	1.01	1.20	1.01	149.9	0.957	0.2	0.0002	0.66	0.97	0.66
2/16/2023	1:12	192.1	0.914	17,144.6	0.847	1.07	1.20	1.07	149.9	0.957	0.3	0.0003	0.67	0.98	0.67
2/16/2023	1:13	192.1	0.914	19,947.0	0.804	1.03	1.21	1.03	149.9	0.957	0.4	0.0004	0.67	0.98	0.67
2/16/2023	1:14	192.1	0.915	20,173.2	0.996	1.05	1.20	1.05				--			
2/16/2023	1:15	192.1	0.915	15,393.2	0.760	1.02	1.23	1.02	149.9	0.957	0.2	0.0002	0.68	0.98	0.68
2/16/2023	1:16	192.1	0.915	11,282.1	0.455	1.04	1.22	1.04	149.9	0.957	0.2	0.0001	0.67	0.99	0.67
2/16/2023	1:17	192.1	0.915	11,209.0	0.639	1.04	1.21	1.04	149.9	0.957	0.4	0.0004	0.67	0.99	0.67
2/16/2023	1:18	192.1	0.915	18,030.1	0.890	1.02	1.23	1.02	150.0	0.957	0.1	0.0001	0.67	0.97	0.67
2/16/2023	1:19	192.1	0.915	19,965.0	1.137	1.02	1.24	1.02	150.0	0.957	0.4	0.0004	0.67	0.98	0.67
2/16/2023	1:20	192.1	0.915	19,904.5	0.982	1.04	1.24	1.04	149.9	0.957	0.1	0.0001	0.68	0.97	0.68
2/16/2023	1:21	192.1	0.915	6,704.2	0.330	0.91	1.30	0.91	150.0	0.957	0.1	0.0001	0.67	0.94	0.67
2/16/2023	1:22	192.1	0.915	3,833.5	0.154	0.86	1.27	0.86	149.9	0.957	0.1	0.0001	0.67	0.96	0.67
2/16/2023	1:23	192.1	0.915	3,202.2	0.129	0.84	1.30	0.84	150.0	0.957	0.3	0.0003	0.67	0.95	0.67
2/16/2023	1:24				--				149.9	0.957	0.2	0.0002	0.66	0.96	0.66
2/16/2023	1:25	192.1	0.915	2,807.3	0.138	0.84	1.24	0.84	149.9	0.957	0.2	0.0002	0.67	0.97	0.67
2/16/2023	1:26	192.1	0.915	2,206.3	0.063	0.83	1.24	0.83	149.9	0.957	0.3	0.0003	0.66	0.96	0.66
2/16/2023	1:27	192.1	0.915	5,160.9	0.147	1.16	1.21	1.16	149.9	0.957	0.2	0.0002	0.66	0.98	0.66
2/16/2023	1:28	192.1	0.915	17,231.8	0.491	0.94	1.21	0.94	149.9	0.957	0.2	0.0002	0.67	0.96	0.67
2/16/2023	1:29	192.1	0.915	7,188.3	0.354	0.82	1.23	0.82	149.9	0.957	0.2	0.0002	0.66	0.97	0.66
2/16/2023	1:30	192.1	0.915	3,692.8	0.149	0.82	1.22	0.82	149.9	0.957	0.2	0.0002	0.66	0.99	0.66
2/16/2023	1:31	192.1	0.915	2,762.8	0.157	0.82	1.22	0.82	150.0	0.957	0.1	0.0001	0.66	0.99	0.66
2/16/2023	1:32	192.1	0.915	2,365.9	0.117	0.82	1.23	0.82	149.9	0.957	0.2	0.0002	0.67	0.99	0.67
2/16/2023	1:33	192.1	0.915	2,111.5	0.104	0.81	1.23	0.81	149.9	0.956	0.1	0.0001	0.67	0.98	0.67
2/16/2023	1:34	192.1	0.915	2,009.5	0.099	0.81	1.22	0.81	149.9	0.956	0.1	0.0001	0.67	0.98	0.67
2/16/2023	1:35	192.1	0.915	1,946.7	0.078	0.81	1.23	0.81	149.9	0.956	0.1	0.0001	0.67	1.00	0.67
2/16/2023	1:36	192.1	0.915	1,824.8	0.090	0.81	1.23	0.81				--			
2/16/2023	1:37	192.1	0.915	1,710.4	0.069	0.81	1.24	0.81	149.9	0.956	0.2	0.0002	0.67	0.99	0.67
2/16/2023	1:38	192.1	0.915	3,152.8	0.156	0.98	1.22	0.98	149.9	0.956	0.1	0.0001	0.67	0.99	0.67
2/16/2023	1:39	192.1	0.915	22,063.6	0.888	0.83	1.28	0.83	149.9	0.956	0.3	0.0003	0.67	0.99	0.67
2/16/2023	1:40	192.1	0.914	10,200.7	0.503	0.93	1.23	0.93	149.9	0.956	0.1	0.0001	0.67	1.02	0.67
2/16/2023	1:41	192.1	0.914	4,601.4	0.185	0.82	1.26	0.82	149.9	0.956	0.1	0.0001	0.68	1.01	0.68
2/16/2023	1:42	192.1	0.914	2,928.5	0.118	0.83	1.25	0.83	149.9	0.956	0.1	0.0001	0.69	1.01	0.69
2/16/2023	1:43	192.1	0.914	2,405.9	0.097	0.84	1.26	0.84	149.9	0.956	0.1	0.0001	0.69	1.02	0.69
2/16/2023	1:44	192.1	0.914	2,130.5	0.086	0.83	1.24	0.83	150.0	0.956	0.1	0.0001	0.70	1.02	0.70
2/16/2023	1:45	192.1	0.914	1,943.5	0.078	0.84	1.23	0.84	149.9	0.956	0.1	0.0001	0.70	1.03	0.70
2/16/2023	1:46				--				149.9	0.956	0.1	0.0001	0.71	1.04	0.71
2/16/2023	1:47	192.1	0.914	1,840.5	0.074	0.84	1.24	0.84	149.9	0.956	0.1	0.0001	0.70	1.03	0.70
2/16/2023	1:48	192.1	0.914	1,744.7	0.050	0.84	1.23	0.84	149.9	0.956	0.3	0.0003	0.70	1.05	0.70
2/16/2023	1:49	192.1	0.914	1,681.7	0.068	0.84	1.24	0.84	149.9	0.956	0.1	0.0001	0.70	1.05	0.70
2/16/2023	1:50	192.1	0.914	2,066.4	0.083	0.86	1.25	0.86	150.0	0.956	0.1	0.0001	0.70	1.04	0.70
2/16/2023	1:51	192.1	0.915	20,951.6	0.844	0.89	1.22	0.89	150.0	0.956	0.1	0.0001	0.69	1.05	0.69
2/16/2023	1:52	192.1	0.914	12,029.0	0.484	0.95	1.24	0.95	150.0	0.956	0.1	0.0001	0.69	1.05	0.69
2/16/2023	1:53	192.1	0.914	4,932.9	0.199	0.83	1.24	0.83	150.0	0.956	0.1	0.0001	0.68	1.01	0.68
2/16/2023	1:54	192.1	0.914	3,034.2	0.086	0.83	1.26	0.83	149.9	0.956	0.2	0.0002	0.68	1.02	0.68

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet $_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/16/2023	1:55	192.1	0.914	2,415.5	0.097	0.83	1.28	0.83	150.0	0.956	0.1	0.0001	0.68	1.01	0.68
2/16/2023	1:56	192.1	0.914	2,082.0	0.084	0.81	1.26	0.81	149.9	0.956	0.1	0.0001	0.68	1.02	0.68
2/16/2023	1:57	192.1	0.914	1,919.3	0.095	0.81	1.23	0.81	149.9	0.956	0.1	0.0001	0.67	1.04	0.67
2/16/2023	1:58	192.1	0.914	1,795.7	0.089	0.81	1.24	0.81	149.9	0.956	0.2	0.0002	0.68	1.02	0.68
2/16/2023	1:59	192.1	0.914	1,695.7	0.068	0.81	1.24	0.81				--			
2/16/2023	2:00	192.1	0.914	2,582.0	0.104	0.89	1.24	0.89	149.9	0.956	0.1	0.0001	0.67	1.01	0.67
2/16/2023	2:01	192.1	0.914	21,744.0	0.876	0.83	1.23	0.83	150.0	0.956	0.1	0.0001	0.68	1.02	0.68
2/16/2023	2:02	192.1	0.914	10,742.1	0.433	0.91	1.22	0.91	149.9	0.956	0.2	0.0001	0.67	1.03	0.67
2/16/2023	2:03	192.1	0.914	4,621.1	0.186	0.81	1.24	0.81	149.9	0.956	0.1	0.0001	0.67	1.03	0.67
2/16/2023	2:04	192.1	0.914	2,938.1	0.084	0.81	1.26	0.81	150.0	0.956	0.4	0.0004	0.66	1.03	0.66
2/16/2023	2:05	192.1	0.914	2,333.9	0.066	0.80	1.25	0.80	149.9	0.957	0.1	0.0001	0.67	1.01	0.67
2/16/2023	2:06	192.1	0.914	2,055.5	0.058	0.80	1.26	0.80	150.0	0.957	0.3	0.0003	0.66	1.01	0.66
2/16/2023	2:07	192.1	0.914	1,897.1	0.076	0.80	1.25	0.80	150.0	0.957	0.1	0.0001	0.67	1.01	0.67
2/16/2023	2:08				--				150.0	0.957	0.1	0.0001	0.67	1.04	0.67
2/16/2023	2:09	192.1	0.915	1,820.1	0.052	0.80	1.17	0.80	150.0	0.957	0.1	0.0001	0.66	1.03	0.66
2/16/2023	2:10	192.1	0.915	1,730.6	0.070	0.80	1.19	0.80	150.0	0.956	0.4	0.0004	0.66	1.02	0.66
2/16/2023	2:11	192.1	0.915	1,648.0	0.066	0.80	1.17	0.80	150.0	0.956	0.1	0.0001	0.65	1.02	0.65
2/16/2023	2:12	192.1	0.915	2,102.5	0.189	0.82	1.18	0.82	149.9	0.957	0.1	0.0001	0.66	1.02	0.66
2/16/2023	2:13	192.1	0.915	20,884.1	0.842	0.82	1.17	0.82	150.0	0.957	0.2	0.0002	0.65	1.02	0.65
2/16/2023	2:14	192.1	0.915	12,122.0	0.346	0.92	1.17	0.92	149.9	0.957	0.1	0.0001	0.66	1.02	0.66
2/16/2023	2:15	192.1	0.915	5,197.9	0.210	0.78	1.16	0.78	149.9	0.957	0.2	0.0002	0.65	1.03	0.65
2/16/2023	2:16	192.1	0.915	3,113.5	0.125	0.79	1.19	0.79	150.0	0.957	0.2	0.0002	0.66	1.03	0.66
2/16/2023	2:17	192.1	0.915	2,480.2	0.100	0.80	1.16	0.80	149.9	0.957	0.1	0.0001	0.65	1.03	0.65
2/16/2023	2:18	192.1	0.915	2,124.3	0.086	0.79	1.16	0.79	149.9	0.957	0.4	0.0004	0.65	1.04	0.65
2/16/2023	2:19	192.1	0.915	1,926.2	0.078	0.79	1.17	0.79	149.9	0.957	0.2	0.0002	0.65	1.02	0.65
2/16/2023	2:20	192.1	0.915	1,813.4	0.089	0.79	1.16	0.79	149.9	0.957	0.2	0.0002	0.65	1.03	0.65
2/16/2023	2:21	192.1	0.915	1,724.9	0.049	0.79	1.14	0.79	149.9	0.957	0.2	0.0002	0.65	1.04	0.65
2/16/2023	2:22	192.1	0.915	1,575.3	0.063	0.79	1.17	0.79				--			
2/16/2023	2:23	192.1	0.915	1,020.5	0.041	0.82	1.17	0.82	149.9	0.957	0.1	0.0001	0.65	1.04	0.65
2/16/2023	2:24	192.1	0.915	938.9	0.046	0.85	1.16	0.85	149.9	0.957	0.2	0.0002	0.65	1.04	0.65
2/16/2023	2:25	192.1	0.915	877.3	0.035	0.86	1.18	0.86	149.9	0.957	0.3	0.0003	0.66	1.03	0.66
2/16/2023	2:26	192.1	0.915	838.2	0.041	0.87	1.18	0.87	150.0	0.957	0.3	0.0003	0.66	1.03	0.66
2/16/2023	2:27	192.1	0.915	809.2	0.023	0.88	1.16	0.88	150.0	0.957	0.2	0.0002	0.65	1.03	0.65
2/16/2023	2:28	192.1	0.915	780.6	0.039	0.89	1.13	0.89	150.0	0.957	0.1	0.0001	0.65	1.04	0.65
2/16/2023	2:29	192.1	0.915	768.9	0.022	0.89	1.11	0.89	150.0	0.957	0.1	0.0001	0.66	1.05	0.66
2/16/2023	2:30				--				150.0	0.957	0.1	0.0001	0.65	1.03	0.65
2/16/2023	2:31	192.1	0.915	790.7	0.032	0.90	1.11	0.90	150.0	0.957	0.1	0.0001	0.65	1.05	0.65
2/16/2023	2:32	192.1	0.915	787.7	0.022	0.90	1.12	0.90	150.0	0.957	0.1	0.0001	0.65	1.04	0.65
2/16/2023	2:33	192.1	0.915	815.1	0.023	0.91	1.12	0.91	150.0	0.957	0.3	0.0003	0.66	1.05	0.66
2/16/2023	2:34	192.1	0.915	2,948.1	0.119	0.96	1.10	0.96	150.0	0.957	0.2	0.0002	0.65	1.06	0.65
2/16/2023	2:35	192.1	0.915	2,160.7	0.107	0.92	1.12	0.92	149.9	0.957	0.5	0.0005	0.65	1.03	0.65
2/16/2023	2:36	192.1	0.915	1,523.9	0.043	0.91	1.11	0.91	150.0	0.957	0.2	0.0002	0.65	1.05	0.65
2/16/2023	2:37	192.1	0.915	1,275.6	0.051	0.90	1.10	0.90	149.9	0.958	0.2	0.0002	0.65	1.05	0.65
2/16/2023	2:38	192.1	0.916	1,167.2	0.047	0.90	1.10	0.90	150.0	0.958	0.2	0.0002	0.65	1.05	0.65
2/16/2023	2:39	192.1	0.915	1,253.6	0.051	0.91	1.15	0.91	150.0	0.958	0.1	0.0001	0.65	0.99	0.65
2/16/2023	2:40	192.1	0.916	1,434.5	0.058	0.92	1.18	0.92	150.0	0.958	0.1	0.0001	0.65	0.97	0.65
2/16/2023	2:41	192.1	0.916	1,601.7	0.000	0.91	1.17	0.91	150.0	0.958	0.4	0.0004	0.65	0.99	0.65
2/16/2023	2:42	192.1	0.916	1,650.7	0.067	0.92	1.16	0.92	150.0	0.959	0.2	0.0002	0.65	0.99	0.65
2/16/2023	2:43	192.1	0.916	1,670.6	0.082	0.92	1.15	0.92	149.9	0.959	0.2	0.0002	0.64	1.00	0.64
2/16/2023	2:44	192.1	0.916	4,693.8	0.134	1.01	1.13	1.01				--			
2/16/2023	2:45	192.1	0.916	4,723.3	0.233	0.92	1.13	0.92	150.0	0.960	0.2	0.0002	0.65	0.99	0.65
2/16/2023	2:46	192.1	0.916	3,498.8	0.173	0.92	1.12	0.92	149.9	0.959	0.2	0.0002	0.65	1.00	0.65
2/16/2023	2:47	192.1	0.916	3,064.9	0.124	0.92	1.11	0.92	149.9	0.960	0.3	0.0003	0.64	1.01	0.64
2/16/2023	2:48	192.1	0.916	3,550.0	0.176	0.93	1.13	0.93	149.9	0.960	0.4	0.0004	0.65	1.00	0.65
2/16/2023	2:49	192.1	0.916	4,288.8	0.173	0.92	1.14	0.92	149.9	0.960	0.2	0.0002	0.64	1.00	0.64
2/16/2023	2:50	192.1	0.916	4,499.4	0.257	0.91	1.12	0.91	149.9	0.960	0.1	0.0001	0.65	1.02	0.65
2/16/2023	2:51	192.1	0.916	11,823.1	0.478	1.08	1.12	1.08	149.9	0.961	0.3	0.0002	0.65	1.01	0.65
2/16/2023	2:52				--				150.0	0.961	0.2	0.0002	0.65	1.03	0.65
2/16/2023	2:53	192.1	0.916	20,966.9	1.038	1.05	1.14	1.05	149.9	0.961	0.2	0.0002	0.64	1.00	0.64
2/16/2023	2:54	192.1	0.916	21,047.8	0.850	0.98	1.15	0.98	149.9	0.961	0.3	0.0003	0.64	1.00	0.64
2/16/2023	2:55	192.1	0.917	31,188.1	1.543	1.13	1.14	1.13	150.0	0.961	0.1	0.0001	0.64	1.00	0.64
2/16/2023	2:56	192.1	0.917	30,047.1	1.213	0.94	1.14	0.94	149.9	0.962	0.4	0.0003	0.64	1.00	0.64
2/16/2023	2:57	192.1	0.916	27,483.3	1.359	0.99	1.14	0.99	149.9	0.962	0.4	0.0004	0.64	0.99	0.64
2/16/2023	2:58	192.1	0.916	27,628.5	1.368	0.99	1.10	0.99	150.0	0.962	0.1	0.0001	0.63	1.01	0.63
2/16/2023	2:59	192.1	0.917	21,589.6	1.069	0.98	1.09	0.98	150.0	0.962	0.1	0.0001	0.64	1.00	0.64
2/16/2023	3:00	192.1	0.916	21,166.4	1.048	1.01	1.10	1.01	150.0	0.962	0.1	0.0001	0.63	0.99	0.63
2/16/2023	3:01	192.1	0.917	21,745.6	1.077	0.96	1.07	0.96	149.9	0.962	0.1	0.0001	0.63	1.01	0.63
2/16/2023	3:02	192.1	0.917	23,434.8	1.160	0.97	1.09	0.97	150.0	0.962	0.1	0.0001	0.63	0.99	0.63
2/16/2023	3:03	192.1	0.917	26,276.5	1.300	0.99	1.09	0.99	150.0	0.962	0.1	0.0001	0.62	0.99	0.62
2/16/2023	3:04	192.1	0.917	24,223.2	1.199	0.98	1.07	0.98	149.9	0.962	0.2	0.0002	0.63	0.99	0.63
2/16/2023	3:05	192.1	0.917	19,473.1	0.787	1.02	1.06	1.02	149.9	0.963	0.1	0.0001	0.62	1.00	0.62
2/16/2023	3:06	192.1	0.917	12,026.2	0.596	0.93	1.07	0.93	149.9	0.963	0.1	0.0001	0.63	1.00	0.63
2/16/2023	3:07	192.1	0.917	11,707.3	0.580	0.94	1.06	0.94				--			
2/16/2023	3:08	192.1	0.916	11,227.0	0.454	0.95	1.06	0.95	149.9	0.962	0.1	0.0001	0.63	1.00	0.63
2/16/2023	3:09	192.1	0.917	18,298.6	0.740	1.05	1.04	1.04	150.0	0.963	0.3	0.0003	0.62	1.00	0.62
2/16/2023	3:10	192.1	0.917	12,271.5	0.496	0.97	1.04	0.97	149.9	0.963	0.3	0.0003	0.62	1.01	0.62
2/16/2023	3:11	192.1	0.917	6,135.8	0.304	0.81	1.04	0.81	150.0	0.963	0.2	0.0002	0.62	1.00	0.62
2/16/2023	3:12	192.1	0.917	4,533.9	0.183	0.84	1.04	0.84	149.9	0.963	0.1	0.0001	0.62	1.00	0.62
2/16/2023	3:13	192.1	0.917	2,953.6	0.146	0.85	1.03	0.85	150.0	0.963	0.1	0.0001	0.62	1.01	0.62
2/16/2023	3:14				--				150.0	0.963	0.1	0.0001	0.62	1.00	0.62
2/16/2023	3:15	192.1	0.916	2,776.8	0.079	0.86	1.03	0.86	149.9	0.963	0.1	0.0001	0.62	1.00	0.62
2/16/2023	3:16	192.1	0.917	6,262.7	0.310	0.88	1.03	0.88	149.9	0.963	0.1	0.0001	0.62	1.00	0.62
2/16/2023	3:17	192.1	0.916	4,143.3	0.167	0.86	1.03	0.86	150.0	0.963	0.1	0.0001	0.62	1.00	0.62
2/16/2023	3:18	192.1	0.917	2,574.6	0.127	0.86	1.04	0.86	150.0	0.963	0.1	0.0001	0.61	0.99	0.61
2/16/2023	3:19	192.1	0.917	1,953.7	0.097	0.85	1.04	0.85	150.0	0.963	0.2	0.0002	0.61	0.99	0.61
2/16/2023	3:20	192.1	0.917	1,609.0	0.046	0.85	1.03	0.85	149.9	0.963	0.3	0.0003	0.61	0.99	0.61
2/16/2023	3:21	192.1	0.916	1,627.3	0.081	0.85	1.02	0.85	150.0	0.963	0.1	0.0001	0.61	1.00	0.61
2/16/2023	3:22	192.1	0.916	1,445.2	0.058	0.85	1.02	0.85	149.9	0.963	0.1	0.0001	0.61	0.99	0.61
2/16/2023	3:23	192.1	0.917	1,113.2	0.045	0.86	1.00	0.86	149.9	0.964	0.2	0.0002	0.60	1.00	0.60
2/16/2023	3:24	192.1	0.917	918.9	0.046	0.87	1.00	0.87	150.0	0.964	0.3	0.0003	0.61	1.00	0.61
2/16/2023	3:25	192.1	0.917	1,023.1	0.059	0.86	1.00	0.86	149.9	0.964	0.1	0.0001	0.60	1.00	0.60
2/16/2023	3:26	192.1	0.917	3,976.2	0.161	0.85	1.00	0.85	149.9	0.964	0.2	0.0002	0.60	1.00	0.60
2/16/2023	3:27	192.1	0.917	2,333.2	0.116	0.84	0.99	0.84	149.9	0.964	0.1	0.0001	0.60	1.00	0.60
2/16/2023	3:28	192.1	0.917	2,417.2	0.069	0.86	0.99	0.86	149.9	0.964	0.1	0.0001	0.60	0.99	0.60
2/16/2023	3:29	192.1	0.917	2,040.2	0.083	0.84	0.99	0.84				--			

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet Temperature - Inlet	Inlet Pressure - Inlet	Inlet Ethylene Oxide - Inlet	Inlet Ethylene Oxide - Inlet	Inlet BWS - Inlet	Inlet BWS - Inlet$_{wet}$	Inlet BWS - Inlet$_{used}$	Outlet Temperature - Outlet	Outlet Pressure - Outlet	Outlet Ethylene Oxide - Outlet	Outlet Ethylene Oxide - Outlet	Outlet BWS - Outlet	Outlet BWS - Outlet$_{wet}$	Outlet BWS - Outlet$_{used}$
	Unit	°C	atm	ppmvw	lb/hr	% (wet)	% (wet)	% (wet)	°C	atm	ppmvw	lb/hr	% (wet)	% (wet)	% (wet)
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/16/2023	3:30	192.1	0.917	1,550.3	0.077	0.84	0.99	0.84	149.9	0.964	0.1	0.0001	0.60	0.99	0.60
2/16/2023	3:31	192.1	0.917	1,673.5	0.083	0.84	0.98	0.84	149.9	0.964	0.2	0.0002	0.60	0.99	0.60
2/16/2023	3:32	192.1	0.917	1,224.9	0.050	0.84	0.97	0.84	149.9	0.964	0.1	0.0001	0.60	1.00	0.60
2/16/2023	3:33	192.1	0.917	960.0	0.000	0.86	0.98	0.86	149.9	0.964	0.1	0.0001	0.60	1.00	0.60
2/16/2023	3:34	192.1	0.917	1,503.1	0.061	0.84	0.98	0.84	150.0	0.964	0.1	0.0001	0.60	0.99	0.60
2/16/2023	3:35	192.1	0.917	1,036.8	0.042	0.84	0.96	0.84	149.9	0.964	0.1	0.0001	0.60	1.00	0.60
2/16/2023	3:36				--				149.9	0.964	0.1	0.0001	0.59	0.99	0.59
2/16/2023	3:37	192.1	0.917	4,549.5	0.184	0.87	0.97	0.87	149.9	0.964	0.3	0.0003	0.59	1.00	0.59
2/16/2023	3:38	192.1	0.917	2,803.9	0.139	0.85	0.97	0.85	149.9	0.964	0.2	0.0002	0.59	1.00	0.59
2/16/2023	3:39	192.1	0.917	2,372.8	0.096	0.85	0.97	0.85	149.9	0.964	0.1	0.0001	0.59	0.99	0.59
2/16/2023	3:40	192.1	0.917	2,517.1	0.102	0.85	0.97	0.85	149.9	0.964	0.4	0.0004	0.60	1.00	0.60
2/16/2023	3:41	192.1	0.917	2,287.7	0.093	0.84	0.97	0.84	149.9	0.964	0.1	0.0001	0.59	1.00	0.59
2/16/2023	3:42	192.1	0.917	2,135.4	0.086	0.84	0.96	0.84	149.9	0.964	0.1	0.0001	0.59	0.99	0.59
2/16/2023	3:43	192.1	0.917	1,975.2	0.098	0.83	0.96	0.83	150.0	0.964	0.1	0.0001	0.59	0.99	0.59
2/16/2023	3:44	192.1	0.917	2,442.6	0.140	0.85	0.96	0.85	149.9	0.965	0.1	0.0001	0.60	1.00	0.60
2/16/2023	3:45	192.1	0.917	2,122.5	0.086	0.83	0.95	0.83	150.0	0.965	0.1	0.0001	0.59	1.01	0.59
2/16/2023	3:46	192.1	0.917	2,189.5	0.125	0.83	0.96	0.83	149.9	0.965	0.1	0.0001	0.59	0.99	0.59
2/16/2023	3:47	192.1	0.917	2,805.2	0.161	0.91	0.95	0.91	150.0	0.965	0.1	0.0001	0.60	1.00	0.60
2/16/2023	3:48	192.1	0.918	6,922.0	0.198	0.83	0.94	0.83	149.9	0.965	0.1	0.0001	0.59	1.00	0.59
2/16/2023	3:49	192.1	0.918	4,568.8	0.185	0.83	0.94	0.83	150.0	0.965	0.2	0.0002	0.60	1.00	0.60
2/16/2023	3:50	192.1	0.917	3,264.4	0.162	0.84	0.94	0.84	149.9	0.964	0.1	0.0001	0.59	1.00	0.59
2/16/2023	3:51	192.1	0.917	4,281.1	0.123	0.84	0.94	0.84	149.9	0.965	0.1	0.0001	0.59	1.01	0.59
2/16/2023	3:52	192.1	0.917	3,150.1	0.090	0.84	0.93	0.84				--			
2/16/2023	3:53	192.1	0.918	4,899.6	0.243	0.84	0.94	0.84	149.9	0.965	0.1	0.0001	0.59	1.00	0.59
2/16/2023	3:54	192.1	0.918	4,701.9	0.190	0.84	0.93	0.84	150.0	0.965	0.3	0.0003	0.59	1.00	0.59
2/16/2023	3:55	192.1	0.918	4,133.1	0.205	0.83	0.93	0.83	149.9	0.965	0.1	0.0001	0.59	0.99	0.59
2/16/2023	3:56	192.1	0.918	3,901.6	0.112	0.83	0.93	0.83	149.9	0.965	0.1	0.0001	0.59	0.99	0.59
2/16/2023	3:57	192.1	0.918	3,501.4	0.174	0.83	0.92	0.83	150.0	0.965	0.1	0.0001	0.58	0.99	0.58
2/16/2023	3:58				--				150.0	0.965	0.1	0.0001	0.58	0.99	0.58
2/16/2023	3:59	192.1	0.918	2,404.1	0.119	0.83	0.92	0.83	149.9	0.965	0.1	0.0001	0.58	0.98	0.58
2/16/2023	4:00	192.1	0.918	2,912.7	0.145	0.82	0.92	0.82	149.9	0.965	0.1	0.0001	0.58	0.99	0.58
2/16/2023	4:01	192.1	0.918	5,043.8	0.204	0.94	0.92	0.92	149.9	0.965	0.2	0.0002	0.57	0.98	0.57
2/16/2023	4:02	192.1	0.918	6,210.7	0.252	0.81	0.91	0.81	150.0	0.965	0.1	0.0001	0.57	0.97	0.57
2/16/2023	4:03	192.1	0.918	5,618.2	0.322	0.80	0.92	0.80	149.9	0.965	0.1	0.0001	0.57	0.97	0.57
2/16/2023	4:04	192.1	0.918	4,908.9	0.281	0.81	0.92	0.81	149.9	0.965	0.2	0.0003	0.57	0.97	0.57
2/16/2023	4:05	192.1	0.918	3,734.4	0.214	0.81	0.91	0.81	150.0	0.965	0.1	0.0001	0.56	0.97	0.56
2/16/2023	4:06	192.1	0.918	3,769.2	0.216	0.81	0.91	0.81	150.0	0.965	0.3	0.0003	0.56	0.97	0.56
2/16/2023	4:07	192.1	0.918	3,907.1	0.194	0.80	0.91	0.80	150.0	0.965	0.2	0.0002	0.55	0.96	0.55
2/16/2023	4:08	192.1	0.918	12,432.9	0.617	0.92	0.91	0.91	150.0	0.965	0.1	0.0001	0.56	0.95	0.56
2/16/2023	4:09	192.1	0.918	9,005.6	0.365	0.74	0.90	0.74	149.9	0.965	0.1	0.0001	0.55	0.95	0.55
2/16/2023	4:10	192.1	0.918	9,210.8	0.458	0.74	0.89	0.74	149.9	0.965	0.1	0.0001	0.55	0.95	0.55
2/16/2023	4:11	192.1	0.918	5,915.7	0.294	0.77	0.89	0.77	150.0	0.965	0.1	0.0001	0.55	0.94	0.55
2/16/2023	4:12	192.1	0.918	6,226.5	0.309	0.76	0.88	0.76	149.9	0.965	0.1	0.0001	0.55	0.95	0.55
2/16/2023	4:13	192.1	0.918	7,092.5	0.352	0.75	0.89	0.75	149.9	0.965	0.1	0.0001	0.55	0.94	0.55
2/16/2023	4:14	192.2	0.918	5,239.0	0.260	0.76	0.89	0.76	150.0	0.965	0.1	0.0001	0.55	0.94	0.55
2/16/2023	4:15	192.1	0.918	5,583.2	0.277	0.76	0.89	0.76				--			
2/16/2023	4:16	192.1	0.918	5,156.4	0.256	0.76	0.89	0.76	149.9	0.965	0.3	0.0003	0.55	0.93	0.55
2/16/2023	4:17	192.1	0.918	4,359.5	0.177	0.76	0.88	0.76	150.0	0.965	0.1	0.0001	0.54	0.93	0.54
2/16/2023	4:18	192.1	0.918	4,291.3	0.246	0.76	0.88	0.76	150.0	0.965	0.3	0.0003	0.54	0.92	0.54
2/16/2023	4:19	192.1	0.918	4,182.4	0.170	0.75	0.88	0.75	150.0	0.965	0.1	0.0001	0.54	0.92	0.54
2/16/2023	4:20				--				149.9	0.965	0.1	0.0001	0.54	0.92	0.54
2/16/2023	4:21	192.1	0.918	4,985.6	0.248	0.84	0.87	0.84	150.0	0.965	0.1	0.0001	0.54	0.91	0.54
2/16/2023	4:22	192.1	0.918	7,849.4	0.451	0.73	0.86	0.73	150.0	0.965	0.1	0.0001	0.53	0.91	0.53
2/16/2023	4:23	192.1	0.918	4,919.5	0.245	0.75	0.86	0.75	150.0	0.965	0.2	0.0002	0.52	0.91	0.52
2/16/2023	4:24	192.1	0.918	4,257.2	0.173	0.75	0.86	0.75	150.0	0.965	0.1	0.0001	0.53	0.91	0.53
2/16/2023	4:25	192.1	0.918	6,206.7	0.309	0.73	0.86	0.73	150.0	0.965	0.1	0.0001	0.53	0.90	0.53
2/16/2023	4:26	192.1	0.918	6,655.9	0.331	0.73	0.86	0.73	150.0	0.965	0.1	0.0001	0.53	0.90	0.53
2/16/2023	4:27	192.1	0.918	7,271.6	0.467	0.72	0.86	0.72	150.0	0.965	0.1	0.0002	0.52	0.90	0.52
2/16/2023	4:28	192.1	0.918	4,639.0	0.421	0.74	0.86	0.74	150.0	0.965	0.2	0.0002	0.53	0.90	0.53
2/16/2023	4:29	192.1	0.919	5,201.0	0.149	0.87	0.86	0.86	150.0	0.966	0.1	0.0001	0.52	0.90	0.52
2/16/2023	4:30	192.1	0.919	9,885.8	0.401	0.75	0.85	0.75	149.9	0.965	0.1	0.0001	0.53	0.90	0.53
2/16/2023	4:31	192.1	0.919	4,268.9	0.173	0.74	0.85	0.74	150.0	0.966	0.3	0.0003	0.52	0.90	0.52
2/16/2023	4:32	192.1	0.918	6,729.3	0.273	0.71	0.85	0.71	150.0	0.965	0.1	0.0001	0.52	0.89	0.52
2/16/2023	4:33	192.1	0.918	6,919.2	0.281	0.73	0.84	0.73	150.0	0.966	0.1	0.0001	0.52	0.89	0.52
2/16/2023	4:34	192.1	0.919	7,838.2	0.318	0.72	0.84	0.72	150.0	0.966	0.2	0.0003	0.52	0.89	0.52
2/16/2023	4:35	192.1	0.919	8,174.1	0.406	0.73	0.86	0.73	150.0	0.966	0.2	0.0002	0.52	0.92	0.52
2/16/2023	4:36	192.1	0.919	6,532.8	0.265	0.72	0.84	0.72	150.0	0.966	0.1	0.0001	0.52	0.88	0.52
2/16/2023	4:37	192.1	0.919	7,726.7	0.444	0.70	0.84	0.70				--			
2/16/2023	4:38	192.2	0.919	4,794.7	0.195	0.73	0.83	0.73	150.0	0.966	0.2	0.0002	0.52	0.88	0.52
2/16/2023	4:39	192.2	0.919	10,231.3	0.416	0.93	0.84	0.84	150.0	0.966	0.1	0.0001	0.52	0.88	0.52
2/16/2023	4:40	192.1	0.919	9,541.4	0.388	0.69	0.84	0.69	150.0	0.966	0.2	0.0003	0.52	0.88	0.52
2/16/2023	4:41	192.1	0.919	8,949.3	0.364	0.70	0.85	0.70	150.0	0.966	0.1	0.0001	0.52	0.88	0.52
2/16/2023	4:42				--				149.9	0.966	0.3	0.0004	0.52	0.89	0.52
2/16/2023	4:43	192.1	0.919	7,801.3	0.388	0.71	0.84	0.71	149.9	0.967	0.1	0.0001	0.52	0.88	0.52
2/16/2023	4:44	192.1	0.920	5,783.0	0.235	0.73	0.83	0.73	150.0	0.967	0.1	0.0001	0.52	0.88	0.52
2/16/2023	4:45	192.1	0.920	9,054.3	0.260	0.70	0.84	0.70	150.0	0.967	0.4	0.0005	0.51	0.88	0.51
2/16/2023	4:46	192.1	0.920	7,741.9	0.315	0.70	0.86	0.70	150.0	0.967	0.1	0.0001	0.51	0.94	0.51
2/16/2023	4:47	192.1	0.920	10,034.4	0.500	0.69	0.82	0.69	150.0	0.967	0.1	0.0002	0.51	0.89	0.51
2/16/2023	4:48	192.1	0.920	9,431.7	0.383	0.68	0.82	0.68	150.0	0.967	0.1	0.0001	0.51	0.89	0.51
2/16/2023	4:49	192.1	0.920	9,630.7	0.277	0.82	0.83	0.82	150.0	0.967	0.1	0.0001	0.51	0.88	0.51
2/16/2023	4:50	192.1	0.920	14,404.1	0.717	0.77	0.83	0.77	150.0	0.966	0.1	0.0001	0.51	0.89	0.51
2/16/2023	4:51	192.1	0.920	10,394.9	0.299	0.77	0.82	0.77	150.0	0.966	0.3	0.0003	0.51	0.88	0.51
2/16/2023	4:52	192.1	0.920	12,060.8	0.491	0.77	0.82	0.77	150.0	0.966	0.2	0.0003	0.51	0.88	0.51
2/16/2023	4:53	192.1	0.920	11,273.7	0.458	0.76	0.81	0.76	150.0	0.966	0.1	0.0001	0.51	0.88	0.51
2/16/2023	4:54	192.1	0.919	11,526.3	0.469	0.77	0.81	0.77	150.0	0.967	0.1	0.0001	0.51	0.88	0.51
2/16/2023	4:55	192.1	0.919	12,379.3	0.503	0.77	0.81	0.77	150.0	0.966	0.3	0.0004	0.51	0.88	0.51
2/16/2023	4:56	192.1	0.919	9,233.7	0.376	0.67	0.81	0.67	150.0	0.966	0.1	0.0001	0.51	0.88	0.51
2/16/2023	4:57	192.1	0.920	11,517.9	0.331	0.75	0.81	0.75	150.0	0.967	0.1	0.0001	0.51	0.88	0.51
2/16/2023	4:58	192.1	0.920	8,460.1	0.421	0.68	0.81	0.68	150.0	0.967	0.2	0.0002	0.51	0.88	0.51
2/16/2023	4:59	192.1	0.920	11,686.5	0.336	0.93	0.81	0.81	150.0	0.967	0.2	0.0002	0.51	0.88	0.51
2/16/2023	5:00	192.1	0.920	13,470.9	0.671	0.79	0.80	0.79				--			
2/16/2023	5:01	192.0	0.920	10,775.8	0.310	0.75	0.80	0.75	150.0	0.967	0.1	0.0001	0.51	0.88	0.51
2/16/2023	5:02	192.1	0.920	9,409.8	0.000	0.68	0.80	0.68	150.0	0.966	0.1	0.0001	0.51	0.87	0.51
2/16/2023	5:03	192.1	0.920	9,597.7	0.276	0.68	0.80	0.68	150.0	0.967	0.3	0.0004	0.51	0.87	0.51
2/16/2023	5:04				--				150.0	0.967	0.1	0.0001	0.50	0.87	0.50

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet Temperature - Inlet	Inlet Pressure - Inlet	Inlet Ethylene Oxide - Inlet	Inlet Ethylene Oxide - Inlet	Inlet BWS - Inlet	Inlet BWS - Inlet$_{wet}$	Inlet BWS - Inlet$_{used}$	Outlet Temperature - Outlet	Outlet Pressure - Outlet	Outlet Ethylene Oxide - Outlet	Outlet Ethylene Oxide - Outlet	Outlet BWS - Outlet	Outlet BWS - Outlet$_{wet}$	Outlet BWS - Outlet$_{used}$
	Unit	°C	atm	ppmvw	lb/hr	% (wet)	% (wet)	% (wet)	°C	atm	ppmvw	lb/hr	% (wet)	% (wet)	% (wet)
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/16/2023	5:05	192.1	0.920	11,090.6	0.638	0.75	0.80	0.75	150.0	0.967	0.1	0.0001	0.50	0.86	0.50
2/16/2023	5:06	192.1	0.920	10,661.3	0.531	0.74	0.80	0.74	150.0	0.967	0.2	0.0002	0.50	0.86	0.50
2/16/2023	5:07	192.1	0.920	12,065.9	0.347	0.75	0.79	0.75	150.0	0.966	0.1	0.0001	0.50	0.86	0.50
2/16/2023	5:08	192.1	0.920	10,320.0	0.420	0.73	0.79	0.73	150.0	0.967	0.1	0.0001	0.50	0.86	0.50
2/16/2023	5:09	192.2	0.920	10,059.2	0.289	0.66	0.79	0.66	150.0	0.967	0.1	0.0001	0.50	0.86	0.50
2/16/2023	5:10	192.1	0.920	7,387.0	0.301	0.68	0.79	0.68	150.0	0.967	0.1	0.0001	0.50	0.87	0.50
2/16/2023	5:11	192.1	0.920	12,601.0	0.628	0.91	0.79	0.79	150.0	0.967	0.1	0.0001	0.50	0.86	0.50
2/16/2023	5:12	192.1	0.920	14,242.4	0.710	0.76	0.79	0.76	150.0	0.967	0.1	0.0001	0.50	0.86	0.50
2/16/2023	5:13	192.1	0.920	12,374.5	0.504	0.73	0.79	0.73	150.0	0.967	0.3	0.0003	0.50	0.86	0.50
2/16/2023	5:14	192.1	0.920	11,448.4	0.466	0.73	0.79	0.73	150.0	0.967	0.4	0.0004	0.50	0.86	0.50
2/16/2023	5:15	192.1	0.920	13,795.5	0.562	0.73	0.79	0.73	150.0	0.967	0.1	0.0001	0.50	0.86	0.50
2/16/2023	5:16	192.1	0.920	12,025.0	0.346	0.74	0.78	0.74	150.0	0.967	0.1	0.0001	0.49	0.86	0.49
2/16/2023	5:17	192.1	0.920	11,023.8	0.000	0.74	0.79	0.74	150.0	0.967	0.2	0.0003	0.49	0.85	0.49
2/16/2023	5:18	192.1	0.920	10,739.2	0.437	0.74	0.79	0.74	150.0	0.967	0.1	0.0002	0.49	0.85	0.49
2/16/2023	5:19	192.1	0.920	10,709.2	0.534	0.73	0.79	0.73	150.0	0.967	0.1	0.0001	0.49	0.85	0.49
2/16/2023	5:20	192.1	0.920	11,059.1	0.552	0.88	0.78	0.78	150.0	0.967	0.3	0.0003	0.48	0.85	0.48
2/16/2023	5:21	192.1	0.920	18,416.2	0.750	0.77	0.78	0.77	150.0	0.967	0.2	0.0003	0.49	0.84	0.49
2/16/2023	5:22	192.1	0.920	14,189.7	0.578	0.75	0.78	0.75	150.0	0.967	0.1	0.0002	0.49	0.84	0.49
2/16/2023	5:23	192.1	0.920	14,089.2	0.574	0.74	0.78	0.74				--			
2/16/2023	5:24	192.1	0.921	13,958.1	0.568	0.73	0.77	0.73	150.0	0.967	0.1	0.0001	0.49	0.84	0.49
2/16/2023	5:25	192.1	0.920	11,874.4	0.484	0.73	0.77	0.73	150.0	0.967	0.3	0.0004	0.49	0.84	0.49
2/16/2023	5:26				--				150.0	0.967	0.1	0.0002	0.49	0.84	0.49
2/16/2023	5:27	192.1	0.921	12,488.5	0.509	0.73	0.76	0.73	150.0	0.967	0.1	0.0001	0.49	0.84	0.49
2/16/2023	5:28	192.1	0.921	12,548.5	0.512	0.72	0.77	0.72	150.0	0.967	0.2	0.0003	0.49	0.84	0.49
2/16/2023	5:29	192.1	0.921	11,263.3	0.325	0.71	0.77	0.71	150.0	0.967	0.2	0.0002	0.49	0.85	0.49
2/16/2023	5:30	192.1	0.921	11,289.7	0.563	0.72	0.77	0.72	150.0	0.967	0.4	0.0004	0.49	0.84	0.49
2/16/2023	5:31	192.1	0.920	13,714.6	0.684	0.82	0.76	0.76	150.0	0.967	0.3	0.0004	0.49	0.84	0.49
2/16/2023	5:32	192.1	0.921	18,870.6	0.769	0.80	0.76	0.76	150.0	0.968	0.1	0.0002	0.50	0.84	0.50
2/16/2023	5:33	192.1	0.920	19,391.3	0.000	0.70	0.77	0.70	150.0	0.967	0.2	0.0003	0.49	0.84	0.49
2/16/2023	5:34	192.1	0.920	14,205.5	0.409	0.72	0.76	0.72	150.0	0.967	0.1	0.0001	0.49	0.84	0.49
2/16/2023	5:35	192.1	0.921	17,109.9	0.493	0.73	0.76	0.73	150.0	0.967	0.2	0.0002	0.49	0.84	0.49
2/16/2023	5:36	192.1	0.920	15,917.3	0.917	0.74	0.76	0.74	150.0	0.967	0.2	0.0002	0.49	0.84	0.49
2/16/2023	5:37	192.1	0.920	16,314.7	0.470	0.72	0.76	0.72	150.0	0.967	0.4	0.0005	0.49	0.84	0.49
2/16/2023	5:38	192.1	0.921	16,092.6	0.464	0.71	0.76	0.71	150.0	0.967	0.1	0.0001	0.49	0.83	0.49
2/16/2023	5:39	192.1	0.920	16,472.2	0.671	0.71	0.77	0.71	150.0	0.967	0.2	0.0002	0.49	0.85	0.49
2/16/2023	5:40	192.2	0.920	16,861.6	1.683	0.70	0.76	0.70	150.0	0.967	0.1	0.0001	0.49	0.84	0.49
2/16/2023	5:41	192.1	0.920	23,318.7	0.950	0.94	0.76	0.76	150.0	0.967	0.3	0.0004	0.49	0.83	0.49
2/16/2023	5:42	192.1	0.920	18,644.5	0.931	0.77	0.75	0.75	150.0	0.968	0.1	0.0001	0.49	0.83	0.49
2/16/2023	5:43	192.1	0.920	14,357.4	0.717	0.75	0.76	0.75	150.0	0.968	0.2	0.0002	0.49	0.83	0.49
2/16/2023	5:44	192.1	0.920	15,853.4	0.646	0.73	0.77	0.73	150.0	0.968	0.1	0.0001	0.48	0.86	0.48
2/16/2023	5:45	192.1	0.921	13,857.3	0.564	0.71	0.78	0.71	150.0	0.968	0.3	0.0004	0.49	0.86	0.49
2/16/2023	5:46	192.2	0.921	16,173.8	0.466	0.71	0.78	0.71				--			
2/16/2023	5:47	192.1	0.921	14,121.2	0.575	0.72	0.77	0.72	150.0	0.968	0.3	0.0004	0.49	0.86	0.49
2/16/2023	5:48				--				150.0	0.968	0.1	0.0001	0.49	0.87	0.49
2/16/2023	5:49	192.1	0.921	13,195.3	0.761	0.71	0.76	0.71	150.0	0.968	0.1	0.0001	0.48	0.84	0.48
2/16/2023	5:50	192.1	0.921	15,584.1	0.635	0.71	0.75	0.71	150.0	0.967	0.1	0.0002	0.49	0.83	0.49
2/16/2023	5:51	192.1	0.921	14,382.5	0.829	0.73	0.75	0.73	150.0	0.967	0.1	0.0001	0.48	0.83	0.48
2/16/2023	5:52	192.1	0.921	15,021.3	0.612	1.28	0.75	0.75	150.0	0.967	0.1	0.0001	0.49	0.82	0.49
2/16/2023	5:53	192.1	0.921	20,872.2	0.851	0.73	0.75	0.73	150.0	0.968	0.1	0.0001	0.49	0.82	0.49
2/16/2023	5:54	192.1	0.921	15,926.3	0.649	0.73	0.75	0.73	150.0	0.968	0.1	0.0001	0.48	0.82	0.48
2/16/2023	5:55	192.1	0.921	15,443.0	0.771	0.70	0.77	0.70	150.0	0.968	0.1	0.0001	0.49	0.86	0.49
2/16/2023	5:56	192.2	0.921	15,260.0	0.762	0.70	0.76	0.70	150.0	0.968	0.1	0.0001	0.48	0.85	0.48
2/16/2023	5:57	192.1	0.921	14,446.0	0.589	0.72	0.75	0.72	150.0	0.968	0.1	0.0001	0.49	0.82	0.49
2/16/2023	5:58	192.1	0.921	16,826.6	0.687	0.72	0.75	0.72	150.0	0.968	0.1	0.0001	0.48	0.82	0.48
2/16/2023	5:59	192.1	0.921	15,255.3	0.880	0.71	0.75	0.71	150.0	0.968	0.1	0.0001	0.49	0.82	0.49
2/16/2023	6:00	192.1	0.921	19,047.3	0.000	0.71	0.75	0.71	150.0	0.968	0.2	0.0002	0.49	0.82	0.49
2/16/2023	6:01	192.1	0.921	16,276.8	0.664	0.74	0.74	0.74	150.0	0.968	0.1	0.0001	0.48	0.82	0.48
2/16/2023	6:02	192.1	0.921	26,738.9	0.771	0.89	0.74	0.74	150.0	0.967	0.1	0.0001	0.48	0.82	0.48
2/16/2023	6:03	192.1	0.921	20,476.1	1.023	0.70	0.74	0.70	150.0	0.968	0.1	0.0001	0.49	0.82	0.49
2/16/2023	6:04	192.1	0.921	17,820.4	0.000	0.70	0.75	0.70	150.0	0.967	0.1	0.0001	0.48	0.82	0.48
2/16/2023	6:05	192.1	0.921	19,465.7	0.561	0.69	0.74	0.69	150.0	0.967	0.1	0.0001	0.48	0.82	0.48
2/16/2023	6:06	192.1	0.921	19,549.2	0.797	0.71	0.74	0.71	150.0	0.967	0.1	0.0001	0.48	0.82	0.48
2/16/2023	6:07	192.1	0.920	16,211.1	0.661	0.71	0.74	0.71	150.0	0.967	0.1	0.0001	0.48	0.82	0.48
2/16/2023	6:08	192.1	0.920	18,308.8	0.747	0.71	0.74	0.71				--			
2/16/2023	6:09	192.2	0.920	12,871.8	0.643	0.73	0.74	0.73	150.0	0.968	0.1	0.0001	0.48	0.82	0.48
2/16/2023	6:10				--				150.0	0.968	0.1	0.0001	0.49	0.82	0.49
2/16/2023	6:11	192.2	0.920	10,796.8	0.311	0.72	0.74	0.72	150.0	0.967	0.1	0.0001	0.49	0.82	0.49
2/16/2023	6:12	192.1	0.921	14,112.6	0.575	0.75	0.74	0.74	150.0	0.967	0.3	0.0004	0.48	0.82	0.48
2/16/2023	6:13	192.1	0.921	22,870.3	0.933	0.83	0.74	0.74	150.0	0.967	0.1	0.0001	0.48	0.82	0.48
2/16/2023	6:14	192.1	0.920	15,664.5	0.639	0.71	0.74	0.71	150.0	0.967	0.1	0.0001	0.48	0.82	0.48
2/16/2023	6:15	192.1	0.921	15,060.1	0.614	0.75	0.74	0.74	150.0	0.968	0.1	0.0001	0.48	0.82	0.48
2/16/2023	6:16	192.1	0.921	14,243.6	0.581	0.72	0.73	0.72	150.0	0.968	0.1	0.0001	0.48	0.82	0.48
2/16/2023	6:17	192.1	0.921	19,278.7	0.963	0.71	0.73	0.71	150.0	0.968	0.2	0.0002	0.48	0.82	0.48
2/16/2023	6:18	192.1	0.921	15,985.0	0.799	0.71	0.74	0.71	150.0	0.968	0.4	0.0005	0.48	0.82	0.48
2/16/2023	6:19	192.1	0.921	20,441.8	0.590	0.71	0.74	0.71	150.0	0.968	0.2	0.0002	0.48	0.82	0.48
2/16/2023	6:20	192.2	0.921	14,721.8	0.600	0.70	0.74	0.70	150.0	0.968	0.1	0.0001	0.48	0.82	0.48
2/16/2023	6:21	192.1	0.921	16,324.7	0.816	0.81	0.75	0.75	150.0	0.968	0.1	0.0002	0.48	0.86	0.48
2/16/2023	6:22	192.1	0.921	21,377.9	1.068	0.82	0.74	0.74	150.0	0.968	0.1	0.0001	0.48	0.83	0.48
2/16/2023	6:23	192.1	0.921	15,348.1	0.886	0.73	0.74	0.73	150.0	0.968	0.1	0.0001	0.48	0.82	0.48
2/16/2023	6:24	192.1	0.921	22,504.7	0.918	0.71	0.74	0.71	150.0	0.968	0.1	0.0001	0.48	0.82	0.48
2/16/2023	6:25	192.2	0.921	17,537.2	0.506	0.72	0.73	0.72	150.0	0.968	0.1	0.0001	0.48	0.82	0.48
2/16/2023	6:26	192.2	0.921	19,391.8	0.969	0.73	0.73	0.73	150.0	0.968	0.1	0.0001	0.48	0.82	0.48
2/16/2023	6:27	192.2	0.921	21,029.0	0.858	0.68	0.74	0.68	150.0	0.968	0.1	0.0001	0.48	0.82	0.48
2/16/2023	6:28	192.2	0.921	15,893.2	0.648	0.71	0.73	0.71	150.0	0.968	0.1	0.0001	0.47	0.82	0.47
2/16/2023	6:29	192.2	0.921	16,163.6	0.466	0.70	0.73	0.70	150.0	0.968	0.1	0.0001	0.48	0.82	0.48
2/16/2023	6:30	192.2	0.921	18,713.8	1.080	0.71	0.73	0.71	150.0	0.968	0.1	0.0001	0.47	0.81	0.47
2/16/2023	6:31	192.2	0.921	14,201.2	0.820	0.72	0.73	0.72				--			
2/16/2023	6:32				--				150.0	0.968	0.1	0.0001	0.47	0.81	0.47
2/16/2023	6:33	192.2	0.921	14,965.9	0.748	0.69	0.73	0.69	150.0	0.968	0.3	0.0003	0.47	0.81	0.47
2/16/2023	6:34	192.1	0.921	22,363.7	1.117	0.84	0.73	0.73	150.0	0.968	0.1	0.0001	0.47	0.81	0.47
2/16/2023	6:35	192.1	0.921	18,226.3	0.526	0.72	0.73	0.72	150.0	0.968	0.2	0.0002	0.47	0.81	0.47
2/16/2023	6:36	192.1	0.921	17,047.6	0.852	0.75	0.73	0.73	150.0	0.968	0.3	0.0003	0.47	0.81	0.47
2/16/2023	6:37	192.1	0.921	21,407.6	0.618	0.71	0.72	0.71	150.0	0.968	0.3	0.0004	0.46	0.81	0.46
2/16/2023	6:38	192.1	0.921	15,623.3	0.638	0.71	0.72	0.71	150.1	0.968	0.2	0.0002	0.46	0.80	0.46
2/16/2023	6:39	192.1	0.921	18,749.9	1.083	0.71	0.72	0.71	150.0	0.968	0.3	0.0003	0.46	0.80	0.46

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet							Outlet						
	Unit	Temperature - Inlet °C	Pressure - Inlet atm	Ethylene Oxide - Inlet ppmvw	Ethylene Oxide - Inlet lb/hr	BWS - Inlet % (wet)	BWS - Inlet$_{wt}$ % (wet)	BWS - Inlet$_{used}$ % (wet)	Temperature - Outlet °C	Pressure - Outlet atm	Ethylene Oxide - Outlet ppmvw	Ethylene Oxide - Outlet lb/hr	BWS - Outlet % (wet)	BWS - Outlet$_{wt}$ % (wet)	BWS - Outlet$_{used}$ % (wet)
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	0.08	--	0.20	--	0.2	--	--	0.08	--	0.20	--	0.2
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/16/2023	6:40	192.1	0.921	18,375.1	0.918	0.71	0.72	0.71	150.0	0.968	0.2	0.0002	0.46	0.80	0.46
2/16/2023	6:41	192.1	0.921	14,671.7	0.423	0.69	0.72	0.69	150.0	0.968	0.1	0.0001	0.46	0.80	0.46
2/16/2023	6:42	192.1	0.922	15,218.7	0.761	1.05	0.72	0.72	150.0	0.968	0.2	0.0003	0.46	0.79	0.46
2/16/2023	6:43	192.1	0.921	19,201.0	0.960	0.71	0.72	0.71	150.0	0.968	0.1	0.0001	0.46	0.80	0.46
2/16/2023	6:44	192.1	0.921	14,887.5	0.607	0.69	0.72	0.69	150.0	0.968	0.2	0.0002	0.46	0.79	0.46
2/16/2023	6:45	192.1	0.922	14,372.2	0.415	0.70	0.72	0.70	150.0	0.968	0.4	0.0005	0.46	0.80	0.46
2/16/2023	6:46	192.1	0.922	16,332.8	0.816	0.68	0.72	0.68	150.0	0.968	0.1	0.0001	0.46	0.80	0.46
2/16/2023	6:47	192.1	0.922	14,585.2	0.730	0.69	0.72	0.69	150.0	0.968	0.3	0.0004	0.46	0.79	0.46
2/16/2023	6:48	192.1	0.921	14,631.5	0.731	0.71	0.72	0.71	150.0	0.968	0.2	0.0003	0.47	0.80	0.47
2/16/2023	6:49	192.1	0.921	14,778.0	0.603	0.69	0.72	0.69	150.1	0.968	0.3	0.0004	0.47	0.79	0.47
2/16/2023	6:50	192.2	0.922	21,076.9	0.000	0.85	0.71	0.71	150.0	0.968	0.2	0.0002	0.47	0.79	0.47
2/16/2023	6:51	192.2	0.921	18,271.2	1.055	0.76	0.72	0.72	150.0	0.968	0.2	0.0002	0.46	0.79	0.46
2/16/2023	6:52	192.2	0.922	14,968.3	0.748	0.69	0.72	0.69	150.0	0.968	0.2	0.0003	0.46	0.79	0.46
2/16/2023	6:53				--				150.1	0.968	0.1	0.0001	0.46	0.79	0.46
2/16/2023	6:54	192.2	0.921	13,222.1	0.540	0.69	0.72	0.69				--			
2/16/2023	6:55	192.2	0.921	18,565.1	0.758	0.68	0.71	0.68	150.0	0.968	0.2	0.0003	0.46	0.79	0.46
2/16/2023	6:56	192.1	0.922	13,641.3	0.682	0.73	0.71	0.71	150.0	0.968	0.2	0.0002	0.46	0.78	0.46
2/16/2023	6:57	192.2	0.922	20,723.2	0.598	0.68	0.71	0.68	150.1	0.968	0.1	0.0001	0.46	0.79	0.46
2/16/2023	6:58	192.2	0.921	15,497.8	0.775	0.70	0.71	0.70	150.0	0.968	0.1	0.0001	0.46	0.78	0.46
2/16/2023	6:59	192.2	0.922	14,101.2	0.705	0.69	0.71	0.69	150.0	0.968	0.2	0.0002	0.46	0.79	0.46
2/16/2023	7:00	192.2	0.922	17,103.6	0.855	0.92	0.71	0.71	150.0	0.968	0.3	0.0003	0.46	0.78	0.46
2/16/2023	7:01	192.2	0.922	17,096.3	0.855	0.68	0.71	0.68	150.0	0.968	0.1	0.0001	0.46	0.78	0.46
2/16/2023	7:02	192.2	0.922	20,945.3	0.855	0.67	0.71	0.67	150.0	0.968	0.1	0.0001	0.46	0.78	0.46
2/16/2023	7:03	192.2	0.921	14,973.9	0.749	0.70	0.71	0.70	150.1	0.968	0.1	0.0001	0.46	0.78	0.46
2/16/2023	7:04	192.1	0.922	15,189.4	0.620	0.67	0.71	0.67	150.0	0.968	0.1	0.0001	0.46	0.78	0.46
2/16/2023	7:05	192.2	0.922	16,033.4	0.655	0.67	0.71	0.67	150.0	0.968	0.1	0.0001	0.45	0.78	0.45
2/16/2023	7:06	192.2	0.922	14,405.8	0.589	0.69	0.70	0.69	150.0	0.968	0.1	0.0001	0.46	0.78	0.46
2/16/2023	7:07	192.2	0.922	18,710.1	0.936	0.66	0.70	0.66	150.0	0.968	0.1	0.0001	0.46	0.78	0.46
2/16/2023	7:08	192.2	0.922	18,409.3	0.532	0.81	0.70	0.70	150.0	0.968	0.1	0.0001	0.46	0.78	0.46
2/16/2023	7:09	192.2	0.922	22,794.8	1.140	0.68	0.71	0.68	150.0	0.968	0.3	0.0003	0.46	0.78	0.46
2/16/2023	7:10	192.2	0.922	23,228.7	1.162	0.71	0.70	0.70	150.1	0.968	0.1	0.0001	0.46	0.78	0.46
2/16/2023	7:11	192.2	0.922	18,198.5	0.743	0.68	0.70	0.68	150.0	0.968	0.1	0.0001	0.46	0.78	0.46
2/16/2023	7:12	192.1	0.922	19,011.5	0.777	0.69	0.70	0.69	150.0	0.968	0.1	0.0001	0.46	0.78	0.46
2/16/2023	7:13	192.2	0.922	14,832.3	0.606	0.67	0.70	0.67	150.0	0.968	0.1	0.0001	0.45	0.77	0.45
2/16/2023	7:14	192.2	0.922	18,899.0	0.773	0.69	0.70	0.69	150.0	0.968	0.2	0.0003	0.46	0.77	0.46
2/16/2023	7:15				--				150.0	0.969	0.1	0.0001	0.45	0.78	0.45
2/16/2023	7:16	192.2	0.922	21,216.7	1.061	0.68	0.70	0.68	150.0	0.969	0.3	0.0003	0.46	0.77	0.46
2/16/2023	7:17	192.2	0.922	16,659.8	0.833	0.68	0.70	0.68				--			
2/16/2023	7:18	192.1	0.922	24,742.1	1.428	0.85	0.71	0.71	150.0	0.969	0.1	0.0001	0.46	0.80	0.46
2/16/2023	7:19	192.1	0.923	19,017.3	0.549	0.70	0.71	0.70	150.1	0.969	0.1	0.0001	0.46	0.81	0.46
2/16/2023	7:20	192.1	0.923	17,702.1	0.885	0.68	0.70	0.68	150.0	0.969	0.1	0.0001	0.46	0.80	0.46
2/16/2023	7:21	192.1	0.923	15,287.6	0.765	0.69	0.70	0.69	150.0	0.969	0.1	0.0001	0.46	0.78	0.46
2/16/2023	7:22	192.1	0.923	16,769.7	0.685	0.70	0.69	0.69	150.0	0.969	0.1	0.0001	0.46	0.78	0.46
2/16/2023	7:23	192.1	0.923	15,512.9	0.777	0.70	0.69	0.69	150.0	0.969	0.1	0.0001	0.46	0.78	0.46
2/16/2023	7:24	192.1	0.923	15,870.7	0.649	0.70	0.69	0.69	150.1	0.969	0.2	0.0003	0.45	0.77	0.45
2/16/2023	7:25	192.1	0.923	18,020.9	0.902	0.71	0.69	0.69	150.0	0.969	0.2	0.0002	0.46	0.78	0.46
2/16/2023	7:26	192.1	0.923	18,305.7	0.916	0.68	0.69	0.68	150.0	0.969	0.1	0.0001	0.46	0.78	0.46
2/16/2023	7:27	192.1	0.923	28,458.6	1.163	0.77	0.69	0.69	150.0	0.969	0.1	0.0001	0.46	0.78	0.46
2/16/2023	7:28	192.1	0.923	21,790.6	1.090	0.73	0.69	0.69	150.0	0.969	0.1	0.0001	0.46	0.78	0.46
2/16/2023	7:29	192.1	0.923	19,965.8	0.999	0.70	0.70	0.70	150.0	0.970	0.1	0.0001	0.46	0.78	0.46
2/16/2023	7:30	192.1	0.923	17,527.3	0.506	0.69	0.69	0.69	150.0	0.970	0.1	0.0001	0.47	0.78	0.47
2/16/2023	7:31	192.2	0.923	20,120.2	0.822	0.68	0.70	0.68	150.0	0.969	0.1	0.0002	0.46	0.79	0.46
2/16/2023	7:32	192.2	0.923	16,348.5	0.819	0.71	0.69	0.69	150.0	0.969	0.1	0.0001	0.46	0.79	0.46
2/16/2023	7:33	192.2	0.923	17,862.3	0.730	0.69	0.70	0.69	150.0	0.969	0.1	0.0001	0.46	0.83	0.46
2/16/2023	7:34	192.2	0.923	21,600.3	1.081	0.71	0.70	0.70	150.0	0.969	0.1	0.0001	0.46	0.81	0.46
2/16/2023	7:35	192.2	0.923	22,404.1	1.121	0.93	0.70	0.70	150.0	0.969	0.1	0.0001	0.46	0.79	0.46
2/16/2023	7:36	192.2	0.923	25,800.6	1.054	0.72	0.69	0.69	150.0	0.969	0.1	0.0001	0.46	0.78	0.46
2/16/2023	7:37				--				150.0	0.969	0.1	0.0001	0.46	0.79	0.46
2/16/2023	7:38	192.2	0.923	21,267.9	1.064	0.70	0.69	0.69	150.0	0.969	0.1	0.0001	0.46	0.78	0.46
2/16/2023	7:39	192.2	0.923	19,503.3	0.976	0.70	0.69	0.69	150.0	0.969	0.1	0.0002	0.46	0.78	0.46
2/16/2023	7:40	192.2	0.923	20,148.4	1.301	0.69	0.69	0.69				--			
2/16/2023	7:41	192.2	0.923	15,769.4	0.912	0.70	0.69	0.69	150.0	0.969	0.1	0.0001	0.46	0.79	0.46
2/16/2023	7:42	192.2	0.923	21,336.4	0.872	0.68	0.69	0.68	150.1	0.969	0.1	0.0002	0.46	0.79	0.46
2/16/2023	7:43	192.2	0.923	16,646.5	0.680	0.68	0.69	0.68	150.0	0.969	0.1	0.0001	0.46	0.79	0.46
2/16/2023	7:44	192.2	0.923	17,768.7	0.726	0.81	0.69	0.69	150.1	0.969	0.1	0.0002	0.46	0.79	0.46
2/16/2023	7:45	192.2	0.923	24,785.4	1.240	0.70	0.69	0.69	150.1	0.969	0.1	0.0001	0.46	0.79	0.46
2/16/2023	7:46	192.2	0.923	19,968.8	1.153	0.70	0.69	0.69	150.0	0.969	0.1	0.0001	0.46	0.79	0.46
2/16/2023	7:47	192.2	0.923	17,584.1	0.880	0.69	0.69	0.69	150.0	0.969	0.1	0.0001	0.46	0.79	0.46
2/16/2023	7:48	192.1	0.923	17,407.5	0.711	0.70	0.69	0.69	150.0	0.969	0.1	0.0001	0.46	0.79	0.46
2/16/2023	7:49	192.1	0.923	15,415.9	0.630	0.70	0.69	0.69	150.0	0.970	0.1	0.0001	0.47	0.79	0.47
2/16/2023	7:50	192.1	0.923	16,877.3	0.487	0.68	0.70	0.68	150.0	0.970	0.1	0.0001	0.47	0.79	0.47
2/16/2023	7:51	192.1	0.923	15,007.6	0.434	0.68	0.70	0.68	150.0	0.970	0.1	0.0001	0.46	0.79	0.46
2/16/2023	7:52	192.2	0.924	19,852.7	0.573	0.96	0.70	0.70	150.0	0.969	0.1	0.0001	0.46	0.79	0.46
2/16/2023	7:53	192.2	0.923	19,229.5	0.962	0.71	0.70	0.70	150.0	0.969	0.1	0.0001	0.46	0.79	0.46
2/16/2023	7:54	192.2	0.923	19,783.9	0.808	0.73	0.70	0.70	150.0	0.969	0.1	0.0001	0.46	0.78	0.46
2/16/2023	7:55	192.1	0.923	21,702.3	0.627	0.70	0.69	0.69	150.0	0.969	0.1	0.0001	0.46	0.78	0.46
2/16/2023	7:56	192.2	0.923	18,746.9	0.938	0.68	0.69	0.68	150.0	0.969	0.1	0.0001	0.46	0.78	0.46
2/16/2023	7:57	192.2	0.923	19,814.4	0.810	0.68	0.70	0.68	150.1	0.969	0.1	0.0002	0.46	0.78	0.46
2/16/2023	7:58	192.2	0.923	18,489.7	0.925	0.69	0.70	0.69	150.0	0.969	0.1	0.0002	0.46	0.78	0.46
2/16/2023	7:59				--				150.1	0.969	0.1	0.0002	0.46	0.78	0.46
2/16/2023	8:00	192.2	0.923	17,539.9	0.877	0.87	0.69	0.69	150.1	0.969	0.1	0.0001	0.46	0.78	0.46
2/16/2023	8:01	192.2	0.923	26,652.3	1.334	0.74	0.70	0.70	150.1	0.969	0.1	0.0001	0.45	0.78	0.45
2/16/2023	8:02	192.2	0.923	21,036.5	0.607	0.69	0.69	0.69	150.0	0.969	0.1	0.0001	0.45	0.78	0.45
2/16/2023	8:03	192.2	0.923	19,962.1	0.577	0.69	0.69	0.69				--			
2/16/2023	8:04	192.2	0.922	17,826.4	0.892	0.69	0.69	0.69	150.0	0.969	0.2	0.0003	0.45	0.78	0.45
2/16/2023	8:05	192.2	0.923	20,395.2	1.443	0.71	0.69	0.69	150.1	0.969	0.1	0.0001	0.46	0.78	0.46
2/16/2023	8:06	192.2	0.923	16,922.8	0.846	0.70	0.69	0.69	150.0	0.969	0.3	0.0004	0.45	0.78	0.45
2/16/2023	8:07	192.2	0.923	18,297.4	0.528	0.70	0.69	0.69	150.0	0.969	0.2	0.0002	0.45	0.78	0.45
2/16/2023	8:08	192.2	0.923	13,679.9	0.395	0.68	0.69	0.68	150.0	0.969	0.1	0.0002	0.45	0.78	0.45
2/16/2023	8:09	192.2	0.923	14,968.5	0.611	0.69	0.69	0.69	150.1	0.970	0.1	0.0001	0.45	0.77	0.45
2/16/2023	8:10	192.2	0.923	13,475.2	0.674	0.68	0.69	0.68	150.0	0.970	0.2	0.0002	0.45	0.78	0.45
2/16/2023	8:11	192.2	0.923	16,122.2	0.931	0.90	0.69	0.69	150.0	0.970	0.4	0.0005	0.45	0.78	0.45
2/16/2023	8:12	192.1	0.923	19,538.6	0.564	0.70	0.69	0.69	150.0	0.970	0.2	0.0003	0.45	0.78	0.45
2/16/2023	8:13	192.2	0.923	17,468.5	0.504	0.69	0.69	0.69	150.0	0.970	0.2	0.0003	0.45	0.78	0.45
2/16/2023	8:14	192.2	0.924	17,543.5	0.878	0.69	0.69	0.69	150.0	0.970	0.1	0.0001	0.46	0.79	0.46

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wt}$**	**BWS - Inlet$_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wt}$**	**BWS - Outlet$_{used}$**
	Unit	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/16/2023	8:15	192.1	0.924	16,548.9	0.828	0.72	0.69	0.69	150.1	0.970	0.2	0.0002	0.46	0.79	0.46
2/16/2023	8:16	192.2	0.923	15,606.9	0.781	0.73	0.69	0.69	150.0	0.970	0.1	0.0002	0.48	0.78	0.48
2/16/2023	8:17	192.1	0.924	17,235.9	0.704	0.71	0.69	0.69	150.0	0.970	0.1	0.0001	0.49	0.79	0.49
2/16/2023	8:18	192.1	0.924	22,953.9	1.148	0.80	0.69	0.69	150.0	0.969	0.2	0.0002	0.48	0.79	0.48
2/16/2023	8:19	192.1	0.924	20,222.3	0.826	0.72	0.69	0.69	150.0	0.968	0.2	0.0003	0.47	0.79	0.47
2/16/2023	8:20	192.1	0.923	17,787.6	0.514	0.70	0.70	0.70	150.0	0.968	0.1	0.0001	0.46	0.79	0.46
2/16/2023	8:21				--				150.0	0.968	0.1	0.0001	0.46	0.80	0.46
2/16/2023	8:22	192.1	0.923	17,700.9	0.511	0.72	0.69	0.69	150.0	0.968	0.2	0.0003	0.46	0.79	0.46
2/16/2023	8:23	192.1	0.923	18,298.4	--	0.70	0.69	0.69	150.0	0.967	0.4	0.0005	0.46	0.80	0.46
2/16/2023	8:24	192.1	0.923	17,050.6	--	0.71	0.69	0.69	150.0	0.967	0.4	0.0004	0.47	0.79	0.47
2/16/2023	8:25	192.1	0.924	16,088.7	--	0.72	0.69	0.69	150.0	0.967	0.1	--	0.46	0.79	0.46
2/16/2023	8:26	192.1	0.924	13,159.3	--	0.70	0.69	0.69				--			
2/16/2023	8:27	192.1	0.924	15,077.2	--	0.69	0.69	0.69				--			
2/16/2023	8:28	192.1	0.924	25,608.9	--	0.88	0.69	0.69				--			
2/16/2023	8:29				--							--			
2/16/2023	8:30				--							--			
2/16/2023	8:31				--							--			
2/16/2023	8:32				--							--			
2/16/2023	8:33				--							--			
2/16/2023	8:34				--							--			
2/16/2023	8:35				--							--			
2/16/2023	8:36				--							--			
2/16/2023	8:37				--							--			
2/16/2023	8:38				--							--			
2/16/2023	8:39				--							--			
2/16/2023	8:40				--							--			
2/16/2023	8:41				--				150.0	0.966	0.2	0.0003	0.45	0.77	0.45
2/16/2023	8:42				--				150.1	0.966	0.4	0.0005	0.44	0.77	0.44
2/16/2023	8:43				--				150.1	0.966	0.1	0.0001	0.45	0.77	0.45
2/16/2023	8:44				--				150.1	0.966	0.1	--	0.44	0.77	0.44
2/16/2023	8:45				--				150.1	0.971	0.1	--	0.35	0.77	0.35
2/16/2023	8:46				--				150.1	0.971	0.1	--	0.23	0.78	0.23
2/16/2023	8:47				--				150.1	0.971	0.4	--	0.20	0.77	0.20
2/16/2023	8:48				--							--			
2/16/2023	8:49	192.2	0.924	13,680.5	--	0.69	0.67	0.67	150.0	0.966	0.1	--	0.37	0.77	0.37
2/16/2023	8:50	192.2	0.924	14,931.7	--	0.70	0.67	0.67	150.1	0.966	0.1	--	0.44	0.77	0.44
2/16/2023	8:51	192.2	0.925	14,896.9	--	0.71	0.66	0.66	150.1	0.966	0.1	--	0.44	0.77	0.44
2/16/2023	8:52				--				150.1	0.966	0.1	--	0.44	0.77	0.44
2/16/2023	8:53	192.2	0.928	107.3	--	0.58	0.67	0.58	150.1	0.966	0.2	--	0.44	0.77	0.44
2/16/2023	8:54	192.2	0.928	471.8	0.014	0.54	0.67	0.54	150.1	0.966	0.1	0.0001	0.44	0.77	0.44
2/16/2023	8:55	192.2	0.927	40.3	0.002	0.43	0.66	0.43	150.1	0.966	0.3	0.0004	0.43	0.77	0.43
2/16/2023	8:56	192.2	0.924	11,329.4	0.567	1.30	0.67	0.67	150.1	0.966	0.2	0.0002	0.43	0.77	0.43
2/16/2023	8:57	192.2	0.924	19,583.5	0.980	0.73	0.66	0.66	150.1	0.967	0.1	0.0001	0.44	0.77	0.44
2/16/2023	8:58	192.2	0.925	15,608.0	1.106	0.68	0.67	0.67				--			
2/16/2023	8:59	192.2	0.925	20,097.6	1.006	0.68	0.66	0.66	150.0	0.966	0.3	0.0003	0.44	0.77	0.44
2/16/2023	9:00	192.2	0.925	13,483.7	0.675	0.70	0.66	0.66	150.0	0.966	0.1	0.0001	0.44	0.77	0.44
2/16/2023	9:01	192.2	0.925	15,696.2	0.786	0.73	0.66	0.66	150.1	0.966	0.1	0.0001	0.44	0.77	0.44
2/16/2023	9:02	192.2	0.925	20,781.1	0.850	0.74	0.66	0.66	150.2	0.966	0.1	0.0001	0.45	0.77	0.45
2/16/2023	9:03	192.2	0.925	12,914.9	0.647	0.70	0.66	0.66	150.4	0.966	0.1	0.0002	0.44	0.77	0.44
2/16/2023	9:04	192.3	0.925	16,209.0	0.663	0.70	0.67	0.67	150.5	0.966	0.1	0.0001	0.45	0.77	0.45
2/16/2023	9:05	192.5	0.925	18,870.5	0.771	0.99	0.66	0.66	150.4	0.966	0.1	0.0001	0.44	0.77	0.44
2/16/2023	9:06	192.6	0.925	19,149.7	0.959	0.72	0.67	0.67	150.3	0.966	0.1	0.0002	0.44	0.77	0.44
2/16/2023	9:07	192.6	0.925	19,102.3	0.956	0.71	0.67	0.67	150.2	0.966	0.1	0.0001	0.45	0.77	0.45
2/16/2023	9:08	192.5	0.925	15,433.7	0.997	0.73	0.66	0.66	150.1	0.967	0.4	0.0005	0.44	0.77	0.44
2/16/2023	9:09	192.4	0.925	17,140.1	0.495	0.70	0.66	0.66	150.1	0.966	0.2	0.0002	0.44	0.77	0.44
2/16/2023	9:10	192.3	0.925	14,583.3	0.730	0.69	0.67	0.67	150.2	0.966	0.1	0.0001	0.44	0.77	0.44
2/16/2023	9:11	192.3	0.925	13,767.6	0.563	0.70	0.66	0.66	150.1	0.966	0.1	0.0001	0.44	0.77	0.44
2/16/2023	9:12				--				150.1	0.967	0.1	0.0001	0.44	0.77	0.44
2/16/2023	9:13	192.3	0.926	14,558.4	0.595	0.69	0.67	0.67	150.1	0.967	0.1	0.0001	0.44	0.78	0.44
2/16/2023	9:14	192.3	0.925	18,889.6	0.772	0.82	0.67	0.67	150.1	0.967	0.2	0.0003	0.44	0.78	0.44
2/16/2023	9:15	192.3	0.925	22,234.9	1.113	0.76	0.67	0.67	150.1	0.967	0.2	0.0003	0.44	0.77	0.44
2/16/2023	9:16	192.3	0.926	18,420.6	1.065	0.71	0.66	0.66	150.1	0.967	0.2	0.0002	0.44	0.78	0.44
2/16/2023	9:17	192.3	0.925	16,018.2	0.000	0.70	0.67	0.67	150.1	0.967	0.1	0.0001	0.44	0.77	0.44
2/16/2023	9:18	192.3	0.925	16,026.1	0.802	0.70	0.67	0.67	150.1	0.967	0.1	0.0001	0.44	0.77	0.44
2/16/2023	9:19	192.3	0.925	14,809.6	0.606	0.71	0.66	0.66	150.1	0.966	0.1	0.0001	0.45	0.77	0.45
2/16/2023	9:20	192.3	0.926	15,514.1	0.635	0.72	0.66	0.66	150.1	0.967	0.1	0.0001	0.44	0.78	0.44
2/16/2023	9:21	192.2	0.925	18,201.6	0.744	0.72	0.67	0.67				--			
2/16/2023	9:22	192.2	0.925	14,464.0	0.418	0.70	0.67	0.67	150.1	0.967	0.2	0.0002	0.44	0.77	0.44
2/16/2023	9:23	192.2	0.925	23,483.0	1.518	0.95	0.67	0.67	150.1	0.967	0.1	0.0001	0.44	0.78	0.44
2/16/2023	9:24	192.3	0.925	16,501.8	0.000	0.74	0.67	0.67	150.1	0.967	0.2	0.0002	0.44	0.77	0.44
2/16/2023	9:25	192.3	0.926	18,086.7	1.479	0.71	0.66	0.66	150.1	0.967	0.1	0.0001	0.45	0.77	0.45
2/16/2023	9:26	192.3	0.926	15,848.6	0.648	0.70	0.67	0.67	150.1	0.967	0.1	0.0001	0.44	0.77	0.44
2/16/2023	9:27	192.3	0.925	18,155.0	0.742	0.71	0.67	0.67	150.1	0.967	0.1	0.0002	0.44	0.77	0.44
2/16/2023	9:28	192.3	0.925	15,484.7	0.896	0.70	0.67	0.67	150.1	0.967	0.3	0.0003	0.44	0.77	0.44
2/16/2023	9:29	192.3	0.925	16,768.6	0.485	0.71	0.67	0.67	150.1	0.967	0.1	0.0001	0.44	0.77	0.44
2/16/2023	9:30	192.3	0.925	13,417.7	0.548	0.70	0.67	0.67	150.1	0.967	0.1	0.0001	0.44	0.77	0.44
2/16/2023	9:31	192.3	0.926	22,782.5	1.140	0.82	0.67	0.67	150.1	0.967	0.2	0.0002	0.43	0.77	0.43
2/16/2023	9:32	192.3	0.925	19,741.8	0.570	0.72	0.67	0.67	150.1	0.967	0.1	0.0001	0.44	0.76	0.44
2/16/2023	9:33	192.2	0.926	16,642.9	0.680	0.71	0.67	0.67	150.1	0.967	0.2	0.0003	0.44	0.77	0.44
2/16/2023	9:34				--				150.1	0.967	0.1	0.0001	0.44	0.77	0.44
2/16/2023	9:35	192.2	0.926	14,497.6	0.592	0.70	0.67	0.67	150.1	0.967	0.1	0.0001	0.44	0.77	0.44
2/16/2023	9:36	192.3	0.926	13,982.0	0.000	0.71	0.67	0.67	150.1	0.967	0.1	0.0001	0.44	0.77	0.44
2/16/2023	9:37	192.3	0.926	15,877.1	0.649	0.72	0.67	0.67	150.1	0.967	0.1	0.0001	0.44	0.77	0.44
2/16/2023	9:38	192.2	0.926	15,387.5	0.770	0.70	0.67	0.67	150.1	0.967	0.1	0.0002	0.44	0.77	0.44
2/16/2023	9:39	192.2	0.926	14,533.7	0.728	0.71	0.67	0.67	150.1	0.967	0.1	0.0001	0.44	0.77	0.44
2/16/2023	9:40	192.3	0.926	22,967.2	0.939	0.82	0.67	0.67	150.1	0.967	0.1	0.0001	0.44	0.77	0.44
2/16/2023	9:41	192.2	0.926	20,231.9	1.013	0.73	0.67	0.67	150.1	0.967	0.4	0.0005	0.44	0.77	0.44
2/16/2023	9:42	192.2	0.926	16,725.5	0.684	0.70	0.67	0.67	150.1	0.967	0.4	0.0005	0.44	0.77	0.44
2/16/2023	9:43	192.2	0.926	19,354.4	0.559	0.72	0.67	0.67	150.1	0.967	0.2	0.0002	0.43	0.77	0.43
2/16/2023	9:44	192.2	0.926	17,795.0	0.891	0.74	0.67	0.67	150.1	0.967	0.2	0.0002	0.43	0.77	0.43
2/16/2023	9:45	192.2	0.925	15,451.2	0.893	0.72	0.67	0.67				--			
2/16/2023	9:46	192.2	0.926	19,218.5	0.786	0.70	0.67	0.67	150.1	0.967	0.1	0.0002	0.43	0.76	0.43
2/16/2023	9:47	192.2	0.926	15,348.0	0.887	0.80	0.67	0.67	150.1	0.967	0.2	0.0003	0.43	0.76	0.43
2/16/2023	9:48	192.2	0.926	24,800.4	1.241	0.77	0.67	0.67	150.1	0.967	0.2	0.0003	0.43	0.76	0.43
2/16/2023	9:49	192.3	0.926	17,388.8	0.870	0.71	0.67	0.67	150.1	0.967	0.1	0.0002	0.43	0.76	0.43

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet $_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/16/2023	9:50	192.3	0.926	16,431.3	1.343	0.69	0.67	0.67	150.2	0.967	0.1	0.0001	0.43	0.76	0.43
2/16/2023	9:51	192.3	0.926	13,410.7	0.548	0.69	0.67	0.67	150.2	0.967	0.1	0.0001	0.43	0.76	0.43
2/16/2023	9:52	192.3	0.926	13,972.9	0.571	0.68	0.67	0.67	150.1	0.967	0.1	0.0001	0.43	0.76	0.43
2/16/2023	9:53	192.3	0.926	12,753.2	0.522	0.68	0.66	0.66	150.1	0.967	0.1	0.0001	0.43	0.75	0.43
2/16/2023	9:54	192.3	0.926	14,610.6	0.598	0.70	0.67	0.67	150.2	0.967	0.2	0.0002	0.42	0.76	0.42
2/16/2023	9:55				--				150.2	0.967	0.2	0.0003	0.43	0.76	0.43
2/16/2023	9:56	192.3	0.926	16,361.2	0.000	0.70	0.67	0.67	150.1	0.967	0.2	0.0003	0.43	0.75	0.43
2/16/2023	9:57	192.3	0.926	28,876.6	1.181	0.80	0.67	0.67	150.1	0.967	0.1	0.0001	0.43	0.77	0.43
2/16/2023	9:58	192.3	0.926	26,197.3	0.758	0.77	0.66	0.66	150.1	0.967	0.1	0.0001	0.43	0.75	0.43
2/16/2023	9:59	192.3	0.926	22,508.7	1.128	0.73	0.66	0.66	150.1	0.967	0.1	0.0001	0.43	0.75	0.43
2/16/2023	10:00	192.3	0.926	22,238.2	1.287	0.73	0.66	0.66	150.1	0.967	0.3	0.0004	0.43	0.75	0.43
2/16/2023	10:01	192.3	0.926	24,086.5	1.208	0.76	0.66	0.66	150.2	0.967	0.1	0.0001	0.43	0.75	0.43
2/16/2023	10:02	192.3	0.926	20,195.4	1.012	0.72	0.66	0.66	150.1	0.967	0.1	0.0001	0.43	0.75	0.43
2/16/2023	10:03	192.3	0.926	21,884.4	1.267	0.73	0.66	0.66	150.1	0.967	0.1	0.0002	0.43	0.75	0.43
2/16/2023	10:04	192.3	0.926	20,822.3	0.852	0.75	0.67	0.67	150.1	0.967	0.1	0.0001	0.43	0.75	0.43
2/16/2023	10:05	192.3	0.926	33,865.4	1.386	0.84	0.66	0.66	150.1	0.967	0.1	0.0001	0.42	0.74	0.42
2/16/2023	10:06	192.3	0.926	28,445.9	1.164	0.76	0.66	0.66	150.1	0.968	0.1	0.0001	0.42	0.74	0.42
2/16/2023	10:07	192.3	0.926	23,739.5	0.687	0.76	0.66	0.66	150.2	0.967	0.1	0.0001	0.42	0.75	0.42
2/16/2023	10:08	192.3	0.927	30,552.5	0.884	0.73	0.66	0.66				--			
2/16/2023	10:09	192.3	0.926	25,160.3	1.629	0.72	0.66	0.66	150.1	0.967	0.1	0.0001	0.43	0.74	0.43
2/16/2023	10:10	192.3	0.926	29,054.6	1.191	0.72	0.66	0.66	150.2	0.967	0.1	0.0001	0.42	0.74	0.42
2/16/2023	10:11	192.3	0.926	27,979.7	0.811	0.73	0.66	0.66	150.1	0.967	0.1	0.0001	0.42	0.74	0.42
2/16/2023	10:12	192.3	0.926	31,181.9	1.277	0.76	0.66	0.66	150.1	0.967	0.1	0.0001	0.42	0.74	0.42
2/16/2023	10:13	192.3	0.926	38,773.1	1.123	0.80	0.66	0.66	150.1	0.967	0.1	0.0001	0.42	0.74	0.42
2/16/2023	10:14	192.3	0.926	39,170.0	1.604	0.67	0.66	0.66	150.1	0.967	0.1	0.0001	0.42	0.74	0.42
2/16/2023	10:15	192.2	0.926	34,600.3	1.417	0.72	0.66	0.66	150.2	0.967	0.1	0.0001	0.41	0.74	0.41
2/16/2023	10:16	192.3	0.926	34,144.3	1.399	0.70	0.66	0.66	150.1	0.967	0.1	0.0001	0.42	0.74	0.42
2/16/2023	10:17				--				150.2	0.967	0.1	0.0001	0.42	0.74	0.42
2/16/2023	10:18	192.3	0.926	34,405.8	1.411	0.71	0.66	0.66	150.1	0.967	0.1	0.0001	0.41	0.73	0.41
2/16/2023	10:19	192.3	0.927	34,535.3	1.001	0.68	0.66	0.66	150.1	0.967	0.1	0.0001	0.41	0.73	0.41
2/16/2023	10:20	192.3	0.926	35,976.4	1.043	0.67	0.66	0.66	150.2	0.967	0.1	0.0001	0.41	0.74	0.41
2/16/2023	10:21	192.3	0.926	38,442.3	1.114	0.73	0.67	0.67	150.2	0.968	0.1	0.0001	0.41	0.74	0.41
2/16/2023	10:22	192.3	0.927	45,928.4	1.330	0.54	0.66	0.54	150.1	0.968	0.1	0.0001	0.41	0.74	0.41
2/16/2023	10:23	192.3	0.927	42,025.1	1.722	0.69	0.67	0.67	150.2	0.967	0.3	0.0004	0.41	0.74	0.41
2/16/2023	10:24	192.3	0.927	41,752.0	1.209	0.66	0.67	0.66	150.2	0.967	0.1	0.0001	0.41	0.74	0.41
2/16/2023	10:25	192.3	0.927	39,374.8	1.614	0.67	0.67	0.67	150.1	0.968	0.1	0.0001	0.41	0.74	0.41
2/16/2023	10:26	192.3	0.927	40,721.2	1.181	0.66	0.66	0.66	150.1	0.967	0.1	0.0001	0.42	0.73	0.42
2/16/2023	10:27	192.3	0.927	39,316.2	2.280	0.69	0.66	0.66	150.2	0.967	0.1	0.0001	0.41	0.73	0.41
2/16/2023	10:28	192.3	0.926	39,297.2	1.611	0.67	0.67	0.67	150.1	0.968	0.1	0.0001	0.41	0.73	0.41
2/16/2023	10:29	192.3	0.927	49,238.3	1.427	0.50	0.66	0.50	150.2	0.968	0.1	0.0001	0.41	0.73	0.41
2/16/2023	10:30	192.3	0.927	47,545.0	0.000	0.48	0.67	0.48	150.2	0.968	0.1	0.0001	0.41	0.73	0.41
2/16/2023	10:31	192.3	0.927	46,736.5	1.915	0.50	0.66	0.50	150.1	0.968	0.1	0.0001	0.41	0.73	0.41
2/16/2023	10:32	192.3	0.927	44,573.1	1.292	0.57	0.67	0.57				--			
2/16/2023	10:33	192.2	0.927	44,223.1	1.813	0.53	0.66	0.53	150.1	0.968	0.1	0.0001	0.41	0.73	0.41
2/16/2023	10:34	192.2	0.927	43,793.0	1.270	0.49	0.66	0.49	150.1	0.968	0.1	0.0002	0.41	0.73	0.41
2/16/2023	10:35	192.2	0.927	43,910.8	1.801	0.53	0.66	0.53	150.2	0.968	0.1	0.0001	0.41	0.73	0.41
2/16/2023	10:36	192.2	0.927	45,394.1	1.862	0.57	0.66	0.57	150.1	0.968	0.1	0.0001	0.41	0.73	0.41
2/16/2023	10:37	192.3	0.927	52,549.1	2.155	0.43	0.66	0.43	150.2	0.967	0.1	0.0001	0.41	0.73	0.41
2/16/2023	10:38	192.3	0.927	50,066.4	2.053	0.43	0.66	0.43	150.2	0.967	0.3	0.0004	0.40	0.73	0.40
2/16/2023	10:39				--				150.2	0.967	0.1	0.0001	0.41	0.73	0.41
2/16/2023	10:40	192.3	0.927	49,610.1	1.439	0.45	0.66	0.45	150.2	0.967	0.1	0.0001	0.41	0.73	0.41
2/16/2023	10:41	192.4	0.927	47,915.0	1.390	0.50	0.66	0.50	150.2	0.967	0.1	0.0001	0.41	0.73	0.41
2/16/2023	10:42	192.3	0.927	46,392.8	1.903	0.52	0.67	0.52	150.1	0.968	0.1	0.0001	0.42	0.73	0.42
2/16/2023	10:43	192.3	0.927	49,988.0	2.050	0.43	0.68	0.43	150.2	0.968	0.1	0.0001	0.41	0.79	0.41
2/16/2023	10:44	192.3	0.927	49,134.0	2.015	0.49	0.68	0.49	150.2	0.967	0.1	0.0001	0.42	0.81	0.42
2/16/2023	10:45	192.3	0.927	59,232.3	2.428	0.26	0.67	0.26	150.2	0.968	0.1	0.0001	0.41	0.82	0.41
2/16/2023	10:46	192.3	0.927	55,664.1	2.282	0.32	0.67	0.32	150.2	0.968	0.3	0.0003	0.41	0.77	0.41
2/16/2023	10:47	192.3	0.927	55,152.5	3.200	0.36	0.66	0.36	150.2	0.968	0.1	0.0001	0.42	0.73	0.42
2/16/2023	10:48	192.3	0.927	53,604.4	1.556	0.43	0.66	0.43	150.2	0.967	0.1	0.0001	0.42	0.73	0.42
2/16/2023	10:49	192.3	0.927	51,773.5	2.125	0.44	0.66	0.44	150.2	0.968	0.1	0.0001	0.41	0.72	0.41
2/16/2023	10:50	192.3	0.927	53,015.3	1.538	0.43	0.66	0.43	150.2	0.968	0.1	0.0001	0.42	0.73	0.42
2/16/2023	10:51	192.3	0.927	52,131.6	2.620	0.49	0.66	0.49	150.2	0.968	0.1	0.0001	0.42	0.73	0.42
2/16/2023	10:52	192.3	0.927	59,749.8	1.732	0.20	0.66	0.20	150.2	0.968	0.1	0.0001	0.42	0.73	0.42
2/16/2023	10:53	192.3	0.927	55,752.3	2.800	0.35	0.67	0.35	150.2	0.968	0.1	0.0001	0.41	0.73	0.41
2/16/2023	10:54	192.3	0.928	54,092.2	2.219	0.40	0.67	0.40	150.2	0.968	0.1	0.0001	0.41	0.73	0.41
2/16/2023	10:55	192.3	0.927	53,009.5	2.175	0.41	0.66	0.41	150.2	0.968	0.3	0.0004	0.41	0.73	0.41
2/16/2023	10:56	192.3	0.928	53,493.0	1.552	0.42	0.66	0.42				--			
2/16/2023	10:57	192.3	0.927	53,787.5	2.207	0.40	0.67	0.40	150.2	0.968	0.1	0.0002	0.41	0.73	0.41
2/16/2023	10:58	192.4	0.928	54,752.4	1.588	0.47	0.67	0.47	150.2	0.968	0.1	0.0001	0.41	0.73	0.41
2/16/2023	10:59	192.3	0.927	60,188.2	2.468	0.27	0.67	0.27	150.2	0.968	0.1	0.0001	0.41	0.73	0.41
2/16/2023	11:00	192.3	0.927	59,215.4	1.717	0.26	0.67	0.26	150.2	0.968	0.1	0.0001	0.41	0.73	0.41
2/16/2023	11:01				--				150.2	0.968	0.1	0.0001	0.41	0.73	0.41
2/16/2023	11:02	192.3	0.927	57,083.8	0.000	0.33	0.67	0.33	150.2	0.968	0.1	0.0001	0.41	0.72	0.41
2/16/2023	11:03	192.3	0.927	53,764.9	1.559	0.41	0.67	0.41	150.2	0.968	0.1	0.0001	0.41	0.73	0.41
2/16/2023	11:04	192.3	0.928	53,390.4	1.548	0.42	0.67	0.42	150.2	0.968	0.1	0.0002	0.41	0.72	0.41
2/16/2023	11:05	192.3	0.928	50,038.8	2.052	0.51	0.67	0.51	150.2	0.968	0.2	0.0002	0.41	0.73	0.41
2/16/2023	11:06	192.3	0.928	49,236.6	2.473	0.48	0.67	0.48	150.2	0.968	0.4	0.0006	0.41	0.73	0.41
2/16/2023	11:07	192.4	0.928	53,824.4	1.560	0.41	0.67	0.41	150.2	0.968	0.2	0.0002	0.41	0.73	0.41
2/16/2023	11:08	192.3	0.928	54,085.2	2.217	0.38	0.67	0.38	150.2	0.968	0.2	0.0003	0.41	0.73	0.41
2/16/2023	11:09	192.4	0.928	53,895.7	1.562	0.40	0.67	0.40	150.2	0.968	0.1	0.0001	0.41	0.72	0.41
2/16/2023	11:10	192.3	0.927	53,331.6	1.546	0.47	0.67	0.47	150.2	0.968	0.1	0.0001	0.41	0.72	0.41
2/16/2023	11:11	192.3	0.927	54,469.6	2.234	0.39	0.67	0.39	150.2	0.968	0.1	0.0001	0.41	0.72	0.41
2/16/2023	11:12	192.3	0.927	54,198.6	2.222	0.38	0.68	0.38	150.2	0.968	0.1	0.0001	0.41	0.72	0.41
2/16/2023	11:13	192.3	0.927	52,877.3	2.656	0.47	0.67	0.47	150.2	0.968	0.1	0.0001	0.41	0.72	0.41
2/16/2023	11:14	192.3	0.927	57,742.7	2.899	0.28	0.67	0.28	150.2	0.968	0.1	0.0001	0.41	0.73	0.41
2/16/2023	11:15	192.3	0.928	57,352.0	1.662	0.30	0.68	0.30	150.2	0.968	0.1	0.0001	0.41	0.73	0.41
2/16/2023	11:16	192.3	0.928	54,602.2	2.239	0.42	0.67	0.42	150.2	0.968	0.2	0.0003	0.41	0.73	0.41
2/16/2023	11:17	192.3	0.928	52,988.0	2.173	0.46	0.67	0.46	150.2	0.968	0.1	0.0001	0.41	0.73	0.41
2/16/2023	11:18	192.3	0.928	52,748.9	2.650	0.42	0.68	0.42				--			
2/16/2023	11:19	192.3	0.928	52,441.4	1.521	0.49	0.68	0.49	150.2	0.968	0.1	0.0001	0.41	0.73	0.41
2/16/2023	11:20	192.3	0.928	51,118.4	1.482	0.46	0.67	0.46	150.2	0.968	0.1	0.0001	0.41	0.73	0.41
2/16/2023	11:21	192.3	0.928	57,693.1	2.897	0.34	0.68	0.34	150.2	0.968	0.1	0.0001	0.41	0.72	0.41
2/16/2023	11:22	192.3	0.928	56,276.1	1.632	0.39	0.67	0.39	150.2	0.968	0.1	0.0001	0.41	0.72	0.41
2/16/2023	11:23				--				150.2	0.968	0.1	0.0001	0.41	0.72	0.41
2/16/2023	11:24	192.4	0.928	56,163.7	1.628	0.35	0.68	0.35	150.2	0.968	0.1	0.0001	0.41	0.72	0.41

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wt}$**	**BWS - Inlet$_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wt}$**	**BWS - Outlet$_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/16/2023	11:25	192.3	0.928	55,178.1	2.772	0.39	0.67	0.39	150.2	0.968	0.3	0.0004	0.40	0.72	0.40
2/16/2023	11:26	192.3	0.928	54,921.3	1.593	0.40	0.67	0.40	150.2	0.968	0.1	0.0001	0.40	0.72	0.40
2/16/2023	11:27	192.3	0.928	52,452.9	1.521	0.43	0.68	0.43	150.2	0.968	0.1	0.0001	0.41	0.71	0.41
2/16/2023	11:28	192.3	0.928	53,355.1	1.547	0.39	0.68	0.39	150.2	0.968	0.1	0.0001	0.40	0.72	0.40
2/16/2023	11:29	192.3	0.928	59,834.4	2.453	0.30	0.68	0.30	150.2	0.968	0.1	0.0001	0.40	0.72	0.40
2/16/2023	11:30	192.3	0.928	57,841.3	2.372	0.36	0.67	0.36	150.2	0.968	0.1	0.0001	0.40	0.72	0.40
2/16/2023	11:31	192.4	0.928	56,178.5	2.304	0.38	0.67	0.38	150.2	0.968	0.1	0.0001	0.40	0.72	0.40
2/16/2023	11:32	192.4	0.928	58,017.1	2.379	0.31	0.68	0.31	150.3	0.968	0.1	0.0001	0.40	0.73	0.40
2/16/2023	11:33	192.4	0.928	55,391.2	2.271	0.35	0.68	0.35	150.2	0.968	0.1	0.0001	0.40	0.72	0.40
2/16/2023	11:34	192.4	0.928	56,581.1	2.320	0.33	0.68	0.33	150.2	0.969	0.1	0.0001	0.40	0.72	0.40
2/16/2023	11:35	192.3	0.928	58,983.2	0.000	0.31	0.68	0.31	150.2	0.969	0.1	0.0001	0.41	0.73	0.41
2/16/2023	11:36	192.3	0.928	60,529.5	2.481	0.21	0.67	0.21	150.2	0.968	0.1	0.0001	0.41	0.72	0.41
2/16/2023	11:37	192.3	0.928	58,021.9	1.682	0.36	0.68	0.36	150.2	0.969	0.1	0.0001	0.41	0.72	0.41
2/16/2023	11:38	192.4	0.928	56,221.9	1.630	0.35	0.67	0.35	150.2	0.969	0.1	0.0001	0.41	0.72	0.41
2/16/2023	11:39	192.4	0.928	56,091.3	2.816	0.38	0.68	0.38	150.2	0.969	0.1	0.0001	0.40	0.73	0.40
2/16/2023	11:40	192.4	0.928	54,043.6	1.567	0.47	0.67	0.47	150.2	0.969	0.1	0.0001	0.40	0.72	0.40
2/16/2023	11:41	192.4	0.928	52,861.3	1.532	0.46	0.68	0.46	150.2	0.968	0.1	0.0001	0.40	0.72	0.40
2/16/2023	11:42	192.4	0.928	56,681.0	1.643	0.34	0.67	0.34				--			
2/16/2023	11:43	192.4	0.928	56,580.1	2.319	0.33	0.68	0.33	150.2	0.968	0.2	0.0002	0.40	0.72	0.40
2/16/2023	11:44				--				150.2	0.968	0.1	0.0001	0.40	0.72	0.40
2/16/2023	11:45	192.4	0.928	55,697.6	0.000	0.40	0.67	0.40	150.2	0.969	0.1	0.0002	0.39	0.71	0.39
2/16/2023	11:46	192.4	0.928	54,572.3	1.582	0.45	0.68	0.45	150.2	0.969	0.2	0.0003	0.40	0.72	0.40
2/16/2023	11:47	192.4	0.928	53,576.6	2.197	0.48	0.68	0.48	150.2	0.969	0.1	0.0001	0.40	0.72	0.40
2/16/2023	11:48	192.4	0.928	52,145.1	1.512	0.44	0.68	0.44	150.2	0.969	0.1	0.0001	0.40	0.71	0.40
2/16/2023	11:49	192.4	0.928	51,304.3	2.104	0.45	0.68	0.45	150.2	0.969	0.1	0.0001	0.40	0.71	0.40
2/16/2023	11:50	192.4	0.929	58,636.2	1.700	0.30	0.67	0.30	150.2	0.969	0.1	0.0001	0.39	0.71	0.39
2/16/2023	11:51	192.4	0.928	56,229.6	1.631	0.36	0.67	0.36	150.2	0.968	0.2	0.0003	0.40	0.71	0.40
2/16/2023	11:52	192.4	0.928	56,188.1	1.629	0.36	0.68	0.36	150.2	0.968	0.1	0.0001	0.40	0.71	0.40
2/16/2023	11:53	192.4	0.928	56,700.1	0.000	0.32	0.67	0.32	150.2	0.968	0.2	0.0002	0.40	0.71	0.40
2/16/2023	11:54	192.3	0.928	57,595.2	2.893	0.42	0.67	0.42	150.2	0.968	0.1	0.0001	0.40	0.70	0.40
2/16/2023	11:55	192.3	0.928	56,220.1	2.824	0.33	0.67	0.33	150.1	0.968	0.3	0.0004	0.39	0.71	0.39
2/16/2023	11:56	192.3	0.928	57,240.6	2.874	0.39	0.68	0.39	150.1	0.968	0.1	0.0001	0.39	0.71	0.39
2/16/2023	11:57	192.3	0.928	60,879.4	2.495	0.20	0.67	0.20	150.2	0.968	0.2	0.0003	0.40	0.71	0.40
2/16/2023	11:58	192.3	0.928	58,613.9	0.000	0.25	0.67	0.25	150.1	0.968	0.1	0.0002	0.40	0.70	0.40
2/16/2023	11:59	192.3	0.928	56,982.8	2.336	0.37	0.67	0.37	150.1	0.968	0.2	0.0002	0.40	0.71	0.40
2/16/2023	12:00	192.3	0.928	55,931.3	2.294	0.36	0.67	0.36	150.2	0.969	0.1	0.0001	0.40	0.70	0.40
2/16/2023	12:01	192.3	0.928	54,799.4	10.297	0.44	0.67	0.44	150.2	0.968	0.1	0.0001	0.40	0.71	0.40
2/16/2023	12:02	192.3	0.928	53,858.6	9.752	0.42	0.67	0.42	150.1	0.969	0.1	0.0002	0.39	0.70	0.39
2/16/2023	12:03	192.3	0.928	51,371.1	8.684	0.52	0.67	0.52	150.1	0.969	0.1	0.0001	0.39	0.70	0.39
2/16/2023	12:04	192.3	0.928	53,643.2	8.533	0.44	0.67	0.44	150.1	0.969	0.2	0.0002	0.40	0.71	0.40
2/16/2023	12:05	192.3	0.928	49,370.9	7.220	0.56	0.67	0.56				--			
2/16/2023	12:06				--				150.2	0.969	0.1	0.0001	0.39	0.70	0.39
2/16/2023	12:07	192.3	0.929	45,719.2	2.317	0.63	0.67	0.63	150.1	0.969	0.1	0.0001	0.39	0.70	0.39
2/16/2023	12:08	192.3	0.930	9,335.3	0.273	1.82	0.68	0.68	150.1	0.969	0.1	0.0001	0.39	0.70	0.39
2/16/2023	12:09	192.3	0.930	181,821.3	9.204	0.20	0.68	0.20	150.1	0.969	0.1	0.0001	0.40	0.70	0.40
2/16/2023	12:10	192.2	0.930	181,885.7	7.515	0.20	0.68	0.20	150.1	0.969	0.1	0.0001	0.40	0.70	0.40
2/16/2023	12:11	192.2	0.930	177,788.3	0.000	0.20	0.68	0.20	150.1	0.968	0.2	0.0002	0.40	0.70	0.40
2/16/2023	12:12	192.2	0.930	186,266.0	0.000	0.20	0.68	0.20	150.1	0.968	0.2	0.0002	0.40	0.70	0.40
2/16/2023	12:13	192.2	0.930	181,211.2	7.479	0.20	0.68	0.20	150.1	0.968	0.1	0.0001	0.40	0.70	0.40
2/16/2023	12:14	192.2	0.929	169,536.3	4.949	0.20	0.68	0.20	150.1	0.969	0.2	0.0002	0.39	0.70	0.39
2/16/2023	12:15	192.2	0.929	160,238.5	8.107	0.90	0.68	0.68	150.1	0.968	0.3	0.0004	0.40	0.70	0.40
2/16/2023	12:16	192.2	0.929	141,828.1	4.141	0.61	0.68	0.61	150.1	0.968	0.1	0.0001	0.40	0.70	0.40
2/16/2023	12:17	192.2	0.929	131,999.0	5.443	0.20	0.68	0.20	150.1	0.969	0.1	0.0001	0.40	0.70	0.40
2/16/2023	12:18	192.2	0.929	126,558.0	0.000	0.20	0.67	0.20	150.1	0.968	0.1	0.0001	0.39	0.70	0.39
2/16/2023	12:19	192.3	0.929	110,359.4	4.548	0.20	0.68	0.20	150.1	0.969	0.1	0.0001	0.39	0.70	0.39
2/16/2023	12:20	192.2	0.929	92,579.7	2.699	0.20	0.67	0.20	150.1	0.969	0.1	0.0002	0.39	0.70	0.39
2/16/2023	12:21	192.3	0.928	83,432.0	3.441	0.20	0.67	0.20	150.1	0.969	0.1	0.0001	0.39	0.70	0.39
2/16/2023	12:22	192.2	0.928	76,826.1	2.240	0.20	0.67	0.20	150.1	0.969	0.1	0.0001	0.39	0.70	0.39
2/16/2023	12:23	192.2	0.929	75,895.5	3.128	0.20	0.67	0.20	150.1	0.969	0.1	0.0001	0.39	0.69	0.39
2/16/2023	12:24	192.2	0.929	87,629.6	2.554	0.20	0.67	0.20	150.1	0.969	0.1	0.0001	0.39	0.70	0.39
2/16/2023	12:25	192.2	0.928	79,871.0	3.292	0.20	0.67	0.20	150.1	0.968	0.1	0.0001	0.39	0.69	0.39
2/16/2023	12:26	192.2	0.928	72,644.8	2.994	0.20	0.67	0.20	150.1	0.969	0.1	0.0001	0.39	0.70	0.39
2/16/2023	12:27	192.2	0.928	69,012.1	2.845	0.20	0.67	0.20	150.1	0.969	0.1	0.0001	0.39	0.69	0.39
2/16/2023	12:28				--							--			
2/16/2023	12:29	192.3	0.928	62,668.5	1.827	0.20	0.67	0.20	150.1	0.969	0.1	0.0001	0.39	0.70	0.39
2/16/2023	12:30	192.3	0.928	61,592.5	1.795	0.20	0.66	0.20	150.1	0.969	0.2	0.0003	0.39	0.69	0.39
2/16/2023	12:31	192.3	0.928	66,413.5	1.935	0.20	0.67	0.20	150.1	0.969	0.1	0.0001	0.39	0.69	0.39
2/16/2023	12:32	192.3	0.928	74,165.5	2.160	0.20	0.67	0.20	150.1	0.968	0.1	0.0001	0.39	0.70	0.39
2/16/2023	12:33	192.2	0.928	67,900.9	0.000	0.20	0.67	0.20	150.1	0.968	0.1	0.0001	0.39	0.69	0.39
2/16/2023	12:34	192.3	0.928	62,208.8	3.141	0.20	0.67	0.20	150.1	0.968	0.2	0.0002	0.39	0.69	0.39
2/16/2023	12:35	192.3	0.928	57,612.6	1.679	0.20	0.67	0.20	150.1	0.969	0.2	0.0002	0.39	0.70	0.39
2/16/2023	12:36	192.2	0.928	53,673.2	1.564	0.20	0.67	0.20	150.1	0.969	0.1	0.0002	0.39	0.69	0.39
2/16/2023	12:37	192.2	0.928	57,116.6	2.352	0.20	0.67	0.20	150.1	0.968	0.1	0.0001	0.39	0.69	0.39
2/16/2023	12:38	192.2	0.928	65,105.0	1.896	0.20	0.67	0.20	150.1	0.968	0.1	0.0001	0.39	0.69	0.39
2/16/2023	12:39	192.3	0.928	58,679.8	1.708	0.20	0.67	0.20	150.1	0.969	0.1	0.0001	0.38	0.69	0.38
2/16/2023	12:40	192.2	0.928	55,040.5	0.000	0.20	0.67	0.20	150.1	0.969	0.2	0.0002	0.39	0.69	0.39
2/16/2023	12:41	192.2	0.928	51,616.0	1.503	0.21	0.67	0.21	150.1	0.969	0.1	0.0001	0.38	0.69	0.38
2/16/2023	12:42	192.2	0.928	48,240.7	1.987	0.25	0.67	0.25	150.1	0.969	0.1	0.0001	0.39	0.69	0.39
2/16/2023	12:43	192.2	0.928	47,247.8	0.000	0.27	0.67	0.27	150.0	0.969	0.1	0.0001	0.38	0.69	0.38
2/16/2023	12:44	192.3	0.928	55,616.8	1.619	0.20	0.67	0.20	150.0	0.969	0.1	0.0001	0.38	0.69	0.38
2/16/2023	12:45	192.3	0.928	49,761.4	2.048	0.22	0.67	0.22	150.1	0.969	0.1	0.0001	0.38	0.69	0.38
2/16/2023	12:46	192.2	0.928	46,321.5	1.348	0.30	0.67	0.30	150.1	0.968	0.1	0.0001	0.38	0.69	0.38
2/16/2023	12:47	192.2	0.928	46,094.7	1.343	0.32	0.67	0.32	150.1	0.968	0.1	0.0001	0.38	0.69	0.38
2/16/2023	12:48	192.2	0.928	43,387.5	0.000	0.36	0.67	0.36	150.1	0.968	0.1	0.0001	0.38	0.69	0.38
2/16/2023	12:49	192.2	0.928	43,411.4	0.000	0.37	0.67	0.37	150.1	0.968	0.2	0.0002	0.38	0.69	0.38
2/16/2023	12:50				--				150.1	0.968	0.1	0.0001	0.37	0.68	0.37
2/16/2023	12:51	192.2	0.928	55,326.5	1.610	0.20	0.67	0.20	150.0	0.968	0.1	0.0001	0.37	0.69	0.37
2/16/2023	12:52	192.2	0.928	48,562.9	1.999	0.25	0.67	0.25				--			
2/16/2023	12:53	192.2	0.928	46,906.0	1.932	0.31	0.67	0.31	150.0	0.969	0.1	0.0001	0.37	0.68	0.37
2/16/2023	12:54	192.2	0.928	44,719.8	0.000	0.33	0.67	0.33	150.0	0.968	0.1	0.0001	0.37	0.69	0.37
2/16/2023	12:55	192.2	0.927	43,890.6	0.000	0.37	0.66	0.37	150.1	0.968	0.3	0.0005	0.38	0.69	0.38
2/16/2023	12:56	192.2	0.927	42,084.7	0.000	0.37	0.67	0.37	150.1	0.968	0.1	0.0001	0.38	0.69	0.38
2/16/2023	12:57	192.2	0.928	52,405.2	2.156	0.20	0.67	0.20	150.1	0.968	0.1	0.0001	0.38	0.69	0.38
2/16/2023	12:58	192.2	0.928	47,701.5	1.388	0.25	0.67	0.25	150.1	0.968	0.1	0.0001	0.38	0.69	0.38
2/16/2023	12:59	192.2	0.928	45,760.6	1.332	0.30	0.66	0.30	150.1	0.968	0.1	0.0001	0.38	0.69	0.38

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet $_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/16/2023	13:00	192.2	0.927	41,676.5	2.102	0.38	0.67	0.38	150.1	0.968	0.1	0.0001	0.38	0.69	0.38
2/16/2023	13:01	192.2	0.928	40,333.3	0.000	0.45	0.66	0.45	150.1	0.968	0.1	0.0001	0.38	0.69	0.38
2/16/2023	13:02	192.2	0.927	36,419.1	1.060	0.49	0.67	0.49	150.1	0.968	0.1	0.0001	0.37	0.69	0.37
2/16/2023	13:03	192.1	0.928	46,438.6	1.351	0.38	0.67	0.38	150.0	0.968	0.1	0.0001	0.37	0.69	0.37
2/16/2023	13:04	192.1	0.928	45,963.4	0.000	0.33	0.67	0.33	150.1	0.968	0.1	0.0001	0.37	0.69	0.37
2/16/2023	13:05	192.1	0.927	42,446.3	1.235	0.43	0.67	0.43	150.0	0.968	0.1	0.0001	0.37	0.69	0.37
2/16/2023	13:06	192.2	0.927	39,659.1	1.155	0.47	0.67	0.47	150.0	0.968	0.1	0.0001	0.37	0.69	0.37
2/16/2023	13:07	192.2	0.927	39,427.2	1.623	0.49	0.67	0.49	150.0	0.968	0.1	0.0001	0.37	0.69	0.37
2/16/2023	13:08	192.2	0.927	37,210.5	1.532	0.45	0.67	0.45	150.1	0.968	0.1	0.0001	0.37	0.69	0.37
2/16/2023	13:09	192.2	0.927	45,280.4	1.863	0.41	0.67	0.41	150.1	0.968	0.1	0.0001	0.37	0.68	0.37
2/16/2023	13:10	192.1	0.928	46,626.2	1.357	0.31	0.67	0.31	150.0	0.968	0.1	0.0001	0.37	0.69	0.37
2/16/2023	13:11	192.2	0.928	44,129.7	1.284	0.35	0.68	0.35	150.1	0.968	0.1	0.0002	0.37	0.68	0.37
2/16/2023	13:12				--				150.1	0.968	0.1	0.0001	0.37	0.69	0.37
2/16/2023	13:13	192.2	0.927	39,452.1	1.624	0.44	0.67	0.44	150.1	0.968	0.1	0.0001	0.36	0.68	0.36
2/16/2023	13:14	192.1	0.927	39,255.0	1.979	0.47	0.67	0.47	150.1	0.969	0.1	0.0001	0.36	0.68	0.36
2/16/2023	13:15	192.1	0.927	35,629.9	1.796	0.49	0.67	0.49				--			
2/16/2023	13:16	192.1	0.928	43,463.9	1.265	0.55	0.67	0.55	150.1	0.968	0.1	0.0002	0.36	0.68	0.36
2/16/2023	13:17	192.1	0.927	45,059.0	1.311	0.33	0.67	0.33	150.1	0.968	0.2	0.0003	0.35	0.69	0.35
2/16/2023	13:18	192.1	0.928	43,964.6	1.280	0.32	0.67	0.32	150.0	0.968	0.1	0.0002	0.36	0.68	0.36
2/16/2023	13:19	192.1	0.928	39,672.1	0.000	0.47	0.67	0.47	150.1	0.968	0.1	0.0001	0.35	0.68	0.35
2/16/2023	13:20	192.1	0.928	37,671.2	1.551	0.43	0.67	0.43	150.1	0.968	0.1	0.0001	0.36	0.68	0.36
2/16/2023	13:21	192.2	0.927	39,218.7	0.000	0.49	0.67	0.49	150.1	0.968	0.1	0.0002	0.35	0.68	0.35
2/16/2023	13:22	192.1	0.927	49,386.2	1.436	0.24	0.67	0.24	150.1	0.968	0.2	0.0003	0.36	0.68	0.36
2/16/2023	13:23	192.1	0.928	46,005.1	1.338	0.34	0.67	0.34	150.0	0.968	0.1	0.0001	0.36	0.68	0.36
2/16/2023	13:24	192.1	0.927	43,102.4	1.774	0.41	0.67	0.41	150.1	0.968	0.2	0.0002	0.35	0.69	0.35
2/16/2023	13:25	192.2	0.927	37,740.2	1.099	0.47	0.67	0.47	150.1	0.968	0.1	0.0002	0.35	0.68	0.35
2/16/2023	13:26	192.2	0.927	37,847.1	1.102	0.48	0.67	0.48	150.1	0.969	0.1	0.0001	0.35	0.68	0.35
2/16/2023	13:27	192.1	0.927	36,889.5	0.000	0.54	0.67	0.54	150.1	0.968	0.1	0.0002	0.35	0.68	0.35
2/16/2023	13:28	192.1	0.928	48,892.2	2.463	0.24	0.67	0.24	150.1	0.968	0.1	0.0001	0.35	0.68	0.35
2/16/2023	13:29	192.1	0.927	42,293.7	1.231	0.43	0.67	0.43	150.1	0.968	0.1	0.0001	0.35	0.68	0.35
2/16/2023	13:30	192.1	0.927	40,065.3	1.166	0.49	0.67	0.49	150.1	0.969	0.1	0.0001	0.35	0.67	0.35
2/16/2023	13:31	192.1	0.927	38,097.1	1.109	0.45	0.67	0.45	150.0	0.968	0.1	0.0001	0.35	0.67	0.35
2/16/2023	13:32	192.1	0.927	36,120.1	1.051	0.42	0.67	0.42	150.1	0.968	0.1	0.0001	0.34	0.67	0.34
2/16/2023	13:33	192.1	0.927	37,459.0	2.885	0.49	0.67	0.49	150.0	0.968	0.1	0.0001	0.34	0.68	0.34
2/16/2023	13:34				--				150.0	0.968	0.1	0.0002	0.34	0.67	0.34
2/16/2023	13:35	192.1	0.927	48,289.0	1.405	0.28	0.67	0.28	150.0	0.968	0.1	0.0001	0.34	0.67	0.34
2/16/2023	13:36	192.1	0.927	43,328.8	1.260	0.34	0.67	0.34	150.0	0.968	0.1	0.0001	0.34	0.68	0.34
2/16/2023	13:37	192.2	0.927	39,025.4	1.607	0.51	0.66	0.51	150.1	0.969	0.1	0.0001	0.34	0.68	0.34
2/16/2023	13:38	192.1	0.927	36,427.9	1.060	0.47	0.66	0.47	150.1	0.968	0.1	0.0001	0.34	0.67	0.34
2/16/2023	13:39	192.2	0.927	34,937.4	1.017	0.49	0.67	0.49				--			
2/16/2023	13:40	192.1	0.927	33,978.6	0.989	0.60	0.67	0.60	150.1	0.968	0.1	0.0001	0.34	0.67	0.34
2/16/2023	13:41	192.2	0.927	43,881.4	0.000	0.30	0.67	0.30	150.1	0.968	0.1	0.0001	0.33	0.68	0.33
2/16/2023	13:42	192.2	0.927	39,053.7	0.000	0.47	0.66	0.47	150.1	0.968	0.1	0.0001	0.32	0.68	0.32
2/16/2023	13:43	192.2	0.927	35,913.0	1.046	0.47	0.66	0.47	150.0	0.968	0.2	0.0003	0.33	0.67	0.33
2/16/2023	13:44	192.3	0.927	33,266.4	0.969	0.54	0.66	0.54	150.1	0.968	0.1	0.0001	0.33	0.67	0.33
2/16/2023	13:45	192.2	0.927	31,734.7	0.000	0.53	0.66	0.53	150.1	0.968	0.2	0.0003	0.33	0.67	0.33
2/16/2023	13:46	192.2	0.927	36,311.3	1.834	0.59	0.66	0.59	150.1	0.969	0.1	0.0001	0.32	0.67	0.32
2/16/2023	13:47	192.1	0.928	44,719.2	0.000	0.36	0.66	0.36	150.0	0.969	0.1	0.0002	0.32	0.67	0.32
2/16/2023	13:48	192.1	0.928	55,832.4	1.628	0.20	0.66	0.20	150.1	0.968	0.1	0.0001	0.32	0.67	0.32
2/16/2023	13:49	192.1	0.928	68,650.6	2.004	0.20	0.66	0.20	150.1	0.968	0.1	0.0001	0.33	0.67	0.33
2/16/2023	13:50	192.1	0.928	79,032.7	2.307	0.20	0.65	0.20	150.0	0.968	0.2	0.0002	0.32	0.66	0.32
2/16/2023	13:51	192.1	0.928	85,358.6	4.316	0.20	0.66	0.20	150.1	0.969	0.1	0.0001	0.32	0.66	0.32
2/16/2023	13:52	192.1	0.928	99,621.3	2.908	0.20	0.66	0.20	150.1	0.969	0.1	0.0001	0.32	0.66	0.32
2/16/2023	13:53	192.1	0.928	109,259.6	0.000	0.20	0.65	0.20	150.1	0.968	0.1	0.0001	0.32	0.65	0.32
2/16/2023	13:54	192.1	0.928	111,489.6	0.000	0.20	0.65	0.20	150.1	0.969	0.1	0.0001	0.31	0.65	0.31
2/16/2023	13:55	192.1	0.928	117,176.9	3.423	0.20	0.65	0.20	150.1	0.969	0.1	0.0001	0.32	0.65	0.32
2/16/2023	13:56				--				150.0	0.969	0.1	0.0002	0.31	0.65	0.31
2/16/2023	13:57	192.1	0.928	119,407.6	4.934	0.20	0.65	0.20	150.0	0.968	0.1	0.0001	0.32	0.65	0.32
2/16/2023	13:58	192.1	0.928	124,620.8	0.000	0.20	0.65	0.20	150.0	0.969	0.2	0.0002	0.32	0.65	0.32
2/16/2023	13:59	192.1	0.928	137,263.3	5.673	0.22	0.65	0.22	150.0	0.969	0.1	0.0001	0.32	0.65	0.32
2/16/2023	14:00	192.1	0.928	134,497.5	3.933	0.56	0.65	0.56	150.0	0.968	0.2	0.0002	0.31	0.65	0.31
2/16/2023	14:01	192.1	0.928	133,748.8	3.909	0.20	0.65	0.20	150.0	0.969	0.1	0.0001	0.32	0.65	0.32
2/16/2023	14:02	192.1	0.928	136,986.2	0.000	0.40	0.65	0.40				--			
2/16/2023	14:03	192.1	0.927	140,171.5	4.086	1.63	0.65	0.65	150.0	0.968	0.1	0.0001	0.31	0.65	0.31
2/16/2023	14:04	192.1	0.928	142,318.6	4.139	0.74	0.65	0.65	150.0	0.969	0.2	0.0003	0.31	0.65	0.31
2/16/2023	14:05	192.1	0.928	135,655.2	3.942	0.99	0.64	0.64	150.0	0.969	0.1	0.0001	0.31	0.65	0.31
2/16/2023	14:06	192.1	0.928	122,964.3	5.050	0.20	0.64	0.20	150.0	0.969	0.2	0.0003	0.31	0.65	0.31
2/16/2023	14:07	192.1	0.927	106,346.2	3.091	0.58	0.64	0.58	150.0	0.969	0.1	0.0002	0.31	0.65	0.31
2/16/2023	14:08	192.1	0.927	96,453.2	2.801	1.81	0.64	0.64	150.0	0.969	0.1	0.0001	0.31	0.65	0.31
2/16/2023	14:09	192.1	0.928	96,502.5	0.000	1.76	0.64	0.64	150.0	0.969	0.1	0.0001	0.31	0.65	0.31
2/16/2023	14:10	192.1	0.927	100,428.9	4.119	0.99	0.64	0.64	150.0	0.969	0.1	0.0001	0.31	0.65	0.31
2/16/2023	14:11	192.1	0.927	95,772.2	0.000	2.11	0.64	0.64	150.1	0.969	0.1	0.0001	0.31	0.65	0.31
2/16/2023	14:12	192.1	0.927	86,944.3	0.000	0.89	0.64	0.64	150.0	0.969	0.1	0.0001	0.31	0.65	0.31
2/16/2023	14:13	192.1	0.927	81,252.3	0.000	0.55	0.64	0.55	150.0	0.969	0.2	0.0003	0.31	0.65	0.31
2/16/2023	14:14	192.1	0.927	78,690.5	2.285	0.84	0.63	0.63	150.1	0.969	0.1	0.0001	0.31	0.65	0.31
2/16/2023	14:15	192.1	0.927	80,179.3	3.289	0.53	0.63	0.53	150.0	0.969	0.1	0.0001	0.31	0.65	0.31
2/16/2023	14:16	192.1	0.927	80,952.7	4.066	0.49	0.63	0.49	150.0	0.969	0.2	0.0002	0.32	0.65	0.32
2/16/2023	14:17	192.1	0.927	76,195.5	2.210	0.95	0.63	0.63	150.0	0.969	0.1	0.0001	0.31	0.65	0.31
2/16/2023	14:18				--				150.0	0.969	0.1	0.0001	0.31	0.65	0.31
2/16/2023	14:19	192.1	0.927	71,562.6	3.600	0.54	0.63	0.54	150.1	0.969	0.1	0.0001	0.30	0.65	0.30
2/16/2023	14:20	192.1	0.927	69,184.1	2.840	0.41	0.63	0.41	150.1	0.969	0.1	0.0001	0.31	0.65	0.31
2/16/2023	14:21	192.1	0.927	67,668.3	2.775	0.22	0.63	0.22	150.1	0.969	0.1	0.0001	0.31	0.65	0.31
2/16/2023	14:22	192.1	0.927	67,709.4	1.963	0.37	0.63	0.37	150.0	0.969	0.1	0.0001	0.31	0.65	0.31
2/16/2023	14:23	192.1	0.927	66,733.4	3.351	0.20	0.63	0.20	150.1	0.969	0.2	0.0002	0.31	0.65	0.31
2/16/2023	14:24	192.2	0.927	62,576.8	2.569	0.42	0.62	0.42	150.0	0.969	0.1	0.0001	0.31	0.65	0.31
2/16/2023	14:25	192.1	0.927	57,725.2	1.676	0.51	0.63	0.51	150.1	0.969	0.2	0.0003	0.31	0.64	0.31
2/16/2023	14:26	192.2	0.927	54,763.4	2.250	0.64	0.62	0.62				--			
2/16/2023	14:27	192.2	0.927	54,880.6	2.253	0.59	0.63	0.59	150.0	0.969	0.3	0.0004	0.31	0.64	0.31
2/16/2023	14:28	192.1	0.927	57,185.2	1.659	0.46	0.62	0.46	150.0	0.969	0.1	0.0001	0.31	0.64	0.31
2/16/2023	14:29	192.1	0.927	59,921.4	2.457	0.38	0.62	0.38	150.0	0.969	0.1	0.0001	0.31	0.64	0.31
2/16/2023	14:30	192.1	0.927	54,846.5	0.000	0.53	0.62	0.53	150.1	0.969	0.1	0.0001	0.32	0.65	0.32
2/16/2023	14:31	192.1	0.927	49,702.1	1.444	0.70	0.62	0.62	150.1	0.969	0.1	0.0001	0.31	0.64	0.31
2/16/2023	14:32	192.1	0.927	45,297.4	0.000	0.72	0.62	0.62	150.0	0.969	0.1	0.0001	0.30	0.64	0.30
2/16/2023	14:33	192.1	0.927	47,083.4	2.370	0.71	0.61	0.61	150.1	0.969	0.1	0.0002	0.30	0.64	0.30
2/16/2023	14:34	192.1	0.928	50,506.1	2.074	0.59	0.61	0.59	150.0	0.969	0.1	0.0001	0.31	0.65	0.31

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet$_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet$_{used}$**
	Unit	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/16/2023	14:35	192.1	0.928	53,960.5	2.214	0.45	0.61	0.45	150.0	0.969	0.2	0.0002	0.31	0.65	0.31
2/16/2023	14:36	192.1	0.927	52,274.1	1.517	0.58	0.61	0.58	150.1	0.969	0.1	0.0001	0.30	0.64	0.30
2/16/2023	14:37	192.1	0.927	46,160.8	1.341	0.71	0.61	0.61	150.1	0.969	0.2	0.0003	0.30	0.69	0.30
2/16/2023	14:38	192.1	0.928	42,383.8	2.133	0.89	0.62	0.62	150.0	0.969	0.1	0.0001	0.30	0.69	0.30
2/16/2023	14:39	192.1	0.927	43,659.7	2.198	0.70	0.62	0.62	150.0	0.969	0.1	0.0001	0.30	0.64	0.30
2/16/2023	14:40				--				150.0	0.969	0.2	0.0003	0.30	0.64	0.30
2/16/2023	14:41	192.1	0.927	47,766.4	1.388	0.60	0.62	0.60	150.0	0.969	0.1	0.0001	0.30	0.64	0.30
2/16/2023	14:42	192.1	0.927	51,122.0	1.485	1.18	0.62	0.62	150.0	0.969	0.1	0.0001	0.29	0.64	0.29
2/16/2023	14:43	192.1	0.927	48,658.6	1.413	5.44	0.62	0.62	150.0	0.969	0.1	0.0001	0.30	0.65	0.30
2/16/2023	14:44	192.1	0.927	42,878.6	2.163	2.76	0.62	0.62	150.0	0.969	0.1	0.0001	0.30	0.65	0.30
2/16/2023	14:45	192.1	0.927	44,970.3	1.311	2.17	0.62	0.62	150.0	0.969	0.1	0.0002	0.30	0.65	0.30
2/16/2023	14:46	192.1	0.928	21,050.8	0.614	2.30	0.62	0.62	150.0	0.969	0.1	0.0001	0.29	0.65	0.29
2/16/2023	14:47	192.1	0.928	33,402.8	1.379	2.13	0.62	0.62	150.1	0.969	0.3	0.0005	0.29	0.65	0.29
2/16/2023	14:48	192.1	0.928	46,458.9	1.919	1.08	0.63	0.63	150.0	0.969	0.1	0.0001	0.29	0.65	0.29
2/16/2023	14:49	192.1	0.928	61,277.5	0.000	0.20	0.62	0.20				--			
2/16/2023	14:50	192.1	0.928	69,991.4	2.044	0.20	0.63	0.20	150.0	0.969	0.2	0.0003	0.29	0.65	0.29
2/16/2023	14:51	192.1	0.928	75,025.5	3.800	0.20	0.62	0.20	150.0	0.969	0.1	0.0001	0.30	0.65	0.30
2/16/2023	14:52	192.1	0.928	81,933.3	2.396	0.20	0.62	0.20	150.1	0.969	0.2	0.0003	0.30	0.66	0.30
2/16/2023	14:53	192.1	0.929	92,637.1	2.710	0.20	0.62	0.20	150.1	0.969	0.1	0.0001	0.30	0.65	0.30
2/16/2023	14:54	192.2	0.929	110,045.1	5.578	0.34	0.62	0.34	150.0	0.969	0.4	0.0005	0.29	0.65	0.29
2/16/2023	14:55	192.2	0.928	116,263.1	0.000	0.20	0.62	0.20	150.0	0.969	0.1	0.0002	0.30	0.65	0.30
2/16/2023	14:56	192.2	0.928	117,287.6	5.944	0.20	0.63	0.20	150.0	0.969	0.2	0.0003	0.30	0.65	0.30
2/16/2023	14:57	192.1	0.929	115,726.5	0.000	0.20	0.63	0.20	150.1	0.969	0.1	0.0001	0.30	0.65	0.30
2/16/2023	14:58	192.1	0.929	114,604.8	3.352	0.20	0.63	0.20	150.1	0.969	0.1	0.0001	0.30	0.65	0.30
2/16/2023	14:59	192.1	0.929	113,639.6	3.324	0.20	0.63	0.20	150.1	0.969	0.1	0.0001	0.31	0.65	0.31
2/16/2023	15:00	192.1	0.929	104,243.8	5.278	0.27	0.63	0.27	150.1	0.969	0.1	0.0001	0.30	0.65	0.30
2/16/2023	15:01				--				150.1	0.969	0.1	0.0001	0.30	0.65	0.30
2/16/2023	15:02	192.1	0.929	95,268.8	2.778	0.20	0.63	0.20	150.1	0.969	0.1	0.0001	0.30	0.65	0.30
2/16/2023	15:03	192.1	0.929	90,379.6	5.883	0.20	0.63	0.20	150.1	0.969	0.1	0.0001	0.30	0.65	0.30
2/16/2023	15:04	192.1	0.929	88,494.0	0.000	0.20	0.62	0.20	150.1	0.969	0.1	0.0001	0.30	0.65	0.30
2/16/2023	15:05	192.1	0.928	88,564.5	2.573	0.20	0.62	0.20	150.1	0.969	0.1	0.0001	0.30	0.66	0.30
2/16/2023	15:06	192.1	0.929	81,679.6	2.372	0.20	0.63	0.20	150.1	0.969	0.1	0.0001	0.29	0.66	0.29
2/16/2023	15:07	192.1	0.929	73,612.1	3.025	0.46	0.63	0.46	150.1	0.969	0.1	0.0001	0.29	0.65	0.29
2/16/2023	15:08	192.1	0.929	68,289.9	3.433	0.20	0.63	0.20	150.1	0.969	0.1	0.0001	0.30	0.65	0.30
2/16/2023	15:09	192.1	0.929	66,421.8	3.853	0.20	0.63	0.20	150.1	0.969	0.1	0.0002	0.29	0.66	0.29
2/16/2023	15:10	192.1	0.929	66,607.8	3.345	0.20	0.63	0.20	150.1	0.969	0.2	0.0003	0.29	0.67	0.29
2/16/2023	15:11	192.1	0.928	61,996.7	2.544	0.30	0.63	0.30	150.1	0.969	0.1	0.0001	0.29	0.66	0.29
2/16/2023	15:12	192.1	0.928	56,799.7	3.688	0.48	0.63	0.48				--			
2/16/2023	15:13	192.1	0.928	50,454.3	2.073	0.67	0.63	0.63	150.1	0.969	0.1	0.0002	0.29	0.66	0.29
2/16/2023	15:14	192.1	0.928	51,633.8	3.352	0.62	0.63	0.62	150.1	0.969	0.1	0.0001	0.29	0.66	0.29
2/16/2023	15:15	192.1	0.929	54,930.7	3.188	0.50	0.63	0.50	150.1	0.969	0.1	0.0001	0.29	0.67	0.29
2/16/2023	15:16	192.1	0.928	55,415.8	3.218	0.46	0.62	0.46	150.1	0.969	0.1	0.0001	0.30	0.66	0.30
2/16/2023	15:17	192.1	0.928	49,597.9	2.037	1.11	0.63	0.63	150.0	0.969	0.2	0.0003	0.30	0.66	0.30
2/16/2023	15:18	192.1	0.928	44,834.1	2.604	0.88	0.63	0.63	150.0	0.969	0.1	0.0001	0.29	0.66	0.29
2/16/2023	15:19	192.1	0.928	47,967.1	13.580	1.25	0.62	0.62	150.1	0.970	0.4	0.0005	0.29	0.66	0.29
2/16/2023	15:20	192.1	0.928	37,469.4	8.501	1.37	0.62	0.62	150.0	0.969	0.1	0.0002	0.29	0.66	0.29
2/16/2023	15:21	192.1	0.928	32,331.0	6.707	1.16	0.63	0.63	150.0	0.969	0.2	0.0002	0.30	0.66	0.30
2/16/2023	15:22	192.1	0.928	21,394.1	3.882	1.09	0.62	0.62	150.1	0.969	0.2	0.0002	0.30	0.66	0.30
2/16/2023	15:23				--				150.0	0.970	0.1	0.0001	0.30	0.66	0.30
2/16/2023	15:24	192.1	0.928	15,713.9	0.651	1.06	0.63	0.63	150.0	0.970	0.1	0.0001	0.32	0.65	0.32
2/16/2023	15:25	192.1	0.928	13,272.9	0.777	1.01	0.64	0.64	150.1	0.970	0.8	0.0012	0.31	0.66	0.31
2/16/2023	15:26	192.1	0.929	12,882.1	0.653	1.24	0.64	0.64	150.0	0.969	1.8	0.0026	0.31	0.66	0.31
2/16/2023	15:27	192.1	0.930	40,062.4	1.172	1.43	0.64	0.64	150.0	0.970	0.6	0.0008	0.30	0.66	0.30
2/16/2023	15:28	192.1	0.931	162,126.8	9.477	0.20	0.64	0.20	150.0	0.969	0.2	0.0002	0.30	0.66	0.30
2/16/2023	15:29	192.1	0.931	248,230.2	14.507	0.20	0.63	0.20	150.0	0.970	0.1	0.0001	0.30	0.66	0.30
2/16/2023	15:30	192.0	0.931	256,599.3	12.984	0.20	0.64	0.20	150.0	0.970	0.1	0.0001	0.31	0.66	0.31
2/16/2023	15:31	192.0	0.930	190,325.1	13.621	0.20	0.63	0.20	150.1	0.970	0.1	0.0001	0.30	0.66	0.30
2/16/2023	15:32	192.0	0.929	123,362.5	7.210	0.30	0.62	0.30	150.1	0.970	0.1	0.0001	0.30	0.66	0.30
2/16/2023	15:33	192.1	0.929	73,147.4	3.024	0.20	0.62	0.20	150.1	0.969	0.1	0.0001	0.30	0.69	0.30
2/16/2023	15:34	192.1	0.929	62,333.6	3.156	0.20	0.63	0.20	150.1	0.970	0.1	0.0001	0.30	0.67	0.30
2/16/2023	15:35	192.2	0.928	45,303.2	2.649	0.35	0.63	0.35	150.1	0.970	0.1	0.0001	0.30	0.67	0.30
2/16/2023	15:36	192.2	0.928	27,426.9	1.390	0.63	0.63	0.63				--			
2/16/2023	15:37	192.2	0.928	19,776.8	1.002	0.60	0.63	0.60	150.1	0.970	0.1	0.0001	0.30	0.67	0.30
2/16/2023	15:38	192.1	0.928	16,418.1	0.832	0.61	0.62	0.61	150.0	0.970	0.1	0.0001	0.30	0.68	0.30
2/16/2023	15:39	192.1	0.928	19,587.9	0.992	0.62	0.63	0.62	150.1	0.969	0.1	0.0001	0.30	0.67	0.30
2/16/2023	15:40	192.1	0.928	16,297.9	0.826	0.63	0.62	0.62	150.0	0.970	0.2	0.0004	0.29	0.68	0.29
2/16/2023	15:41	192.1	0.928	13,191.1	0.546	0.63	0.62	0.62	150.0	0.970	0.3	0.0004	0.29	0.67	0.29
2/16/2023	15:42	192.1	0.928	12,215.7	0.619	0.64	0.62	0.62	150.0	0.970	0.2	0.0003	0.28	0.67	0.28
2/16/2023	15:43	192.1	0.928	12,223.7	0.505	0.64	0.63	0.63	150.0	0.970	0.1	0.0001	0.29	0.68	0.29
2/16/2023	15:44	192.1	0.928	12,065.4	0.353	0.64	0.62	0.62	150.0	0.970	0.1	0.0001	0.28	0.68	0.28
2/16/2023	15:45				--				150.1	0.970	0.1	0.0001	0.29	0.67	0.29
2/16/2023	15:46	192.1	0.928	13,134.7	0.767	0.63	0.63	0.63	150.0	0.970	0.1	0.0001	0.29	0.66	0.29
2/16/2023	15:47	192.1	0.928	11,149.9	0.564	0.63	0.62	0.62	150.0	0.970	0.1	0.0001	0.29	0.67	0.29
2/16/2023	15:48	192.1	0.928	9,884.1	0.288	0.56	0.62	0.56	150.0	0.970	0.1	0.0001	0.28	0.66	0.28
2/16/2023	15:49	192.1	0.928	10,913.6	0.552	0.64	0.62	0.62	150.0	0.970	0.3	0.0004	0.29	0.66	0.29
2/16/2023	15:50	192.1	0.928	12,155.0	0.614	0.63	0.63	0.63	150.0	0.970	0.1	0.0001	0.29	0.66	0.29
2/16/2023	15:51	192.1	0.928	10,031.2	0.293	0.56	0.62	0.56	150.0	0.970	0.2	0.0003	0.28	0.66	0.28
2/16/2023	15:52	192.1	0.928	9,127.0	0.532	0.56	0.62	0.56	150.0	0.970	0.2	0.0003	0.29	0.67	0.29
2/16/2023	15:53	192.1	0.928	9,512.5	0.480	0.56	0.62	0.56	150.0	0.970	0.1	0.0001	0.28	0.66	0.28
2/16/2023	15:54	192.1	0.928	11,557.1	6.630	0.62	0.62	0.62	150.0	0.970	0.1	0.0002	0.29	0.66	0.29
2/16/2023	15:55	192.1	0.928	9,410.7	4.861	0.55	0.62	0.55	150.0	0.970	0.2	0.0004	0.29	0.65	0.29
2/16/2023	15:56	192.1	0.928	8,031.4	3.709	0.56	0.61	0.56	150.0	0.970	0.1	0.0002	0.29	0.66	0.29
2/16/2023	15:57	192.1	0.928	7,930.5	3.244	0.57	0.61	0.57	150.0	0.970	0.2	0.0004	0.28	0.65	0.28
2/16/2023	15:58	192.1	0.928	6,711.1	2.503	0.58	0.61	0.58	150.0	0.970	0.1	0.0001	0.29	0.65	0.29
2/16/2023	15:59	192.1	0.929	8,843.9	2.910	0.58	0.62	0.58				--			
2/16/2023	16:00	192.1	0.928	9,295.7	2.729	0.55	0.63	0.55	150.0	0.970	44.1	0.0771	0.30	0.66	0.30
2/16/2023	16:01	192.0	0.932	8,220.9	2.042	0.67	0.64	0.64	150.0	0.970	65.1	0.1108	0.30	0.65	0.30
2/16/2023	16:02	192.1	0.932	2,394.4	0.511	0.57	0.64	0.57	150.0	0.970	46.1	0.0766	0.30	0.65	0.30
2/16/2023	16:03	192.1	0.932	1,137.9	0.057	0.57	0.64	0.57	150.0	0.970	33.0	0.0545	0.30	0.64	0.30
2/16/2023	16:04	192.1	0.931	1,696.8	0.085	0.57	0.65	0.57	150.0	0.970	19.3	0.0281	0.31	0.65	0.31
2/16/2023	16:05	192.1	0.931	971.6	0.056	0.56	0.65	0.56	150.0	0.970	12.2	0.0178	0.30	0.65	0.30
2/16/2023	16:06	192.1	0.931	889.1	0.037	0.55	0.65	0.55	150.0	0.970	7.1	0.0104	0.30	0.64	0.30
2/16/2023	16:07				--				150.0	0.970	4.3	0.0064	0.30	0.65	0.30
2/16/2023	16:08	192.1	0.930	1,548.4	0.090	0.58	0.64	0.58	150.0	0.970	1.1	0.0016	0.30	0.65	0.30
2/16/2023	16:09	192.1	0.930	961.8	0.028	0.55	0.63	0.55	150.0	0.970	0.1	0.0002	0.29	0.65	0.29

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet$_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet$_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/16/2023	16:10	192.1	0.930	768.1	0.045	0.55	0.63	0.55	150.0	0.970	0.3	0.0004	0.29	0.64	0.29
2/16/2023	16:11	192.1	0.929	1,367.6	0.089	0.53	0.62	0.53	150.0	0.970	0.3	0.0005	0.28	0.64	0.28
2/16/2023	16:12	192.1	0.929	3,915.1	0.161	0.53	0.62	0.53	150.0	0.970	0.2	0.0003	0.29	0.65	0.29
2/16/2023	16:13	192.1	0.928	6,105.1	0.177	1.21	0.61	0.61	150.0	0.970	0.2	0.0003	0.29	0.65	0.29
2/16/2023	16:14	192.1	0.928	6,396.9	0.263	0.59	0.61	0.59	150.0	0.970	0.2	0.0003	0.28	0.65	0.28
2/16/2023	16:15	192.1	0.929	5,497.9	0.226	0.55	0.61	0.55	150.0	0.970	0.2	0.0003	0.28	0.64	0.28
2/16/2023	16:16	192.1	0.929	5,202.5	0.262	0.56	0.61	0.56	150.0	0.970	0.1	0.0002	0.28	0.65	0.28
2/16/2023	16:17	192.1	0.929	6,311.3	0.260	0.54	0.61	0.54	150.0	0.970	0.1	0.0001	0.28	0.65	0.28
2/16/2023	16:18	192.1	0.929	6,500.9	0.267	0.54	0.61	0.54	150.0	0.970	0.1	0.0001	0.28	0.64	0.28
2/16/2023	16:19	192.1	0.929	5,740.2	0.236	0.55	0.60	0.55	150.0	0.970	0.1	0.0002	0.28	0.65	0.28
2/16/2023	16:20	192.1	0.929	5,472.5	0.225	0.55	0.60	0.55	150.0	0.970	0.3	0.0005	0.28	0.67	0.28
2/16/2023	16:21	192.1	0.929	6,302.6	0.259	0.82	0.60	0.60	150.0	0.970	0.3	0.0004	0.28	0.66	0.28
2/16/2023	16:22	192.1	0.929	6,173.3	0.180	0.72	0.60	0.60				--			
2/16/2023	16:23	192.1	0.929	6,147.3	0.310	0.58	0.60	0.58	150.0	0.971	0.3	0.0005	0.28	0.64	0.28
2/16/2023	16:24	192.1	0.929	6,455.5	0.188	0.55	0.60	0.55	150.0	0.970	0.1	0.0001	0.28	0.64	0.28
2/16/2023	16:25	192.1	0.929	8,090.5	0.333	0.53	0.60	0.53	150.0	0.970	0.1	0.0001	0.28	0.64	0.28
2/16/2023	16:26	192.1	0.929	9,314.8	0.271	0.51	0.60	0.51	150.0	0.970	0.1	0.0001	0.28	0.64	0.28
2/16/2023	16:27	192.1	0.929	9,661.0	0.281	0.50	0.59	0.50	150.0	0.970	0.1	0.0001	0.28	0.64	0.28
2/16/2023	16:28	192.1	0.929	10,191.1	0.419	0.57	0.60	0.57	150.0	0.970	0.1	0.0001	0.28	0.64	0.28
2/16/2023	16:29				--				150.0	0.971	0.1	0.0001	0.28	0.65	0.28
2/16/2023	16:30	192.1	0.929	11,082.7	0.558	0.59	0.59	0.59	150.0	0.970	0.2	0.0002	0.28	0.65	0.28
2/16/2023	16:31	192.1	0.929	15,269.8	0.770	0.57	0.59	0.57	150.0	0.970	0.1	0.0001	0.28	0.65	0.28
2/16/2023	16:32	192.1	0.929	14,043.2	0.708	0.68	0.60	0.60	150.0	0.971	0.1	0.0001	0.28	0.64	0.28
2/16/2023	16:33	192.1	0.929	13,447.1	0.553	0.83	0.60	0.60	150.0	0.970	0.4	0.0005	0.27	0.64	0.27
2/16/2023	16:34	192.1	0.929	13,250.3	0.546	0.64	0.59	0.59	150.0	0.970	0.3	0.0005	0.28	0.64	0.28
2/16/2023	16:35	192.1	0.929	16,489.7	0.679	0.76	0.59	0.59	150.0	0.970	0.1	0.0001	0.27	0.64	0.27
2/16/2023	16:36	192.1	0.929	22,905.7	0.943	0.53	0.59	0.53	150.0	0.971	0.1	0.0001	0.28	0.64	0.28
2/16/2023	16:37	192.1	0.929	20,255.5	1.022	0.54	0.59	0.54	150.0	0.970	0.1	0.0002	0.28	0.64	0.28
2/16/2023	16:38	192.1	0.929	18,941.6	0.780	0.55	0.59	0.55	150.0	0.971	0.1	0.0001	0.27	0.64	0.27
2/16/2023	16:39	192.1	0.929	18,448.5	0.537	0.54	0.59	0.54	150.0	0.970	0.1	0.0001	0.28	0.64	0.28
2/16/2023	16:40	192.1	0.929	34,192.2	10.395	0.55	0.59	0.55	150.0	0.970	0.1	0.0001	0.28	0.64	0.28
2/16/2023	16:41	192.0	0.929	30,160.2	6.216	0.56	0.59	0.56	150.0	0.970	0.1	0.0001	0.28	0.64	0.28
2/16/2023	16:42	192.0	0.929	26,933.5	1.360	0.81	0.59	0.59	150.0	0.970	0.1	0.0001	0.28	0.64	0.28
2/16/2023	16:43	192.1	0.929	25,174.7	1.038	0.63	0.59	0.59	150.0	0.970	0.1	0.0001	0.28	0.64	0.28
2/16/2023	16:44	192.1	0.929	25,743.0	0.000	0.65	0.59	0.59	150.0	0.970	0.1	0.0001	0.28	0.64	0.28
2/16/2023	16:45	192.1	0.929	40,225.8	1.659	0.42	0.59	0.42	150.0	0.971	0.3	0.0005	0.28	0.64	0.28
2/16/2023	16:46	192.0	0.930	35,067.6	1.771	0.44	0.59	0.44				--			
2/16/2023	16:47	192.1	0.930	31,994.4	0.933	0.51	0.59	0.51	150.0	0.971	0.1	0.0002	0.28	0.64	0.28
2/16/2023	16:48	192.1	0.930	52,584.9	1.532	0.20	0.59	0.20	150.0	0.971	0.1	0.0001	0.27	0.63	0.27
2/16/2023	16:49	192.1	0.930	36,908.8	1.863	0.42	0.59	0.42	150.0	0.970	0.1	0.0001	0.27	0.64	0.27
2/16/2023	16:50	192.0	0.929	36,403.5	1.061	0.43	0.58	0.43	150.0	0.970	0.1	0.0001	0.27	0.64	0.27
2/16/2023	16:51				--				150.0	0.970	0.1	0.0001	0.28	0.64	0.28
2/16/2023	16:52	192.0	0.929	35,410.0	0.000	0.58	0.58	0.58	150.0	0.970	0.1	0.0001	0.28	0.64	0.28
2/16/2023	16:53	192.1	0.929	34,359.4	1.003	0.59	0.59	0.59	150.0	0.970	0.1	0.0001	0.28	0.63	0.28
2/16/2023	16:54	192.1	0.929	33,598.3	1.386	0.51	0.58	0.51	150.0	0.970	0.1	0.0001	0.27	0.64	0.27
2/16/2023	16:55	192.0	0.929	44,354.6	2.239	0.31	0.58	0.31	150.0	0.970	0.1	0.0001	0.28	0.64	0.28
2/16/2023	16:56	192.0	0.929	41,620.2	1.716	0.39	0.58	0.39	150.0	0.971	0.1	0.0001	0.28	0.64	0.28
2/16/2023	16:57	192.0	0.930	37,421.3	1.092	0.39	0.58	0.39	150.0	0.970	0.1	0.0001	0.28	0.63	0.28
2/16/2023	16:58	192.0	0.929	34,351.2	1.737	0.47	0.58	0.47	150.0	0.971	0.1	0.0001	0.28	0.63	0.28
2/16/2023	16:59	192.1	0.929	32,958.7	0.000	0.50	0.58	0.50	150.0	0.970	0.2	0.0002	0.28	0.63	0.28
2/16/2023	17:00	192.1	0.930	35,001.3	1.769	0.61	0.58	0.58	150.0	0.971	0.1	0.0001	0.27	0.63	0.27
2/16/2023	17:01	192.1	0.929	43,872.8	1.812	0.53	0.58	0.53	150.0	0.971	0.1	0.0001	0.28	0.63	0.28
2/16/2023	17:02	192.1	0.929	39,444.1	1.629	0.51	0.58	0.51	150.0	0.971	0.1	0.0001	0.27	0.63	0.27
2/16/2023	17:03	192.1	0.929	36,528.5	1.508	0.44	0.58	0.44	150.0	0.971	0.2	0.0003	0.28	0.63	0.28
2/16/2023	17:04	192.0	0.930	36,330.5	1.501	0.52	0.58	0.52	150.0	0.971	0.1	0.0001	0.28	0.62	0.28
2/16/2023	17:05	192.0	0.930	48,216.0	1.409	0.20	0.57	0.20	150.0	0.971	0.1	0.0001	0.27	0.62	0.27
2/16/2023	17:06	192.0	0.930	43,587.4	1.801	0.26	0.57	0.26	150.0	0.970	0.1	0.0001	0.27	0.62	0.27
2/16/2023	17:07	192.0	0.930	41,254.7	2.087	0.41	0.57	0.41	150.1	0.971	0.1	0.0001	0.28	0.62	0.28
2/16/2023	17:08	192.0	0.930	55,429.8	2.802	0.20	0.57	0.20	150.0	0.971	0.1	0.0001	0.27	0.62	0.27
2/16/2023	17:09	192.1	0.930	50,284.7	2.077	0.20	0.57	0.20				--			
2/16/2023	17:10	192.1	0.930	47,260.0	1.953	0.20	0.57	0.20	150.0	0.971	0.1	0.0001	0.27	0.62	0.27
2/16/2023	17:11	192.1	0.930	44,704.9	1.306	0.31	0.57	0.31	150.0	0.971	0.1	0.0001	0.27	0.62	0.27
2/16/2023	17:12	192.1	0.930	49,666.3	2.051	0.21	0.57	0.21	150.0	0.971	0.1	0.0001	0.27	0.61	0.27
2/16/2023	17:13				--				150.0	0.971	0.1	0.0001	0.27	0.61	0.27
2/16/2023	17:14	192.0	0.930	56,729.4	0.000	0.20	0.57	0.20	150.0	0.971	0.1	0.0001	0.28	0.61	0.28
2/16/2023	17:15	192.0	0.930	52,166.4	2.155	0.20	0.57	0.20	150.0	0.971	0.2	0.0002	0.28	0.61	0.28
2/16/2023	17:16	192.0	0.930	48,970.8	1.431	0.20	0.56	0.20	150.0	0.971	0.1	0.0001	0.27	0.61	0.27
2/16/2023	17:17	192.0	0.930	46,702.4	1.364	0.25	0.56	0.25	150.0	0.971	0.1	0.0001	0.27	0.61	0.27
2/16/2023	17:18	192.0	0.930	45,093.9	1.862	0.27	0.56	0.27	150.0	0.971	0.1	0.0001	0.27	0.61	0.27
2/16/2023	17:19	192.0	0.930	59,348.3	2.451	0.20	0.57	0.20	150.0	0.971	0.1	0.0001	0.27	0.61	0.27
2/16/2023	17:20	192.0	0.930	53,813.5	1.573	0.20	0.56	0.20	150.0	0.971	0.1	0.0001	0.27	0.61	0.27
2/16/2023	17:21	192.0	0.930	50,245.1	2.077	0.34	0.56	0.34	150.0	0.971	0.2	0.0003	0.27	0.62	0.27
2/16/2023	17:22	192.0	0.930	48,085.9	1.987	0.37	0.56	0.37	150.0	0.971	0.1	0.0001	0.27	0.62	0.27
2/16/2023	17:23	192.0	0.930	58,895.6	2.979	0.20	0.56	0.20	150.0	0.971	0.1	0.0001	0.28	0.62	0.28
2/16/2023	17:24	192.0	0.930	58,357.2	2.412	0.20	0.56	0.20	150.0	0.971	0.1	0.0001	0.27	0.61	0.27
2/16/2023	17:25	192.1	0.930	54,258.7	2.243	0.20	0.56	0.20	150.0	0.971	0.1	0.0001	0.27	0.62	0.27
2/16/2023	17:26	192.1	0.930	50,774.7	1.484	0.20	0.56	0.20	150.0	0.971	0.1	0.0001	0.28	0.62	0.28
2/16/2023	17:27	192.1	0.930	51,109.7	1.497	0.20	0.56	0.20	150.0	0.971	0.1	0.0001	0.27	0.62	0.27
2/16/2023	17:28	192.0	0.930	66,345.2	2.752	0.20	0.56	0.20	150.1	0.971	0.1	0.0001	0.27	0.62	0.27
2/16/2023	17:29	192.0	0.930	60,448.4	2.507	0.20	0.56	0.20	150.0	0.971	0.1	0.0001	0.27	0.62	0.27
2/16/2023	17:30	192.0	0.931	61,907.5	2.570	0.20	0.56	0.20	150.0	0.971	0.1	0.0001	0.27	0.62	0.27
2/16/2023	17:31	192.0	0.931	144,638.8	6.004	1.77	0.56	0.56	150.0	0.971	0.1	0.0001	0.27	0.61	0.27
2/16/2023	17:32	192.0	0.931	130,379.5	0.000	0.20	0.56	0.20	150.0	0.971	0.1	0.0001	0.27	0.62	0.27
2/16/2023	17:33	192.0	0.930	107,626.0	4.463	0.20	0.55	0.20				--			
2/16/2023	17:34				--				150.0	0.971	0.1	0.0001	0.27	0.61	0.27
2/16/2023	17:35	192.0	0.930	102,591.4	4.256	0.20	0.55	0.20	150.0	0.971	0.1	0.0001	0.26	0.61	0.26
2/16/2023	17:36	192.0	0.930	92,920.9	3.852	0.20	0.56	0.20	150.0	0.971	0.1	0.0001	0.27	0.61	0.27
2/16/2023	17:37	192.0	0.930	86,552.1	0.000	0.20	0.55	0.20	150.0	0.971	0.1	0.0001	0.27	0.62	0.27
2/16/2023	17:38	192.0	0.931	105,146.2	3.079	0.20	0.55	0.20	150.0	0.971	0.1	0.0001	0.27	0.62	0.27
2/16/2023	17:39	192.0	0.930	96,482.1	3.999	0.20	0.55	0.20	150.0	0.971	0.1	0.0001	0.27	0.62	0.27
2/16/2023	17:40	192.0	0.930	87,235.8	3.615	0.20	0.55	0.20	150.0	0.971	0.1	0.0001	0.27	0.62	0.27
2/16/2023	17:41	192.0	0.930	79,422.4	4.029	0.20	0.55	0.20	150.0	0.971	0.1	0.0001	0.27	0.62	0.27
2/16/2023	17:42	192.0	0.931	78,626.1	3.255	0.20	0.55	0.20	150.0	0.971	0.1	0.0001	0.27	0.62	0.27
2/16/2023	17:43	192.0	0.931	89,999.4	4.563	0.20	0.55	0.20	150.0	0.971	0.1	0.0001	0.27	0.61	0.27
2/16/2023	17:44	192.0	0.930	82,248.7	0.000	0.20	0.55	0.20	150.0	0.971	0.1	0.0001	0.27	0.61	0.27

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet $_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/16/2023	17:45	192.0	0.931	76,798.0	3.181	0.20	0.54	0.20	150.0	0.971	0.1	0.0001	0.27	0.61	0.27
2/16/2023	17:46	192.0	0.930	72,747.5	3.012	0.20	0.55	0.20	150.0	0.971	0.1	0.0001	0.27	0.61	0.27
2/16/2023	17:47	192.0	0.930	81,779.1	2.393	0.20	0.55	0.20	150.0	0.971	0.1	0.0001	0.27	0.62	0.27
2/16/2023	17:48	192.0	0.931	84,183.4	2.463	0.20	0.54	0.20	150.0	0.971	0.1	0.0001	0.27	0.61	0.27
2/16/2023	17:49	192.0	0.931	77,960.8	3.229	0.20	0.54	0.20	150.0	0.971	0.1	0.0001	0.27	0.61	0.27
2/16/2023	17:50	192.0	0.931	73,030.1	3.024	0.20	0.54	0.20	150.0	0.971	0.1	0.0001	0.26	0.61	0.26
2/16/2023	17:51	192.0	0.930	68,761.6	2.013	0.20	0.54	0.20	150.0	0.971	0.1	0.0001	0.26	0.61	0.26
2/16/2023	17:52	192.0	0.931	80,282.1	2.349	0.20	0.54	0.20	150.0	0.971	0.1	0.0001	0.26	0.61	0.26
2/16/2023	17:53	192.0	0.931	80,280.4	2.349	0.20	0.54	0.20	150.0	0.971	0.1	0.0001	0.26	0.61	0.26
2/16/2023	17:54	192.0	0.930	75,494.8	3.828	0.20	0.54	0.20	150.0	0.971	0.1	0.0001	0.27	0.61	0.27
2/16/2023	17:55	192.1	0.930	70,832.4	2.932	0.20	0.54	0.20	150.0	0.971	0.3	0.0004	0.27	0.62	0.27
2/16/2023	17:56				--							--			
2/16/2023	17:57	192.0	0.930	67,551.6	2.795	0.20	0.54	0.20	150.0	0.971	0.1	0.0001	0.27	0.61	0.27
2/16/2023	17:58	192.0	0.931	82,297.5	0.000	0.20	0.54	0.20	150.0	0.971	0.1	0.0001	0.27	0.62	0.27
2/16/2023	17:59	192.0	0.930	75,770.3	2.223	0.20	0.54	0.20	150.0	0.971	0.1	0.0001	0.26	0.61	0.26
2/16/2023	18:00	192.0	0.931	71,184.2	2.954	0.20	0.54	0.20	150.0	0.971	0.1	0.0001	0.27	0.61	0.27
2/16/2023	18:01	192.1	0.930	67,076.1	1.968	0.20	0.54	0.20	150.0	0.971	0.1	0.0001	0.27	0.61	0.27
2/16/2023	18:02	192.0	0.931	109,133.0	5.542	0.20	0.54	0.20	150.0	0.971	0.1	0.0001	0.27	0.61	0.27
2/16/2023	18:03	192.0	0.931	133,158.1	3.907	0.20	0.54	0.20	150.0	0.971	0.1	0.0002	0.27	0.61	0.27
2/16/2023	18:04	192.0	0.931	142,365.7	4.179	0.74	0.54	0.54	150.0	0.971	0.1	0.0001	0.27	0.60	0.27
2/16/2023	18:05	192.0	0.931	124,741.8	5.179	1.03	0.54	0.54	150.0	0.972	0.1	0.0001	0.27	0.61	0.27
2/16/2023	18:06	192.0	0.931	125,358.0	6.372	0.96	0.54	0.54	150.0	0.971	0.1	0.0001	0.27	0.61	0.27
2/16/2023	18:07	192.0	0.931	125,694.2	3.691	0.86	0.54	0.54	150.0	0.972	0.1	0.0001	0.27	0.61	0.27
2/16/2023	18:08	192.0	0.931	134,836.1	3.957	0.36	0.54	0.36	150.0	0.972	0.1	0.0001	0.27	0.61	0.27
2/16/2023	18:09	192.0	0.931	125,413.2	5.208	0.54	0.54	0.54	150.0	0.971	0.1	0.0001	0.27	0.61	0.27
2/16/2023	18:10	192.0	0.931	134,078.4	3.935	0.56	0.54	0.54	150.0	0.971	0.2	0.0002	0.27	0.60	0.27
2/16/2023	18:11	192.0	0.931	130,215.0	5.401	0.20	0.53	0.20	150.0	0.971	0.1	0.0001	0.26	0.60	0.26
2/16/2023	18:12	192.0	0.931	144,668.5	4.246	0.59	0.54	0.54	150.0	0.971	0.1	0.0001	0.27	0.60	0.27
2/16/2023	18:13	192.0	0.931	127,701.5	3.745	0.20	0.53	0.20	150.0	0.972	0.1	0.0001	0.26	0.60	0.26
2/16/2023	18:14	192.0	0.931	118,636.1	3.476	0.20	0.54	0.20	150.0	0.972	0.1	0.0001	0.26	0.60	0.26
2/16/2023	18:15	192.0	0.931	132,017.0	0.000	0.20	0.53	0.20	150.0	0.972	0.1	0.0002	0.26	0.60	0.26
2/16/2023	18:16	192.0	0.931	115,575.6	0.000	0.20	0.53	0.20	150.0	0.972	0.1	0.0001	0.26	0.60	0.26
2/16/2023	18:17	192.0	0.931	102,658.6	3.007	0.20	0.53	0.20	150.0	0.972	0.1	0.0001	0.26	0.60	0.26
2/16/2023	18:18				--				150.0	0.972	0.1	0.0002	0.25	0.60	0.25
2/16/2023	18:19	192.0	0.931	94,080.5	2.766	0.20	0.53	0.20	150.0	0.972	0.1	0.0001	0.26	0.60	0.26
2/16/2023	18:20	192.0	0.931	88,091.1	2.588	0.20	0.53	0.20				--			
2/16/2023	18:21	192.1	0.931	88,676.3	2.590	0.20	0.53	0.20	150.0	0.972	0.1	0.0001	0.26	0.60	0.26
2/16/2023	18:22	192.0	0.932	169,663.4	4.946	1.98	0.53	0.53	150.0	0.972	0.1	0.0001	0.26	0.60	0.26
2/16/2023	18:23	192.0	0.932	204,783.9	5.966	0.20	0.53	0.20	150.0	0.972	0.1	0.0001	0.27	0.60	0.27
2/16/2023	18:24	192.0	0.932	123,962.3	3.611	0.20	0.53	0.20	150.0	0.972	0.1	0.0001	0.26	0.59	0.26
2/16/2023	18:25	192.0	0.931	69,404.6	2.022	0.20	0.53	0.20	150.0	0.972	0.2	0.0003	0.26	0.60	0.26
2/16/2023	18:26	192.0	0.931	60,070.8	0.000	0.32	0.53	0.32	150.0	0.972	0.1	0.0001	0.26	0.59	0.26
2/16/2023	18:27	192.0	0.931	55,343.5	0.000	0.45	0.53	0.45	150.0	0.972	0.1	0.0001	0.26	0.59	0.26
2/16/2023	18:28	192.0	0.930	50,308.2	3.278	0.60	0.52	0.52	150.0	0.972	0.1	0.0001	0.25	0.59	0.25
2/16/2023	18:29	192.0	0.931	39,012.7	2.785	0.93	0.53	0.53	150.0	0.972	0.1	0.0001	0.26	0.59	0.26
2/16/2023	18:30	192.0	0.931	26,027.4	1.696	0.88	0.52	0.52	150.0	0.972	0.1	0.0001	0.26	0.60	0.26
2/16/2023	18:31	192.0	0.930	22,037.4	1.285	0.85	0.52	0.52	150.0	0.972	0.3	0.0004	0.26	0.60	0.26
2/16/2023	18:32	192.1	0.930	19,432.2	1.387	0.81	0.52	0.52	150.0	0.972	0.2	0.0003	0.27	0.60	0.27
2/16/2023	18:33	192.1	0.931	17,494.2	1.020	0.78	0.52	0.52	150.0	0.972	0.1	0.0001	0.27	0.60	0.27
2/16/2023	18:34	192.1	0.931	15,588.3	0.909	0.76	0.53	0.53	150.0	0.972	0.1	0.0001	0.27	0.60	0.27
2/16/2023	18:35	192.1	0.930	14,077.8	0.821	0.74	0.53	0.53	150.0	0.972	0.1	0.0002	0.27	0.60	0.27
2/16/2023	18:36	192.1	0.930	7,735.8	0.451	0.93	0.53	0.53	150.0	0.972	0.1	0.0001	0.27	0.59	0.27
2/16/2023	18:37	192.1	0.930	3,207.5	0.187	0.97	0.53	0.53	150.0	0.972	0.1	0.0001	0.26	0.59	0.26
2/16/2023	18:38	192.1	0.930	2,388.0	0.156	0.96	0.54	0.54	150.0	0.972	0.1	0.0001	0.27	0.59	0.27
2/16/2023	18:39	192.1	0.930	2,044.2	0.103	0.92	0.54	0.54	150.0	0.972	0.1	0.0001	0.27	0.60	0.27
2/16/2023	18:40				--				150.0	0.972	0.1	0.0001	0.27	0.60	0.27
2/16/2023	18:41	192.1	0.930	1,822.8	0.092	0.89	0.54	0.54	150.0	0.972	0.2	0.0002	0.27	0.60	0.27
2/16/2023	18:42	192.1	0.930	1,639.4	0.067	0.85	0.54	0.54	150.0	0.972	0.1	0.0001	0.27	0.60	0.27
2/16/2023	18:43	192.1	0.930	1,404.6	0.041	0.81	0.54	0.54				--			
2/16/2023	18:44	192.0	0.930	1,253.1	0.063	0.76	0.54	0.54	150.0	0.972	0.1	0.0001	0.27	0.60	0.27
2/16/2023	18:45	192.0	0.930	1,181.8	0.034	0.70	0.54	0.54	150.0	0.972	0.1	0.0001	0.27	0.60	0.27
2/16/2023	18:46	192.0	0.930	1,082.5	0.044	0.64	0.53	0.53	150.0	0.972	0.1	0.0001	0.27	0.60	0.27
2/16/2023	18:47	192.1	0.930	1,029.1	0.042	0.61	0.53	0.53	150.0	0.972	0.1	0.0001	0.26	0.60	0.26
2/16/2023	18:48	192.1	0.930	3,646.5	0.150	0.59	0.53	0.53	150.0	0.972	0.1	0.0001	0.26	0.60	0.26
2/16/2023	18:49	192.1	0.930	6,500.7	0.267	0.55	0.53	0.53	150.0	0.972	0.1	0.0001	0.26	0.59	0.26
2/16/2023	18:50	192.1	0.930	8,120.4	0.236	0.53	0.53	0.53	150.0	0.972	0.1	0.0001	0.26	0.60	0.26
2/16/2023	18:51	192.1	0.930	9,256.3	0.380	0.52	0.53	0.52	150.0	0.972	0.1	0.0001	0.27	0.60	0.27
2/16/2023	18:52	192.1	0.931	10,103.5	0.415	0.58	0.53	0.53	150.0	0.972	0.1	0.0001	0.26	0.60	0.26
2/16/2023	18:53	192.1	0.931	10,724.9	0.312	0.57	0.53	0.53	150.0	0.972	0.1	0.0001	0.27	0.60	0.27
2/16/2023	18:54	192.1	0.931	11,181.2	0.000	0.57	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.60	0.27
2/16/2023	18:55	192.1	0.931	11,574.7	0.336	0.58	0.52	0.52	150.0	0.972	0.1	0.0001	0.27	0.60	0.27
2/16/2023	18:56	192.1	0.931	11,956.3	0.347	0.57	0.53	0.53	150.0	0.972	0.1	0.0001	0.27	0.60	0.27
2/16/2023	18:57	192.1	0.931	12,326.9	0.507	0.57	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.61	0.27
2/16/2023	18:58	192.1	0.931	12,601.6	0.518	0.57	0.52	0.52	150.0	0.972	0.1	0.0001	0.27	0.60	0.27
2/16/2023	18:59	192.1	0.931	12,774.2	0.525	0.56	0.52	0.52	150.0	0.972	0.1	0.0001	0.27	0.61	0.27
2/16/2023	19:00	192.1	0.931	12,870.3	0.648	0.56	0.52	0.52	150.0	0.972	0.1	0.0001	0.28	0.60	0.28
2/16/2023	19:01	192.1	0.931	12,958.4	0.377	0.56	0.52	0.52	150.0	0.972	0.1	0.0001	0.28	0.60	0.28
2/16/2023	19:02				--				150.0	0.973	0.1	0.0002	0.27	0.60	0.27
2/16/2023	19:03	192.1	0.931	12,975.2	0.000	0.57	0.52	0.52	150.0	0.972	0.1	0.0001	0.27	0.60	0.27
2/16/2023	19:04	192.1	0.931	12,983.4	0.000	0.56	0.52	0.52	150.0	0.972	0.1	0.0002	0.27	0.59	0.27
2/16/2023	19:05	192.1	0.931	13,072.4	0.537	0.55	0.52	0.52	150.0	0.972	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:06	192.1	0.931	13,242.8	0.000	0.55	0.52	0.52	150.0	0.972	0.1	0.0001	0.26	0.60	0.26
2/16/2023	19:07	192.1	0.931	13,336.9	0.388	0.56	0.52	0.52				--			
2/16/2023	19:08	192.1	0.931	13,431.4	0.552	0.55	0.52	0.52	150.0	0.972	0.1	0.0001	0.27	0.60	0.27
2/16/2023	19:09	192.1	0.931	13,498.4	0.392	0.55	0.52	0.52	150.0	0.972	0.1	0.0001	0.27	0.60	0.27
2/16/2023	19:10	192.1	0.931	13,602.1	0.560	0.55	0.52	0.52	150.0	0.972	0.1	0.0001	0.27	0.60	0.27
2/16/2023	19:11	192.1	0.931	14,179.4	0.413	0.57	0.52	0.52	150.0	0.972	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:12	192.0	0.931	8,262.0	0.241	0.52	0.52	0.52	150.0	0.972	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:13	192.0	0.931	7,270.2	0.299	0.53	0.52	0.52	150.0	0.972	0.1	0.0002	0.27	0.59	0.27
2/16/2023	19:14	192.1	0.931	6,826.6	0.281	0.53	0.52	0.52	150.0	0.972	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:15	192.1	0.931	10,125.3	0.295	0.61	0.52	0.52	150.0	0.972	0.3	0.0005	0.27	0.59	0.27
2/16/2023	19:16	192.1	0.931	14,080.2	0.580	0.62	0.52	0.52	150.0	0.972	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:17	192.1	0.931	16,823.1	0.490	0.67	0.52	0.52	150.0	0.972	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:18	192.1	0.931	18,524.5	0.763	0.75	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:19	192.1	0.931	18,435.0	0.537	0.85	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet $_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/16/2023	19:20	192.1	0.931	17,766.7	0.518	0.91	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:21	192.1	0.931	16,839.1	0.491	0.96	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:22	192.1	0.931	15,953.1	0.465	0.98	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:23	192.1	0.932	14,975.7	0.436	0.97	0.52	0.52	150.0	0.973	0.1	0.0002	0.27	0.59	0.27
2/16/2023	19:24				--				150.0	0.973	0.1	0.0001	0.27	0.60	0.27
2/16/2023	19:25	192.1	0.931	13,986.2	0.408	0.98	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:26	192.1	0.931	13,440.0	0.392	0.97	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.60	0.27
2/16/2023	19:27	192.1	0.932	13,083.1	0.539	0.97	0.51	0.51	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:28	192.1	0.932	12,541.6	0.517	0.97	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:29	192.1	0.932	12,471.7	0.514	0.96	0.51	0.51	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:30	192.1	0.931	12,528.9	0.365	0.97	0.52	0.52				--			
2/16/2023	19:31	192.1	0.931	12,337.2	0.508	0.95	0.52	0.52	150.0	0.973	0.1	0.0001	0.28	0.59	0.28
2/16/2023	19:32	192.1	0.932	12,232.4	0.356	0.95	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:33	192.1	0.932	12,052.9	0.497	0.95	0.52	0.52	150.0	0.973	0.2	0.0003	0.28	0.59	0.28
2/16/2023	19:34	192.1	0.931	11,952.2	0.493	0.94	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:35	192.1	0.931	11,894.5	0.347	0.93	0.52	0.52	150.0	0.973	0.2	0.0003	0.27	0.59	0.27
2/16/2023	19:36	192.1	0.931	11,824.8	0.487	0.93	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:37	192.1	0.931	11,605.8	0.478	0.89	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:38	192.1	0.932	11,498.0	0.335	0.89	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:39	192.1	0.931	10,898.4	0.318	0.87	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:40	192.1	0.931	10,922.1	0.450	0.88	0.52	0.52	150.0	0.973	0.1	0.0001	0.28	0.59	0.28
2/16/2023	19:41	192.1	0.931	10,084.1	0.294	0.87	0.51	0.51	150.0	0.973	0.1	0.0001	0.28	0.59	0.28
2/16/2023	19:42	192.1	0.932	9,811.2	0.404	0.79	0.51	0.51	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:43	192.1	0.931	9,241.5	0.269	0.79	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:44	192.1	0.931	8,705.3	0.254	0.78	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:45	192.1	0.931	8,385.0	0.244	0.78	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:46				--				150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:47	192.1	0.931	8,026.4	0.234	0.78	0.51	0.51	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:48	192.1	0.931	7,684.8	0.388	0.77	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:49	192.1	0.932	7,519.9	0.310	0.77	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:50	192.1	0.931	7,057.8	0.206	0.77	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:51	192.0	0.931	6,660.9	0.194	0.76	0.51	0.51	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:52	192.1	0.932	6,303.2	0.184	0.75	0.51	0.51	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:53	192.1	0.931	6,221.9	0.181	0.75	0.51	0.51				--			
2/16/2023	19:54	192.1	0.931	6,016.6	0.000	0.74	0.51	0.51	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:55	192.1	0.931	5,849.9	0.241	0.73	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:56	192.1	0.931	5,761.1	0.168	0.73	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:57	192.1	0.931	5,626.7	0.164	0.73	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:58	192.1	0.931	5,281.9	0.000	0.71	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	19:59	192.0	0.932	5,275.1	0.154	0.70	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	20:00	192.1	0.931	5,074.1	0.209	0.69	0.51	0.51	150.0	0.973	0.1	0.0001	0.28	0.59	0.28
2/16/2023	20:01	192.1	0.931	4,952.0	0.204	0.70	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	20:02	192.1	0.932	4,717.1	0.138	0.69	0.51	0.51	150.0	0.973	0.1	0.0002	0.27	0.59	0.27
2/16/2023	20:03	192.1	0.932	4,406.4	0.128	0.68	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	20:04	192.1	0.932	4,398.3	0.128	0.68	0.51	0.51	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	20:05	192.1	0.932	4,312.4	0.126	0.67	0.52	0.52	150.0	0.973	0.1	0.0001	0.28	0.59	0.28
2/16/2023	20:06	192.1	0.932	4,224.2	0.174	0.67	0.51	0.51	150.0	0.973	0.1	0.0001	0.28	0.59	0.28
2/16/2023	20:07	192.1	0.931	4,183.9	0.211	0.67	0.51	0.51	150.0	0.973	0.1	0.0002	0.27	0.59	0.27
2/16/2023	20:08				--				150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	20:09	192.1	0.931	4,152.9	0.121	0.66	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	20:10	192.1	0.932	4,178.0	0.122	0.66	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.60	0.27
2/16/2023	20:11	192.1	0.932	4,115.7	0.120	0.65	0.51	0.51	150.0	0.973	0.1	0.0002	0.28	0.67	0.28
2/16/2023	20:12	192.1	0.932	4,089.0	0.169	0.64	0.51	0.51	150.0	0.973	0.1	0.0001	0.28	0.66	0.28
2/16/2023	20:13	192.1	0.932	4,095.8	0.119	0.64	0.52	0.52	150.0	0.973	0.1	0.0001	0.28	0.59	0.28
2/16/2023	20:14	192.1	0.932	4,034.7	0.118	0.64	0.52	0.52	150.0	0.973	0.2	0.0003	0.28	0.59	0.28
2/16/2023	20:15	192.0	0.931	3,953.7	0.115	0.63	0.52	0.52	150.0	0.973	0.1	0.0001	0.28	0.60	0.28
2/16/2023	20:16	192.0	0.931	3,888.9	0.160	0.62	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	20:17	192.1	0.931	3,924.5	0.114	0.62	0.52	0.52				--			
2/16/2023	20:18	192.1	0.932	3,911.3	0.114	0.62	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.60	0.27
2/16/2023	20:19	192.0	0.932	3,853.8	0.159	0.60	0.52	0.52	150.0	0.973	0.1	0.0001	0.28	0.60	0.28
2/16/2023	20:20	192.0	0.932	3,957.0	0.115	0.61	0.52	0.52	150.0	0.973	0.2	0.0002	0.28	0.59	0.28
2/16/2023	20:21	192.1	0.932	3,990.0	0.116	0.61	0.52	0.52	150.1	0.973	0.1	0.0001	0.28	0.59	0.28
2/16/2023	20:22	192.1	0.932	4,029.7	0.117	0.61	0.52	0.52	150.1	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	20:23	192.1	0.932	4,212.3	0.123	0.61	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	20:24	192.1	0.932	4,160.8	0.121	0.61	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	20:25	192.1	0.932	4,230.0	0.123	0.61	0.52	0.52	150.1	0.974	0.1	0.0001	0.28	0.59	0.28
2/16/2023	20:26	192.1	0.932	4,241.5	0.124	0.61	0.52	0.52	150.0	0.973	0.1	0.0002	0.28	0.59	0.28
2/16/2023	20:27	192.1	0.932	4,204.9	0.123	0.60	0.52	0.52	150.0	0.973	0.1	0.0001	0.28	0.59	0.28
2/16/2023	20:28	192.1	0.932	4,299.0	0.125	0.61	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.60	0.27
2/16/2023	20:29	192.1	0.932	4,230.9	0.174	0.60	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.59	0.27
2/16/2023	20:30				--				150.0	0.973	0.1	0.0001	0.28	0.60	0.28
2/16/2023	20:31	192.1	0.932	4,206.1	0.173	0.60	0.52	0.52	150.0	0.974	0.1	0.0001	0.28	0.59	0.28
2/16/2023	20:32	192.1	0.932	4,152.3	0.171	0.60	0.52	0.52	150.0	0.973	0.2	0.0003	0.28	0.59	0.28
2/16/2023	20:33	192.1	0.932	4,168.5	0.122	0.60	0.52	0.52	150.0	0.974	0.2	0.0003	0.28	0.59	0.28
2/16/2023	20:34	192.1	0.932	4,091.9	0.169	0.59	0.52	0.52	150.0	0.973	0.3	0.0005	0.27	0.59	0.27
2/16/2023	20:35	192.1	0.932	4,092.5	0.169	0.59	0.52	0.52	150.0	0.973	0.4	0.0006	0.28	0.59	0.28
2/16/2023	20:36	192.1	0.932	4,182.0	0.122	0.60	0.52	0.52	150.0	0.974	0.1	0.0001	0.28	0.59	0.28
2/16/2023	20:37	192.1	0.932	4,150.5	0.121	0.60	0.52	0.52	150.0	0.974	0.1	0.0001	0.28	0.59	0.28
2/16/2023	20:38	192.1	0.932	4,099.7	0.169	0.60	0.52	0.52	150.0	0.973	0.5	0.0007	0.28	0.60	0.28
2/16/2023	20:39	192.1	0.932	4,067.5	0.000	0.60	0.52	0.52	150.0	0.973	0.1	0.0001	0.28	0.61	0.28
2/16/2023	20:40	192.1	0.932	3,949.9	0.115	0.59	0.52	0.52				--			
2/16/2023	20:41	192.1	0.932	4,025.8	0.117	0.61	0.52	0.52	150.0	0.974	0.2	0.0004	0.28	0.60	0.28
2/16/2023	20:42	192.1	0.932	3,830.6	0.158	0.59	0.52	0.52	150.1	0.974	0.3	0.0005	0.28	0.60	0.28
2/16/2023	20:43	192.1	0.932	3,918.4	0.000	0.61	0.52	0.52	150.0	0.973	0.1	0.0001	0.27	0.60	0.27
2/16/2023	20:44	192.1	0.932	3,815.0	0.111	0.60	0.52	0.52	150.0	0.974	0.1	0.0001	0.28	0.60	0.28
2/16/2023	20:45	192.1	0.932	3,825.9	0.158	0.60	0.52	0.52	150.0	0.974	0.1	0.0002	0.28	0.60	0.28
2/16/2023	20:46	192.1	0.932	3,824.4	0.158	0.60	0.52	0.52	150.0	0.974	0.2	0.0004	0.28	0.60	0.28
2/16/2023	20:47	192.1	0.932	3,801.8	0.157	0.60	0.52	0.52	150.0	0.974	0.2	0.0003	0.28	0.60	0.28
2/16/2023	20:48	192.1	0.932	3,857.4	0.159	0.60	0.52	0.52	150.0	0.974	0.1	0.0001	0.28	0.60	0.28
2/16/2023	20:49	192.1	0.932	3,802.4	0.111	0.59	0.53	0.53	150.0	0.974	0.1	0.0002	0.28	0.60	0.28
2/16/2023	20:50	192.1	0.932	3,899.9	0.114	0.60	0.53	0.53	150.0	0.974	0.1	0.0001	0.28	0.60	0.28
2/16/2023	20:51	192.1	0.932	3,895.2	0.161	0.60	0.53	0.53	150.1	0.973	0.2	0.0003	0.27	0.60	0.27
2/16/2023	20:52				--				150.0	0.974	0.1	0.0001	0.27	0.60	0.27
2/16/2023	20:53	192.1	0.932	3,906.8	0.000	0.60	0.52	0.52	150.0	0.973	0.1	0.0001	0.28	0.60	0.28
2/16/2023	20:54	192.1	0.932	3,924.7	0.000	0.60	0.52	0.52	150.0	0.974	0.1	0.0001	0.28	0.60	0.28

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wt}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wt}$**	**BWS - Outlet $_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/16/2023	20:55	192.0	0.932	4,030.8	0.166	0.61	0.52	0.52	150.0	0.974	0.2	0.0002	0.28	0.62	0.28
2/16/2023	20:56	192.0	0.932	4,088.8	0.119	0.61	0.53	0.53	150.0	0.974	0.3	0.0005	0.28	0.60	0.28
2/16/2023	20:57	192.0	0.932	4,003.8	0.165	0.61	0.53	0.53	150.0	0.973	0.1	0.0002	0.28	0.61	0.28
2/16/2023	20:58	192.1	0.932	3,963.6	0.115	0.60	0.53	0.53	150.0	0.974	0.2	0.0004	0.28	0.60	0.28
2/16/2023	20:59	192.1	0.932	3,998.4	0.165	0.61	0.53	0.53	150.0	0.974	0.3	0.0005	0.28	0.61	0.28
2/16/2023	21:00	192.1	0.932	4,002.0	0.117	0.61	0.53	0.53	150.0	0.974	0.1	0.0001	0.28	0.60	0.28
2/16/2023	21:01	192.1	0.932	3,998.6	0.117	0.62	0.53	0.53	150.0	0.974	0.1	0.0001	0.28	0.61	0.28
2/16/2023	21:02	192.0	0.932	4,017.2	0.166	0.61	0.53	0.53	150.0	0.974	0.2	0.0003	0.28	0.60	0.28
2/16/2023	21:03	192.1	0.932	4,064.4	0.118	0.62	0.52	0.52	150.0	0.974	0.2	0.0003	0.28	0.60	0.28
2/16/2023	21:04	192.1	0.932	3,995.2	0.116	0.61	0.53	0.53				--			
2/16/2023	21:05	192.1	0.932	4,029.9	0.117	0.61	0.53	0.53	150.0	0.974	0.1	0.0002	0.28	0.60	0.28
2/16/2023	21:06	192.1	0.932	4,029.6	0.117	0.61	0.53	0.53	150.0	0.974	0.1	0.0001	0.28	0.60	0.28
2/16/2023	21:07	192.1	0.932	4,061.9	0.118	0.60	0.52	0.52	150.0	0.974	0.1	0.0001	0.28	0.60	0.28
2/16/2023	21:08	192.1	0.932	4,293.3	0.125	0.63	0.53	0.53	150.0	0.974	0.3	0.0005	0.28	0.60	0.28
2/16/2023	21:09	192.1	0.932	4,306.9	0.125	0.63	0.53	0.53	150.0	0.974	0.3	0.0005	0.28	0.60	0.28
2/16/2023	21:10	192.1	0.932	4,381.4	0.181	0.65	0.53	0.53	150.0	0.974	0.1	0.0002	0.28	0.60	0.28
2/16/2023	21:11	192.0	0.932	4,378.8	0.180	0.65	0.53	0.53	150.0	0.974	0.1	0.0001	0.28	0.60	0.28
2/16/2023	21:12	192.0	0.932	4,407.2	0.128	0.66	0.53	0.53	150.0	0.974	0.1	0.0001	0.28	0.60	0.28
2/16/2023	21:13	192.0	0.932	4,342.9	0.127	0.65	0.53	0.53	150.0	0.974	0.2	0.0002	0.28	0.61	0.28
2/16/2023	21:14				--				150.0	0.974	0.1	0.0001	0.28	0.60	0.28
2/16/2023	21:15	192.1	0.932	4,298.7	0.177	0.64	0.53	0.53	150.0	0.974	0.1	0.0002	0.28	0.60	0.28
2/16/2023	21:16	192.0	0.932	4,364.9	0.127	0.65	0.53	0.53	150.0	0.974	0.4	0.0006	0.28	0.60	0.28
2/16/2023	21:17	192.1	0.932	4,333.7	0.000	0.64	0.53	0.53	150.0	0.974	0.3	0.0005	0.28	0.60	0.28
2/16/2023	21:18	192.1	0.932	4,348.1	0.127	0.64	0.53	0.53	150.0	0.974	0.1	0.0002	0.28	0.60	0.28
2/16/2023	21:19	192.1	0.932	4,359.2	0.180	0.65	0.53	0.53	150.0	0.974	0.3	0.0004	0.28	0.60	0.28
2/16/2023	21:20	192.1	0.932	4,390.5	0.181	0.64	0.53	0.53	150.0	0.974	0.3	0.0004	0.28	0.60	0.28
2/16/2023	21:21	192.1	0.932	4,403.5	0.181	0.64	0.53	0.53	150.0	0.974	0.4	0.0006	0.28	0.60	0.28
2/16/2023	21:22	192.0	0.932	4,445.6	0.129	0.64	0.53	0.53	150.0	0.974	0.3	0.0004	0.28	0.60	0.28
2/16/2023	21:23	192.0	0.932	4,441.9	0.183	0.63	0.53	0.53	150.0	0.974	0.1	0.0002	0.28	0.60	0.28
2/16/2023	21:24	192.1	0.932	4,480.3	0.185	0.63	0.53	0.53	150.0	0.974	0.3	0.0005	0.28	0.60	0.28
2/16/2023	21:25	192.1	0.932	4,473.8	0.184	0.65	0.53	0.53	150.0	0.974	0.3	0.0005	0.28	0.60	0.28
2/16/2023	21:26	192.1	0.932	4,468.6	0.184	0.65	0.53	0.53	150.0	0.974	0.3	0.0005	0.28	0.60	0.28
2/16/2023	21:27	192.1	0.932	4,541.3	0.187	0.64	0.53	0.53				--			
2/16/2023	21:28	192.1	0.932	4,587.7	0.134	0.64	0.53	0.53	150.0	0.974	0.1	0.0002	0.28	0.60	0.28
2/16/2023	21:29	192.0	0.932	5,298.9	0.154	0.70	0.53	0.53	150.0	0.974	0.2	0.0002	0.28	0.60	0.28
2/16/2023	21:30	192.0	0.932	5,864.1	0.241	0.71	0.54	0.54	150.0	0.974	0.1	0.0001	0.28	0.61	0.28
2/16/2023	21:31	192.0	0.932	6,036.5	0.176	0.71	0.53	0.53	150.0	0.974	0.1	0.0002	0.28	0.61	0.28
2/16/2023	21:32	192.0	0.932	7,330.0	0.213	0.77	0.54	0.54	150.0	0.974	0.2	0.0003	0.28	0.61	0.28
2/16/2023	21:33	192.0	0.932	7,206.8	0.210	0.73	0.54	0.54	150.0	0.974	0.2	0.0003	0.28	0.60	0.28
2/16/2023	21:34	192.0	0.932	8,025.7	0.234	0.76	0.54	0.54	150.0	0.974	0.2	0.0002	0.28	0.61	0.28
2/16/2023	21:35	192.0	0.932	8,972.7	0.261	0.79	0.53	0.53	150.0	0.974	0.2	0.0003	0.28	0.61	0.28
2/16/2023	21:36				--				150.0	0.974	0.3	0.0004	0.28	0.61	0.28
2/16/2023	21:37	192.0	0.932	8,696.4	0.253	0.74	0.54	0.54	150.0	0.974	0.2	0.0003	0.28	0.60	0.28
2/16/2023	21:38	192.0	0.932	8,661.7	0.252	0.69	0.54	0.54	150.0	0.974	0.2	0.0003	0.28	0.61	0.28
2/16/2023	21:39	192.0	0.932	8,009.8	0.233	0.64	0.54	0.54	150.0	0.974	0.2	0.0004	0.28	0.60	0.28
2/16/2023	21:40	192.0	0.932	7,715.5	0.224	0.61	0.54	0.54	150.0	0.974	0.1	0.0002	0.28	0.60	0.28
2/16/2023	21:41	192.0	0.932	7,110.3	0.292	0.59	0.54	0.54	150.0	0.974	0.1	0.0001	0.28	0.60	0.28
2/16/2023	21:42	192.1	0.932	6,587.2	0.192	0.59	0.54	0.54	150.0	0.974	0.1	0.0002	0.28	0.60	0.28
2/16/2023	21:43	192.0	0.932	5,962.4	0.173	0.59	0.54	0.54	150.0	0.974	0.2	0.0003	0.28	0.60	0.28
2/16/2023	21:44	192.0	0.932	5,695.4	0.166	0.58	0.54	0.54	150.0	0.974	0.1	0.0002	0.29	0.61	0.29
2/16/2023	21:45	192.1	0.932	5,753.5	0.167	0.59	0.54	0.54	150.0	0.974	0.2	0.0003	0.28	0.61	0.28
2/16/2023	21:46	192.0	0.932	6,326.8	0.184	0.59	0.54	0.54	150.0	0.974	0.1	0.0001	0.28	0.61	0.28
2/16/2023	21:47	192.1	0.932	5,621.2	0.000	0.60	0.55	0.55	150.0	0.974	0.1	0.0001	0.28	0.61	0.28
2/16/2023	21:48	192.0	0.932	5,385.6	0.157	0.60	0.54	0.54	150.0	0.974	0.1	0.0002	0.28	0.61	0.28
2/16/2023	21:49	192.1	0.932	5,449.5	0.224	0.60	0.54	0.54	150.0	0.974	0.1	0.0001	0.28	0.61	0.28
2/16/2023	21:50	192.1	0.932	5,316.6	0.268	0.60	0.55	0.55	150.0	0.974	0.3	0.0004	0.28	0.61	0.28
2/16/2023	21:51	192.1	0.932	5,182.9	0.151	0.62	0.55	0.55				--			
2/16/2023	21:52	192.1	0.933	4,091.5	0.119	0.65	0.55	0.55	150.0	0.974	0.1	0.0001	0.28	0.61	0.28
2/16/2023	21:53	192.1	0.932	3,059.4	0.089	0.66	0.55	0.55	150.0	0.974	0.2	0.0003	0.28	0.60	0.28
2/16/2023	21:54	192.1	0.932	1,881.1	0.055	0.67	0.54	0.54	150.0	0.974	0.1	0.0001	0.29	0.60	0.29
2/16/2023	21:55	192.0	0.932	1,248.9	0.036	0.70	0.54	0.54	150.0	0.974	0.1	0.0001	0.28	0.62	0.28
2/16/2023	21:56	192.0	0.933	1,028.2	0.363	0.71	0.54	0.54	150.0	0.974	0.1	0.0001	0.29	0.61	0.29
2/16/2023	21:57	192.0	0.932	742.9	0.037	0.73	0.54	0.54	150.0	0.974	0.1	0.0001	0.28	0.61	0.28
2/16/2023	21:58				--				150.0	0.974	0.2	0.0003	0.28	0.60	0.28
2/16/2023	21:59	192.1	0.932	539.0	0.016	0.73	0.55	0.55	150.0	0.974	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:00	192.0	0.932	393.5	0.016	0.75	0.54	0.54	150.0	0.974	0.1	0.0001	0.29	0.60	0.29
2/16/2023	22:01	192.0	0.932	350.5	0.014	0.76	0.54	0.54	150.0	0.974	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:02	192.0	0.932	324.0	0.013	0.75	0.55	0.55	150.0	0.974	0.1	0.0001	0.29	0.60	0.29
2/16/2023	22:03	192.1	0.932	311.6	0.009	0.75	0.55	0.55	150.0	0.974	0.1	0.0001	0.30	0.60	0.30
2/16/2023	22:04	192.1	0.933	305.4	0.013	0.76	0.54	0.54	150.0	0.974	0.1	0.0001	0.29	0.60	0.29
2/16/2023	22:05	192.1	0.934	1,003.6	0.000	0.73	0.55	0.55	150.0	0.974	0.1	0.0002	0.29	0.61	0.29
2/16/2023	22:06	192.0	0.934	131,583.2	5.467	1.18	0.54	0.54	150.0	0.974	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:07	192.0	0.934	144,658.4	6.006	1.29	0.54	0.54	150.0	0.974	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:08	192.0	0.933	97,680.6	4.051	0.50	0.54	0.50	150.0	0.974	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:09	192.0	0.933	82,513.2	2.416	0.20	0.54	0.20	150.0	0.974	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:10	192.0	0.933	102,675.1	4.252	0.20	0.54	0.20	150.0	0.974	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:11	192.0	0.934	75,569.6	2.211	0.20	0.54	0.20	150.0	0.974	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:12	192.0	0.933	56,865.2	1.661	0.20	0.54	0.20	150.0	0.974	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:13	192.0	0.933	50,423.1	2.081	0.20	0.54	0.20	150.0	0.974	0.1	0.0001	0.30	0.61	0.30
2/16/2023	22:14	192.0	0.933	46,259.6	1.349	0.27	0.54	0.27				--			
2/16/2023	22:15	192.0	0.933	27,532.6	1.135	0.70	0.54	0.54	150.0	0.974	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:16	192.1	0.932	17,657.4	0.515	0.65	0.54	0.54	150.0	0.974	0.1	0.0001	0.30	0.60	0.30
2/16/2023	22:17	192.1	0.933	10,824.0	0.315	0.70	0.54	0.54	150.0	0.974	0.1	0.0001	0.30	0.61	0.30
2/16/2023	22:18	192.1	0.933	6,546.6	0.191	0.64	0.54	0.54	150.0	0.974	0.1	0.0001	0.29	0.60	0.29
2/16/2023	22:19	192.1	0.933	4,076.1	0.119	0.68	0.54	0.54	150.0	0.974	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:20				--				150.0	0.974	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:21	192.1	0.933	2,332.3	0.096	0.70	0.54	0.54	150.0	0.974	0.1	0.0001	0.30	0.61	0.30
2/16/2023	22:22	192.0	0.933	1,700.8	0.070	0.70	0.54	0.54	150.0	0.974	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:23	192.0	0.933	1,350.8	0.000	0.71	0.54	0.54	150.0	0.975	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:24	192.0	0.933	1,139.7	0.033	0.72	0.54	0.54	150.0	0.974	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:25	192.0	0.933	1,035.7	0.043	0.73	0.54	0.54	150.0	0.975	0.1	0.0001	0.30	0.70	0.30
2/16/2023	22:26	192.0	0.933	916.5	0.027	0.74	0.54	0.54	150.0	0.975	0.1	0.0001	0.29	0.70	0.29
2/16/2023	22:27	192.0	0.933	902.5	0.037	0.73	0.54	0.54	150.0	0.975	0.1	0.0001	0.30	0.70	0.30
2/16/2023	22:28	192.0	0.933	865.9	0.025	0.74	0.54	0.54	150.0	0.975	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:29	192.0	0.933	744.1	0.022	0.74	0.54	0.54	150.0	0.975	0.1	0.0001	0.29	0.60	0.29

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wt}$**	**BWS - Inlet$_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wt}$**	**BWS - Outlet$_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/16/2023	22:30	192.1	0.933	1,603.0	0.047	0.70	0.54	0.54	150.0	0.975	0.3	0.0005	0.29	0.61	0.29
2/16/2023	22:31	192.1	0.932	874.4	0.025	0.74	0.54	0.54	150.0	0.974	0.3	0.0005	0.29	0.61	0.29
2/16/2023	22:32	192.1	0.933	674.7	0.028	0.74	0.54	0.54	150.0	0.974	0.1	0.0002	0.29	0.60	0.29
2/16/2023	22:33	192.1	0.933	561.5	0.023	0.73	0.54	0.54	150.1	0.975	0.1	0.0001	0.29	0.60	0.29
2/16/2023	22:34	192.1	0.933	476.3	0.020	0.75	0.54	0.54	150.0	0.975	0.1	0.0001	0.29	0.60	0.29
2/16/2023	22:35	192.2	0.933	433.9	0.018	0.74	0.54	0.54	150.0	0.975	0.1	0.0001	0.29	0.60	0.29
2/16/2023	22:36	192.1	0.933	425.8	0.012	0.74	0.54	0.54	150.0	0.975	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:37	192.1	0.933	416.1	0.017	0.74	0.54	0.54				--			
2/16/2023	22:38	192.1	0.933	578.2	0.017	0.71	0.54	0.54	150.0	0.974	0.1	0.0001	0.29	0.60	0.29
2/16/2023	22:39	192.1	0.933	465.4	0.000	0.72	0.54	0.54	150.0	0.974	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:40	192.1	0.933	427.9	0.012	0.73	0.54	0.54	150.0	0.975	0.1	0.0001	0.29	0.60	0.29
2/16/2023	22:41	192.1	0.933	377.4	0.011	0.73	0.54	0.54	150.1	0.974	0.2	0.0002	0.29	0.61	0.29
2/16/2023	22:42				--				150.0	0.974	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:43	192.1	0.933	333.7	0.014	0.72	0.54	0.54	150.0	0.975	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:44	192.1	0.933	304.8	0.013	0.72	0.54	0.54	150.0	0.975	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:45	192.1	0.933	281.4	0.012	0.72	0.54	0.54	150.0	0.975	0.1	0.0001	0.29	0.66	0.29
2/16/2023	22:46	192.1	0.933	261.5	0.000	0.72	0.54	0.54	150.0	0.975	0.1	0.0001	0.30	0.60	0.30
2/16/2023	22:47	192.1	0.933	312.9	0.013	0.71	0.54	0.54	150.0	0.975	0.3	0.0004	0.29	0.60	0.29
2/16/2023	22:48	192.1	0.933	296.4	0.012	0.71	0.54	0.54	150.0	0.975	0.1	0.0002	0.29	0.60	0.29
2/16/2023	22:49	192.1	0.933	268.9	0.008	0.71	0.55	0.55	150.0	0.975	0.1	0.0001	0.29	0.60	0.29
2/16/2023	22:50	192.1	0.933	263.0	0.008	0.71	0.54	0.54	150.0	0.975	0.1	0.0001	0.29	0.60	0.29
2/16/2023	22:51	192.1	0.933	252.7	0.007	0.70	0.54	0.54	150.1	0.975	0.1	0.0001	0.29	0.60	0.29
2/16/2023	22:52	192.1	0.933	248.9	0.007	0.70	0.54	0.54	150.0	0.975	0.1	0.0001	0.30	0.61	0.30
2/16/2023	22:53	192.1	0.933	234.3	0.010	0.70	0.54	0.54	150.0	0.975	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:54	192.1	0.933	234.2	0.007	0.69	0.54	0.54	150.0	0.975	0.2	0.0003	0.29	0.61	0.29
2/16/2023	22:55	192.0	0.933	291.3	0.012	0.69	0.54	0.54	150.0	0.975	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:56	192.1	0.933	285.9	0.008	0.68	0.54	0.54	150.0	0.975	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:57	192.1	0.933	262.3	0.011	0.70	0.54	0.54	150.0	0.975	0.1	0.0001	0.29	0.61	0.29
2/16/2023	22:58	192.1	0.933	241.4	0.010	0.70	0.54	0.54	150.0	0.975	0.1	0.0001	0.30	0.61	0.30
2/16/2023	22:59	192.0	0.933	233.7	0.007	0.69	0.54	0.54	150.0	0.975	0.1	0.0001	0.30	0.61	0.30
2/16/2023	23:00	192.1	0.933	203.4	0.008	0.65	0.55	0.55	150.0	0.975	0.1	0.0001	0.29	0.61	0.29
2/16/2023	23:01	192.1	0.933	190.0	0.006	0.64	0.54	0.54				--			
2/16/2023	23:02	192.0	0.933	180.4	0.005	0.64	0.54	0.54	150.0	0.975	0.1	0.0001	0.30	0.61	0.30
2/16/2023	23:03	192.1	0.933	259.9	0.008	0.67	0.54	0.54	150.0	0.975	0.1	0.0001	0.30	0.61	0.30
2/16/2023	23:04				--				150.0	0.975	0.1	0.0001	0.30	0.61	0.30
2/16/2023	23:05	192.1	0.933	210.2	0.006	0.64	0.54	0.54	150.0	0.975	0.1	0.0001	0.30	0.62	0.30
2/16/2023	23:06	192.1	0.934	199.1	0.006	0.64	0.54	0.54	150.0	0.975	0.1	0.0001	0.30	0.61	0.30
2/16/2023	23:07	192.0	0.933	198.5	0.008	0.63	0.54	0.54	150.0	0.975	0.1	0.0001	0.30	0.61	0.30
2/16/2023	23:08	192.1	0.933	198.8	0.006	0.64	0.54	0.54	150.0	0.975	0.1	0.0001	0.30	0.61	0.30
2/16/2023	23:09	192.1	0.933	197.1	0.008	0.63	0.54	0.54	150.0	0.975	0.1	0.0001	0.29	0.61	0.29
2/16/2023	23:10	192.1	0.933	194.4	0.006	0.63	0.55	0.55	150.0	0.975	0.1	0.0001	0.29	0.61	0.29
2/16/2023	23:11	192.1	0.933	185.1	0.005	0.64	0.55	0.55	150.0	0.975	0.3	0.0004	0.29	0.61	0.29
2/16/2023	23:12	192.0	0.933	179.3	0.007	0.63	0.54	0.54	150.0	0.975	0.1	0.0001	0.29	0.61	0.29
2/16/2023	23:13	192.0	0.933	302.5	0.012	0.67	0.55	0.55	150.0	0.975	0.1	0.0001	0.30	0.61	0.30
2/16/2023	23:14	192.0	0.933	251.1	0.010	0.66	0.54	0.54	150.0	0.975	0.1	0.0001	0.30	0.61	0.30
2/16/2023	23:15	192.0	0.933	201.4	0.006	0.63	0.54	0.54	150.0	0.975	0.1	0.0002	0.30	0.61	0.30
2/16/2023	23:16	192.0	0.933	187.8	0.005	0.63	0.55	0.55	150.0	0.975	0.1	0.0001	0.29	0.61	0.29
2/16/2023	23:17	192.1	0.933	177.6	0.007	0.63	0.55	0.55	150.0	0.975	0.1	0.0001	0.30	0.61	0.30
2/16/2023	23:18	192.1	0.933	171.4	0.005	0.63	0.55	0.55	150.0	0.975	0.1	0.0001	0.30	0.61	0.30
2/16/2023	23:19	192.1	0.933	162.3	0.005	0.63	0.55	0.55	150.0	0.975	0.1	0.0001	0.29	0.61	0.29
2/16/2023	23:20	192.1	0.933	207.6	0.006	0.62	0.54	0.54	150.0	0.975	0.1	0.0001	0.30	0.61	0.30
2/16/2023	23:21	192.0	0.933	246.0	0.010	0.66	0.55	0.55	150.0	0.975	0.2	0.0003	0.30	0.61	0.30
2/16/2023	23:22	192.1	0.933	201.1	0.006	0.61	0.55	0.55	150.0	0.975	0.4	0.0006	0.30	0.61	0.30
2/16/2023	23:23	192.1	0.933	193.5	0.006	0.62	0.55	0.55	150.0	0.975	0.1	0.0001	0.30	0.61	0.30
2/16/2023	23:24	192.1	0.933	182.9	0.005	0.63	0.54	0.54				--			
2/16/2023	23:25	192.1	0.933	181.6	0.005	0.62	0.55	0.55	150.0	0.975	0.1	0.0001	0.30	0.61	0.30
2/16/2023	23:26				--				150.0	0.975	0.1	0.0001	0.30	0.61	0.30
2/16/2023	23:27	192.1	0.933	180.8	0.007	0.62	0.55	0.55	150.0	0.975	0.1	0.0001	0.29	0.61	0.29
2/16/2023	23:28	192.1	0.933	177.1	0.005	0.62	0.55	0.55	150.0	0.975	0.1	0.0001	0.30	0.61	0.30
2/16/2023	23:29	192.1	0.933	990.1	0.041	0.63	0.55	0.55	150.0	0.975	0.1	0.0001	0.29	0.61	0.29
2/16/2023	23:30	192.1	0.933	591.7	0.024	0.63	0.55	0.55	150.0	0.975	0.1	0.0002	0.30	0.61	0.30
2/16/2023	23:31	192.1	0.933	304.5	0.009	0.65	0.55	0.55	150.0	0.975	0.1	0.0001	0.30	0.61	0.30
2/16/2023	23:32	192.1	0.933	209.4	0.000	0.61	0.55	0.55	150.0	0.976	0.2	0.0003	0.30	0.61	0.30
2/16/2023	23:33	192.0	0.933	203.4	0.006	0.61	0.54	0.54	150.0	0.975	0.2	0.0003	0.30	0.61	0.30
2/16/2023	23:34	192.0	0.933	202.3	0.000	0.61	0.55	0.55	150.0	0.975	0.1	0.0002	0.30	0.61	0.30
2/16/2023	23:35	192.0	0.933	196.3	0.008	0.62	0.55	0.55	150.0	0.975	0.1	0.0002	0.30	0.61	0.30
2/16/2023	23:36	192.0	0.933	528.2	0.015	0.66	0.55	0.55	150.0	0.975	0.2	0.0002	0.30	0.62	0.30
2/16/2023	23:37	192.0	0.933	7,189.5	0.209	0.57	0.55	0.55	150.0	0.975	0.2	0.0004	0.30	0.61	0.30
2/16/2023	23:38	192.1	0.933	3,829.1	0.157	0.60	0.55	0.55	150.0	0.975	0.3	0.0004	0.30	0.61	0.30
2/16/2023	23:39	192.1	0.933	3,374.9	0.139	0.61	0.55	0.55	150.0	0.975	0.1	0.0002	0.29	0.61	0.29
2/16/2023	23:40	192.1	0.933	1,729.5	0.050	0.62	0.55	0.55	150.0	0.975	0.1	0.0002	0.30	0.61	0.30
2/16/2023	23:41	192.0	0.933	300.1	0.009	0.66	0.54	0.54	150.0	0.975	0.1	0.0001	0.29	0.61	0.29
2/16/2023	23:42	192.0	0.933	187.0	0.008	0.61	0.55	0.55	150.0	0.975	0.2	0.0002	0.30	0.61	0.30
2/16/2023	23:43	192.0	0.933	168.0	0.005	0.61	0.54	0.54	150.0	0.975	0.1	0.0001	0.30	0.61	0.30
2/16/2023	23:44	192.0	0.933	5,747.8	0.167	0.74	0.55	0.55	150.0	0.975	0.3	0.0005	0.30	0.61	0.30
2/16/2023	23:45	192.0	0.933	6,703.9	0.195	0.58	0.54	0.54	150.0	0.976	0.1	0.0001	0.30	0.61	0.30
2/16/2023	23:46	192.0	0.933	4,817.1	0.140	0.59	0.55	0.55	150.0	0.975	0.1	0.0001	0.29	0.61	0.29
2/16/2023	23:47	192.0	0.933	2,588.1	0.075	0.62	0.55	0.55	150.0	0.975	0.1	0.0001	0.29	0.61	0.29
2/16/2023	23:48				--							--			
2/16/2023	23:49	192.0	0.933	1,752.8	0.072	0.61	0.55	0.55	150.0	0.975	0.3	0.0004	0.30	0.61	0.30
2/16/2023	23:50	192.0	0.933	358.3	0.000	0.65	0.54	0.54	150.0	0.975	0.1	0.0002	0.29	0.61	0.29
2/16/2023	23:51	192.0	0.933	146.4	0.006	0.62	0.55	0.55	150.0	0.975	0.1	0.0001	0.30	0.62	0.30
2/16/2023	23:52	192.0	0.933	2,723.8	0.079	0.70	0.55	0.55	150.0	0.975	0.2	0.0004	0.30	0.61	0.30
2/16/2023	23:53	192.1	0.933	6,940.6	0.285	0.56	0.54	0.54	150.0	0.975	0.2	0.0004	0.30	0.61	0.30
2/16/2023	23:54	192.1	0.933	6,681.5	0.194	0.57	0.54	0.54	150.0	0.976	0.1	0.0002	0.30	0.61	0.30
2/16/2023	23:55	192.1	0.933	5,191.7	0.214	0.59	0.55	0.55	150.0	0.976	0.2	0.0004	0.30	0.61	0.30
2/16/2023	23:56	192.1	0.933	1,751.3	0.051	0.60	0.54	0.54	150.0	0.976	0.1	0.0001	0.30	0.61	0.30
2/16/2023	23:57	192.0	0.934	212.3	0.006	0.61	0.55	0.55	150.0	0.976	0.1	0.0001	0.30	0.61	0.30
2/16/2023	23:58	192.0	0.933	450.2	0.013	0.65	0.55	0.55	150.0	0.976	0.4	0.0006	0.30	0.61	0.30
2/16/2023	23:59	192.0	0.933	1,406.3	0.058	0.62	0.55	0.55	150.0	0.976	0.1	0.0001	0.29	0.61	0.29
2/16/2023	0:00	192.1	0.933	9,045.8	0.263	0.74	0.55	0.55	150.0	0.976	0.3	0.0005	0.30	0.62	0.30
2/17/2023	0:01	192.0	0.934	12,491.2	0.363	0.63	0.54	0.54	150.0	0.976	0.1	0.0001	0.30	0.61	0.30
2/17/2023	0:02	192.1	0.933	10,971.8	0.451	0.61	0.55	0.55	150.0	0.976	0.1	0.0001	0.30	0.61	0.30
2/17/2023	0:03	192.1	0.933	8,222.1	0.239	0.56	0.55	0.55	150.0	0.976	0.2	0.0003	0.30	0.61	0.30
2/17/2023	0:04	192.0	0.933	7,642.7	0.222	0.56	0.55	0.55	150.0	0.976	0.2	0.0003	0.30	0.62	0.30

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet $_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/17/2023	0:05	192.0	0.934	7,587.8	0.312	0.56	0.55	0.55	150.0	0.976	0.1	0.0001	0.30	0.61	0.30
2/17/2023	0:06	192.0	0.934	10,341.0	0.301	0.61	0.55	0.55	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:07	192.0	0.933	11,388.1	0.469	0.70	0.55	0.55	150.0	0.975	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:08	192.0	0.934	22,221.8	0.646	0.58	0.55	0.55	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:09	192.0	0.934	17,038.7	0.496	0.60	0.55	0.55	150.0	0.976	0.3	0.0004	0.30	0.62	0.30
2/17/2023	0:10				--				150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:11	192.0	0.934	14,707.6	0.428	0.60	0.55	0.55				--			
2/17/2023	0:12	192.1	0.934	11,239.4	0.327	0.61	0.55	0.55	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:13	192.1	0.934	9,594.2	0.395	0.54	0.55	0.54	150.0	0.976	0.2	0.0003	0.30	0.62	0.30
2/17/2023	0:14	192.0	0.934	9,195.1	0.268	0.54	0.55	0.54	150.0	0.976	0.2	0.0003	0.30	0.62	0.30
2/17/2023	0:15	192.0	0.934	10,099.0	0.416	0.76	0.55	0.55	150.0	0.976	0.2	0.0002	0.30	0.62	0.30
2/17/2023	0:16	192.0	0.934	23,330.0	0.679	0.58	0.55	0.55	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:17	192.0	0.934	21,243.7	0.874	0.59	0.55	0.55	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:18	192.0	0.934	21,577.0	0.888	0.60	0.55	0.55	150.0	0.976	0.1	0.0002	0.30	0.62	0.30
2/17/2023	0:19	192.0	0.934	18,627.5	0.000	0.62	0.55	0.55	150.0	0.976	0.1	0.0001	0.31	0.62	0.31
2/17/2023	0:20	192.0	0.934	17,761.4	0.518	0.60	0.55	0.55	150.0	0.976	0.4	0.0006	0.30	0.62	0.30
2/17/2023	0:21	192.0	0.934	18,435.2	0.537	0.59	0.55	0.55	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:22	192.1	0.934	20,756.3	0.605	0.83	0.55	0.55	150.0	0.976	0.1	0.0001	0.30	0.61	0.30
2/17/2023	0:23	192.0	0.934	29,953.5	0.872	0.57	0.55	0.55	150.0	0.976	0.1	0.0001	0.31	0.62	0.31
2/17/2023	0:24	192.0	0.934	26,047.0	1.073	0.57	0.55	0.55	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:25	192.0	0.934	23,343.0	0.961	0.58	0.55	0.55	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:26	192.0	0.934	21,474.2	0.886	0.58	0.55	0.55	150.0	0.976	0.2	0.0003	0.30	0.62	0.30
2/17/2023	0:27	192.0	0.934	22,912.3	0.945	0.59	0.55	0.55	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:28	192.0	0.934	22,065.9	0.643	0.57	0.55	0.55	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:29	192.0	0.934	27,892.6	0.813	0.92	0.55	0.55	150.0	0.976	0.2	0.0003	0.30	0.61	0.30
2/17/2023	0:30	192.0	0.934	33,816.0	0.985	0.51	0.55	0.51	150.0	0.976	0.2	0.0003	0.30	0.62	0.30
2/17/2023	0:31	192.0	0.934	32,452.5	0.946	0.56	0.55	0.55	150.0	0.976	0.2	0.0003	0.30	0.62	0.30
2/17/2023	0:32				--				150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:33	192.0	0.934	30,506.9	1.258	0.54	0.55	0.54	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:34	192.0	0.934	29,032.3	0.847	0.55	0.55	0.55	150.0	0.976	0.1	0.0002	0.30	0.62	0.30
2/17/2023	0:35	192.0	0.934	30,604.3	1.263	0.54	0.55	0.54				--			
2/17/2023	0:36	192.0	0.934	31,620.7	1.304	0.56	0.56	0.56	150.0	0.976	0.1	0.0002	0.30	0.62	0.30
2/17/2023	0:37	192.0	0.934	33,471.9	1.381	0.64	0.55	0.55	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:38	192.0	0.934	41,467.0	1.209	0.46	0.55	0.46	150.0	0.976	0.1	0.0002	0.30	0.63	0.30
2/17/2023	0:39	192.0	0.934	40,147.6	1.171	0.44	0.55	0.44	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:40	192.0	0.934	37,779.3	1.102	0.47	0.55	0.47	150.0	0.975	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:41	192.0	0.934	38,155.3	1.114	0.47	0.55	0.47	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:42	192.0	0.934	36,773.2	1.518	0.50	0.55	0.50	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:43	192.0	0.934	35,729.6	1.043	0.49	0.55	0.49	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:44	192.0	0.934	44,218.6	1.825	0.42	0.55	0.42	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:45	192.0	0.934	45,513.2	1.878	0.35	0.55	0.35	150.0	0.976	0.2	0.0003	0.30	0.62	0.30
2/17/2023	0:46	192.0	0.934	43,176.9	1.780	0.36	0.55	0.36	150.0	0.976	0.3	0.0005	0.30	0.62	0.30
2/17/2023	0:47	192.0	0.934	41,604.6	1.215	0.49	0.55	0.49	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:48	192.0	0.934	41,271.9	1.705	0.48	0.55	0.48	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:49	192.1	0.934	38,366.0	1.585	0.48	0.55	0.48	150.0	0.976	0.3	0.0004	0.30	0.62	0.30
2/17/2023	0:50	192.1	0.934	44,526.5	1.300	0.39	0.55	0.39	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:51	192.1	0.934	50,865.2	1.484	0.20	0.55	0.20	150.0	0.976	0.1	0.0001	0.31	0.62	0.31
2/17/2023	0:52	192.0	0.934	50,579.1	2.087	0.20	0.55	0.20	150.0	0.976	0.2	0.0002	0.30	0.62	0.30
2/17/2023	0:53	192.1	0.934	50,867.2	1.484	0.20	0.55	0.20	150.0	0.976	0.2	0.0003	0.30	0.62	0.30
2/17/2023	0:54				--				150.0	0.976	0.1	0.0001	0.31	0.63	0.31
2/17/2023	0:55	192.1	0.934	48,140.7	1.406	0.24	0.55	0.24	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:56	192.0	0.934	47,449.5	1.386	0.26	0.55	0.26	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	0:57	192.0	0.934	46,108.4	1.905	0.36	0.55	0.36	150.0	0.976	0.1	0.0001	0.31	0.62	0.31
2/17/2023	0:58	192.0	0.934	61,216.1	1.788	0.20	0.55	0.20				--			
2/17/2023	0:59	192.0	0.934	57,923.0	2.392	0.20	0.55	0.20	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	1:00	192.0	0.934	56,827.8	1.661	0.20	0.55	0.20	150.0	0.976	0.2	0.0003	0.30	0.62	0.30
2/17/2023	1:01	192.0	0.935	57,709.2	1.687	0.20	0.55	0.20	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	1:02	192.0	0.934	55,404.7	2.290	0.20	0.55	0.20	150.0	0.976	0.2	0.0003	0.30	0.62	0.30
2/17/2023	1:03	192.0	0.935	54,066.5	2.234	0.20	0.55	0.20	150.0	0.976	0.1	0.0001	0.31	0.62	0.31
2/17/2023	1:04	192.0	0.935	67,293.5	2.780	0.20	0.55	0.20	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	1:05	192.0	0.935	63,863.4	1.865	0.20	0.55	0.20	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	1:06	192.0	0.935	61,541.3	2.541	0.20	0.55	0.20	150.0	0.976	0.1	0.0001	0.30	0.63	0.30
2/17/2023	1:07	192.0	0.935	58,101.5	1.698	0.20	0.55	0.20	150.0	0.976	0.1	0.0001	0.31	0.63	0.31
2/17/2023	1:08	192.0	0.934	56,573.2	1.654	0.20	0.55	0.20	150.0	0.976	0.1	0.0001	0.30	0.63	0.30
2/17/2023	1:09	192.0	0.935	53,992.5	2.232	0.20	0.55	0.20	150.0	0.976	0.1	0.0001	0.30	0.63	0.30
2/17/2023	1:10	192.0	0.934	61,347.1	1.793	0.20	0.55	0.20	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	1:11	192.0	0.935	67,566.5	1.974	0.20	0.55	0.20	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	1:12	192.0	0.934	66,485.4	1.943	0.20	0.55	0.20	150.0	0.976	0.1	0.0001	0.30	0.63	0.30
2/17/2023	1:13	192.0	0.935	66,624.0	1.948	0.20	0.55	0.20	150.0	0.976	0.3	0.0004	0.30	0.63	0.30
2/17/2023	1:14	192.0	0.934	64,512.8	2.668	0.20	0.55	0.20	150.0	0.976	0.1	0.0001	0.30	0.63	0.30
2/17/2023	1:15	192.0	0.934	63,650.3	2.632	0.20	0.55	0.20	150.0	0.976	0.1	0.0001	0.31	0.63	0.31
2/17/2023	1:16				--				150.0	0.976	0.1	0.0001	0.31	0.63	0.31
2/17/2023	1:17	192.0	0.934	65,885.5	2.724	0.20	0.55	0.20	150.0	0.976	0.1	0.0001	0.30	0.63	0.30
2/17/2023	1:18	192.0	0.935	75,284.2	3.112	0.20	0.55	0.20	150.0	0.976	0.2	0.0002	0.30	0.63	0.30
2/17/2023	1:19	192.0	0.935	71,456.4	2.089	0.20	0.55	0.20	150.0	0.976	0.1	0.0001	0.30	0.63	0.30
2/17/2023	1:20	192.0	0.935	68,996.7	2.852	0.20	0.55	0.20	150.0	0.976	0.1	0.0001	0.30	0.63	0.30
2/17/2023	1:21	192.0	0.934	67,488.4	1.969	0.20	0.55	0.20				--			
2/17/2023	1:22	192.0	0.935	68,490.8	2.815	0.20	0.55	0.20	150.0	0.976	0.1	0.0002	0.30	0.63	0.30
2/17/2023	1:23	192.0	0.935	66,514.4	1.932	0.20	0.55	0.20	150.0	0.976	0.1	0.0001	0.31	0.63	0.31
2/17/2023	1:24	192.0	0.935	61,360.1	1.782	0.20	0.55	0.20	150.0	0.976	0.1	0.0001	0.31	0.63	0.31
2/17/2023	1:25	192.0	0.934	9,230.4	0.379	1.06	0.55	0.55	150.0	0.976	0.1	0.0001	0.31	0.63	0.31
2/17/2023	1:26	192.0	0.934	2,204.1	0.091	0.63	0.56	0.56	150.0	0.976	0.1	0.0001	0.31	0.63	0.31
2/17/2023	1:27	192.1	0.934	787.8	0.023	0.67	0.56	0.56	150.0	0.976	0.3	0.0005	0.30	0.63	0.30
2/17/2023	1:28	192.1	0.934	454.6	0.000	0.68	0.55	0.55	150.0	0.976	0.1	0.0001	0.30	0.63	0.30
2/17/2023	1:29	192.0	0.934	357.7	0.010	0.68	0.56	0.56	150.0	0.976	0.1	0.0001	0.30	0.63	0.30
2/17/2023	1:30	192.0	0.934	316.0	0.009	0.68	0.56	0.56	150.0	0.976	0.1	0.0001	0.30	0.63	0.30
2/17/2023	1:31	192.1	0.934	298.6	0.009	0.68	0.55	0.55	150.0	0.976	0.1	0.0001	0.30	0.62	0.30
2/17/2023	1:32	192.0	0.934	264.6	0.008	0.67	0.55	0.55	150.0	0.976	0.2	0.0003	0.30	0.62	0.30
2/17/2023	1:33	192.0	0.934	239.9	0.007	0.67	0.55	0.55	150.0	0.976	0.1	0.0001	0.30	0.63	0.30
2/17/2023	1:34	192.0	0.934	242.7	0.010	0.66	0.55	0.55	150.0	0.976	0.1	0.0001	0.30	0.63	0.30
2/17/2023	1:35	192.0	0.934	313.4	0.009	0.65	0.56	0.56	150.0	0.976	0.1	0.0001	0.30	0.63	0.30
2/17/2023	1:36	192.0	0.934	381.2	0.011	0.65	0.56	0.56	150.0	0.976	0.2	0.0003	0.30	0.65	0.30
2/17/2023	1:37	192.0	0.934	1,914.9	0.056	0.62	0.55	0.55	150.0	0.976	0.1	0.0001	0.30	0.72	0.30
2/17/2023	1:38				--				150.0	0.976	0.1	0.0001	0.30	0.72	0.30
2/17/2023	1:39	192.0	0.934	2,215.9	0.091	0.61	0.55	0.55	150.0	0.976	0.1	0.0002	0.29	0.71	0.29

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet Temperature - Inlet	Inlet Pressure - Inlet	Inlet Ethylene Oxide - Inlet	Inlet Ethylene Oxide - Inlet	Inlet BWS - Inlet	Inlet BWS - Inlet$_{wet}$	Inlet BWS - Inlet$_{used}$	Outlet Temperature - Outlet	Outlet Pressure - Outlet	Outlet Ethylene Oxide - Outlet	Outlet Ethylene Oxide - Outlet	Outlet BWS - Outlet	Outlet BWS - Outlet$_{wet}$	Outlet BWS - Outlet$_{used}$
	Unit	°C	atm	ppmvw	lb/hr	% (wet)	% (wet)	% (wet)	°C	atm	ppmvw	lb/hr	% (wet)	% (wet)	% (wet)
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/17/2023	1:40	192.0	0.934	979.2	0.040	0.62	0.55	0.55	150.0	0.976	0.1	0.0001	0.30	0.71	0.30
2/17/2023	1:41	192.0	0.934	718.7	0.021	0.64	0.55	0.55	150.0	0.976	0.3	0.0004	0.30	0.71	0.30
2/17/2023	1:42	192.1	0.934	760.4	0.031	0.63	0.55	0.55	150.0	0.977	0.1	0.0002	0.30	0.71	0.30
2/17/2023	1:43	192.1	0.934	767.6	0.022	0.64	0.55	0.55	150.0	0.977	0.1	0.0001	0.30	0.64	0.30
2/17/2023	1:44	192.1	0.934	2,963.2	0.086	0.65	0.56	0.56	150.0	0.977	0.1	0.0001	0.30	0.63	0.30
2/17/2023	1:45	192.1	0.935	4,999.4	0.145	0.59	0.56	0.56				--			
2/17/2023	1:46	192.1	0.934	3,685.6	0.107	0.61	0.55	0.55	150.0	0.976	0.1	0.0001	0.30	0.63	0.30
2/17/2023	1:47	192.1	0.934	3,167.5	0.092	0.61	0.56	0.56	150.0	0.977	0.1	0.0001	0.30	0.63	0.30
2/17/2023	1:48	192.0	0.934	2,799.9	0.081	0.62	0.55	0.55	150.0	0.976	0.1	0.0002	0.30	0.63	0.30
2/17/2023	1:49	192.0	0.934	2,340.9	0.096	0.63	0.56	0.56	150.0	0.977	0.1	0.0001	0.30	0.63	0.30
2/17/2023	1:50	192.0	0.934	5,808.1	0.169	0.67	0.55	0.55	150.0	0.977	0.1	0.0001	0.30	0.63	0.30
2/17/2023	1:51	192.0	0.934	10,028.8	0.291	0.62	0.56	0.56	150.0	0.977	0.2	0.0003	0.30	0.63	0.30
2/17/2023	1:52	192.0	0.934	9,149.5	0.000	0.56	0.56	0.56	150.0	0.977	0.2	0.0003	0.30	0.63	0.30
2/17/2023	1:53	192.0	0.934	8,169.7	0.238	0.56	0.55	0.55	150.0	0.977	0.1	0.0001	0.30	0.63	0.30
2/17/2023	1:54	192.0	0.934	7,459.3	0.307	0.57	0.56	0.56	150.0	0.977	0.1	0.0001	0.30	0.63	0.30
2/17/2023	1:55	192.1	0.934	6,912.9	0.201	0.57	0.56	0.56	150.0	0.977	0.1	0.0001	0.30	0.63	0.30
2/17/2023	1:56	192.1	0.935	9,706.6	0.282	0.77	0.56	0.56	150.0	0.977	0.1	0.0001	0.30	0.63	0.30
2/17/2023	1:57	192.0	0.934	18,641.1	0.542	0.62	0.55	0.55	150.0	0.977	0.1	0.0001	0.31	0.63	0.31
2/17/2023	1:58	192.0	0.934	16,821.5	0.691	0.62	0.56	0.56	150.0	0.977	0.1	0.0002	0.30	0.63	0.30
2/17/2023	1:59	192.1	0.934	15,378.1	0.633	0.61	0.55	0.55	150.0	0.977	0.1	0.0001	0.30	0.63	0.30
2/17/2023	2:00				--				150.0	0.977	0.1	0.0001	0.30	0.63	0.30
2/17/2023	2:01	192.1	0.934	14,225.8	0.585	0.62	0.55	0.55	150.0	0.977	0.1	0.0001	0.31	0.63	0.31
2/17/2023	2:02	192.1	0.935	13,450.9	0.553	0.62	0.55	0.55	150.0	0.976	0.1	0.0002	0.31	0.63	0.31
2/17/2023	2:03	192.1	0.935	16,476.8	0.678	0.88	0.55	0.55	150.0	0.977	0.2	0.0003	0.30	0.63	0.30
2/17/2023	2:04	192.1	0.935	25,282.2	0.735	0.59	0.56	0.56	150.0	0.977	0.1	0.0001	0.30	0.63	0.30
2/17/2023	2:05	192.1	0.935	22,815.2	0.664	0.58	0.56	0.56	150.0	0.977	0.1	0.0001	0.30	0.64	0.30
2/17/2023	2:06	192.1	0.934	20,975.7	0.611	0.59	0.56	0.56	150.0	0.977	0.1	0.0001	0.30	0.63	0.30
2/17/2023	2:07	192.0	0.934	19,555.2	0.569	0.60	0.56	0.56	150.0	0.977	0.2	0.0003	0.30	0.64	0.30
2/17/2023	2:08	192.1	0.934	18,570.5	0.541	0.60	0.56	0.56				--			
2/17/2023	2:09	192.1	0.935	21,991.7	0.905	0.90	0.55	0.55	150.0	0.977	0.1	0.0001	0.30	0.63	0.30
2/17/2023	2:10	192.0	0.935	31,258.0	0.909	0.55	0.56	0.55	150.0	0.977	0.1	0.0001	0.30	0.63	0.30
2/17/2023	2:11	192.1	0.935	28,213.2	1.161	0.56	0.55	0.55	150.0	0.977	0.1	0.0001	0.30	0.63	0.30
2/17/2023	2:12	192.1	0.935	25,939.2	1.069	0.59	0.55	0.55	150.0	0.977	0.1	0.0002	0.30	0.63	0.30
2/17/2023	2:13	192.1	0.935	24,003.5	0.699	0.59	0.56	0.56	150.0	0.977	0.1	0.0001	0.30	0.63	0.30
2/17/2023	2:14	192.1	0.935	22,885.5	0.667	0.57	0.56	0.56	150.0	0.977	0.1	0.0001	0.30	0.63	0.30
2/17/2023	2:15	192.0	0.935	24,221.9	0.705	0.79	0.56	0.56	150.0	0.977	0.2	0.0003	0.30	0.63	0.30
2/17/2023	2:16	192.0	0.935	36,306.5	1.495	0.52	0.56	0.52	150.0	0.977	0.1	0.0001	0.30	0.63	0.30
2/17/2023	2:17	192.0	0.935	32,491.0	10.948	0.56	0.55	0.55	150.0	0.977	0.1	0.0001	0.30	0.63	0.30
2/17/2023	2:18	192.0	0.935	30,215.6	13.911	0.54	0.56	0.54	150.0	0.977	0.1	0.0001	0.30	0.63	0.30
2/17/2023	2:19	192.1	0.935	27,977.8	14.819	0.58	0.55	0.55	150.0	0.977	0.1	0.0001	0.30	0.63	0.30
2/17/2023	2:20	192.1	0.935	26,504.8	15.352	0.57	0.56	0.56	150.0	0.977	0.1	0.0001	0.30	0.63	0.30
2/17/2023	2:21	192.0	0.935	27,193.3	16.544	0.73	0.55	0.55	150.0	0.977	0.2	0.0004	0.30	0.63	0.30
2/17/2023	2:22				--				150.0	0.977	0.1	0.0002	0.30	0.63	0.30
2/17/2023	2:23	192.0	0.935	40,456.4	25.642	0.47	0.56	0.47	150.0	0.977	0.1	0.0002	0.30	0.63	0.30
2/17/2023	2:24	192.0	0.935	36,553.6	23.621	0.50	0.55	0.50	150.0	0.977	0.2	0.0004	0.30	0.63	0.30
2/17/2023	2:25	192.0	0.935	34,154.0	22.304	0.53	0.56	0.53	150.0	0.977	0.6	0.0012	0.30	0.63	0.30
2/17/2023	2:26	192.0	0.935	31,820.8	21.233	0.57	0.58	0.57	150.0	0.977	36.9	0.0734	0.30	0.64	0.30
2/17/2023	2:27	192.0	0.935	29,901.4	19.873	0.55	0.61	0.55	150.0	0.977	70.1	0.1395	0.30	0.64	0.30
2/17/2023	2:28	192.0	0.938	15,136.7	10.021	0.20	0.64	0.20	150.0	0.977	75.7	0.1525	0.30	0.64	0.30
2/17/2023	2:29	192.0	0.938	1,403.5	0.937	0.20	0.70	0.20	150.0	0.977	72.8	0.1452	0.31	0.64	0.31
2/17/2023	2:30	192.0	0.939	1,219.6	0.817	0.20	0.75	0.20	150.0	0.977	68.4	0.1371	0.31	0.64	0.31
2/17/2023	2:31	192.0	0.940	3,530.7	2.348	0.20	0.81	0.20				--			
2/17/2023	2:32	192.0	0.940	4,461.8	2.978	0.20	0.87	0.20	150.0	0.977	63.1	0.1254	0.31	0.63	0.31
2/17/2023	2:33	192.0	0.940	5,270.0	3.528	0.20	0.94	0.20	150.0	0.977	59.7	0.1182	0.32	0.63	0.32
2/17/2023	2:34	192.0	0.940	6,071.6	4.073	0.20	1.01	0.20	150.0	0.977	65.4	0.1298	0.32	0.64	0.32
2/17/2023	2:35	192.0	0.940	7,539.3	5.048	0.20	1.09	0.20	150.0	0.977	59.5	0.1186	0.32	0.64	0.32
2/17/2023	2:36	192.0	0.940	9,297.6	6.179	0.20	1.16	0.20	150.0	0.977	51.2	0.1012	0.33	0.64	0.33
2/17/2023	2:37	192.0	0.940	8,616.3	5.719	0.20	1.23	0.20	150.0	0.977	46.4	0.0932	0.33	0.64	0.33
2/17/2023	2:38	192.0	0.940	7,944.9	5.359	0.20	1.30	0.20	150.0	0.977	41.8	0.0829	0.33	0.64	0.33
2/17/2023	2:39	192.0	0.940	7,399.7	4.958	0.20	1.36	0.20	150.0	0.977	38.5	0.0758	0.33	0.64	0.33
2/17/2023	2:40	192.0	0.940	6,924.2	4.629	0.20	1.43	0.20	150.0	0.978	41.5	0.0819	0.33	0.64	0.33
2/17/2023	2:41	192.0	0.940	6,664.8	4.492	0.20	1.49	0.20	150.0	0.977	42.1	0.0835	0.33	0.64	0.33
2/17/2023	2:42	192.0	0.940	6,898.4	4.649	0.20	1.55	0.20	150.0	0.977	36.4	0.0721	0.33	0.64	0.33
2/17/2023	2:43	192.1	0.940	5,998.3	4.067	0.20	1.60	0.20	149.9	0.977	31.7	0.0633	0.34	0.64	0.34
2/17/2023	2:44				--				150.0	0.977	27.2	0.0540	0.34	0.65	0.34
2/17/2023	2:45	192.0	0.940	5,676.9	3.856	0.20	1.72	0.20	150.0	0.977	21.9	0.0435	0.34	0.65	0.34
2/17/2023	2:46	192.1	0.940	5,410.6	3.677	0.20	1.75	0.20	150.0	0.978	22.9	0.0453	0.34	0.65	0.34
2/17/2023	2:47	192.0	0.940	5,154.2	3.473	0.20	1.79	0.20	150.0	0.978	31.2	0.0628	0.34	0.65	0.34
2/17/2023	2:48	192.0	0.940	4,949.8	3.354	0.20	1.82	0.20	150.0	0.978	24.2	0.0479	0.33	0.65	0.33
2/17/2023	2:49	192.0	0.940	5,418.2	3.646	0.20	1.87	0.20	150.0	0.977	20.4	0.0409	0.34	0.64	0.34
2/17/2023	2:50	192.0	0.940	4,681.6	3.155	0.20	1.90	0.20	150.0	0.977	17.7	0.0354	0.34	0.65	0.34
2/17/2023	2:51	192.1	0.940	4,501.8	3.033	0.20	1.92	0.20	150.0	0.977	15.8	0.0313	0.34	0.65	0.34
2/17/2023	2:52	192.0	0.940	4,357.7	2.919	0.20	1.94	0.20	150.0	0.977	17.9	0.0354	0.34	0.65	0.34
2/17/2023	2:53	192.0	0.940	4,213.6	2.835	0.20	1.96	0.20	150.0	0.977	22.8	0.0458	0.34	0.65	0.34
2/17/2023	2:54	192.0	0.940	4,074.1	2.743	0.20	1.98	0.20	150.0	0.977	19.0	0.0382	0.34	0.65	0.34
2/17/2023	2:55	192.0	0.940	4,592.9	3.064	0.20	1.98	0.20				--			
2/17/2023	2:56	192.0	0.940	3,783.7	2.533	0.20	2.00	0.20	150.0	0.978	16.1	0.0322	0.34	0.65	0.34
2/17/2023	2:57	192.0	0.940	3,652.0	2.438	0.20	1.98	0.20	150.0	0.978	13.6	0.0272	0.34	0.65	0.34
2/17/2023	2:58	192.0	0.940	3,549.7	2.370	0.20	2.00	0.20	150.0	0.978	12.1	0.0240	0.34	0.65	0.34
2/17/2023	2:59	192.0	0.940	3,459.9	2.321	0.20	1.98	0.20	150.0	0.978	13.9	0.0276	0.34	0.65	0.34
2/17/2023	3:00	192.0	0.940	3,361.8	2.257	0.20	1.99	0.20	150.0	0.978	20.7	0.0415	0.34	0.65	0.34
2/17/2023	3:01	192.0	0.940	3,943.2	2.644	0.20	2.00	0.20	150.0	0.978	16.4	0.0326	0.35	0.65	0.35
2/17/2023	3:02	192.0	0.940	3,269.8	2.205	0.20	1.99	0.20	150.0	0.978	12.8	0.0256	0.34	0.65	0.34
2/17/2023	3:03	192.0	0.939	3,153.1	2.115	0.20	1.99	0.20	150.0	0.978	10.7	0.0213	0.34	0.65	0.34
2/17/2023	3:04	192.0	0.940	3,063.1	2.046	0.20	2.01	0.20	150.0	0.978	8.7	0.0174	0.34	0.64	0.34
2/17/2023	3:05	192.0	0.940	2,986.5	2.002	0.20	2.02	0.20	150.0	0.978	7.6	0.0150	0.34	0.65	0.34
2/17/2023	3:06				--				150.0	0.978	14.4	0.0287	0.34	0.64	0.34
2/17/2023	3:07	192.0	0.939	2,923.6	1.951	0.20	2.03	0.20	150.0	0.978	16.4	0.0328	0.34	0.65	0.34
2/17/2023	3:08	192.0	0.939	2,923.7	1.946	0.20	2.03	0.20	150.0	0.978	12.7	0.0253	0.34	0.65	0.34
2/17/2023	3:09	192.0	0.939	3,424.6	2.297	0.20	2.04	0.20	150.0	0.978	9.4	0.0188	0.34	0.65	0.34
2/17/2023	3:10	192.0	0.939	2,769.6	1.856	0.20	2.05	0.20	150.0	0.978	7.3	0.0146	0.34	0.65	0.34
2/17/2023	3:11	192.0	0.939	2,694.4	1.805	0.20	2.06	0.20	150.0	0.978	6.3	0.0126	0.34	0.65	0.34
2/17/2023	3:12	192.0	0.938	2,616.4	1.747	0.20	2.04	0.20	150.0	0.978	7.3	0.0146	0.34	0.65	0.34
2/17/2023	3:13	192.0	0.938	2,557.8	1.715	0.20	2.06	0.20	150.0	0.978	16.6	0.0329	0.34	0.65	0.34
2/17/2023	3:14	192.0	0.938	2,497.2	1.672	0.20	2.05	0.20	150.0	0.978	13.0	0.0258	0.34	0.65	0.34

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{cc}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{cc}$**	**BWS - Outlet $_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/17/2023	3:15	192.0	0.938	3,128.3	2.102	0.20	2.04	0.20	150.0	0.978	9.7	0.0193	0.34	0.65	0.34
2/17/2023	3:16	192.0	0.938	2,454.3	1.639	0.20	2.04	0.20	150.0	0.978	7.3	0.0144	0.34	0.65	0.34
2/17/2023	3:17	192.0	0.937	2,366.8	1.586	0.20	2.06	0.20	150.0	0.978	5.6	0.0111	0.34	0.65	0.34
2/17/2023	3:18	192.0	0.937	2,310.5	1.543	0.20	2.04	0.20				--			
2/17/2023	3:19	192.0	0.936	2,244.3	1.494	0.20	2.06	0.20	150.0	0.978	4.6	0.0092	0.34	0.65	0.34
2/17/2023	3:20	192.0	0.935	2,191.0	1.460	0.20	2.06	0.20	150.0	0.978	14.4	0.0288	0.34	0.65	0.34
2/17/2023	3:21	192.0	0.933	2,735.4	1.829	0.20	2.07	0.20	150.0	0.978	14.0	0.0280	0.34	0.64	0.34
2/17/2023	3:22	192.0	0.932	2,227.0	1.490	0.20	2.09	0.20	150.0	0.978	10.0	0.0198	0.34	0.64	0.34
2/17/2023	3:23	192.0	0.929	2,074.8	1.385	0.20	2.11	0.20	150.0	0.978	6.9	0.0138	0.34	0.65	0.34
2/17/2023	3:24	192.0	0.927	2,010.4	1.346	0.20	2.11	0.20	150.0	0.978	5.4	0.0108	0.34	0.65	0.34
2/17/2023	3:25	192.0	0.924	1,955.2	1.304	0.20	2.11	0.20	150.0	0.978	4.3	0.0086	0.34	0.65	0.34
2/17/2023	3:26	192.0	0.922	1,916.7	1.278	0.20	2.11	0.20	150.0	0.978	10.9	0.0221	0.33	0.65	0.33
2/17/2023	3:27	192.0	0.921	2,100.9	1.408	0.20	2.12	0.20	150.0	0.978	14.1	0.0281	0.34	0.64	0.34
2/17/2023	3:28				--				150.0	0.978	9.9	0.0198	0.34	0.65	0.34
2/17/2023	3:29	192.1	0.920	2,289.9	1.527	0.20	2.11	0.20	150.0	0.978	16.7	0.0332	0.33	0.64	0.33
2/17/2023	3:30	192.0	0.918	1,818.6	1.215	0.20	2.12	0.20	150.0	0.978	33.9	0.0679	0.33	0.64	0.33
2/17/2023	3:31	192.0	0.917	1,747.3	1.169	0.20	2.11	0.20	150.0	0.978	29.6	0.0591	0.33	0.64	0.33
2/17/2023	3:32	192.1	0.916	3,386.7	2.394	0.20	2.09	0.20	150.0	0.978	24.3	0.0483	0.33	0.64	0.33
2/17/2023	3:33	192.0	0.912	1,699.3	1.134	0.20	2.10	0.20	150.0	0.978	16.0	0.0323	0.34	0.64	0.34
2/17/2023	3:34	192.1	0.908	2,327.0	1.551	0.20	2.09	0.20	150.0	0.978	10.0	0.0201	0.34	0.64	0.34
2/17/2023	3:35	192.1	0.898	1,566.8	1.044	0.20	2.09	0.20	150.0	0.978	6.6	0.0133	0.34	0.64	0.34
2/17/2023	3:36	192.0	0.888	1,457.5	0.968	0.20	2.07	0.20	150.0	0.978	6.9	0.0140	0.34	0.64	0.34
2/17/2023	3:37	192.0	0.877	1,394.6	0.934	0.20	2.06	0.20	150.0	0.978	12.6	0.0255	0.33	0.64	0.33
2/17/2023	3:38	192.1	0.860	1,301.6	0.863	0.20	2.06	0.20	150.0	0.978	9.1	0.0182	0.33	0.64	0.33
2/17/2023	3:39	192.1	0.839	1,776.3	1.186	0.20	2.04	0.20	150.0	0.978	6.3	0.0127	0.33	0.64	0.33
2/17/2023	3:40	192.1	0.825	1,177.2	0.779	0.20	2.02	0.20	150.0	0.978	8.1	0.0165	0.33	0.64	0.33
2/17/2023	3:41	192.1	0.802	1,105.7	0.733	0.20	1.98	0.20	150.0	0.978	12.0	0.0241	0.33	0.64	0.33
2/17/2023	3:42	192.0	0.769	957.5	0.635	0.20	1.97	0.20				--			
2/17/2023	3:43	192.1	0.738	1,389.9	0.926	0.20	1.96	0.20	150.0	0.978	8.3	0.0169	0.33	0.63	0.33
2/17/2023	3:44	192.1	0.697	722.0	0.483	0.21	1.94	0.21	150.0	0.978	5.3	0.0108	0.33	0.63	0.33
2/17/2023	3:45	192.1	0.702	694.8	0.463	0.22	1.95	0.22	150.0	0.978	4.2	0.0085	0.33	0.63	0.33
2/17/2023	3:46	192.1	0.706	688.3	0.459	0.21	1.96	0.21	149.9	0.978	11.7	0.0236	0.33	0.63	0.33
2/17/2023	3:47	192.1	0.706	1,040.9	0.695	0.21	1.93	0.21	150.0	0.978	8.5	0.0173	0.33	0.63	0.33
2/17/2023	3:48	192.1	0.707	703.1	0.464	0.21	1.94	0.21	150.0	0.978	5.8	0.0118	0.33	0.63	0.33
2/17/2023	3:49	192.1	0.700	641.4	0.429	0.22	1.94	0.22	150.0	0.978	3.7	0.0075	0.33	0.64	0.33
2/17/2023	3:50				--				150.0	0.978	2.5	0.0051	0.33	0.63	0.33
2/17/2023	3:51	192.1	0.689	585.5	0.390	0.26	1.95	0.26	150.0	0.978	2.1	0.0043	0.33	0.63	0.33
2/17/2023	3:52	192.1	0.686	563.0	0.374	0.28	1.94	0.28	150.0	0.978	6.5	0.0132	0.33	0.62	0.33
2/17/2023	3:53	192.1	0.686	551.0	0.366	0.29	1.95	0.29	150.0	0.978	8.9	0.0179	0.33	0.62	0.33
2/17/2023	3:54	192.1	0.688	683.5	0.453	0.29	1.95	0.29	150.0	0.978	6.2	0.0125	0.33	0.62	0.33
2/17/2023	3:55	192.1	0.691	757.6	0.501	0.29	1.93	0.29	149.9	0.978	3.7	0.0075	0.33	0.62	0.33
2/17/2023	3:56	192.1	0.695	560.7	0.376	0.27	1.94	0.27	150.0	0.978	2.7	0.0055	0.33	0.62	0.33
2/17/2023	3:57	192.1	0.697	545.2	0.363	0.27	1.95	0.27	150.0	0.978	1.7	0.0035	0.33	0.62	0.33
2/17/2023	3:58	192.1	0.698	534.9	0.357	0.28	1.97	0.28	150.0	0.978	1.2	0.0025	0.33	0.62	0.33
2/17/2023	3:59	192.1	0.700	525.6	0.349	0.28	1.99	0.28	150.0	0.978	0.9	0.0018	0.33	0.62	0.33
2/17/2023	4:00	192.1	0.702	519.1	0.303	0.28	1.99	0.28	150.0	0.978	0.8	0.0017	0.33	0.62	0.33
2/17/2023	4:01	192.1	0.705	516.6	0.284	0.28	2.01	0.28	150.0	0.978	1.0	0.0020	0.34	0.62	0.34
2/17/2023	4:02	192.1	0.710	518.0	0.292	0.28	2.02	0.28	150.0	0.978	8.4	0.0170	0.33	0.63	0.33
2/17/2023	4:03	192.1	0.713	514.1	0.308	0.28	2.04	0.28	150.0	0.978	7.0	0.0140	0.33	0.62	0.33
2/17/2023	4:04	192.1	0.714	884.4	0.547	0.29	2.06	0.29	150.0	0.978	4.7	0.0092	0.33	0.62	0.33
2/17/2023	4:05	192.1	0.716	542.1	0.343	0.28	2.07	0.28				--			
2/17/2023	4:06	192.2	0.718	508.2	0.332	0.28	2.06	0.28	150.0	0.978	3.0	0.0060	0.33	0.62	0.33
2/17/2023	4:07	192.2	0.720	499.3	0.327	0.29	2.04	0.29	149.9	0.978	1.8	0.0035	0.33	0.62	0.33
2/17/2023	4:08	192.1	0.723	492.6	0.328	0.28	2.00	0.28	150.0	0.978	1.2	0.0024	0.33	0.62	0.33
2/17/2023	4:09	192.1	0.725	488.7	0.323	0.28	1.94	0.28	150.0	0.978	0.5	0.0011	0.33	0.62	0.33
2/17/2023	4:10	192.1	0.728	487.3	0.324	0.28	1.92	0.28	149.9	0.978	3.9	0.0080	0.33	0.62	0.33
2/17/2023	4:11	192.1	0.730	939.9	0.630	0.29	1.91	0.29	150.0	0.978	5.7	0.0115	0.33	0.62	0.33
2/17/2023	4:12				--				150.0	0.978	4.2	0.0086	0.33	0.61	0.33
2/17/2023	4:13	192.1	0.731	559.2	0.373	0.27	1.91	0.27	150.0	0.978	2.7	0.0056	0.33	0.62	0.33
2/17/2023	4:14	192.1	0.733	509.4	0.337	0.27	1.91	0.27	150.0	0.978	1.9	0.0038	0.32	0.61	0.32
2/17/2023	4:15	192.1	0.734	494.5	0.330	0.28	1.91	0.28	149.9	0.978	1.4	0.0028	0.32	0.61	0.32
2/17/2023	4:16	192.1	0.735	478.2	0.322	0.28	1.91	0.28	150.0	0.978	5.8	0.0120	0.32	0.61	0.32
2/17/2023	4:17	192.1	0.736	468.1	0.315	0.29	1.90	0.29	150.0	0.978	10.4	0.0215	0.32	0.60	0.32
2/17/2023	4:18	192.1	0.737	535.8	0.359	0.29	1.93	0.29	150.0	0.978	7.1	0.0146	0.32	0.60	0.32
2/17/2023	4:19	192.1	0.739	843.0	0.569	0.30	1.92	0.30	150.0	0.979	4.4	0.0090	0.32	0.61	0.32
2/17/2023	4:20	192.1	0.741	462.8	0.313	0.29	1.92	0.29	150.0	0.979	2.9	0.0060	0.31	0.61	0.31
2/17/2023	4:21	192.1	0.743	443.2	0.299	0.29	1.92	0.29	150.0	0.978	1.7	0.0035	0.32	0.60	0.32
2/17/2023	4:22	192.1	0.744	430.3	0.291	0.29	1.91	0.29	150.0	0.979	4.2	0.0086	0.32	0.60	0.32
2/17/2023	4:23	192.1	0.745	421.7	0.282	0.29	1.92	0.29	150.0	0.978	9.5	0.0196	0.32	0.60	0.32
2/17/2023	4:24	192.1	0.746	413.2	0.277	0.31	1.92	0.31	150.0	0.978	6.9	0.0141	0.32	0.60	0.32
2/17/2023	4:25	192.1	0.747	893.2	0.598	0.32	1.93	0.32	150.0	0.978	4.4	0.0091	0.32	0.60	0.32
2/17/2023	4:26	192.1	0.748	424.9	0.284	0.31	1.94	0.31	150.0	0.978	2.4	0.0049	0.32	0.60	0.32
2/17/2023	4:27	192.1	0.750	401.8	0.270	0.31	1.94	0.31	150.0	0.979	1.7	0.0035	0.32	0.60	0.32
2/17/2023	4:28	192.1	0.750	391.3	0.260	0.32	1.94	0.32				--			
2/17/2023	4:29	192.1	0.751	382.0	0.256	0.32	1.93	0.32	150.0	0.979	1.1	0.0023	0.32	0.60	0.32
2/17/2023	4:30	192.1	0.752	374.4	0.251	0.32	1.91	0.32	150.0	0.979	8.6	0.0179	0.32	0.60	0.32
2/17/2023	4:31	192.1	0.753	831.5	0.559	0.34	1.90	0.34	150.0	0.979	10.3	0.0214	0.32	0.60	0.32
2/17/2023	4:32	192.1	0.753	444.8	0.297	0.33	1.90	0.33	150.0	0.979	6.7	0.0139	0.32	0.60	0.32
2/17/2023	4:33	192.1	0.754	375.5	0.252	0.32	1.91	0.32	150.0	0.979	4.3	0.0090	0.32	0.60	0.32
2/17/2023	4:34				--				150.0	0.979	2.5	0.0051	0.32	0.60	0.32
2/17/2023	4:35	192.1	0.755	358.4	0.241	0.33	1.89	0.33	150.0	0.979	1.6	0.0033	0.31	0.60	0.31
2/17/2023	4:36	192.1	0.756	348.5	0.232	0.33	1.90	0.33	150.0	0.979	6.9	0.0143	0.31	0.59	0.31
2/17/2023	4:37	192.1	0.757	342.1	0.228	0.33	1.88	0.33	150.0	0.979	10.0	0.0208	0.31	0.59	0.31
2/17/2023	4:38	192.1	0.758	756.5	0.505	0.35	1.87	0.35	150.0	0.978	6.8	0.0141	0.31	0.59	0.31
2/17/2023	4:39	192.1	0.759	446.2	0.298	0.34	1.88	0.34	150.0	0.979	4.5	0.0093	0.31	0.59	0.31
2/17/2023	4:40	192.1	0.759	345.8	0.231	0.34	1.88	0.34	150.0	0.979	2.6	0.0055	0.31	0.59	0.31
2/17/2023	4:41	192.1	0.760	327.6	0.221	0.35	1.88	0.35	150.0	0.979	1.5	0.0031	0.31	0.58	0.31
2/17/2023	4:42	192.1	0.760	317.9	0.214	0.34	1.88	0.34	150.0	0.979	1.1	0.0023	0.31	0.59	0.31
2/17/2023	4:43	192.1	0.761	311.8	0.210	0.34	1.89	0.34	150.0	0.979	9.3	0.0192	0.31	0.59	0.31
2/17/2023	4:44	192.1	0.762	305.3	0.206	0.34	1.90	0.34	150.0	0.979	10.2	0.0210	0.31	0.59	0.31
2/17/2023	4:45	192.1	0.762	809.3	0.545	0.36	1.90	0.36	150.0	0.979	6.6	0.0136	0.31	0.59	0.31
2/17/2023	4:46	192.1	0.762	354.7	0.239	0.35	1.89	0.35	150.0	0.979	3.8	0.0079	0.31	0.59	0.31
2/17/2023	4:47	192.1	0.763	308.7	0.207	0.35	1.88	0.35	150.0	0.978	2.4	0.0050	0.31	0.59	0.31
2/17/2023	4:48	192.1	0.764	293.6	0.198	0.35	1.86	0.35	150.0	0.979	1.5	0.0032	0.31	0.58	0.31
2/17/2023	4:49	192.1	0.765	285.2	0.194	0.36	1.88	0.36	150.0	0.978	9.6	0.0200	0.31	0.58	0.31

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet $_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet $_{used}$**
	Unit	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**°C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/17/2023	4:50	192.1	0.766	280.4	0.188	0.36	1.87	0.36	150.0	0.979	8.3	0.0173	0.31	0.58	0.31
2/17/2023	4:51	192.1	0.767	730.1	0.492	0.37	1.88	0.37	150.0	0.979	5.3	0.0112	0.31	0.58	0.31
2/17/2023	4:52	192.1	0.767	308.0	0.207	0.36	1.89	0.36				--			
2/17/2023	4:53	192.1	0.767	257.5	0.173	0.39	1.90	0.39	150.0	0.979	3.0	0.0063	0.31	0.58	0.31
2/17/2023	4:54	192.1	0.768	247.4	0.167	0.38	1.91	0.38	150.0	0.979	1.8	0.0039	0.31	0.58	0.31
2/17/2023	4:55	192.1	0.769	241.8	0.164	0.39	1.91	0.39	150.0	0.979	2.9	0.0062	0.31	0.58	0.31
2/17/2023	4:56				--				150.0	0.979	11.0	0.0230	0.31	0.58	0.31
2/17/2023	4:57	192.1	0.771	237.5	0.161	0.39	1.92	0.39	150.0	0.979	8.2	0.0174	0.31	0.58	0.31
2/17/2023	4:58	192.1	0.772	752.6	0.505	0.38	1.91	0.38	150.0	0.979	4.8	0.0101	0.31	0.58	0.31
2/17/2023	4:59	192.1	0.773	277.3	0.188	0.37	1.91	0.37	150.0	0.978	2.8	0.0059	0.31	0.58	0.31
2/17/2023	5:00	192.1	0.773	234.5	0.158	0.39	1.89	0.39	150.0	0.979	5.3	0.0112	0.31	0.58	0.31
2/17/2023	5:01	192.1	0.773	223.5	0.150	0.39	1.89	0.39	150.0	0.979	14.3	0.0299	0.30	0.57	0.30
2/17/2023	5:02	192.1	0.771	216.0	0.146	0.39	1.90	0.39	150.0	0.978	9.6	0.0203	0.31	0.57	0.31
2/17/2023	5:03	192.1	0.769	802.8	0.539	0.40	1.90	0.40	150.0	0.979	6.2	0.0130	0.31	0.57	0.31
2/17/2023	5:04	192.1	0.688	197.1	0.131	0.45	1.89	0.45	150.0	0.979	3.4	0.0072	0.31	0.57	0.31
2/17/2023	5:05	192.1	0.663	136.9	0.091	0.52	1.89	0.52	150.0	0.979	2.0	0.0043	0.31	0.57	0.31
2/17/2023	5:06	192.1	0.700	156.3	0.103	0.47	1.89	0.47	150.0	0.979	1.5	0.0032	0.31	0.57	0.31
2/17/2023	5:07	192.1	0.714	161.0	0.106	0.45	1.89	0.45	150.0	0.979	10.1	0.0214	0.31	0.57	0.31
2/17/2023	5:08	192.1	0.721	160.6	0.105	0.45	1.88	0.45	150.0	0.979	11.1	0.0236	0.31	0.57	0.31
2/17/2023	5:09	192.1	0.724	645.1	0.424	0.44	1.88	0.44	150.0	0.979	7.1	0.0149	0.31	0.57	0.31
2/17/2023	5:10	192.1	0.725	209.3	0.140	0.44	1.85	0.44	150.0	0.979	3.9	0.0081	0.31	0.57	0.31
2/17/2023	5:11	192.1	0.726	168.7	0.113	0.44	1.84	0.44	150.0	0.979	2.4	0.0050	0.30	0.56	0.30
2/17/2023	5:12	192.1	0.727	157.6	0.105	0.45	1.85	0.45	150.0	0.979	1.5	0.0031	0.31	0.56	0.31
2/17/2023	5:13	192.1	0.729	152.5	0.102	0.44	1.83	0.44	150.0	0.979	3.1	0.0066	0.31	0.57	0.31
2/17/2023	5:14	192.1	0.730	149.9	0.101	0.44	1.82	0.44	150.0	0.979	10.5	0.0220	0.30	0.57	0.30
2/17/2023	5:15	192.1	0.730	146.2	0.098	0.45	1.81	0.45				--			
2/17/2023	5:16	192.1	0.733	656.0	0.444	0.44	1.81	0.44	150.0	0.979	7.5	0.0158	0.31	0.57	0.31
2/17/2023	5:17	192.1	0.735	168.4	0.113	0.44	1.81	0.44	150.0	0.979	4.8	0.0100	0.30	0.57	0.30
2/17/2023	5:18				--				150.0	0.979	2.6	0.0054	0.31	0.56	0.31
2/17/2023	5:19	192.1	0.736	152.0	0.109	0.44	1.79	0.44	150.0	0.979	1.7	0.0035	0.31	0.56	0.31
2/17/2023	5:20	192.1	0.736	144.1	0.097	0.44	1.77	0.44	150.0	0.979	1.7	0.0036	0.31	0.56	0.31
2/17/2023	5:21	192.1	0.736	138.9	0.094	0.44	1.78	0.44	150.0	0.979	12.3	0.0260	0.30	0.56	0.30
2/17/2023	5:22	192.2	0.736	135.3	0.091	0.45	1.78	0.45	150.0	0.979	9.6	0.0203	0.30	0.56	0.30
2/17/2023	5:23	192.2	0.735	666.7	0.451	0.44	1.79	0.44	150.0	0.979	6.1	0.0130	0.30	0.56	0.30
2/17/2023	5:24	192.2	0.737	165.5	0.112	0.44	1.79	0.44	150.0	0.979	3.7	0.0078	0.30	0.56	0.30
2/17/2023	5:25	192.2	0.743	142.2	0.103	0.44	1.79	0.44	150.0	0.979	2.1	0.0045	0.30	0.56	0.30
2/17/2023	5:26	192.1	0.745	134.6	0.091	0.45	1.80	0.45	150.0	0.979	1.3	0.0028	0.30	0.56	0.30
2/17/2023	5:27	192.1	0.745	129.8	0.088	0.44	1.81	0.44	150.0	0.979	0.6	0.0014	0.30	0.55	0.30
2/17/2023	5:28	192.1	0.746	125.6	0.085	0.45	1.81	0.45	150.0	0.979	11.3	0.0240	0.30	0.55	0.30
2/17/2023	5:29	192.1	0.744	123.0	0.083	0.45	1.82	0.45	150.0	0.979	9.8	0.0209	0.30	0.55	0.30
2/17/2023	5:30	192.1	0.714	565.4	0.386	0.47	1.82	0.47	150.0	0.979	6.0	0.0127	0.30	0.55	0.30
2/17/2023	5:31	192.1	0.720	139.8	0.094	0.47	1.83	0.47	150.0	0.979	3.5	0.0074	0.30	0.56	0.30
2/17/2023	5:32	192.2	0.724	117.2	0.085	0.46	1.83	0.46	150.0	0.979	1.7	0.0037	0.30	0.56	0.30
2/17/2023	5:33	192.2	0.722	108.3	0.073	0.46	1.82	0.46	150.0	0.979	2.8	0.0060	0.30	0.55	0.30
2/17/2023	5:34	192.2	0.721	103.2	0.069	0.46	1.82	0.46	150.0	0.979	10.0	0.0211	0.30	0.55	0.30
2/17/2023	5:35	192.1	0.722	100.9	0.068	0.47	1.83	0.47	150.0	0.979	7.4	0.0156	0.30	0.55	0.30
2/17/2023	5:36	192.1	0.722	558.5	0.368	0.47	1.83	0.47	150.0	0.979	4.3	0.0090	0.30	0.55	0.30
2/17/2023	5:37	192.1	0.724	121.4	0.081	0.47	1.83	0.47	150.0	0.979	2.3	0.0048	0.30	0.55	0.30
2/17/2023	5:38	192.1	0.724	104.3	0.069	0.47	1.83	0.47				--			
2/17/2023	5:39	192.1	0.725	97.5	0.064	0.47	1.82	0.47	150.0	0.979	1.5	0.0032	0.30	0.56	0.30
2/17/2023	5:40				--				150.0	0.979	0.9	0.0019	0.30	0.55	0.30
2/17/2023	5:41	192.1	0.724	93.9	0.063	0.47	1.83	0.47	150.0	0.979	6.4	0.0135	0.30	0.55	0.30
2/17/2023	5:42	192.1	0.724	91.2	0.060	0.47	1.81	0.47	150.0	0.979	11.1	0.0237	0.30	0.55	0.30
2/17/2023	5:43	192.1	0.725	540.8	0.361	0.48	1.80	0.48	150.0	0.979	7.4	0.0156	0.30	0.55	0.30
2/17/2023	5:44	192.1	0.724	187.3	0.126	0.46	1.80	0.46	150.0	0.979	4.6	0.0097	0.30	0.55	0.30
2/17/2023	5:45	192.1	0.724	106.3	0.072	0.46	1.80	0.46	150.0	0.979	2.4	0.0050	0.30	0.55	0.30
2/17/2023	5:46	192.1	0.724	92.6	0.062	0.47	1.79	0.47	150.0	0.979	1.4	0.0030	0.30	0.55	0.30
2/17/2023	5:47	192.1	0.724	87.1	0.059	0.47	1.81	0.47	150.0	0.979	1.1	0.0023	0.30	0.55	0.30
2/17/2023	5:48	192.1	0.725	83.8	0.056	0.47	1.81	0.47	150.0	0.979	4.6	0.0098	0.30	0.55	0.30
2/17/2023	5:49	192.1	0.726	81.9	0.055	0.47	1.81	0.47	150.0	0.979	7.9	0.0169	0.29	0.55	0.29
2/17/2023	5:50	192.1	0.726	447.0	0.302	0.47	1.81	0.47	150.0	0.979	5.1	0.0108	0.29	0.55	0.29
2/17/2023	5:51	192.1	0.726	145.3	0.097	0.46	1.82	0.46	150.0	0.979	3.1	0.0066	0.30	0.54	0.30
2/17/2023	5:52	192.1	0.726	94.5	0.064	0.47	1.81	0.47	150.0	0.979	2.1	0.0044	0.29	0.54	0.29
2/17/2023	5:53	192.1	0.725	83.0	0.055	0.47	1.81	0.47	150.0	0.979	5.0	0.0108	0.29	0.54	0.29
2/17/2023	5:54	192.1	0.725	77.5	0.051	0.47	1.82	0.47	150.0	0.979	4.2	0.0091	0.29	0.55	0.29
2/17/2023	5:55	192.1	0.725	286.0	0.189	0.45	1.81	0.45	150.0	0.979	2.4	0.0052	0.29	0.54	0.29
2/17/2023	5:56	192.1	0.725	94.4	0.063	0.47	1.82	0.47	150.0	0.979	4.6	0.0098	0.29	0.55	0.29
2/17/2023	5:57	192.1	0.725	79.8	0.052	0.48	1.83	0.48	150.0	0.979	10.3	0.0219	0.29	0.55	0.29
2/17/2023	5:58	192.1	0.726	369.4	0.247	0.48	1.83	0.48	150.0	0.979	7.0	0.0149	0.29	0.54	0.29
2/17/2023	5:59	192.1	0.726	232.8	0.156	0.45	1.82	0.45	150.0	0.979	4.1	0.0088	0.29	0.54	0.29
2/17/2023	6:00	192.1	0.726	88.5	0.058	0.47	1.81	0.47	150.0	0.979	2.0	0.0042	0.29	0.54	0.29
2/17/2023	6:01	192.1	0.726	74.7	0.050	0.47	1.81	0.47	150.0	0.979	1.5	0.0031	0.29	0.54	0.29
2/17/2023	6:02				--							--			
2/17/2023	6:03	192.1	0.726	68.8	0.046	0.47	1.81	0.47	150.1	0.979	3.7	0.0080	0.28	0.54	0.28
2/17/2023	6:04	192.2	0.726	69.8	0.047	0.46	1.80	0.46	150.0	0.979	9.9	0.0210	0.29	0.54	0.29
2/17/2023	6:05	192.2	0.726	380.3	0.256	0.47	1.80	0.47	150.0	0.979	6.6	0.0141	0.29	0.54	0.29
2/17/2023	6:06	192.1	0.726	233.0	0.157	0.45	1.81	0.45	150.0	0.979	4.0	0.0086	0.29	0.54	0.29
2/17/2023	6:07	192.2	0.726	83.0	0.056	0.47	1.80	0.47	150.0	0.980	2.4	0.0051	0.28	0.54	0.28
2/17/2023	6:08	192.2	0.726	68.2	0.046	0.46	1.79	0.46	150.0	0.979	1.6	0.0034	0.28	0.54	0.28
2/17/2023	6:09	192.1	0.724	62.6	0.042	0.47	1.78	0.47	150.0	0.980	8.8	0.0188	0.28	0.53	0.28
2/17/2023	6:10	192.1	0.724	59.3	0.039	0.47	1.77	0.47	150.0	0.979	7.0	0.0148	0.28	0.53	0.28
2/17/2023	6:11	192.1	0.724	493.2	0.326	0.48	1.78	0.48	150.0	0.980	4.4	0.0094	0.28	0.53	0.28
2/17/2023	6:12	192.1	0.723	83.5	0.055	0.46	1.78	0.46	150.0	0.979	3.0	0.0064	0.28	0.54	0.28
2/17/2023	6:13	192.2	0.723	64.5	0.043	0.47	1.78	0.47	150.0	0.980	2.8	0.0061	0.28	0.53	0.28
2/17/2023	6:14	192.2	0.723	58.0	0.038	0.47	1.77	0.47	150.0	0.979	10.1	0.0216	0.28	0.53	0.28
2/17/2023	6:15	192.2	0.723	56.4	0.037	0.47	1.79	0.47	150.0	0.979	7.6	0.0162	0.28	0.53	0.28
2/17/2023	6:16	192.2	0.723	492.0	0.326	0.48	1.77	0.48	150.0	0.979	4.7	0.0101	0.28	0.53	0.28
2/17/2023	6:17	192.1	0.724	73.8	0.049	0.47	1.78	0.47	150.0	0.979	2.7	0.0057	0.27	0.53	0.27
2/17/2023	6:18	192.1	0.724	58.3	0.039	0.47	1.78	0.47	150.0	0.979	5.4	0.0114	0.28	0.53	0.28
2/17/2023	6:19	192.1	0.724	53.1	0.036	0.47	1.77	0.47	150.0	0.980	10.2	0.0219	0.27	0.53	0.27
2/17/2023	6:20	192.2	0.725	445.2	0.285	0.48	1.78	0.48	150.0	0.980	7.0	0.0152	0.27	0.53	0.27
2/17/2023	6:21	192.2	0.725	123.5	0.021	0.46	1.79	0.46	150.0	0.980	4.3	0.0092	0.27	0.54	0.27
2/17/2023	6:22	192.2	0.725	64.5	0.009	0.47	1.78	0.47	150.0	0.979	2.9	0.0062	0.28	0.53	0.28
2/17/2023	6:23	192.2	0.725	54.2	0.006	0.47	1.78	0.47	150.0	0.979	5.8	0.0124	0.28	0.53	0.28
2/17/2023	6:24				--				150.0	0.979	9.5	0.0173	0.27	0.53	0.27

Alliance SOURCE TESTING

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

		Inlet							Outlet						
Date	**Time**	**Temperature - Inlet**	**Pressure - Inlet**	**Ethylene Oxide - Inlet**	**Ethylene Oxide - Inlet**	**BWS - Inlet**	**BWS - Inlet$_{wet}$**	**BWS - Inlet$_{used}$**	**Temperature - Outlet**	**Pressure - Outlet**	**Ethylene Oxide - Outlet**	**Ethylene Oxide - Outlet**	**BWS - Outlet**	**BWS - Outlet$_{wet}$**	**BWS - Outlet$_{used}$**
	Unit	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**	**° C**	**atm**	**ppmvw**	**lb/hr**	**% (wet)**	**% (wet)**	**% (wet)**
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/17/2023	6:25	192.1	0.726	49.2	0.002	0.47	1.80	0.47				--			
2/17/2023	6:26	192.2	0.726	455.3	0.000	0.48	1.78	0.48	150.0	0.979	6.2	0.0109	0.27	0.52	0.27
2/17/2023	6:27	192.2	0.726	100.1	0.003	0.46	1.78	0.46	150.0	0.979	4.0	0.0070	0.28	0.53	0.28
2/17/2023	6:28	192.2	0.727	59.9	0.000	0.47	1.74	0.47	150.0	0.979	2.2	0.0039	0.27	0.52	0.27
2/17/2023	6:29	192.2	0.726	49.8	0.000	0.47	1.63	0.47	150.0	0.979	0.3	0.0006	0.28	0.52	0.28
2/17/2023	6:30	192.2	0.727	45.9	0.000	0.47	1.54	0.47	150.0	0.979	0.2	0.0004	0.28	0.52	0.28
2/17/2023	6:31	192.2	0.726	847.6	0.068	0.49	1.43	0.49	150.0	0.979	0.1	0.0001	0.27	0.51	0.27
2/17/2023	6:32	192.2	0.725	373.8	0.000	0.47	1.34	0.47	150.0	0.979	0.1	0.0001	0.27	0.51	0.27
2/17/2023	6:33	192.1	0.727	143.6	0.004	0.45	1.26	0.45	150.0	0.979	0.1	0.0001	0.27	0.51	0.27
2/17/2023	6:34	192.1	0.727	108.0	0.000	0.46	1.20	0.46	150.0	0.979	0.3	0.0006	0.28	0.51	0.28
2/17/2023	6:35	192.1	0.728	93.2	0.000	0.46	1.14	0.46	150.0	0.979	0.2	0.0004	0.27	0.51	0.27
2/17/2023	6:36	192.1	0.728	230.1	0.007	0.45	1.10	0.45	150.0	0.979	0.4	0.0007	0.27	0.51	0.27
2/17/2023	6:37	192.1	0.729	7,033.3	0.202	0.45	1.05	0.45	150.0	0.979	0.5	0.0008	0.27	0.51	0.27
2/17/2023	6:38	192.2	0.730	3,464.2	0.000	0.45	1.01	0.45	150.0	0.979	0.2	0.0003	0.27	0.51	0.27
2/17/2023	6:39	192.2	0.730	2,593.9	0.075	0.44	0.96	0.44	150.0	0.979	0.3	0.0005	0.27	0.51	0.27
2/17/2023	6:40	192.1	0.731	1,190.9	0.034	0.47	0.93	0.47	150.0	0.979	0.1	0.0002	0.27	0.51	0.27
2/17/2023	6:41	192.1	0.732	456.3	0.019	0.48	0.89	0.48	150.0	0.979	0.1	0.0001	0.27	0.51	0.27
2/17/2023	6:42	192.1	0.733	2,082.0	0.159	0.51	0.86	0.51	150.0	0.979	0.2	0.0004	0.27	0.51	0.27
2/17/2023	6:43	192.1	0.734	3,952.0	0.000	0.47	0.84	0.47	150.0	0.980	0.3	0.0005	0.27	0.51	0.27
2/17/2023	6:44	192.2	0.735	1,292.1	0.000	0.45	0.81	0.45	150.0	0.979	0.4	0.0007	0.27	0.50	0.27
2/17/2023	6:45	192.2	0.737	686.8	0.000	0.47	0.80	0.47	150.0	0.979	0.2	0.0003	0.27	0.50	0.27
2/17/2023	6:46				--				150.0	0.979	0.2	0.0004	0.27	0.50	0.27
2/17/2023	6:47	192.2	0.738	442.8	0.000	0.48	0.75	0.48	150.0	0.979	0.3	0.0005	0.27	0.50	0.27
2/17/2023	6:48	192.1	0.739	436.6	0.013	0.49	0.73	0.49				--			
2/17/2023	6:49	192.1	0.739	6,164.7	0.178	0.48	0.72	0.48	150.0	0.979	0.2	0.0004	0.27	0.50	0.27
2/17/2023	6:50	192.2	0.741	1,806.2	0.052	0.45	0.70	0.45	150.0	0.979	0.3	0.0006	0.27	0.50	0.27
2/17/2023	6:51	192.2	0.742	898.7	0.000	0.48	0.69	0.48	150.0	0.979	0.1	0.0001	0.27	0.50	0.27
2/17/2023	6:52	192.1	0.744	539.9	0.000	0.49	0.67	0.49	150.0	0.979	0.4	0.0007	0.27	0.50	0.27
2/17/2023	6:53	192.2	0.746	357.8	0.000	0.48	0.66	0.48	150.0	0.980	0.1	0.0001	0.27	0.50	0.27
2/17/2023	6:54	192.2	0.748	4,852.6	0.140	0.50	0.65	0.50	150.0	0.979	0.1	0.0002	0.27	0.50	0.27
2/17/2023	6:55	192.1	0.749	2,223.0	0.064	0.45	0.63	0.45	150.0	0.979	0.1	0.0001	0.27	0.50	0.27
2/17/2023	6:56	192.1	0.751	1,032.6	0.030	0.48	0.62	0.48	150.0	0.979	0.1	0.0002	0.27	0.50	0.27
2/17/2023	6:57	192.1	0.751	632.6	0.018	0.47	0.61	0.47	150.0	0.980	0.1	0.0001	0.27	0.50	0.27
2/17/2023	6:58	192.2	0.753	422.8	0.012	0.48	0.61	0.48	150.0	0.980	0.1	0.0001	0.27	0.50	0.27
2/17/2023	6:59	192.2	0.754	3,861.4	0.112	0.53	0.62	0.53	150.0	0.980	0.1	0.0001	0.27	0.49	0.27
2/17/2023	7:00	192.2	0.755	2,859.7	0.000	0.46	0.61	0.46	150.0	0.979	0.1	0.0001	0.27	0.50	0.27
2/17/2023	7:01	192.2	0.756	1,312.4	0.054	0.46	0.61	0.46	150.0	0.980	0.1	0.0001	0.27	0.50	0.27
2/17/2023	7:02	192.2	0.758	784.5	0.000	0.47	0.60	0.47	150.0	0.980	0.1	0.0001	0.27	0.50	0.27
2/17/2023	7:03	192.2	0.760	500.1	0.000	0.49	0.59	0.49	150.1	0.980	0.1	0.0001	0.27	0.49	0.27
2/17/2023	7:04	192.2	0.761	5,456.4	0.158	0.49	0.59	0.49	150.1	0.980	0.1	0.0001	0.27	0.50	0.27
2/17/2023	7:05	192.1	0.762	2,394.7	0.069	0.44	0.59	0.44	150.1	0.980	0.1	0.0001	0.27	0.50	0.27
2/17/2023	7:06	192.1	0.764	1,097.7	0.032	0.48	0.59	0.48	150.0	0.980	0.1	0.0001	0.27	0.49	0.27
2/17/2023	7:07	192.2	0.765	615.9	0.018	0.47	0.58	0.47	150.1	0.980	0.1	0.0001	0.27	0.49	0.27
2/17/2023	7:08				--				150.0	0.980	0.1	0.0001	0.27	0.49	0.27
2/17/2023	7:09	192.1	0.766	1,361.6	0.039	0.50	0.58	0.50	150.0	0.980	0.1	0.0001	0.27	0.49	0.27
2/17/2023	7:10	192.2	0.767	4,698.3	0.136	0.48	0.58	0.48	150.0	0.979	0.1	0.0001	0.27	0.49	0.27
2/17/2023	7:11	192.2	0.768	1,318.6	0.038	0.45	0.57	0.45	150.0	0.980	0.1	0.0001	0.27	0.49	0.27
2/17/2023	7:12	192.2	0.769	537.6	0.016	0.48	0.57	0.48				--			
2/17/2023	7:13	192.2	0.770	258.8	0.000	0.44	0.57	0.44	150.1	0.980	0.1	0.0001	0.27	0.50	0.27
2/17/2023	7:14	192.2	0.771	4,505.2	0.000	0.56	0.56	0.56	150.1	0.980	0.1	0.0001	0.27	0.50	0.27
2/17/2023	7:15	192.2	0.772	1,539.4	0.045	0.45	0.56	0.45	150.0	0.980	0.1	0.0001	0.27	0.49	0.27
2/17/2023	7:16	192.2	0.772	455.0	0.040	0.47	0.55	0.47	150.1	0.980	0.1	0.0001	0.26	0.49	0.26
2/17/2023	7:17	192.2	0.774	230.2	0.007	0.44	0.55	0.44	150.1	0.980	0.1	0.0001	0.27	0.50	0.27
2/17/2023	7:18	192.2	0.775	198.8	0.000	0.45	0.55	0.45	150.0	0.980	0.1	0.0002	0.27	0.49	0.27
2/17/2023	7:19	192.1	0.776	5,724.0	0.166	0.54	0.55	0.54	150.0	0.980	0.1	0.0001	0.27	0.50	0.27
2/17/2023	7:20	192.1	0.777	924.5	0.027	0.46	0.54	0.46	150.0	0.980	0.1	0.0001	0.27	0.49	0.27
2/17/2023	7:21	192.2	0.778	343.4	0.000	0.47	0.54	0.47	150.0	0.980	0.1	0.0001	0.26	0.49	0.26
2/17/2023	7:22	192.1	0.779	169.5	0.000	0.44	0.54	0.44	150.0	0.980	0.1	0.0001	0.27	0.49	0.27
2/17/2023	7:23	192.1	0.780	2,823.8	0.000	0.61	0.53	0.53	150.0	0.980	0.1	0.0001	0.26	0.49	0.26
2/17/2023	7:24	192.2	0.781	2,115.9	0.061	0.44	0.53	0.44	150.1	0.980	0.1	0.0001	0.26	0.49	0.26
2/17/2023	7:25	192.1	0.782	443.4	0.013	0.47	0.53	0.47	150.0	0.980	0.1	0.0001	0.26	0.49	0.26
2/17/2023	7:26	192.2	0.782	189.5	0.000	0.44	0.52	0.44	150.0	0.980	0.1	0.0001	0.26	0.49	0.26
2/17/2023	7:27	192.2	0.783	757.9	0.000	0.50	0.52	0.50	150.0	0.980	0.1	0.0001	0.27	0.49	0.27
2/17/2023	7:28	192.2	0.784	4,649.7	0.135	0.54	0.52	0.52	150.0	0.980	0.1	0.0001	0.26	0.49	0.26
2/17/2023	7:29	192.2	0.785	677.4	0.020	0.46	0.52	0.46	150.0	0.980	0.1	0.0001	0.27	0.49	0.27
2/17/2023	7:30				--				150.0	0.980	0.1	0.0001	0.27	0.49	0.27
2/17/2023	7:31	192.2	0.786	276.5	0.008	0.46	0.51	0.46	150.0	0.980	0.1	0.0001	0.26	0.49	0.26
2/17/2023	7:32	192.1	0.786	150.2	0.000	0.45	0.51	0.45	150.1	0.980	0.1	0.0001	0.26	0.49	0.26
2/17/2023	7:33	192.1	0.787	4,119.2	0.000	0.60	0.50	0.50	150.1	0.980	0.1	0.0001	0.26	0.50	0.26
2/17/2023	7:34	192.2	0.788	1,692.9	0.000	0.44	0.50	0.44	150.1	0.980	0.1	0.0001	0.27	0.49	0.27
2/17/2023	7:35	192.1	0.789	384.4	0.000	0.47	0.50	0.47				--			
2/17/2023	7:36	192.1	0.789	181.0	0.000	0.44	0.50	0.44	150.1	0.980	0.2	0.0004	0.26	0.49	0.26
2/17/2023	7:37	192.1	0.790	514.3	0.015	0.50	0.50	0.50	150.0	0.980	0.1	0.0001	0.26	0.49	0.26
2/17/2023	7:38	192.1	0.791	5,623.4	0.000	0.54	0.50	0.50	150.0	0.980	0.1	0.0001	0.26	0.49	0.26
2/17/2023	7:39	192.1	0.792	760.5	0.000	0.46	0.49	0.46	150.0	0.980	0.2	0.0003	0.26	0.54	0.26
2/17/2023	7:40	192.1	0.793	306.2	0.000	0.47	0.49	0.47	150.1	0.980	0.3	0.0005	0.26	0.50	0.26
2/17/2023	7:41	192.1	0.794	165.4	0.005	0.45	0.49	0.45	150.1	0.980	0.1	0.0001	0.26	0.50	0.26
2/17/2023	7:42	192.2	0.795	3,608.5	0.000	0.65	0.49	0.49	150.0	0.980	0.3	0.0005	0.26	0.50	0.26
2/17/2023	7:43	192.2	0.796	1,889.3	0.055	0.45	0.49	0.45	150.0	0.980	0.1	0.0001	0.26	0.50	0.26
2/17/2023	7:44	192.2	0.797	448.7	0.000	0.48	0.49	0.48	150.0	0.980	0.1	0.0001	0.26	0.50	0.26
2/17/2023	7:45	192.2	0.797	232.2	0.000	0.44	0.49	0.44	150.0	0.980	0.1	0.0001	0.26	0.50	0.26
2/17/2023	7:46	192.1	0.798	1,388.1	0.040	0.57	0.49	0.49	150.0	0.980	0.1	0.0001	0.26	0.50	0.26
2/17/2023	7:47	192.2	0.799	4,670.6	0.136	0.58	0.49	0.49	150.0	0.980	0.3	0.0005	0.26	0.50	0.26
2/17/2023	7:48	192.2	0.800	836.0	0.024	0.47	0.48	0.47	150.0	0.980	0.2	0.0003	0.26	0.50	0.26
2/17/2023	7:49	192.2	0.800	371.1	0.000	0.48	0.49	0.48	150.0	0.981	0.1	0.0002	0.26	0.50	0.26
2/17/2023	7:50	192.2	0.801	220.4	0.006	0.45	0.49	0.45	150.0	0.981	0.1	0.0001	0.26	0.50	0.26
2/17/2023	7:51	192.1	0.802	3,457.7	0.000	0.76	0.49	0.49	150.0	0.980	0.2	0.0003	0.26	0.50	0.26
2/17/2023	7:52				--				150.0	0.981	0.3	0.0005	0.26	0.50	0.26
2/17/2023	7:53	192.1	0.803	3,099.9	0.090	0.48	0.49	0.48	150.0	0.980	0.1	0.0001	0.26	0.50	0.26
2/17/2023	7:54	192.1	0.804	668.5	0.019	0.47	0.49	0.47	150.0	0.981	0.3	0.0005	0.26	0.50	0.26
2/17/2023	7:55	192.1	0.805	342.9	0.014	0.47	0.50	0.47	150.0	0.980	0.1	0.0002	0.27	0.51	0.27
2/17/2023	7:56	192.1	0.806	202.7	0.006	0.45	0.50	0.45	150.0	0.981	0.2	0.0003	0.26	0.56	0.26
2/17/2023	7:57	192.2	0.806	6,807.3	0.198	0.68	0.50	0.50	150.0	0.981	0.1	0.0001	0.27	0.58	0.27
2/17/2023	7:58	192.1	0.807	2,108.7	0.000	0.46	0.50	0.46	150.0	0.981	0.1	0.0002	0.27	0.57	0.27
2/17/2023	7:59	192.1	0.807	546.5	0.016	0.49	0.51	0.49				--			

Run 1 - FTIR Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/17/2023

Date	Time	Inlet							Outlet						
	Unit	Temperature - Inlet	Pressure - Inlet	Ethylene Oxide - Inlet	Ethylene Oxide - Inlet	BWS - Inlet	BWS - Inlet$_{cc}$	BWS - Inlet$_{used}$	Temperature - Outlet	Pressure - Outlet	Ethylene Oxide - Outlet	Ethylene Oxide - Outlet	BWS - Outlet	BWS - Outlet$_{cc}$	BWS - Outlet$_{used}$
		° C	atm	ppmvw	lb/hr	% (wet)	% (wet)	% (wet)	° C	atm	ppmvw	lb/hr	% (wet)	% (wet)	% (wet)
	Type	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MDL	--	--	**0.08**	--	**0.20**	--	**0.2**	--	--	**0.08**	--	**0.20**	--	**0.2**
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/17/2023	8:00	192.1	0.808	304.1	0.000	0.48	0.51	0.48	150.1	0.981	0.1	0.0001	0.26	0.51	0.26
2/17/2023	8:01	192.2	0.809	1,104.1	0.032	0.56	0.52	0.52	150.0	0.981	0.2	0.0003	0.26	0.51	0.26
2/17/2023	8:02	192.2	0.809	7,043.9	0.205	0.52	0.52	0.52	150.1	0.981	0.1	0.0001	0.26	0.51	0.26
2/17/2023	8:03	192.2	0.810	1,079.6	0.031	0.48	0.53	0.48	150.0	0.981	0.2	0.0003	0.26	0.51	0.26
2/17/2023	8:04	192.2	0.810	441.3	0.000	0.49	0.53	0.49	150.0	0.981	0.5	0.0009	0.26	0.51	0.26
2/17/2023	8:05	192.2	0.811	283.2	0.008	0.48	0.54	0.48	150.1	0.981	0.3	0.0005	0.26	0.51	0.26
2/17/2023	8:06	192.1	0.812	2,361.5	0.000	0.64	0.54	0.54	150.1	0.981	0.1	0.0001	0.26	0.51	0.26
2/17/2023	8:07	192.1	0.812	5,079.8	0.000	0.51	0.55	0.51	150.1	0.980	0.1	0.0001	0.26	0.52	0.26
2/17/2023	8:08	192.2	0.812	703.6	0.000	0.49	0.55	0.49	150.1	0.981	0.1	0.0001	0.26	0.57	0.26
2/17/2023	8:09	192.2	0.814	361.0	0.010	0.51	0.55	0.51	150.1	0.981	0.1	0.0001	0.25	0.55	0.25
2/17/2023	8:10	192.2	0.815	268.3	0.011	0.52	0.56	0.52	150.1	0.981	0.1	0.0002	0.25	0.52	0.25
2/17/2023	8:11	192.2	0.816	5,655.4	0.164	0.68	0.57	0.57	150.0	0.981	0.1	0.0001	0.25	0.52	0.25
2/17/2023	8:12	192.2	0.817	2,360.9	0.000	0.52	0.58	0.52	150.0	0.981	0.1	0.0001	0.25	0.52	0.25
2/17/2023	8:13	192.2	0.818	538.5	0.000	0.55	0.58	0.55	150.0	0.981	0.1	0.0001	0.26	0.52	0.26
2/17/2023	8:14				--				150.0	0.981	0.2	0.0003	0.25	0.52	0.25
2/17/2023	8:15	192.2	0.819	312.1	0.009	0.55	0.59	0.55	150.0	0.981	0.1	0.0001	0.25	0.52	0.25
2/17/2023	8:16	192.1	0.821	1,350.1	0.039	0.63	0.59	0.59	150.0	0.981	0.2	0.0003	0.25	0.52	0.25
2/17/2023	8:17	192.1	0.822	6,750.1	0.000	0.59	0.60	0.59	150.0	0.981	0.1	0.0002	0.25	0.52	0.25
2/17/2023	8:18	192.1	0.823	1,209.7	0.000	0.53	0.60	0.53	150.0	0.981	0.1	0.0001	0.25	0.52	0.25
2/17/2023	8:19	192.1	0.825	542.8	0.000	0.55	0.61	0.55	150.1	0.981	0.1	0.0001	0.25	0.53	0.25
2/17/2023	8:20	192.2	0.826	360.4	0.023	0.55	0.61	0.55	150.0	0.981	0.1	0.0001	0.25	0.52	0.25
2/17/2023	8:21	192.2	0.828	8,106.7	0.574	0.63	0.61	0.61	150.0	0.981	0.1	0.0001	0.26	0.53	0.26
2/17/2023	8:22	192.1	0.829	2,700.0	0.175	0.52	0.61	0.52				--			
2/17/2023	8:23	192.1	0.830	797.6	0.000	0.52	0.61	0.52	150.0	0.981	0.1	0.0001	0.25	0.53	0.25
2/17/2023	8:24	192.2	0.831	424.7	0.012	0.53	0.62	0.53	150.0	0.981	0.1	0.0001	0.25	0.53	0.25
2/17/2023	8:25	192.1	0.833	3,151.0	0.129	0.79	0.62	0.62	150.0	0.981	0.1	0.0001	0.25	0.53	0.25
2/17/2023	8:26	192.1	0.834	4,959.5	0.406	0.54	0.63	0.54	150.0	0.981	0.1	0.0001	0.26	0.53	0.26
2/17/2023	8:27	192.1	0.834	1,376.4	0.000	0.52	0.63	0.52	150.0	0.981	0.1	0.0001	0.25	0.53	0.25
2/17/2023	8:28	192.1	0.835	657.8	0.019	0.54	0.63	0.54	150.0	0.981	0.1	0.0001	0.25	0.53	0.25
2/17/2023	8:29	192.1	0.836	1,448.7	0.042	0.59	0.64	0.59	150.0	0.981	0.1	0.0001	0.25	0.53	0.25
2/17/2023	8:30	192.1	0.837	9,077.8	0.000	0.62	0.65	0.62	150.0	0.981	0.1	0.0001	0.25	0.54	0.25
2/17/2023	8:31	192.1	0.837	2,636.3	0.076	0.53	0.64	0.53	150.0	0.981	0.1	0.0001	0.25	0.65	0.25
2/17/2023	8:32	192.1	0.837	1,079.9	0.044	0.54	0.64	0.54	150.0	0.981	0.1	0.0001	0.25	0.60	0.25
2/17/2023	8:33	192.1	0.837	634.4	0.018	0.54	0.65	0.54	150.1	0.981	0.1	0.0001	0.25	0.54	0.25
2/17/2023	8:34	192.1	0.839	5,683.8	0.000	0.79	0.66	0.66	150.1	0.981	0.1	0.0001	0.25	0.54	0.25
2/17/2023	8:35	192.2	0.840	4,847.0	0.000	0.55	0.66	0.55	150.1	0.981	0.1	0.0001	0.25	0.54	0.25
2/17/2023	8:36				--				150.0	0.981	0.1	0.0001	0.24	0.59	0.24
2/17/2023	8:37	192.2	0.839	1,804.7	0.052	0.52	0.66	0.52	150.0	0.981	0.1	0.0001	0.24	0.56	0.24
2/17/2023	8:38	192.2	0.838	975.9	0.049	0.55	0.66	0.55	150.0	0.981	0.1	0.0001	0.24	0.54	0.24
2/17/2023	8:39	192.1	0.839	9,937.2	0.406	0.56	0.67	0.56	150.0	0.981	0.3	0.0005	0.25	0.54	0.25
2/17/2023	8:40	192.1	0.833	3,356.6	0.097	0.53	0.67	0.53	150.0	0.981	0.1	0.0001	0.24	0.54	0.24
2/17/2023	8:41	192.1	0.823	1,531.2	0.063	0.54	0.67	0.54	150.0	0.981	0.2	0.0003	0.25	0.55	0.25
2/17/2023	8:42	192.1	0.821	2,353.5	0.096	0.63	0.67	0.63	150.0	0.981	0.1	0.0001	0.25	0.55	0.25
2/17/2023	8:43	192.1	0.820	7,237.1	0.295	0.57	0.68	0.57	150.0	0.981	0.1	0.0001	0.24	0.54	0.24
2/17/2023	8:44	192.1	0.815	2,059.0	0.084	0.52	0.68	0.52	150.0	0.981	0.1	0.0001	0.24	0.54	0.24
2/17/2023	8:45	192.1	0.812	4,217.5	0.122	0.76	0.68	0.68				--			
2/17/2023	8:46	192.1	0.801	5,440.6	0.222	0.58	0.68	0.58	150.0	0.981	0.1	0.0001	0.24	0.55	0.24
2/17/2023	8:47	192.1	0.805	2,198.2	0.155	0.55	0.69	0.55	150.0	0.981	0.2	0.0003	0.24	0.55	0.24
2/17/2023	8:48	192.1	0.801	1,205.6	0.049	0.58	0.68	0.58	150.0	0.981	0.1	0.0002	0.25	0.56	0.25
2/17/2023	8:49	192.1	0.742	873.3	0.036	0.64	0.69	0.64	150.0	0.981	0.1	0.0001	0.24	0.56	0.24
2/17/2023	8:50	192.1	0.614	3,984.3	0.000	0.69	0.70	0.69	150.0	0.981	0.1	0.0001	0.24	0.56	0.24
2/17/2023	8:51	192.2	0.625	1,489.0	0.074	0.73	0.70	0.70	150.0	0.981	0.1	0.0002	0.24	0.56	0.24
2/17/2023	8:52	192.2	0.655	837.6	0.034	0.75	0.71	0.71	150.0	0.981	0.1	0.0002	0.24	0.57	0.24
2/17/2023	8:53	192.2	0.668	958.4	0.028	0.73	0.70	0.70	150.0	0.981	0.1	0.0001	0.24	0.55	0.24
2/17/2023	8:54	192.2	0.618	1,612.3	0.046	0.74	0.71	0.71	150.0	0.981	0.1	0.0001	0.24	0.56	0.24
2/17/2023	8:55	192.2	0.601	650.0	0.059	0.77	0.71	0.71	150.0	0.981	0.1	0.0001	0.24	0.56	0.24
2/17/2023	8:56	192.2	0.591	1,369.4	0.039	0.75	0.71	0.71	150.0	0.981	0.1	0.0001	0.24	0.58	0.24
2/17/2023	8:57	192.2	0.593	838.5	0.024	0.74	0.72	0.72	150.1	0.981	0.1	0.0001	0.24	0.57	0.24
2/17/2023	8:58				--				150.1	0.981	0.1	0.0001	0.24	0.58	0.24
2/17/2023	8:59	192.3	0.599	444.2	0.013	0.72	0.73	0.72	150.1	0.981	0.1	0.0001	0.24	0.57	0.24
2/17/2023	9:00	192.3	0.578	2,481.2	0.072	0.71	0.72	0.71	150.0	0.981	0.1	0.0001	0.23	0.59	0.23

Parameter	Temperature - Inlet	Pressure - Inlet	Ethylene Oxide - Inlet	Ethylene Oxide - lb/hr	BWS - Inlet	BWS - InletSAT	BWS - Inlet used	Temperature - Outlet	Pressure - Outlet	Ethylene Oxide - Outlet	Ethylene Oxide - lb/hr	BWS - Outlet	BWS - OutletSAT	BWS - Outlet used
Run Average	192.0	0.911	15350.6	1.3	1.22	1.5	1.1	150.0	0.962	58.4	0.1	0.53	1.4	0.5

Flow and O2/CO2 Recorded Data

Alliance SOURCE TESTING

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet O_2 - Inlet % dry	Inlet CO_2 - Inlet % dry	Inlet Delta P in. W.C.	Inlet Sq Rt Delta P	Inlet Temperature (°F)	Inlet Barometric in. Hg	Inlet Stack Pressure in. W.C.	Inlet Stack Pressure in. Hg	Inlet Molecular Weight Md	Inlet Molecular Weight Mw	Inlet Velocity ft/sec	Inlet Flow Rate (DSCFM)	Outlet O_2 - Outlet % dry	Outlet CO_2 - Outlet % dry	Outlet Delta P in. W.C.	Outlet Sq Rt Delta P	Outlet Temperature (°F)	Outlet Barometric in. Hg	Outlet Stack Pressure in. W.C.	Outlet Stack Pressure in. Hg	Outlet Molecular Weight Md	Outlet Molecular Weight Mw	Outlet Velocity ft/sec	Outlet Flow Rate (DSCFM)	Point in Process -
	Unit	%	%			°F	in. Hg	in. W.C.	in. Hg			ft/sec		%	%			°F	in. Hg	in. W.C.	in. Hg			ft/sec		
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
			(via Servomex)												(via Servomex)											
2/13/2023	9:00	17.77	0.06	0.0004	0.020	49.7	28.66	0.50	28.70	28.72	28.65	1.13	8.24	21.41	0.02	0.0973	0.312	45.7	28.66	0.30	28.68	28.86	28.81	17.52	128.82	
2/13/2023	9:01	16.67	0.06	0.0005	0.022	49.7	28.66	0.50	28.70	28.68	28.60	1.26	9.21	21.38	0.03	0.1014	0.318	45.8	28.66	0.30	28.68	28.86	28.80	17.89	131.49	
2/13/2023	9:02	16.22	0.07	0.0006	0.024	49.9	28.66	0.50	28.70	28.66	28.54	1.39	10.06	21.40	0.02	0.0991	0.315	45.8	28.66	0.30	28.68	28.86	28.81	17.68	130.03	
2/13/2023	9:03	17.14	0.07	0.0007	0.026	49.9	28.66	0.50	28.70	28.70	28.65	1.50	10.92	21.42	0.03	0.1036	0.322	45.9	28.66	0.30	28.68	28.86	28.81	18.08	132.96	
2/13/2023	9:04	17.86	0.07	0.0010	0.032	50.1	28.66	0.50	28.70	28.73	28.65	1.79	13.01	21.41	0.02	0.1034	0.322	46.1	28.66	0.30	28.68	28.86	28.81	18.06	132.81	
2/13/2023	9:05	16.24	0.07	0.0006	0.024	50.2	28.66	0.50	28.70	28.66	28.59	1.39	10.09	21.37	0.02	0.1036	0.322	46.0	28.66	0.30	28.68	28.86	28.81	18.08	132.96	
2/13/2023	9:06	16.47	0.07	0.0006	0.024	50.4	28.66	0.50	28.70	28.67	28.63	1.39	10.11	21.41	0.03	0.1042	0.323	46.2	28.66	0.30	28.68	28.86	28.81	18.14	133.30	
2/13/2023	9:07	17.15	0.07	0.0005	0.022	50.5	28.66	0.50	28.70	28.70	28.64	1.27	9.21	21.41	0.02	0.1018	0.319	46.3	28.66	0.30	28.68	28.86	28.81	17.93	131.76	
2/13/2023	9:08	18.03	0.07	0.0004	0.020	50.7	28.66	0.50	28.70	28.73	28.65	1.13	8.22	21.41	0.02	0.1027	0.320	46.5	28.66	0.30	28.68	28.86	28.81	18.01	132.30	
2/13/2023	9:09	11.57	0.08	0.0004	0.020	50.8	28.66	0.50	28.70	28.48	28.38	1.14	8.25	21.08	0.03	0.1045	0.323	46.5	28.66	0.30	28.68	28.85	28.79	18.17	133.41	
2/13/2023	9:10	3.77	0.03	0.0006	0.024	51.2	28.66	0.50	28.70	28.16	28.11	1.40	10.19	19.40	0.04	0.1040	0.322	46.4	28.66	0.30	28.68	28.78	28.73	18.15	133.32	
2/13/2023	9:11	3.34	0.03	0.0002	0.014	51.7	28.66	0.50	28.70	28.14	28.08	0.81	5.88	15.07	0.01	0.1067	0.327	46.5	28.66	0.30	28.68	28.60	28.55	18.44	135.43	
2/13/2023	9:12	3.13	0.02	0.0075	0.087	52.5	28.66	0.50	28.70	28.13	28.06	4.96	35.93	14.11	0.01	0.1515	0.389	46.5	28.66	0.30	28.68	28.57	28.52	21.99	161.50	
2/13/2023	9:13	3.12	0.02	0.0205	0.143	53.8	28.66	0.50	28.70	28.13	28.03	8.21	59.21	13.67	0.01	0.2180	0.467	46.7	28.66	0.30	28.68	28.55	28.50	26.39	193.80	
2/13/2023	9:14	3.06	0.02	0.0270	0.164	55.3	28.66	0.50	28.70	28.13	28.11	9.43	68.28	13.45	0.01	0.2475	0.497	47.0	28.66	0.30	28.68	28.54	28.49	28.13	206.43	
2/13/2023	9:15	3.03	0.02	0.0332	0.182	57.5	28.66	0.50	28.70	28.12	28.10	10.48	75.56	13.29	0.01	0.2605	0.510	46.9	28.66	0.30	28.68	28.53	--	--	--	
2/13/2023	9:16	2.84	0.02	0.0362	0.190	59.5	28.66	0.50	28.70	28.12	28.10	10.96	78.75	13.15	0.01	0.2706	0.520	47.2	28.66	0.30	28.68	28.53	28.48	29.43	215.79	
2/13/2023	9:17	2.74	0.02	0.0398	0.199	61.5	28.66	0.50	28.70	28.11	--	--	--	13.10	0.00	0.2717	0.521	47.2	28.66	0.30	28.68	28.52	28.47	29.49	216.19	
2/13/2023	9:18	2.67	0.02	0.0413	0.203	63.5	28.66	0.50	28.70	28.11	28.09	11.76	83.81	13.29	0.01	0.2773	0.527	47.4	28.66	0.30	28.68	28.53	28.48	29.79	218.32	
2/13/2023	9:19	2.61	0.03	0.0444	0.211	65.2	28.66	0.50	28.70	28.11	28.08	12.21	86.69	13.31	0.00	0.2754	0.525	47.8	28.66	0.30	28.68	28.53	28.48	29.71	217.48	
2/13/2023	9:20	2.29	0.03	0.0437	0.209	67.2	28.66	0.50	28.70	28.10	28.06	12.14	85.79	13.17	0.00	0.2763	0.526	47.9	28.66	0.30	28.68	28.53	28.47	29.76	217.82	
2/13/2023	9:21	1.62	0.03	0.0375	0.194	69.1	28.66	0.50	28.70	28.07	28.02	11.28	79.30	13.33	0.01	0.2631	0.513	48.1	28.66	0.30	28.68	28.53	28.48	29.04	212.47	
2/13/2023	9:22	1.59	0.03	0.0415	0.204	70.8	28.66	0.50	28.70	28.07	28.02	11.88	83.27	13.17	0.01	0.2669	0.517	48.3	28.66	0.30	28.68	28.53	28.47	29.26	213.98	
2/13/2023	9:23	1.60	0.03	0.0417	0.204	72.2	28.66	0.50	28.70	28.07	28.01	11.93	83.33	13.03	0.01	0.2670	0.517	48.1	28.66	0.30	28.68	28.52	28.47	29.26	214.08	
2/13/2023	9:24	1.58	0.03	0.0403	0.201	73.5	28.66	0.50	28.70	28.07	28.00	11.74	81.77	12.97	0.01	0.2626	0.512	48.6	28.66	0.30	28.68	28.52	28.46	29.04	212.19	
2/13/2023	9:25	1.46	0.03	0.0430	0.207	74.8	28.66	0.50	28.70	28.06	28.00	12.15	84.37	12.94	0.01	0.2708	0.520	48.1	28.66	0.30	28.68	28.52	28.46	29.47	215.57	
2/13/2023	9:26	1.52	0.03	0.0541	0.233	76.1	28.66	0.50	28.70	28.07	28.00	13.64	94.51	12.85	0.01	0.2694	0.519	48.3	28.66	0.30	28.68	28.52	28.46	29.40	214.98	
2/13/2023	9:27	1.55	0.04	0.0462	0.215	76.8	28.66	0.50	28.70	28.07	28.00	12.61	87.25	12.78	0.01	0.2705	0.520	48.6	28.66	0.30	28.68	28.51	28.45	29.47	215.37	
2/13/2023	9:28	1.58	0.04	0.0462	0.215	77.9	28.66	0.50	28.70	28.07	28.00	12.63	87.12	12.79	0.01	0.2748	0.524	48.6	28.66	0.30	28.68	28.51	28.45	29.71	217.05	
2/13/2023	9:29	1.56	0.04	0.0475	0.218	79.0	28.66	0.50	28.70	28.07	27.99	12.82	88.25	12.74	0.01	0.2707	0.520	48.7	28.66	0.30	28.68	28.51	28.45	29.49	215.42	
2/13/2023	9:30	1.58	0.04	0.0483	0.220	80.0	28.66	0.50	28.70	28.07	27.99	12.94	88.89	12.69	0.01	0.2653	0.515	49.0	28.66	0.30	28.68	28.51	28.45	29.20	213.20	
2/13/2023	9:31	1.56	0.04	0.0487	0.221	80.6	28.66	0.50	28.70	28.07	27.99	13.00	89.17	12.66	0.01	0.2688	0.518	49.1	28.66	0.30	28.68	28.51	28.45	29.40	214.57	
2/13/2023	9:32	1.51	0.04	0.0494	0.222	81.2	28.66	0.50	28.70	28.07	27.98	13.10	89.76	12.87	0.01	0.2680	0.518	49.3	28.66	0.30	28.68	28.52	28.45	29.36	214.18	
2/13/2023	9:33	1.51	0.04	0.0504	0.224	81.3	28.66	0.50	28.70	28.07	27.98	13.23	90.63	12.97	0.01	0.2636	0.513	49.1	28.66	0.30	28.68	28.52	28.46	29.11	212.42	
2/13/2023	9:34	1.53	0.04	0.0498	0.223	81.3	28.66	0.50	28.70	28.07	27.98	13.15	90.07	12.81	0.01	0.2652	0.515	49.5	28.66	0.30	28.68	28.51	28.45	29.21	213.02	
2/13/2023	9:35	1.50	0.04	0.0409	0.202	81.4	28.66	0.50	28.70	28.07	27.98	11.92	81.60	13.01	0.01	0.2415	0.491	49.7	28.66	0.30	28.68	28.52	28.46	27.88	203.20	
2/13/2023	9:36	1.65	0.04	0.0453	0.213	81.8	28.66	0.50	28.70	28.07	27.98	12.55	85.84	12.86	0.01	0.2548	0.505	49.6	28.66	0.30	28.68	28.52	28.45	28.64	208.75	
2/13/2023	9:37	1.49	0.04	0.0469	0.217	81.9	28.66	0.50	28.70	28.07	27.97	12.77	87.33	12.75	0.01	0.2546	0.505	49.8	28.66	0.30	28.68	28.51	28.45	28.63	208.64	
2/13/2023	9:38	1.54	0.05	0.0442	0.210	82.0	28.66	0.50	28.70	28.07	27.97	12.40	84.74	12.67	0.01	0.2448	0.495	49.8	28.66	0.30	28.68	28.51	28.45	28.08	204.60	
2/13/2023	9:39	1.52	0.05	0.0469	0.217	81.5	28.66	0.50	28.70	28.07	--	--	--	12.64	0.01	0.2473	0.497	49.6	28.66	0.30	28.68	28.51	--	--	--	
2/13/2023	9:40	1.43	0.05	0.0471	0.217	82.0	28.66	0.50	28.70	28.07	27.97	12.80	87.48	12.63	0.00	0.2642	0.514	50.0	28.66	0.30	28.68	28.51	28.44	29.17	212.53	
2/13/2023	9:41	1.44	0.05	0.0490	0.221	82.1	28.66	0.50	28.70	28.07	27.81	13.10	88.01	12.56	0.01	0.2594	0.509	49.7	28.66	0.30	28.68	28.50	28.44	28.90	210.64	
2/13/2023	9:42	1.41	0.05	0.0505	0.225	82.3	28.66	0.50	28.70	28.06	27.68	13.33	88.37	12.53	0.01	0.2565	0.506	49.9	28.66	0.30	28.68	28.50	28.44	28.75	209.42	
2/13/2023	9:43	1.39	0.05	0.0501	0.224	82.5	28.66	0.50	28.70	28.06	27.67	13.28	87.99	12.51	0.01	0.2502	0.500	50.0	28.66	0.30	28.68	28.50	28.44	28.39	206.83	
2/13/2023	9:44	1.39	0.05	0.0510	0.226	82.5	28.66	0.50	28.70	28.06	27.67	13.40	88.78	12.45	0.01	0.2515	0.501	49.8	28.66	0.30	28.68	28.50	28.44	28.46	207.43	
2/13/2023	9:45	1.39	0.05	0.0510	0.226	82.8	28.66	0.50	28.70	28.06	27.68	13.40	88.77	12.46	0.01	0.2551	0.505	50.2	28.66	0.30	28.68	28.50	28.44	28.68	208.82	
2/13/2023	9:46	1.41	0.04	0.0510	0.226	83.3	28.66	0.50	28.70	28.06	27.69	13.41	88.84	12.47	0.01	0.2548	0.505	50.4	28.66	0.30	28.68	28.50	28.44	28.66	208.64	
2/13/2023	9:47	1.41	0.04	0.0526	0.229	83.4	28.66	0.50	28.70	28.06	27.74	13.60	90.61	12.62	0.01	0.2507	0.501	50.3	28.66	0.30	28.68	28.51	28.44	28.43	206.97	
2/13/2023	9:48	1.40	0.04	0.0518	0.228	83.3	28.66	0.50	28.70	28.06	27.67	13.51	89.39	12.77	0.01	0.2538	0.504	50.4	28.66	0.30	28.68	28.51	28.45	28.60	208.19	
2/13/2023	9:49	1.40	0.04	0.0513	0.226	83.5	28.66	0.50	28.70	28.06	27.70	13.45	89.14	12.73	0.01	0.2561	0.506	50.6	28.66	0.30	28.68	28.51	28.45	28.74	209.08	
2/13/2023	9:50	1.38	0.04	0.0520	0.228	83.3	28.66	0.50	28.70	28.06	27.73	13.53	90.01	12.87	0.00	0.2353	0.485	50.8	28.66	0.30	28.68	28.51	28.45	27.55	200.37	
2/13/2023	9:51	1.39	0.04	0.0477	0.218	83.3	28.66	0.50	28.70	28.06	27.70	12.96	85.98	12.69	0.00	0.2410	0.491	50.7	28.66	0.30	28.68	28.51	28.45	27.88	202.84	
2/13/2023	9:52	1.40	0.04	0.0450	0.212	83.5	28.66	0.50	28.70	28.06	27.67	12.60	83.31	12.64	0.01	0.2365	0.486	50.8	28.66	0.30	28.68	28.51	28.45	27.62	200.92	
2/13/2023	9:53	1.41	0.04	0.0449	0.212	83.7	28.66	0.50	28.70	28.06	27.73	12.58	83.57	12.60	0.00	0.2380	0.488	51.0	28.66	0.30	28.68	28.50	28.44	27.72	201.52	
2/13/2023	9:54	1.43	0.04	0.0482	0.220	83.9	28.66	0.50	28.70	28.06	27.66	13.05	86.06	12.56	0.01	0.2411	0.491	50.8	28.66	0.30	28.68	28.50	28.44	27.89	202.86	
2/13/2023	9:55	1.46	0.04	0.0488	0.221	84.1	28.66	0.50	28.70	28.06	27.70	13.12	86.90	12.50	0.00	0.2445	0.494	50.9	28.66	0.30	28.68	28.50	28.44	28.09	204.29	
2/13/2023	9:56	1.66	0.04	0.0492	0.222	84.6	28.66	0.50	28.70	28.07	27.66	13.19	86.87	11.17	0.00	0.2413	0.491	50.9	28.66	0.30	28.68	28.45	28.38	27.94	203.13	
2/13/2023	9:57	1.97	0.06	0.0495	0.222	84.2	28.66	0.50	28.70	28.09	27.70	13.22	87.29	10.54	0.00	0.2561	0.506	51.3	28.66	0.30	28.68	28.42	28.36	28.80	209.29	
2/13/2023	9:58	1.72	0.06	0.0499	0.223	83.6	28.66	0.50	28.70	28.08	27.69	13.26	87.75	10.81	0.00	0.2458	0.496	51.4	28.66	0.30	28.68	28.43	28.39	28.21	205.30	
2/13/2023	9:59	1.64	0.05	0.0596	0.244	83.5	28.66	0.50	28.70	28.07	27.69	14.49	95.91	11.04	0.00	0.2561	0.506	51.5	28.66	0.30	28.68	28.44	28.42	28.78	209.84	
2/13/2023	10:00	1.73	0.05	0.1506	0.388	83.0	28.66	0.50	28.70	28.08	27.68	23.03	152.39	11.09	0.01	0.3635	0.603	51.6	28.66	0.30	28.68	28.45	28.42	34.29	249.96	
2/13/2023	10:01	2.19	0.07	0.1036	0.322	83.0	28.66	0.50	28.70	28.10	--	--	--	10.32	0.01	0.3197	0.565	51.9	28.66	0.30	28.68	28.41	28.39	32.18	234.47	
2/13/2023	10:02	2.09	0.07	0.0948	0.308	82.6	28.66	0.50	28.70	28.09	27.78	18.24	121.76	10.48	0.00	0.3115	0.558	52.1	28.66	0.30	28.68	28.42	--	--	--	
2/13/2023	10:03	1.58	0.05	0.1131	0.336	82.2	28.66	0.50	28.70	28.07	27.72	19.93	132.62	11.48	0.00	0.3556	0.596	52.2	28.66	0.30	28.68	28.46	28.44	33.92	247.02	
2/13/2023	10:04	1.45	0.04	0.1348	0.367	82.3	28.66	0.50	28.70	28.06	27.69	21.77	144.59	12.39	0.00	0.3547	0.596	52.2	28.66	0.30	28.68	28.50	28.47	33.86	246.55	
2/13/2023	10:05	1.46	0.04	0.1381	0.372	83.0	28.66	0.50	28.70	28.06	27.70	22.05	146.31	12.31	0.01	0.3341	0.578	52.4	28.66	0.30	28.68	28.49	28.47	32.87	239.26	
2/13/2023	10:06	1.43	0.03	0.0749	0.274	83.5	28.66	0.50	28.70	28.06	27.71	16.24	107.79	12.51	0.00	0.2885	0.537	52.2	28.66	0.30	28.68	28.50	28.48	30.53	222.34	
2/13/2023	10:07	1.43	0.03	0.0484	0.220	83.9	28.66	0.50	28.70	28.06	27.80	13.04	87.29	12.63	0.00	0.2529	0.503	52.2	28.66	0.30	28.68	28.51	28.48	28.58	208.16	
2/13/2023	10:08	1.43	0.03	0.0477	0.218	84.1	28.66	0.50	28.70	28.06	27.65	12.98	85.59	12.54	0.00	0.2179	0.467	52.2	28.66	0.30	28.68	28.50	28.46	26.55	192.92	
2/13/2023	10:09	1.44	0.03	0.0428	0.207	84.7	28.66	0.50	28.70	28.06	27.71	12.29	81.41	12.51	0.00	0.2378	0.488	52.4	28.66	0.30	28.68	28.44	28.45	27.74	201.33	
2/13/2023	10:10	1.44	0.03	0.0455	0.213	84.8	28.66	0.50	28.70	28.06	27.73	12.67	84.11	12.46	0.00	0.2387	0.489	52.2	28.66	0.30	28.68	28.50	28.44	27.79	201.67	
2/13/2023	10:11	1.45	0.03	0.0475	0.218	84.7	28.66	0.50	28.70	28.06	27.72	12.95	85.87	12.43	0.00	0.2427	0.493	52.2	28.66	0.30	28.68	28.50	28.44	28.03	203.31	
2/13/2023	10:12	1.45	0.03	0.0490	0.221	85.1	28.66	0.50	28.70	28.06	27.67	13.17	86.78	12.42	0.00	0.2470	0.497	52.5	28.66	0.30	28.68	28.50	28.44	28.28	205.03	
2/13/2023	10:13	1.44	0.03	0.0484	0.220	85.3	28.66	0.50	28.70	28.06	27.71	13.08	86.56	12.41	0.00	0.2466	0.497	52.6	28.66	0.30	28.68	28.50	28.43	28.26	204.85	
2/13/2023	10:14	1.46	0.03	0.0487	0.221	85.6	28.66	0.50	28.70	28.06	27.68	13.13	86.57	12.40	0.00	0.2464	0.496	52.9	28.66	0.30	28.68	28.50	28.43	28.26	204.70	
2/13/2023	10:15	1.45	0.03	0.0500	0.224	85.9	28.66	0.50	28.70	28.06	27.63	13.32	87.30	12.46	0.00	0.2501	0.500	52.8	28.66	0.30	28.68	28.50	28.44	28.47	206.22	
2/13/2023	10:16	1.44	0.03	0.0503	0.224	85.7	28.66	0.50	28.70	28.06	27.68	13.34	87.98	12.97	0.00	0.2483	0.498	52.9	28.66	0.30	28.68	28.52	28.46	28.36	205.38	
2/13/2023	10:17	1.38	0.02	0.0497	0.223	84.5	28.66	0.50	28.70	28.06	27.65	13.26	87.33	13.73	0.00	0.2589	0.509	52.9	28.66	0.30	28.68	28.55	28.49	28.94	209.62	
2/13/2023	10:18	1.40	0.03	0.0475	0.218	83.9	28.66	0.50	28.70	28.06	27.69	12.95	85.68	14.11	0.00	0.2372	0.487	52.8	28.66	0.30	28.68	28.56	28.50	27.69	200.61	
2/13/2023	10:19	1.34	0.02	0.0369	0.192	83.8	28.66	0.50	28.70	28.06	27.65	11.42	75.33	14.34	0.00	0.2222	0.471	52.8	28.66	0.30	28.68	28.57	28.51	26.80	194.14	
2/13/2023	10:20	1.29	0.02	0.0287	0.169	83.8	28.66	0.50	28.70	28.05	27.65	10.07	66.44	14.81	0.00	0.1949	0.441	53.1	28.66	0.30	28.68	28.59	28.53	25.10	181.73	
2/13/2023	10:21	1.29	0.02	0.0260	0.161	83.6	28.66	0.50	28.70	28.05	27.67	9.58	63.35	14.78	0.01	0.1909	0.437	52.9	28.66	0.30	28.68	28.59	28.53	24.83	179.92	
2/13/2023	10:22	1.30	0.01	0.0237	0.154	83.6	28.66	0.50	28.70	28.05	27.65	9.15	60.39	14.66	0.00	0.1827	0.427	53.5	28.66	0.30	28.68	28.59	28.53	24.31	175.93	
2/13/2023	10:23	1.37	0.01	0.0214	0.146	84.0	28.66	0.50	28.70	28.06	--	--	--	14.03	0.00	0.1770	0.421	53.4	28.66	0.30	28.68	28.56	28.50	23.93	173.25	
2/13/2023	10:24	1.39	0.00	0.0213	0.146	84.4	28.66	0.50	28.70	28.06	27.68	8.67	57.36	13.55	0.01	0.1748	0.418	53.2	28.66	0.30	28.68	28.54	28.48	23.79	172.25	
2/13/2023	10:25	1.42	0.00	0.0241	0.155	84.7	28.66	0.50	28.70	28.06	27.64	9.24	60.77	13.35	0.00	0.1831	0.428	53.4	28.66	0.30	28.68	28.53	28.47	24.36	176.26	
2/13/2023	10:26	1.43	0.00	0.0306	0.175	84.8	28.66	0.50	28.70	28.06	27.65	10.41	68.54	13.18	0.00	0.2053	0.453	53.5	28.66	0.30	28.68	28.53	--	--	--	
2/13/2023	10:27	1.43	0.00	0.0341	0.185	84.9	28.66	0.50	28.70	28.06	27.70	10.98	72.62	13.02	0.00	0.2138	0.462	53.5	28.66	0.30	28.68	28.52	28.46	26.33	190.48	
2/13/2023	10:28	1.43	0.00	0.0366	0.191	85.1	28.66	0.50	28.70	28.06	27.67	11.38	75.05	12.95	0.00	0.2169	0.466	53.5	28.66	0.30	28.68	28.52	28.46	26.52	191.88	
2/13/2023	10:29	1.44	0.00	0.0390	0.197	85.3	28.66	0.50	28.70	28.06	27.66	11.75	77.41	12.85	0.00	0.2219	0.471	53.6	28.66	0.30	28.68	28.51	28.45	26.83	194.05	
2/13/2023	10:30	1.44	0.00	0.0407	0.202	85.5	28.66	0.50	28.70	28.06	27.66	12.01	79.04	12.76	0.00	0.2263	0.476	53.7	28.66	0.30	28.68	28.51	28.45	27.10	195.96	
2/13/2023	10:31	1.43	0.00	0.0410	0.202	85.9	28.66	0.50	28.70	28.06	27.67	12.05	79.35	12.75	0.00	0.2252	0.475	54.0	28.66	0.30	28.68	28.51	28.45	27.04	195.42	
2/13/2023	10:32	1.46	0.00	0.0422	0.205	86.5	28.66	0.50	28.70	28.06	27.69	12.23	80.61	12.72	0.00	0.2363	0.486	54.0	28.66	0.30	28.68	28.51	28.45	27.70	200.20	
2/13/2023	10:33

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time Unit Status	Inlet												Outlet										Point in Process
		O_2 - Inlet % dry Valid	CO_2 - Inlet % dry Valid	Delta P in. W.C. Valid	Sq Rt Delta P Valid	Temperature (°F) Valid	Barometric in. Hg Valid	Stack Pressure in. W.C. Valid	Stack Pressure in. Hg Valid	Molecular Weight Md Valid	Molecular Weight Mw Valid	Velocity ft/sec Valid	Flow Rate (DSCFM) Valid	O_2 - Outlet % dry Valid	CO_2 - Outlet % dry Valid	Delta P in. W.C. Valid	Sq Rt Delta P Valid	Temperature (°F) Valid	Barometric in. Hg Valid	Stack Pressure in. W.C. Valid	Stack Pressure in. Hg Valid	Molecular Weight Md Valid	Molecular Weight Mw Valid	Velocity ft/sec Valid	Flow Rate (DSCFM) Valid	- Valid
2/13/2023	10:57	1.56	0.01	0.0529	0.230	90.0	28.66	0.50	28.70	28.06	27.86	13.69	91.23	12.03	-0.01	0.2493	0.499	61.3	28.66	0.30	28.68	28.48	28.42	28.67	204.25	
2/13/2023	10:58	1.57	0.01	0.0550	0.235	89.8	28.66	0.50	28.70	28.06	27.57	14.03	90.77	12.05	-0.01	0.2459	0.496	60.9	28.66	0.30	28.68	28.48	28.42	28.46	202.91	
2/13/2023	10:59	1.57	0.00	0.0539	0.232	89.8	28.66	0.50	28.70	28.06	27.57	13.89	89.88	12.02	-0.02	0.2463	0.496	57.3	28.66	0.30	28.68	28.48	28.41	28.38	203.81	
2/13/2023	11:00	1.56	0.00	0.0552	0.235	89.6	28.66	0.50	28.70	28.06	27.58	14.06	91.00	12.03	-0.02	0.2469	0.497	57.4	28.66	0.30	28.68	28.48	28.41	28.42	204.03	
2/13/2023	11:01	1.56	0.00	0.0542	0.233	89.5	28.66	0.50	28.70	28.06	27.58	13.93	90.18	12.07	-0.01	0.2490	0.499	57.3	28.66	0.30	28.68	28.48	28.42	28.54	204.93	
2/13/2023	11:02	1.56	0.00	0.0540	0.232	89.5	28.66	0.50	28.70	28.06	27.62	13.89	90.36	12.09	-0.02	0.2458	0.496	57.4	28.66	0.30	28.68	28.48	28.42	28.36	203.58	
2/13/2023	11:03	1.57	0.00	0.0533	0.231	89.8	28.66	0.50	28.70	28.06	27.57	13.82	89.38	12.09	-0.02	0.2416	0.492	57.3	28.66	0.30	28.68	28.48	28.42	28.11	201.86	
2/13/2023	11:04	1.58	0.00	0.0519	0.228	89.8	28.66	0.50	28.70	28.06	27.63	13.62	88.64	12.10	-0.01	0.2417	0.492	57.7	28.66	0.30	28.68	28.48	28.42	28.13	201.80	
2/13/2023	11:05	1.59	0.00	0.0520	0.228	89.8	28.66	0.50	28.70	28.06	27.57	13.65	88.27	12.12	-0.02	0.2416	0.492	57.7	28.66	0.30	28.68	28.48	28.42	28.12	201.75	
2/13/2023	11:06	1.61	0.00	0.0506	0.225	89.7	28.66	0.50	28.70	28.06	27.65	13.44	87.62	12.10	-0.02	0.2411	0.491	57.8	28.66	0.30	28.68	28.48	28.42	28.10	201.53	
2/13/2023	11:07	1.66	0.00	0.0508	0.225	89.7	28.66	0.50	28.70	28.07	27.58	13.48	87.27	12.13	-0.02	0.2406	0.491	57.9	28.66	0.30	28.68	28.48	28.42	28.07	201.30	
2/13/2023	11:08	1.67	0.00	0.0515	0.227	89.7	28.66	0.50	28.70	28.07	27.58	13.58	87.89	12.11	-0.01	0.2376	0.487	58.2	28.66	0.30	28.68	28.48	28.42	27.90	199.99	
2/13/2023	11:09	1.70	0.00	0.0519	0.228	89.7	28.66	0.50	28.70	28.07	27.58	13.63	88.21	12.12	-0.02	0.2412	0.491	58.3	28.66	0.30	28.68	28.48	28.42	28.11	201.49	
2/13/2023	11:10	1.74	0.00	0.0515	0.227	89.8	28.66	0.50	28.70	28.07	27.58	13.58	87.84	12.11	-0.02	0.2401	0.490	58.0	28.66	0.30	28.68	28.48	28.42	28.04	201.09	
2/13/2023	11:11	1.76	0.00	0.0568	0.238	90.0	28.66	0.50	28.70	28.07	27.63	14.25	92.64	12.00	-0.02	0.2548	0.505	58.4	28.66	0.30	28.68	28.48	--	--	--	
2/13/2023	11:12	1.77	0.00	0.0507	0.225	89.9	28.66	0.50	28.70	28.07	--	--	--	12.02	-0.01	0.2353	0.485	58.3	28.66	0.30	28.68	28.48	28.41	27.77	199.01	
2/13/2023	11:13	1.78	0.00	0.0518	0.228	90.3	28.66	0.50	28.70	28.07	27.63	13.61	88.44	12.00	-0.02	0.2441	0.494	58.5	28.66	0.30	28.68	28.48	28.41	28.29	202.65	
2/13/2023	11:14	1.76	0.00	0.0520	0.228	90.4	28.66	0.50	28.70	28.07	27.67	13.63	88.91	11.95	-0.02	0.2400	0.490	58.5	28.66	0.30	28.68	28.47	28.41	28.05	200.95	
2/13/2023	11:15	1.79	0.00	0.0522	0.228	90.7	28.66	0.50	28.70	28.07	27.57	13.69	88.25	11.95	-0.02	0.2387	0.489	58.7	28.66	0.30	28.68	28.47	28.41	27.98	200.36	
2/13/2023	11:16	1.79	0.00	0.0540	0.232	91.0	28.66	0.50	28.70	28.07	27.56	13.92	89.70	11.93	-0.02	0.2426	0.493	58.9	28.66	0.30	28.68	28.47	28.41	28.22	201.97	
2/13/2023	11:17	1.81	0.00	0.0537	0.232	91.2	28.66	0.50	28.70	28.07	27.56	13.89	89.40	11.88	-0.02	0.2397	0.490	58.9	28.66	0.30	28.68	28.47	28.41	28.05	200.75	
2/13/2023	11:18	1.80	0.00	0.0526	0.229	91.5	28.66	0.50	28.70	28.07	27.62	13.73	88.95	11.89	-0.02	0.2414	0.491	59.3	28.66	0.30	28.68	28.47	28.41	28.16	201.40	
2/13/2023	11:19	1.81	0.00	0.0526	0.229	91.8	28.66	0.50	28.70	28.07	27.60	13.74	88.74	11.86	-0.02	0.2400	0.490	59.3	28.66	0.30	28.68	28.47	28.41	28.08	200.80	
2/13/2023	11:20	1.80	0.00	0.0543	0.233	91.9	28.66	0.50	28.70	28.07	27.57	13.97	89.94	11.83	-0.02	0.2394	0.489	59.5	28.66	0.30	28.68	28.47	28.40	28.05	200.51	
2/13/2023	11:21	1.82	0.00	0.0539	0.232	92.0	28.66	0.50	28.70	28.07	27.55	13.93	89.40	11.83	-0.02	0.2395	0.489	59.5	28.66	0.30	28.68	28.47	28.40	28.06	200.54	
2/13/2023	11:22	1.84	0.00	0.0526	0.229	92.1	28.66	0.50	28.70	28.07	27.59	13.75	88.62	11.78	-0.02	0.2376	0.487	60.0	28.66	0.30	28.68	28.47	28.40	27.96	199.67	
2/13/2023	11:23	1.84	0.00	0.0528	0.230	92.0	28.66	0.50	28.70	28.07	27.55	13.78	88.53	11.82	-0.02	0.2397	0.490	59.8	28.66	0.30	28.68	28.47	28.40	28.07	200.58	
2/13/2023	11:24	1.83	0.00	0.0539	0.232	91.9	28.66	0.50	28.70	28.07	27.57	13.92	89.59	11.78	-0.02	0.2326	0.482	59.8	28.66	0.30	28.68	28.47	28.40	27.66	197.56	
2/13/2023	11:25	1.78	0.00	0.0526	0.229	91.9	28.66	0.50	28.70	28.07	27.60	13.75	88.72	11.72	-0.02	0.2327	0.482	60.1	28.66	0.30	28.68	28.47	28.40	27.67	197.57	
2/13/2023	11:26	1.75	0.00	0.0523	0.229	92.1	28.66	0.50	28.70	28.07	27.55	13.72	88.12	11.73	-0.03	0.2344	0.484	60.4	28.66	0.30	28.68	28.46	28.40	27.78	198.24	
2/13/2023	11:27	1.72	0.00	0.0523	0.229	92.2	28.66	0.50	28.70	28.07	27.57	13.72	88.28	11.73	-0.03	0.2335	0.483	60.2	28.66	0.30	28.68	28.46	28.40	27.72	197.91	
2/13/2023	11:28	1.69	0.00	0.0527	0.230	92.1	28.66	0.50	28.70	28.07	27.54	13.77	88.39	11.67	-0.04	0.2356	0.485	60.4	28.66	0.30	28.68	28.46	28.39	27.86	198.76	
2/13/2023	11:29	1.69	0.00	0.0524	0.229	92.1	28.66	0.50	28.70	28.07	27.62	13.72	88.76	11.72	-0.04	0.2337	0.483	60.4	28.66	0.30	28.68	28.46	28.40	27.74	197.96	
2/13/2023	11:30	1.67	0.00	0.0526	0.229	92.0	28.66	0.50	28.70	28.07	27.54	13.76	88.32	11.71	-0.04	0.2299	0.479	60.7	28.66	0.30	28.68	28.46	28.40	27.52	196.30	
2/13/2023	11:31	1.75	0.00	0.0525	0.229	91.9	28.66	0.50	28.70	28.07	27.80	13.68	90.19	11.74	-0.03	0.2315	0.481	60.8	28.66	0.30	28.68	28.46	28.40	27.62	196.96	
2/13/2023	11:32	1.67	-0.01	0.0535	0.231	92.0	28.66	0.50	28.70	28.07	27.86	13.80	91.55	11.75	-0.03	0.2287	0.478	60.7	28.66	0.30	28.68	28.47	28.40	27.45	195.77	
2/13/2023	11:33	1.69	-0.01	0.0644	0.254	91.9	28.66	0.50	28.70	28.07	27.88	15.13	100.59	11.72	-0.04	0.2375	0.487	60.9	28.66	0.30	28.68	28.46	28.40	27.98	199.47	
2/13/2023	11:34	1.70	0.00	0.0522	0.228	91.9	28.66	0.50	28.70	28.07	--	--	--	11.75	-0.04	0.2299	0.479	61.1	28.66	0.30	28.68	28.46	--	--	--	
2/13/2023	11:35	1.78	0.00	0.0521	0.228	92.3	28.66	0.50	28.70	28.07	27.54	13.70	87.84	11.74	-0.03	0.2327	0.482	65.7	28.66	0.30	28.68	28.46	28.40	27.82	196.53	
2/13/2023	11:36	1.68	0.00	0.0527	0.230	92.3	28.66	0.50	28.70	28.07	27.54	13.78	88.35	11.71	-0.04	0.2331	0.483	64.7	28.66	0.30	28.68	28.46	28.40	27.82	196.91	
2/13/2023	11:37	1.69	0.00	0.0521	0.228	92.3	28.66	0.50	28.70	28.07	27.85	13.62	90.20	11.76	-0.03	0.2330	0.483	61.0	28.66	0.30	28.68	28.47	28.40	27.71	197.54	
2/13/2023	11:38	1.70	0.00	0.0533	0.231	92.4	28.66	0.50	28.70	28.07	27.88	13.77	91.49	11.74	-0.03	0.2318	0.481	61.1	28.66	0.30	28.68	28.46	28.40	27.65	197.00	
2/13/2023	11:39	1.78	0.00	0.0520	0.228	92.6	28.66	0.50	28.70	28.07	27.53	13.69	87.69	11.74	-0.03	0.2300	0.480	61.3	28.66	0.30	28.68	28.46	28.40	27.54	196.22	
2/13/2023	11:40	1.70	-0.01	0.0527	0.230	92.7	28.66	0.50	28.70	28.07	27.53	13.79	88.26	11.73	-0.04	0.2295	0.479	61.3	28.66	0.30	28.68	28.46	28.40	27.51	196.01	
2/13/2023	11:41	1.72	-0.01	0.0519	0.228	92.7	28.66	0.50	28.70	28.07	27.83	13.61	89.88	11.67	-0.03	0.2300	0.480	61.5	28.66	0.30	28.68	28.46	28.40	27.55	196.19	
2/13/2023	11:42	1.73	-0.02	0.0510	0.226	92.7	28.66	0.50	28.70	28.07	27.80	13.49	88.88	11.73	-0.03	0.2264	0.476	61.5	28.66	0.30	28.68	28.46	28.40	27.33	194.63	
2/13/2023	11:43	1.80	-0.02	0.0531	0.230	92.5	28.66	0.50	28.70	28.07	27.53	13.83	88.65	11.69	-0.03	0.2300	0.480	61.6	28.66	0.30	28.68	28.46	28.40	27.55	196.17	
2/13/2023	11:44	1.72	-0.03	0.0516	0.227	92.2	28.66	0.50	28.70	28.06	27.63	13.61	88.17	11.66	-0.03	0.2259	0.475	61.6	28.66	0.30	28.68	28.46	28.39	27.31	194.38	
2/13/2023	11:45	1.73	-0.03	0.0530	0.230	92.2	28.66	0.50	28.70	28.06	27.88	13.73	91.26	11.65	-0.03	0.2275	0.477	61.5	28.66	0.30	28.68	28.46	28.39	27.40	195.09	
2/13/2023	11:46	1.71	-0.03	0.0526	0.229	91.8	28.66	0.50	28.70	28.06	27.59	13.74	88.75	11.60	-0.03	0.2305	0.480	61.7	28.66	0.30	28.68	28.46	28.39	27.59	196.36	
2/13/2023	11:47	1.70	-0.03	0.0518	0.228	91.7	28.66	0.50	28.70	28.06	27.54	13.65	87.72	11.56	-0.03	0.2241	0.473	61.6	28.66	0.30	28.68	28.46	28.39	27.20	193.64	
2/13/2023	11:48	1.65	-0.04	0.0524	0.229	91.3	28.66	0.50	28.70	28.06	27.73	13.68	89.73	11.17	-0.04	0.2216	0.471	61.5	28.66	0.30	28.68	28.44	28.37	27.05	192.64	
2/13/2023	11:49	1.71	-0.04	0.0517	0.227	91.2	28.66	0.50	28.70	28.06	27.86	13.55	90.08	11.43	-0.04	0.2230	0.472	61.7	28.66	0.30	28.68	28.45	28.38	27.14	193.17	
2/13/2023	11:50	1.84	-0.05	0.0522	0.228	91.1	28.66	0.50	28.70	28.07	27.55	13.69	88.18	11.44	-0.03	0.2202	0.469	61.5	28.66	0.30	28.68	28.45	28.39	26.96	191.99	
2/13/2023	11:51	2.15	-0.05	0.0512	0.226	90.9	28.66	0.50	28.70	28.08	27.57	13.56	87.34	11.44	-0.04	0.2150	0.464	61.5	28.66	0.30	28.68	28.45	28.39	26.64	189.72	
2/13/2023	11:52	2.40	-0.05	0.0519	0.228	91.0	28.66	0.50	28.70	28.09	27.58	13.65	87.91	11.41	-0.04	0.2182	0.467	61.7	28.66	0.30	28.68	28.45	28.38	26.84	191.09	
2/13/2023	11:53	2.42	-0.05	0.0502	0.224	91.2	28.66	0.50	28.70	28.09	27.75	13.38	87.72	11.46	-0.03	0.2161	0.465	61.8	28.66	0.30	28.68	28.45	28.39	26.72	190.12	
2/13/2023	11:54	2.33	-0.06	0.0515	0.227	91.1	28.66	0.50	28.70	28.08	27.86	13.52	89.77	11.45	-0.03	0.2213	0.470	61.7	28.66	0.30	28.68	28.45	28.39	27.03	192.42	
2/13/2023	11:55	2.27	-0.04	0.0518	0.228	90.9	28.66	0.50	28.70	28.08	27.89	13.56	90.23	11.49	-0.03	0.2149	0.464	61.8	28.66	0.30	28.68	28.45	28.39	26.64	189.60	
2/13/2023	11:56	2.16	-0.01	0.0517	0.227	90.9	28.66	0.50	28.70	28.08	--	--	--	11.47	-0.03	0.2185	0.467	61.9	28.66	0.30	28.68	28.45	--	--	--	
2/13/2023	11:57	2.26	0.00	0.0515	0.227	90.8	28.66	0.50	28.70	28.09	27.58	13.59	87.60	11.47	-0.03	0.2178	0.467	61.7	28.66	0.30	28.68	28.45	28.39	26.82	190.89	
2/13/2023	11:58	2.13	0.00	0.0521	0.228	90.8	28.66	0.50	28.70	28.09	27.62	13.66	88.48	11.50	-0.03	0.2163	0.465	61.9	28.66	0.30	28.68	28.46	28.39	26.73	190.21	
2/13/2023	11:59	2.16	0.01	0.0506	0.225	90.5	28.66	0.50	28.70	28.09	27.90	13.39	89.22	11.47	-0.03	0.2170	0.466	61.7	28.66	0.30	28.68	28.45	28.39	26.77	190.55	
2/13/2023	12:00	2.17	0.02	0.0517	0.227	90.5	28.66	0.50	28.70	28.09	27.90	13.54	90.18	11.51	-0.03	0.2162	0.465	61.7	28.66	0.30	28.68	28.46	28.39	26.72	190.20	
2/13/2023	12:01	2.17	0.02	0.0516	0.227	90.3	28.66	0.50	28.70	28.09	27.59	13.60	87.79	11.52	-0.03	0.2181	0.467	61.8	28.66	0.30	28.68	28.46	28.39	26.84	191.02	
2/13/2023	12:02	2.22	0.02	0.0560	0.237	90.1	28.66	0.50	28.70	28.09	27.59	14.16	91.49	11.47	-0.03	0.2183	0.467	61.7	28.66	0.30	28.68	28.45	28.39	26.85	191.12	
2/13/2023	12:03	2.16	0.02	0.0517	0.227	90.0	28.66	0.50	28.70	28.09	27.85	13.54	89.86	11.49	-0.03	0.2195	0.469	61.7	28.66	0.30	28.68	28.45	28.39	26.92	191.62	
2/13/2023	12:04	2.20	0.01	0.0509	0.226	89.9	28.66	0.50	28.70	28.09	27.89	13.43	89.47	11.48	-0.03	0.2199	0.469	61.6	28.66	0.30	28.68	28.45	28.39	26.94	191.83	
2/13/2023	12:05	2.19	0.01	0.0516	0.227	89.7	28.66	0.50	28.70	28.09	27.60	13.59	87.90	11.46	-0.03	0.2213	0.470	61.4	28.66	0.30	28.68	28.45	28.39	27.03	192.48	
2/13/2023	12:06	2.28	-0.01	0.0522	0.228	90.1	28.66	0.50	28.70	28.09	27.59	13.67	88.35	11.51	-0.03	0.2161	0.465	61.8	28.66	0.30	28.68	28.46	28.39	26.71	190.14	
2/13/2023	12:07	2.15	-0.01	0.0511	0.226	90.2	28.66	0.50	28.70	28.08	27.83	13.47	89.25	11.51	-0.03	0.2206	0.470	61.7	28.66	0.30	28.68	28.46	28.39	26.99	192.10	
2/13/2023	12:08	2.12	-0.01	0.0514	0.227	90.5	28.66	0.50	28.70	28.08	27.89	13.50	89.94	11.59	-0.03	0.2219	0.471	62.0	28.66	0.30	28.68	28.46	28.39	27.08	192.59	
2/13/2023	12:09	2.24	-0.01	0.0514	0.227	90.7	28.66	0.50	28.70	28.09	27.73	13.54	88.68	11.64	-0.03	0.2156	0.464	66.7	28.66	0.30	28.68	28.46	28.39	26.81	188.98	
2/13/2023	12:10	2.17	0.01	0.0517	0.227	90.6	28.66	0.50	28.70	28.09	27.58	13.61	87.81	11.68	-0.03	0.2224	0.472	67.1	28.66	0.30	28.68	28.46	28.40	27.24	191.87	
2/13/2023	12:11	2.21	0.02	0.0522	0.228	90.4	28.66	0.50	28.70	28.09	27.72	13.64	89.26	11.77	-0.03	0.2276	0.477	63.5	28.66	0.30	28.68	28.47	28.40	27.46	194.75	
2/13/2023	12:12	2.10	0.02	0.0506	0.225	90.3	28.66	0.50	28.70	28.09	27.89	13.39	89.19	11.84	-0.03	0.2286	0.478	61.8	28.66	0.30	28.68	28.47	28.40	27.47	195.50	
2/13/2023	12:13	1.88	0.03	0.0501	0.224	90.5	28.66	0.50	28.70	28.08	27.89	13.33	88.79	11.87	-0.03	0.2284	0.478	61.6	28.66	0.30	28.68	28.47	28.40	27.45	195.46	
2/13/2023	12:14	1.74	0.03	0.0505	0.225	90.8	28.66	0.50	28.70	28.07	27.57	13.46	86.77	11.95	-0.03	0.2325	0.482	62.0	28.66	0.30	28.68	28.47	28.41	27.71	197.11	
2/13/2023	12:15	1.79	0.04	0.0502	0.224	91.0	28.66	0.50	28.70	28.08	27.57	13.42	86.47	11.95	-0.03	0.2322	0.482	61.9	28.66	0.30	28.68	28.47	28.41	27.68	197.02	
2/13/2023	12:16	1.71	0.04	0.0497	0.223	91.3	28.66	0.50	28.70	28.07	27.79	13.31	87.69	12.00	-0.03	0.2334	0.483	62.1	28.66	0.30	28.68	28.48	28.41	27.76	197.49	
2/13/2023	12:17	1.68	0.03	0.0494	0.222	91.5	28.66	0.50	28.70	28.07	27.86	13.25	87.93	11.99	-0.03	0.2296	0.479	62.1	28.66	0.30	28.68	28.47	28.41	27.54	195.85	
2/13/2023	12:18	1.68	0.03	0.0489	0.221	91.2	28.66	0.50	28.70	28.07	--	--	--	11.94	-0.03	0.2360	0.486	62.1	28.66	0.30	28.68	28.47	--	--	--	
2/13/2023	12:19	1.69	0.01	0.0496	0.223	90.9	28.66	0.50	28.70	28.07	27.76	13.30	87.49	11.95	-0.03	0.2328	0.482	62.0	28.66	0.30	28.68	28.47	28.41	27.73	197.20	
2/13/2023	12:20	1.75	-0.01	0.0505	0.225	90.8	28.66	0.50	28.70	28.07	27.56	13.46	86.78	11.86	-0.03	0.2406	0.491	61.9	28.66	0.30	28.68	28.47	28.40	28.19	200.53	
2/13/2023	12:21	1.68	-0.01	0.0505	0.225	90.7	28.66	0.50	28.70	28.07	27.67	13.43	87.64	11.89	-0.03	0.2426	0.493	61.7	28.66	0.30	28.68	28.47	28.40	28.30	201.40	
2/13/2023	12:22	1.70	-0.01	0.0507	0.225	90.6	28.66	0.50	28.70	28.07	27.86	13.41	89.20	11.88	-0.03	0.2338	0.484	61.6	28.66	0.30	28.68	28.47	28.40	27.77	197.75	
2/13/2023	12:23	1.72	-0.02	0.0501	0.224	90.4	28.66	0.50	28.70	28.07	27.87	13.33	88.83	11.82	-0.03	0.2334	0.483	61.8	28.66	0.30	28.68	28.47	28.40	27.76	197.55	
2/13/2023	12:24	1.83	-0.02	0.0511	0.226	90.3	28.66	0.50	28.70	28.07	27.57	13.53	87.40	11.85	-0.03	0.2321	0.482	61.7	28.66	0.30	28.68	28.47	28.40	27.68	197.01	
2/13/2023	12:25	1.71	0.00	0.0509	0.226	90.5	28.66	0.50	28.70	28.07	27.61	13.50	87.54	11.79	-0.03	0.2381	0.488	61.9	28.66	0.30	28.68	28.47	28.40	28.04	199.51	
2/13/2023	12:26	1.73	0.01	0.0500	0.224	90.5	28.66	0.50	28.70	28.07	27.87	13.32	88.65	11.77	-0.03	0.2369	0.487	61.7	28.66	0.30	28.68	28.47	28.40	27.96	199.07	
2/13/2023	12:27	1.73	0.01	0.0513	0.226	91.1	28.66	0.50	28.70	28.07	27.87	13.50	89.75	11.77	-0.03	0.2371	0.487	61.8	28.66	0.30	28.68	28.47	28.40	27.98	199.12	
2/13/2023	12:28	1.81	0.02	0.0504	0.224	91.2	28.66	0.50	28.70	28.08	27.56	13.45	86.61	11.73	-0.03	0.2416	0.492	62.0	28.66	0.30	28.68	28.46	28.40	28.25	200.98	
2/13/2023	12:29	1.67	0.02	0.0506	0.225	91.5	28.66	0.50	28.70	28.07	27.65	13.46	87.49	11.75	-0.03	0.2330	0.483	62.0	28.66	0.30	28.68	28.47	28.40	27.74	197.35	
2/13/2023	12:30	1.71	0.02	0.0501	0.224	91.9	28.66	0.50	28.70	28.07	27.87	13.35	88.60	11.72

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	-
	Status	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	Valid
		Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	
2/13/2023	12:55	2.11	0.06	0.0502	0.224	91.2	28.66	0.50	28.70	28.09	27.75	13.38	87.65	11.25	-0.04	0.2150	0.464	63.5	28.66	0.30	28.68	28.44	28.38	26.70	189.34	
2/13/2023	12:56	2.12	0.06	0.0555	0.236	91.3	28.66	0.50	28.70	28.09	27.84	14.05	92.91	11.31	-0.05	0.2218	0.471	63.6	28.66	0.30	28.68	28.44	28.38	27.12	192.31	
2/13/2023	12:57	1.88	0.06	0.0516	0.227	91.3	28.66	0.50	28.70	28.08	27.57	13.61	87.60	11.37	-0.04	0.2121	0.461	63.5	28.66	0.30	28.68	28.45	28.38	26.51	188.06	
2/13/2023	12:58	1.67	0.06	0.0506	0.225	91.5	28.66	0.50	28.70	28.08	27.75	13.44	88.18	11.43	-0.05	0.2093	0.457	63.7	28.66	0.30	28.68	28.45	28.38	26.34	186.78	
2/13/2023	12:59	1.67	0.06	0.0503	0.224	91.4	28.66	0.50	28.70	28.08	27.84	13.37	88.59	11.51	-0.04	0.2157	0.464	63.8	28.66	0.30	28.68	28.45	28.39	26.74	189.57	
2/13/2023	13:00	1.73	0.07	0.0505	0.225	91.1	28.66	0.50	28.70	28.08	27.57	13.46	86.71	11.53	-0.04	0.2134	0.462	63.8	28.66	0.30	28.68	28.45	28.39	26.60	188.55	
2/13/2023	13:01	1.66	0.06	0.0504	0.224	91.0	28.66	0.50	28.70	28.08	--	--	--	11.55	-0.04	0.2116	0.460	63.7	28.66	0.30	28.68	28.46	28.39	26.48	187.77	
2/13/2023	13:02	1.75	0.07	0.0498	0.223	90.9	28.66	0.50	28.70	28.08	27.73	13.33	87.34	11.57	-0.04	0.2134	0.462	64.1	28.66	0.30	28.68	28.46	--	--	--	
2/13/2023	13:03	1.63	0.07	0.0489	0.221	90.8	28.66	0.50	28.70	28.08	27.85	13.18	87.43	11.63	-0.04	0.2172	0.466	64.1	28.66	0.30	28.68	28.46	28.39	26.84	190.17	
2/13/2023	13:04	1.66	0.07	0.0541	0.233	90.8	28.66	0.50	28.70	28.08	27.57	13.93	89.80	11.66	-0.05	0.2178	0.467	63.8	28.66	0.30	28.68	28.46	28.39	26.87	190.46	
2/13/2023	13:05	1.67	0.07	0.0510	0.226	90.6	28.66	0.50	28.70	28.08	27.77	13.48	88.69	11.70	-0.05	0.2190	0.468	63.9	28.66	0.30	28.68	28.46	28.39	26.95	190.97	
2/13/2023	13:06	2.26	0.07	0.0553	0.235	90.5	28.66	0.50	28.70	28.10	27.60	14.07	90.83	11.76	-0.05	0.2407	0.491	64.1	28.66	0.30	28.68	28.46	28.39	28.25	200.17	
2/13/2023	13:07	2.28	0.07	0.0506	0.225	90.3	28.66	0.50	28.70	28.10	27.60	13.46	86.92	11.81	-0.04	0.2254	0.475	63.9	28.66	0.30	28.68	28.47	28.40	27.33	193.73	
2/13/2023	13:08	2.32	0.07	0.0504	0.224	90.3	28.66	0.50	28.70	28.10	27.87	13.37	88.70	11.84	-0.05	0.2293	0.479	63.7	28.66	0.30	28.68	28.47	28.40	27.57	195.42	
2/13/2023	13:09	2.28	0.07	0.0510	0.226	90.1	28.66	0.50	28.70	28.10	27.63	13.50	87.48	11.90	-0.04	0.2385	0.488	63.8	28.66	0.30	28.68	28.47	28.40	28.11	199.30	
2/13/2023	13:10	2.18	0.07	0.0515	0.227	89.8	28.66	0.50	28.70	28.10	27.61	13.57	87.80	11.94	-0.04	0.2351	0.485	63.8	28.66	0.30	28.68	28.47	28.40	27.91	197.88	
2/13/2023	13:11	2.18	0.07	0.0500	0.224	89.7	28.66	0.50	28.70	28.10	27.87	13.31	88.48	12.05	-0.05	0.2416	0.492	63.9	28.66	0.30	28.68	28.47	28.41	28.29	200.56	
2/13/2023	13:12	2.23	0.07	0.0509	0.226	89.5	28.66	0.50	28.70	28.10	27.75	13.45	88.36	12.10	-0.05	0.2379	0.488	63.7	28.66	0.30	28.68	28.48	28.41	28.07	199.04	
2/13/2023	13:13	2.19	0.07	0.0499	0.223	89.5	28.66	0.50	28.70	28.10	27.61	13.36	86.47	12.14	-0.05	0.2430	0.493	63.9	28.66	0.30	28.68	28.48	28.41	28.37	201.13	
2/13/2023	13:14	2.16	0.07	0.0493	0.222	89.3	28.66	0.50	28.70	28.10	27.84	13.22	87.67	12.20	-0.04	0.2478	0.498	63.9	28.66	0.30	28.68	28.48	28.42	28.65	203.10	
2/13/2023	13:15	2.17	0.07	0.0494	0.222	89.4	28.66	0.50	28.70	28.10	27.86	13.23	87.87	12.24	-0.04	0.2535	0.503	64.0	28.66	0.30	28.68	28.48	28.42	28.98	205.39	
2/13/2023	13:16	2.27	0.07	0.0503	0.224	89.5	28.66	0.50	28.70	28.10	27.61	13.41	86.82	12.31	-0.04	0.2478	0.498	63.7	28.66	0.30	28.68	28.49	28.42	28.64	203.13	
2/13/2023	13:17	2.11	0.07	0.0489	0.221	89.7	28.66	0.50	28.70	28.10	27.74	13.19	86.54	12.34	-0.04	0.2535	0.503	64.0	28.66	0.30	28.68	28.49	28.42	28.98	205.38	
2/13/2023	13:18	2.29	0.07	0.0502	0.224	89.8	28.66	0.50	28.70	28.10	27.87	13.34	88.59	12.34	-0.03	0.2616	0.511	64.1	28.66	0.30	28.68	28.49	28.42	29.44	208.60	
2/13/2023	13:19	2.29	0.07	0.0499	0.223	89.9	28.66	0.50	28.70	28.10	27.83	13.31	88.00	12.32	-0.05	0.2651	0.515	64.0	28.66	0.30	28.68	28.48	28.42	29.64	210.04	
2/13/2023	13:20	2.32	0.07	0.0511	0.226	89.9	28.66	0.50	28.70	28.10	27.61	13.52	87.42	12.27	-0.04	0.2675	0.517	64.0	28.66	0.30	28.68	28.48	28.42	29.77	210.98	
2/13/2023	13:21	2.21	0.07	0.0552	0.235	89.9	28.66	0.50	28.70	28.10	27.84	13.99	92.68	12.30	-0.04	0.2637	0.514	64.0	28.66	0.30	28.68	28.49	28.42	29.56	209.47	
2/13/2023	13:22	2.20	0.07	0.0506	0.225	90.2	28.66	0.50	28.70	28.10	27.87	13.39	88.94	12.32	-0.04	0.2658	0.516	63.9	28.66	0.30	28.68	28.49	28.42	29.67	210.32	
2/13/2023	13:23	2.04	0.07	0.0509	0.226	90.4	28.66	0.50	28.70	28.09	--	--	--	12.24	-0.03	0.2618	0.512	63.9	28.66	0.30	28.68	28.48	28.42	29.45	208.75	
2/13/2023	13:24	1.74	0.07	0.0610	0.247	90.6	28.66	0.50	28.70	28.08	27.58	14.79	95.40	12.25	-0.04	0.2699	0.520	64.1	28.66	0.30	28.68	28.48	--	--	--	
2/13/2023	13:25	1.57	0.07	0.0514	0.227	90.4	28.66	0.50	28.70	28.07	27.59	13.57	87.74	12.92	-0.03	0.2672	0.517	64.2	28.66	0.30	28.68	28.51	28.45	29.74	210.73	
2/13/2023	13:26	1.52	0.07	0.0600	0.245	89.8	28.66	0.50	28.70	28.07	27.83	14.59	96.85	13.54	-0.03	0.2733	0.523	64.4	28.66	0.30	28.68	28.54	28.47	30.08	212.98	
2/13/2023	13:27	1.60	0.07	0.0464	0.215	89.6	28.66	0.50	28.70	28.08	27.69	12.86	84.16	13.61	-0.03	0.2531	0.503	64.6	28.66	0.30	28.68	28.54	28.47	28.95	204.93	
2/13/2023	13:28	1.54	0.07	0.0332	0.182	89.8	28.66	0.50	28.70	28.07	27.58	10.90	70.53	13.27	-0.03	0.2182	0.467	64.5	28.66	0.30	28.68	28.53	28.46	26.88	190.35	
2/13/2023	13:29	1.59	0.07	0.0298	0.173	90.6	28.66	0.50	28.70	28.07	27.80	10.30	68.00	12.86	-0.03	0.2091	0.457	65.4	28.66	0.30	28.68	28.51	28.44	26.34	186.21	
2/13/2023	13:30	1.65	0.07	0.0315	0.177	91.1	28.66	0.50	28.70	28.08	27.80	10.59	69.86	12.56	-0.04	0.2129	0.461	65.8	28.66	0.30	28.68	28.50	28.43	26.60	187.87	
2/13/2023	13:31	1.70	0.07	0.0365	0.191	91.6	28.66	0.50	28.70	28.08	27.56	11.45	73.64	12.35	-0.03	0.2176	0.466	67.9	28.66	0.30	28.68	28.49	28.42	26.95	189.54	
2/13/2023	13:32	1.85	0.07	0.0407	0.202	91.6	28.66	0.50	28.70	28.09	27.75	12.05	78.98	12.19	-0.03	0.2297	0.479	65.5	28.66	0.30	28.68	28.48	28.41	27.63	195.18	
2/13/2023	13:33	1.75	0.07	0.0436	0.209	91.2	28.66	0.50	28.70	28.08	27.83	12.45	82.35	12.10	-0.03	0.2310	0.481	65.5	28.66	0.30	28.68	28.48	28.41	27.71	195.78	
2/13/2023	13:34	1.78	0.08	0.0461	0.215	91.1	28.66	0.50	28.70	28.08	27.86	12.80	84.89	12.00	-0.03	0.2349	0.485	64.9	28.66	0.30	28.68	28.48	28.41	27.93	197.55	
2/13/2023	13:35	1.79	0.08	0.0477	0.218	91.1	28.66	0.50	28.70	28.08	27.76	13.04	85.63	11.85	-0.03	0.2415	0.491	65.1	28.66	0.30	28.68	28.47	28.40	28.33	200.28	
2/13/2023	13:36	1.80	0.08	0.0482	0.220	91.1	28.66	0.50	28.70	28.08	27.57	13.15	84.70	11.91	-0.03	0.2424	0.492	64.9	28.66	0.30	28.68	28.47	28.40	28.37	200.69	
2/13/2023	13:37	1.92	0.08	0.0595	0.244	91.2	28.66	0.50	28.70	28.09	27.66	14.59	94.80	11.86	-0.03	0.2444	0.494	65.3	28.66	0.30	28.68	28.47	28.40	28.50	201.46	
2/13/2023	13:38	1.77	0.08	0.0493	0.222	91.4	28.66	0.50	28.70	28.08	27.86	13.24	87.78	11.79	-0.03	0.2396	0.489	65.4	28.66	0.30	28.68	28.47	28.40	28.22	199.47	
2/13/2023	13:39	1.81	0.08	0.0501	0.224	91.3	28.66	0.50	28.70	28.09	27.87	13.34	88.59	11.79	-0.03	0.2352	0.485	65.6	28.66	0.30	28.68	28.47	28.40	27.97	197.57	
2/13/2023	13:40	1.83	0.08	0.0500	0.224	91.3	28.66	0.50	28.70	28.09	27.57	13.40	86.22	11.77	-0.03	0.2367	0.487	65.7	28.66	0.30	28.68	28.47	28.40	28.06	198.17	
2/13/2023	13:41	1.80	0.08	0.0508	0.225	91.2	28.66	0.50	28.70	28.08	27.57	13.51	86.94	11.82	-0.03	0.2341	0.484	66.0	28.66	0.30	28.68	28.47	28.40	27.91	196.98	
2/13/2023	13:42	1.87	0.08	0.0494	0.222	91.3	28.66	0.50	28.70	28.09	27.66	13.30	86.35	11.82	-0.03	0.2354	0.485	66.2	28.66	0.30	28.68	28.47	28.40	27.99	197.49	
2/13/2023	13:43	1.68	0.08	0.0492	0.222	91.2	28.66	0.50	28.70	28.08	27.82	13.23	87.47	11.79	-0.03	0.2331	0.483	66.1	28.66	0.30	28.68	28.47	28.40	27.86	196.54	
2/13/2023	13:44	1.74	0.08	0.0496	0.223	91.4	28.66	0.50	28.70	28.08	27.87	13.28	88.11	11.79	-0.03	0.2245	0.474	66.4	28.66	0.30	28.68	28.47	28.40	27.35	192.82	
2/13/2023	13:45	1.74	0.08	0.0506	0.225	91.4	28.66	0.50	28.70	28.08	--	--	--	11.77	-0.03	0.2288	0.478	66.3	28.66	0.30	28.68	28.47	28.40	27.60	194.70	
2/13/2023	13:46	1.75	0.08	0.0487	0.221	91.0	28.66	0.50	28.70	28.08	27.71	13.19	86.19	11.75	-0.03	0.2261	0.475	66.4	28.66	0.30	28.68	28.47	--	--	--	
2/13/2023	13:47	1.82	0.08	0.0559	0.236	91.0	28.66	0.50	28.70	28.09	27.57	14.16	91.23	11.76	-0.03	0.2416	0.492	66.4	28.66	0.30	28.68	28.47	28.39	28.37	200.04	
2/13/2023	13:48	1.74	0.08	0.0484	0.220	91.2	28.66	0.50	28.70	28.08	27.60	13.18	85.08	11.68	-0.02	0.2249	0.474	66.5	28.66	0.30	28.68	28.46	28.39	27.37	192.98	
2/13/2023	13:49	1.74	0.08	0.0482	0.220	91.2	28.66	0.50	28.70	28.08	27.82	13.10	86.52	11.72	-0.03	0.2250	0.474	66.7	28.66	0.30	28.68	28.46	28.39	27.39	192.99	
2/13/2023	13:50	1.79	0.08	0.0490	0.221	91.2	28.66	0.50	28.70	28.08	27.83	13.20	87.32	11.68	-0.02	0.2243	0.474	66.8	28.66	0.30	28.68	28.46	28.39	27.35	192.66	
2/13/2023	13:51	1.84	0.08	0.0499	0.223	91.4	28.66	0.50	28.70	28.09	27.57	13.39	86.12	11.68	-0.03	0.2266	0.476	66.9	28.66	0.30	28.68	28.46	28.39	27.49	193.65	
2/13/2023	13:52	1.85	0.08	0.0496	0.223	91.3	28.66	0.50	28.70	28.09	27.57	13.35	85.89	11.71	-0.02	0.2284	0.478	67.1	28.66	0.30	28.68	28.47	28.40	27.60	194.38	
2/13/2023	13:53	1.92	0.08	0.0488	0.221	91.4	28.66	0.50	28.70	28.09	27.65	13.22	85.75	11.75	-0.03	0.2272	0.477	67.3	28.66	0.30	28.68	28.47	28.39	27.53	193.83	
2/13/2023	13:54	1.84	0.08	0.0507	0.225	91.2	28.66	0.50	28.70	28.09	27.80	13.44	88.58	11.74	-0.03	0.2336	0.483	67.5	28.66	0.30	28.68	28.46	28.39	27.93	196.49	
2/13/2023	13:55	1.85	0.08	0.0483	0.220	91.1	28.66	0.50	28.70	28.09	27.84	13.10	86.71	11.75	-0.02	0.2245	0.474	67.5	28.66	0.30	28.68	28.47	28.40	27.37	192.63	
2/13/2023	13:56	1.78	0.08	0.0590	0.243	90.7	28.66	0.50	28.70	28.08	27.58	14.55	93.79	11.69	-0.02	0.2269	0.476	67.4	28.66	0.30	28.68	28.46	28.39	27.52	193.66	
2/13/2023	13:57	1.76	0.08	0.0489	0.221	90.4	28.66	0.50	28.70	28.08	27.58	13.24	85.45	11.70	-0.02	0.2248	0.474	67.4	28.66	0.30	28.68	28.46	28.39	27.39	192.75	
2/13/2023	13:58	1.75	0.08	0.0505	0.225	90.3	28.66	0.50	28.70	28.08	27.58	13.45	86.87	11.68	-0.02	0.2214	0.471	67.3	28.66	0.30	28.68	28.46	28.39	27.18	191.34	
2/13/2023	13:59	1.85	0.09	0.0489	0.221	90.3	28.66	0.50	28.70	28.09	27.82	13.18	87.17	11.65	-0.02	0.2218	0.471	67.6	28.66	0.30	28.68	28.46	28.39	27.21	191.45	
2/13/2023	14:00	1.82	0.09	0.0481	0.219	90.5	28.66	0.50	28.70	28.09	27.86	13.06	86.75	11.62	-0.02	0.2183	0.467	67.8	28.66	0.30	28.68	28.46	28.39	27.00	189.91	
2/13/2023	14:01	1.79	0.09	0.0483	0.220	90.3	28.66	0.50	28.70	28.09	27.86	13.09	86.97	11.57	-0.02	0.2076	0.456	67.4	28.66	0.30	28.68	28.46	28.39	26.32	185.27	
2/13/2023	14:02	1.81	0.09	0.0474	0.218	90.3	28.66	0.50	28.70	28.09	27.59	13.03	84.15	11.55	-0.02	0.2158	0.465	67.6	28.66	0.30	28.68	28.46	28.39	26.85	188.85	
2/13/2023	14:03	1.80	0.09	0.0476	0.218	90.1	28.66	0.50	28.70	28.09	27.59	13.06	84.35	11.52	-0.02	0.2138	0.462	67.6	28.66	0.30	28.68	28.46	28.39	26.72	187.98	
2/13/2023	14:04	1.92	0.09	0.0488	0.221	90.0	28.66	0.50	28.70	28.09	27.73	13.19	86.39	11.54	-0.02	0.2142	0.463	68.0	28.66	0.30	28.68	28.46	28.39	26.76	188.07	
2/13/2023	14:05	1.72	0.09	0.0497	0.223	89.6	28.66	0.50	28.70	28.08	27.85	13.27	88.17	11.49	-0.02	0.2153	0.464	67.7	28.66	0.30	28.68	28.46	28.38	26.82	188.61	
2/13/2023	14:06	1.79	0.09	0.0491	0.222	89.6	28.66	0.50	28.70	28.09	27.85	13.19	87.67	11.50	-0.02	0.2109	0.459	67.6	28.66	0.30	28.68	28.46	28.38	26.54	186.70	
2/13/2023	14:07	1.80	0.09	0.0506	0.225	89.3	28.66	0.50	28.70	28.09	--	--	--	11.48	-0.02	0.2212	0.470	67.8	28.66	0.30	28.68	28.46	28.38	27.18	191.18	
2/13/2023	14:08	1.79	0.09	0.0497	0.223	89.0	28.66	0.50	28.70	28.09	27.68	13.31	86.98	11.50	-0.02	0.2105	0.459	67.7	28.66	0.30	28.68	28.46	28.38	26.52	186.49	
2/13/2023	14:09	1.78	0.09	0.0481	0.219	88.6	28.66	0.50	28.70	28.09	27.61	13.10	85.10	11.51	-0.02	0.2112	0.460	67.8	28.66	0.30	28.68	28.46	--	--	--	
2/13/2023	14:10	1.82	0.09	0.0479	0.219	88.4	28.66	0.50	28.70	28.09	27.62	13.07	84.96	11.46	-0.02	0.2116	0.460	67.8	28.66	0.30	28.68	28.46	28.38	26.59	186.98	
2/13/2023	14:11	1.60	0.09	0.0480	0.219	88.2	28.66	0.50	28.70	28.08	27.82	13.03	86.61	11.50	-0.02	0.2084	0.457	67.6	28.66	0.30	28.68	28.46	28.38	26.38	185.58	
2/13/2023	14:12	1.64	0.09	0.0486	0.220	88.3	28.66	0.50	28.70	28.08	27.86	13.11	87.44	11.48	-0.02	0.2143	0.463	67.5	28.66	0.30	28.68	28.46	28.38	26.75	188.22	
2/13/2023	14:13	1.63	0.09	0.0481	0.219	88.0	28.66	0.50	28.70	28.08	27.87	13.03	87.04	11.48	-0.02	0.2081	0.456	67.6	28.66	0.30	28.68	28.46	28.39	26.36	185.48	
2/13/2023	14:14	1.61	0.09	0.0494	0.222	88.1	28.66	0.50	28.70	28.08	27.61	13.27	86.34	11.50	-0.02	0.2115	0.460	67.2	28.66	0.30	28.68	28.46	28.39	26.57	187.04	
2/13/2023	14:15	1.61	0.10	0.0489	0.221	88.1	28.66	0.50	28.70	28.08	27.61	13.20	85.89	11.48	-0.02	0.2170	0.466	67.3	28.66	0.30	28.68	28.46	28.38	26.91	189.44	
2/13/2023	14:16	1.61	0.10	0.0478	0.219	88.4	28.66	0.50	28.70	28.08	27.61	13.06	84.86	11.50	-0.02	0.2120	0.460	67.6	28.66	0.30	28.68	28.46	28.39	26.61	187.19	
2/13/2023	14:17	1.71	0.10	0.0483	0.220	88.2	28.66	0.50	28.70	28.08	27.83	13.07	86.87	11.49	-0.02	0.2139	0.462	67.6	28.66	0.30	28.68	28.46	28.38	26.73	188.02	
2/13/2023	14:18	1.63	0.10	0.0479	0.219	88.1	28.66	0.50	28.70	28.08	27.85	13.01	86.75	11.50	-0.02	0.2126	0.461	67.6	28.66	0.30	28.68	28.46	28.39	26.65	187.46	
2/13/2023	14:19	1.64	0.10	0.0488	0.221	88.2	28.66	0.50	28.70	28.08	27.87	13.13	87.64	11.47	-0.02	0.2109	0.459	67.4	28.66	0.30	28.68	28.46	28.38	26.53	186.76	
2/13/2023	14:20	1.65	0.10	0.0482	0.220	88.2	28.66	0.50	28.70	28.08	27.69	13.09	85.80	11.50	-0.02	0.2090	0.457	67.4	28.66	0.30	28.68	28.46	28.39	26.42	185.89	
2/13/2023	14:21	1.65	0.10	0.0487	0.221	87.9	28.66	0.50	28.70	28.08	27.62	13.17	85.75	11.51	-0.02	0.2135	0.462	67.4	28.66	0.30	28.68	28.46	28.38	26.70	187.87	
2/13/2023	14:22	1.63	0.10	0.0492	0.222	87.9	28.66	0.50	28.70	28.08	27.62	13.24	86.21	11.51	-0.02	0.2101	0.458	67.3	28.66	0.30	28.68	28.46	28.38	26.48	186.38	
2/13/2023	14:23	1.75	0.10	0.0479	0.219	87.9	28.66	0.50	28.70	28.09	27.81	13.02	86.42	11.48	-0.02	0.2118	0.460	67.3	28.66	0.30	28.68	28.46	28.39	26.59	187.18	
2/13/2023	14:24	1.57	0.11	0.0477	0.218	88.1	28.66	0.50	28.70	28.08	27.86	12.98	86.61	11.49	-0.02	0.2110	0.459	67.3	28.66	0.30	28.68	28.46	28.39	26.54	186.83	
2/13/2023	14:25	1.63	0.11	0.0478	0.219	88.2	28.66	0.50	28.70	28.08	27.86	13.00	86.70	11.46	-0.02	0.2095	0.458	67.3	28.66	0.30	28.68	28.46	28.38	26.45	186.15	
2/13/2023	14:26	1.63	0.11	0.0480	0.219	88.3	28.66	0.50	28.70	28.08	27.81	13.04	86.48	11.47	-0.02	0.2079	0.456	67.6	28.66	0.30	28.68	28.46	28.38	26.35	185.37	
2/13/2023	14:27	1.65	0.11	0.0473	0.217	88.4	28.66	0.50	28.70	28.08	27.61	12.99	84.41	11.43	-0.02	0.2071	0.455	67.6	28.66	0.30	28.68	28.45	28.38	26.30	185.02	
2/13/2023	14:28	1.50	0.11	0.0475	0.218	88.5	28.66	0.50	28.70	28.08	27.61	13.02	84.59	12.79	-0.02	0.2089	0.457	67.8	28.66	0.30	28.68	28.51	28.44	26.

Alliance SOURCE TESTING

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet O_2 - Inlet % dry	Inlet CO_2 - Inlet % dry	Inlet Delta P in. W.C.	Inlet Sq Rt Delta P	Inlet Temperature (°F)	Inlet Barometric in. Hg	Inlet Stack Pressure in. W.C.	Inlet Stack Pressure in. Hg	Inlet Molecular Weight Md	Inlet Molecular Weight Mw	Inlet Velocity ft/sec	Inlet Flow Rate (DSCFM)	Outlet O_2 - Outlet % dry	Outlet CO_2 - Outlet % dry	Outlet Delta P in. W.C.	Outlet Sq Rt Delta P	Outlet Temperature (°F)	Outlet Barometric in. Hg	Outlet Stack Pressure in. W.C.	Outlet Stack Pressure in. Hg	Outlet Molecular Weight Md	Outlet Molecular Weight Mw	Outlet Velocity ft/sec	Outlet Flow Rate (DSCFM)	Point in Process
	Unit	%	%	in. W.C.		°F	in. Hg	in. W.C.	in. Hg			ft/sec	DSCFM	%	%	in. W.C.		°F	in. Hg	in. W.C.	in. Hg			ft/sec	DSCFM	-
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/13/2023	14:53	2.25	0.16	0.1396	0.374	72.7	28.66	0.50	28.70	28.12	27.83	21.90	149.48	9.37	-0.03	0.2856	0.534	68.9	28.66	0.30	28.68	28.37	--	--	--	
2/13/2023	14:54	6.75	0.17	0.1379	0.371	72.6	28.66	0.50	28.70	28.30	28.01	21.70	148.11	16.26	-0.02	0.2884	0.537	69.0	28.66	0.30	28.68	28.65	28.63	30.94	218.19	
2/13/2023	14:55	6.80	0.17	0.1387	0.372	72.8	28.66	0.50	28.70	28.30	28.01	21.77	148.47	16.68	-0.01	0.2770	0.526	69.0	28.66	0.30	28.68	28.67	28.64	30.32	213.77	
2/13/2023	14:56	3.80	0.16	0.0022	0.047	72.4	28.66	0.50	28.70	28.18	27.90	2.75	18.75	12.22	-0.02	0.0580	0.241	69.0	28.66	0.30	28.68	28.49	28.46	13.92	98.12	
2/13/2023	14:57	8.57	0.17	0.0049	0.070	72.4	28.66	0.50	28.70	28.37	28.21	4.08	28.18	17.93	-0.01	0.0677	0.260	69.2	28.66	0.30	28.68	28.72	28.69	14.98	105.56	
2/13/2023	14:58	11.08	0.17	0.1349	0.367	72.6	28.66	0.50	28.70	28.47	28.32	21.35	147.68	19.50	-0.01	0.2610	0.511	69.0	28.66	0.30	28.68	28.78	28.76	29.37	207.09	
2/13/2023	14:59	9.36	0.17	0.0020	0.045	72.5	28.66	0.50	28.70	28.40	28.19	2.60	17.92	17.71	-0.01	0.0614	0.248	68.9	28.66	0.30	28.68	28.71	28.67	14.27	100.46	
2/13/2023	15:00	7.04	0.29	0.0012	0.035	72.5	28.66	0.50	28.70	28.33	28.18	2.02	13.97	18.07	-0.01	0.0544	0.233	69.1	28.66	0.30	28.68	28.72	28.68	13.43	94.47	
2/13/2023	15:01	2.14	0.24	0.0085	0.092	71.9	28.66	0.50	28.70	28.12	27.94	5.39	37.20	13.48	-0.01	0.0930	0.305	69.1	28.66	0.30	28.68	28.54	28.48	17.62	123.79	
2/13/2023	15:02	1.89	0.16	0.0260	0.161	71.3	28.66	0.50	28.70	28.10	27.94	9.42	65.26	9.08	-0.03	0.0851	0.292	69.2	28.66	0.30	28.68	28.36	28.30	16.91	118.76	
2/13/2023	15:03	3.68	0.17	0.2149	0.464	71.0	28.66	0.50	28.70	28.17	28.00	27.06	187.17	10.94	-0.03	0.1712	0.414	69.3	28.66	0.30	28.68	28.43	28.41	23.94	168.69	
2/13/2023	15:04	8.69	0.17	0.1349	0.367	71.2	28.66	0.50	28.70	28.37	28.19	21.37	147.69	18.95	-0.01	0.2873	0.536	68.9	28.66	0.30	28.68	28.76	28.73	30.83	217.37	
2/13/2023	15:05	11.18	0.18	0.1333	0.365	71.2	28.66	0.50	28.70	28.48	28.29	21.20	146.57	20.12	-0.01	0.2783	0.528	69.0	28.66	0.30	28.68	28.80	28.78	30.32	213.75	
2/13/2023	15:06	17.48	0.19	0.0034	0.058	71.3	28.66	0.50	28.70	28.73	28.54	3.37	23.30	19.94	-0.01	0.0697	0.264	69.0	28.66	0.30	28.68	28.80	28.77	15.17	106.95	
2/13/2023	15:07	19.30	0.19	0.0011	0.033	71.3	28.66	0.50	28.70	28.80	28.72	1.91	13.35	19.81	-0.01	0.0536	0.232	68.9	28.66	0.30	28.68	28.79	28.76	13.31	93.77	
2/13/2023	15:08	18.10	0.19	0.0018	0.042	71.5	28.66	0.50	28.70	28.75	28.59	2.45	16.99	19.90	-0.01	0.0601	0.245	68.9	28.66	0.30	28.68	28.79	28.75	14.09	99.17	
2/13/2023	15:09	18.83	0.19	0.0010	0.032	71.7	28.66	0.50	28.70	28.78	28.61	1.83	12.64	20.08	-0.01	0.0553	0.235	69.0	28.66	0.30	28.68	28.80	28.75	13.52	95.05	
2/13/2023	15:10	18.53	0.19	0.0010	0.032	71.7	28.66	0.50	28.70	28.77	28.57	1.83	12.61	20.11	-0.01	0.0528	0.230	68.9	28.66	0.30	28.68	28.80	28.75	13.21	92.87	
2/13/2023	15:11	19.78	0.20	0.0012	0.035	71.7	28.66	0.50	28.70	28.82	28.53	2.00	13.71	20.37	-0.01	0.0526	0.229	68.8	28.66	0.30	28.68	28.81	28.76	13.18	92.68	
2/13/2023	15:12	18.72	0.20	0.0011	0.033	71.8	28.66	0.50	28.70	28.78	28.56	1.92	13.21	20.70	0.00	0.0542	0.233	68.7	28.66	0.30	28.68	28.83	28.77	13.38	94.07	
2/13/2023	15:13	19.59	0.20	0.0013	0.036	71.9	28.66	0.50	28.70	28.82	--	--	--	20.84	0.00	0.0563	0.237	68.7	28.66	0.30	28.68	28.83	28.78	13.63	95.86	
2/13/2023	15:14	19.29	0.19	0.0014	0.037	72.1	28.66	0.50	28.70	28.80	28.56	2.16	14.87	20.95	-0.01	0.0548	0.234	68.8	28.66	0.30	28.68	28.84	--	--	--	
2/13/2023	15:15	19.29	0.19	0.0013	0.036	72.1	28.66	0.50	28.70	28.80	28.59	2.08	14.36	20.99	0.00	0.0536	0.232	68.7	28.66	0.30	28.68	28.84	28.78	13.30	93.51	
2/13/2023	15:16	19.68	0.18	0.0014	0.037	72.2	28.66	0.50	28.70	28.82	28.58	2.16	14.87	21.06	0.00	0.0578	0.240	68.7	28.66	0.30	28.68	28.84	28.78	13.81	97.11	
2/13/2023	15:17	18.99	0.18	0.0015	0.039	72.3	28.66	0.50	28.70	28.79	28.54	2.24	15.39	21.08	0.00	0.0535	0.231	68.8	28.66	0.30	28.68	28.84	28.78	13.29	93.41	
2/13/2023	15:18	20.06	0.18	0.0015	0.039	72.4	28.66	0.50	28.70	28.83	28.62	2.24	15.42	21.12	0.00	0.0560	0.237	68.7	28.66	0.30	28.68	28.84	28.79	13.59	95.58	
2/13/2023	15:19	18.94	0.17	0.0017	0.041	72.3	28.66	0.50	28.70	28.78	28.53	2.39	16.36	21.14	0.00	0.0559	0.236	68.8	28.66	0.30	28.68	28.85	28.79	13.58	95.49	
2/13/2023	15:20	20.15	0.17	0.0014	0.037	72.4	28.66	0.50	28.70	28.83	28.62	2.16	14.89	21.17	0.00	0.0539	0.232	68.7	28.66	0.30	28.68	28.85	28.79	13.34	93.77	
2/13/2023	15:21	19.37	0.17	0.0010	0.032	72.5	28.66	0.50	28.70	28.80	28.54	1.83	12.54	21.16	0.00	0.0551	0.235	68.6	28.66	0.30	28.68	28.85	28.79	13.48	94.81	
2/13/2023	15:22	18.89	0.16	0.0016	0.040	72.6	28.66	0.50	28.70	28.78	28.54	2.32	15.90	21.17	0.00	0.0516	0.227	68.5	28.66	0.30	28.68	28.85	28.79	13.05	91.76	
2/13/2023	15:23	20.13	0.16	0.0013	0.036	72.5	28.66	0.50	28.70	28.83	28.61	2.08	14.34	21.17	0.00	0.0526	0.229	68.5	28.66	0.30	28.68	28.85	28.79	13.17	92.63	
2/13/2023	15:24	19.40	0.16	0.0013	0.036	72.6	28.66	0.50	28.70	28.80	28.58	2.09	14.34	21.17	0.00	0.0547	0.234	68.4	28.66	0.30	28.68	28.85	28.79	13.43	94.48	
2/13/2023	15:25	19.22	0.16	0.0015	0.039	72.7	28.66	0.50	28.70	28.79	28.52	2.24	15.34	21.18	-0.01	0.0508	0.225	68.5	28.66	0.30	28.68	28.85	28.79	12.95	91.05	
2/13/2023	15:26	19.22	0.16	0.0014	0.037	72.7	28.66	0.50	28.70	28.79	28.57	2.17	14.89	21.19	0.00	0.0529	0.230	68.4	28.66	0.30	28.68	28.85	28.79	13.21	92.92	
2/13/2023	15:27	19.93	0.16	0.0012	0.035	72.7	28.66	0.50	28.70	28.82	28.61	2.00	13.78	21.18	-0.01	0.0509	0.226	68.6	28.66	0.30	28.68	28.85	28.79	12.96	91.12	
2/13/2023	15:28	19.06	0.15	0.0016	0.040	72.7	28.66	0.50	28.70	28.79	28.51	2.32	15.85	21.17	0.00	0.0562	0.237	68.4	28.66	0.30	28.68	28.85	28.79	13.61	95.77	
2/13/2023	15:29	20.16	0.16	0.0017	0.041	72.7	28.66	0.50	28.70	28.83	28.60	2.38	16.37	21.20	0.00	0.0509	0.226	68.4	28.66	0.30	28.68	28.85	28.79	12.96	91.13	
2/13/2023	15:30	18.99	0.15	0.0015	0.039	72.6	28.66	0.50	28.70	28.78	28.55	2.24	15.40	21.19	0.00	0.0542	0.233	68.4	28.66	0.30	28.68	28.85	28.79	13.37	94.05	
2/13/2023	15:31	20.15	0.16	0.0016	0.040	72.6	28.66	0.50	28.70	28.83	28.57	2.31	15.85	21.18	0.00	0.0529	0.230	68.2	28.66	0.30	28.68	28.85	28.79	13.21	92.94	
2/13/2023	15:32	19.01	0.15	0.0015	0.039	72.4	28.66	0.50	28.70	28.78	28.57	2.24	15.42	21.18	0.00	0.0548	0.234	68.5	28.66	0.30	28.68	28.85	28.79	13.44	94.57	
2/13/2023	15:33	20.18	0.15	0.0013	0.036	72.5	28.66	0.50	28.70	28.83	28.57	2.09	14.29	21.19	0.00	0.0511	0.226	68.4	28.66	0.30	28.68	28.85	28.79	12.98	91.33	
2/13/2023	15:34	18.65	0.15	0.0011	0.033	72.5	28.66	0.50	28.70	28.77	--	--	--	21.19	0.00	0.0562	0.237	68.5	28.66	0.30	28.68	28.85	28.79	13.62	95.75	
2/13/2023	15:35	20.21	0.15	0.0008	0.028	72.4	28.66	0.50	28.70	28.83	28.61	1.64	11.25	21.20	0.00	0.0518	0.228	68.2	28.66	0.30	28.68	28.85	28.79	13.07	91.95	
2/13/2023	15:36	20.24	0.15	0.0006	0.024	72.6	28.66	0.50	28.70	28.83	28.59	1.42	9.73	21.19	0.00	0.0525	0.229	68.4	28.66	0.30	28.68	28.85	--	--	--	
2/13/2023	15:37	18.79	0.14	0.0008	0.028	72.5	28.66	0.50	28.70	28.77	28.56	1.64	11.26	21.19	0.00	0.0544	0.233	68.3	28.66	0.30	28.68	28.85	28.79	13.39	94.23	
2/13/2023	15:38	19.11	0.14	0.0015	0.039	72.5	28.66	0.50	28.70	28.79	28.51	2.24	15.35	21.19	0.00	0.0495	0.222	68.3	28.66	0.30	28.68	28.85	28.79	12.78	89.89	
2/13/2023	15:39	19.91	0.14	0.0007	0.026	72.4	28.66	0.50	28.70	28.82	28.61	1.53	10.53	21.20	0.00	0.0539	0.232	68.3	28.66	0.30	28.68	28.85	28.79	13.33	93.80	
2/13/2023	15:40	18.88	0.14	0.0012	0.035	72.3	28.66	0.50	28.70	28.78	28.56	2.00	13.79	21.19	0.00	0.0578	0.240	68.1	28.66	0.30	28.68	28.85	28.79	13.80	97.15	
2/13/2023	15:41	19.51	0.14	0.0013	0.036	72.2	28.66	0.50	28.70	28.80	28.55	2.09	14.31	21.21	0.00	0.0522	0.228	68.1	28.66	0.30	28.68	28.85	28.79	13.12	92.33	
2/13/2023	15:42	19.64	0.14	0.0011	0.033	72.2	28.66	0.50	28.70	28.81	28.54	1.92	13.15	21.21	0.00	0.0519	0.228	68.1	28.66	0.30	28.68	28.85	28.79	13.08	92.06	
2/13/2023	15:43	19.21	0.14	0.0027	0.052	72.2	28.66	0.50	28.70	28.79	28.56	3.01	20.66	21.19	0.01	0.0531	0.230	68.1	28.66	0.30	28.68	28.85	28.79	13.23	93.12	
2/13/2023	15:44	20.04	0.14	0.0014	0.037	72.1	28.66	0.50	28.70	28.82	28.60	2.16	14.89	21.19	0.00	0.0502	0.224	68.0	28.66	0.30	28.68	28.85	28.79	12.86	90.55	
2/13/2023	15:45	18.97	0.13	0.0014	0.037	72.0	28.66	0.50	28.70	28.78	28.53	2.17	14.86	21.19	0.00	0.0637	0.252	67.9	28.66	0.30	28.68	28.85	28.79	14.49	102.01	
2/13/2023	15:46	19.87	0.14	0.0014	0.037	71.8	28.66	0.50	28.70	28.82	28.61	2.16	14.90	21.19	0.01	0.0518	0.228	68.2	28.66	0.30	28.68	28.85	28.79	13.07	91.96	
2/13/2023	15:47	19.27	0.13	0.0011	0.033	71.8	28.66	0.50	28.70	28.79	28.56	1.92	13.19	21.19	0.00	0.0550	0.235	68.0	28.66	0.30	28.68	28.85	28.79	13.46	94.77	
2/13/2023	15:48	20.33	0.13	0.0012	0.035	71.7	28.66	0.50	28.70	28.83	28.58	2.00	13.76	21.20	0.01	0.0507	0.225	68.0	28.66	0.30	28.68	28.85	28.79	12.93	90.99	
2/13/2023	15:49	19.62	0.13	0.0011	0.033	71.9	28.66	0.50	28.70	28.81	28.60	1.92	13.21	21.19	0.01	0.0543	0.233	67.9	28.66	0.30	28.68	28.85	28.79	13.38	94.18	
2/13/2023	15:50	19.25	0.13	0.0011	0.033	71.6	28.66	0.50	28.70	28.79	28.54	1.92	13.18	21.19	0.01	0.0521	0.228	67.9	28.66	0.30	28.68	28.85	28.79	13.10	92.25	
2/13/2023	15:51	19.10	0.13	0.0028	0.053	71.4	28.66	0.50	28.70	28.78	28.58	3.06	21.11	21.20	0.00	0.0536	0.232	67.9	28.66	0.30	28.68	28.85	28.79	13.29	93.59	
2/13/2023	15:52	20.24	0.13	0.0012	0.035	71.5	28.66	0.50	28.70	28.83	28.62	2.00	13.80	21.21	0.01	0.0549	0.234	68.0	28.66	0.30	28.68	28.85	28.79	13.45	94.70	
2/13/2023	15:53	20.10	0.13	0.0013	0.036	71.5	28.66	0.50	28.70	28.82	28.60	2.08	14.35	21.20	0.00	0.0540	0.232	67.8	28.66	0.30	28.68	28.85	28.79	13.34	93.93	
2/13/2023	15:54	18.92	0.12	0.0012	0.035	71.3	28.66	0.50	28.70	28.78	28.52	2.00	13.77	21.21	0.00	0.0522	0.228	67.9	28.66	0.30	28.68	28.85	28.79	13.11	92.34	
2/13/2023	15:55	19.76	0.12	0.0012	0.035	71.3	28.66	0.50	28.70	28.81	28.61	2.00	13.82	21.21	0.01	0.0523	0.229	67.5	28.66	0.30	28.68	28.85	28.79	13.12	92.45	
2/13/2023	15:56	18.64	0.12	0.0012	0.035	71.2	28.66	0.50	28.70	28.76	--	--	--	21.18	0.00	0.0515	0.227	67.8	28.66	0.30	28.68	28.85	28.79	13.02	91.73	
2/13/2023	15:57	19.63	0.12	0.0021	0.046	71.0	28.66	0.50	28.70	28.80	28.60	2.65	18.28	21.19	0.01	0.0535	0.231	67.7	28.66	0.30	28.68	28.85	28.79	13.27	93.49	
2/13/2023	15:58	19.06	0.12	0.0014	0.037	70.9	28.66	0.50	28.70	28.78	28.55	2.16	14.90	21.20	0.01	0.0519	0.228	67.7	28.66	0.30	28.68	28.85	--	--	--	
2/13/2023	15:59	20.13	0.12	0.0012	0.035	70.7	28.66	0.50	28.70	28.82	28.59	2.00	13.79	21.21	0.01	0.0539	0.232	67.6	28.66	0.30	28.68	28.85	28.79	13.32	93.86	
2/13/2023	16:00	20.22	0.12	0.0011	0.033	70.9	28.66	0.50	28.70	28.83	28.57	1.92	13.17	21.20	0.01	0.0540	0.232	67.6	28.66	0.30	28.68	28.85	28.79	13.33	93.95	
2/13/2023	16:01	18.88	0.11	0.0012	0.035	70.7	28.66	0.50	28.70	28.77	28.57	2.00	13.83	21.19	0.01	0.0545	0.233	67.6	28.66	0.30	28.68	28.85	28.79	13.40	94.38	
2/13/2023	16:02	20.10	0.12	0.0014	0.037	70.5	28.66	0.50	28.70	28.82	28.57	2.16	14.87	21.18	0.01	0.0528	0.230	67.6	28.66	0.30	28.68	28.85	28.79	13.19	92.89	
2/13/2023	16:03	19.21	0.11	0.0011	0.033	70.4	28.66	0.50	28.70	28.79	28.59	1.91	13.25	21.17	0.01	0.0525	0.229	67.8	28.66	0.30	28.68	28.85	28.79	13.15	92.61	
2/13/2023	16:04	19.63	0.11	0.0012	0.035	70.3	28.66	0.50	28.70	28.80	28.60	2.00	13.83	21.19	0.00	0.0530	0.230	67.9	28.66	0.30	28.68	28.85	28.79	13.21	93.05	
2/13/2023	16:05	19.20	0.09	0.0013	0.036	70.2	28.66	0.50	28.70	28.78	28.55	2.08	14.37	21.19	0.01	0.0538	0.232	67.7	28.66	0.30	28.68	28.85	28.79	13.31	93.77	
2/13/2023	16:06	19.36	0.08	0.0012	0.035	70.1	28.66	0.50	28.70	28.79	28.59	2.00	13.84	21.21	0.01	0.0540	0.232	67.8	28.66	0.30	28.68	28.85	28.79	13.34	93.93	
2/13/2023	16:07	19.43	0.08	0.0010	0.032	70.0	28.66	0.50	28.70	28.79	28.54	1.83	12.59	21.20	0.01	0.0502	0.241	67.6	28.66	0.30	28.68	28.85	28.79	13.04	97.53	
2/13/2023	16:08	20.16	0.07	0.0032	0.057	70.0	28.66	0.50	28.70	28.82	28.63	3.26	22.61	21.21	0.01	0.0519	0.228	67.7	28.66	0.30	28.68	28.85	28.79	13.07	92.09	
2/13/2023	16:09	19.87	0.06	0.0012	0.035	69.8	28.66	0.50	28.70	28.80	28.56	2.00	13.79	21.19	0.01	0.0542	0.233	67.7	28.66	0.30	28.68	28.85	28.79	13.36	94.11	
2/13/2023	16:10	19.42	0.06	0.0013	0.036	69.6	28.66	0.50	28.70	28.79	28.53	2.08	14.35	21.18	0.01	0.0534	0.231	67.7	28.66	0.30	28.68	28.85	28.79	13.26	93.41	
2/13/2023	16:11	20.08	0.05	0.0032	0.057	69.6	28.66	0.50	28.70	28.81	28.62	3.26	22.62	21.18	0.00	0.0537	0.232	67.5	28.66	0.30	28.68	28.85	28.79	13.30	93.69	
2/13/2023	16:12	18.48	0.05	0.0014	0.037	69.4	28.66	0.50	28.70	28.75	28.56	2.16	14.98	21.18	0.00	0.0543	0.233	67.7	28.66	0.30	28.68	28.85	28.79	13.37	94.19	
2/13/2023	16:13	19.94	0.05	0.0023	0.048	69.3	28.66	0.50	28.70	28.81	28.55	2.77	19.09	21.19	0.01	0.0533	0.231	67.6	28.66	0.30	28.68	28.85	28.79	13.25	93.33	
2/13/2023	16:14	20.58	0.04	0.0013	0.036	69.3	28.66	0.50	28.70	28.83	28.64	2.08	14.42	21.21	0.01	0.0546	0.234	67.6	28.66	0.30	28.68	28.85	28.79	13.41	94.46	
2/13/2023	16:15	19.19	0.04	0.0011	0.033	69.2	28.66	0.50	28.70	28.77	28.51	1.91	13.20	21.20	0.00	0.0528	0.230	67.7	28.66	0.30	28.68	28.85	28.79	13.19	92.90	
2/13/2023	16:16	20.38	0.04	0.0010	0.032	69.1	28.66	0.50	28.70	28.82	28.62	1.82	12.64	21.21	0.00	0.0531	0.230	67.7	28.66	0.30	28.68	28.85	28.79	13.22	93.16	
2/13/2023	16:17	18.47	0.04	0.0011	0.033	68.9	28.66	0.50	28.70	28.75	28.56	1.91	13.29	21.20	0.00	0.0535	0.231	67.5	28.66	0.30	28.68	28.85	28.79	13.27	93.52	
2/13/2023	16:18	19.82	0.04	0.0011	0.033	68.8	28.66	0.50	28.70	28.80	--	--	--	21.19	0.00	0.0544	0.233	67.6	28.66	0.30	28.68	28.85	28.79	13.38	94.29	
2/13/2023	16:19	20.60	0.03	0.0010	0.032	68.7	28.66	0.50	28.70	28.83	28.57	1.82	12.58	21.19	0.00	0.0559	0.236	67.3	28.66	0.30	28.68	28.85	28.79	13.56	95.61	
2/13/2023	16:20	19.19	0.03	0.0011	0.033	68.5	28.66	0.50	28.70	28.77	28.59	1.91	13.29	21.21	0.00	0.0562	0.237	67.4	28.66	0.30	28.68	28.85	--	--	--	
2/13/2023	16:21	18.97	0.03	0.0011	0.033	68.2	28.66	0.50	28.70	28.76	28.51	1.91	13.22	21.21	0.00	0.0547	0.234	67.2	28.66	0.30	28.68	28.85	28.79	13.42	94.58	
2/13/2023	16:22	20.44	0.03	0.0010	0.032	68.0	28.66	0.50	28.70	28.82	28.63	1.82	12.66	21.21	0.00	0.0559	0.236	67.2	28.66	0.30	28.68	28.85	28.79	13.56	95.61	
2/13/2023	16:23	19.04	0.03	0.0009	0.030	68.1	28.66	0.50	28.70	28.77	28.59	1.73	12.03	21.19	0.00	0.0528	0.230	67.3	28.66	0.30	28.68	28.85	28.79	13.18	92.91	
2/13/2023	16:24	20.26	0.03	0.0010	0.032	67.7	28.66	0.50	28.70	28.82	28.58	1.82	12.62	21.19	0.00	0.0569	0.239	67.2	28.66	0.30	28.68	28.85	28.79	13.68	96.47	
2/13/2023	16:25	19.91	0.03	0.0011	0.033	67.7	28.66	0.50	28.70	28.80	28.56	1.91	13.23	21.21	0.00	0.0542	0.233	67.2	28.66	0.30	28.68	28.85	28.79	13.35	94.16	
2/13/2023	16:26	18.96	0.03	0.0010	0.032	67.6

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	O₂ - Inlet	CO₂ - Inlet	Delta P	Sq Rt	Temperature	Barometric	Inlet Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O₂ - Outlet	CO₂ - Outlet	Delta P	Sq Rt	Temperature	Barometric	Outlet Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	Point in Process
	Unit	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	-
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/13/2023	16:51	19.1	0.02	0.0008	0.028	64.5	28.66	0.50	28.70	28.77	28.55	1.62	11.35	21.20	-0.01	0.0609	0.247	65.9	28.66	0.30	28.68	28.85	28.79	14.14	99.93	
2/13/2023	16:52	20.4	0.02	0.0009	0.030	64.4	28.66	0.50	28.70	28.82	28.64	1.72	12.07	21.20	-0.01	0.0626	0.250	66.2	28.66	0.30	28.68	28.85	28.79	14.34	101.29	
2/13/2023	16:53	19.0	0.02	0.0008	0.028	64.2	28.66	0.50	28.70	28.76	28.55	1.62	11.36	21.20	-0.01	0.0594	0.244	66.2	28.66	0.30	28.68	28.85	28.79	13.97	98.67	
2/13/2023	16:54	19.9	0.02	0.0014	0.037	64.2	28.66	0.50	28.70	28.80	28.60	2.15	15.03	21.19	-0.01	0.0633	0.252	66.2	28.66	0.30	28.68	28.85	28.79	14.42	101.84	
2/13/2023	16:55	19.6	0.02	0.0008	0.028	64.2	28.66	0.50	28.70	28.79	28.61	1.62	11.38	21.20	-0.01	0.0602	0.245	66.1	28.66	0.30	28.68	28.85	28.79	14.06	99.32	
2/13/2023	16:56	19.5	0.02	0.0006	0.024	64.1	28.66	0.50	28.70	28.78	28.56	1.41	9.83	21.20	-0.01	0.0614	0.248	65.9	28.66	0.30	28.68	28.85	28.79	14.20	100.33	
2/13/2023	16:57	20.0	0.02	0.0008	0.028	64.1	28.66	0.50	28.70	28.80	28.63	1.62	11.38	21.19	-0.01	0.0635	0.252	65.8	28.66	0.30	28.68	28.85	28.79	14.44	102.04	
2/13/2023	16:58	19.3	0.02	0.0007	0.026	63.8	28.66	0.50	28.70	28.78	28.57	1.52	10.63	21.19	-0.01	0.0631	0.251	66.0	28.66	0.30	28.68	28.85	28.79	14.39	101.72	
2/13/2023	16:59	20.4	0.01	0.0008	0.028	63.8	28.66	0.50	28.70	28.82	28.62	1.62	11.36	21.19	-0.01	0.0636	0.252	65.7	28.66	0.30	28.68	28.85	28.79	14.45	102.15	
2/13/2023	17:00	19.0	0.02	0.0008	0.028	63.6	28.66	0.50	28.70	28.76	28.58	1.62	11.39	21.19	-0.01	0.0639	0.253	65.7	28.66	0.30	28.68	28.85	28.79	14.48	102.38	
2/13/2023	17:01	20.3	0.01	0.0021	0.046	63.3	28.66	0.50	28.70	28.81	28.60	2.63	18.39	21.19	-0.02	0.0646	0.254	65.5	28.66	0.30	28.68	28.84	28.78	14.56	102.96	
2/13/2023	17:02	19.3	0.02	0.0007	0.026	63.3	28.66	0.50	28.70	28.77	--	--	--	21.20	-0.01	0.0647	0.254	65.6	28.66	0.30	28.68	28.85	28.79	14.57	103.03	
2/13/2023	17:03	19.7	0.01	0.0006	0.024	63.2	28.66	0.50	28.70	28.79	28.62	1.40	9.88	21.18	-0.01	0.0646	0.254	65.3	28.66	0.30	28.68	28.85	--	--	--	
2/13/2023	17:04	20.4	0.01	0.0007	0.026	63.3	28.66	0.50	28.70	28.82	28.60	1.52	10.62	21.18	-0.01	0.0661	0.257	65.5	28.66	0.30	28.68	28.85	28.79	14.73	104.14	
2/13/2023	17:05	19.3	0.01	0.0010	0.032	63.0	28.66	0.50	28.70	28.77	28.59	1.81	12.74	21.17	-0.02	0.0733	0.271	65.2	28.66	0.30	28.68	28.84	28.78	15.50	109.71	
2/13/2023	17:06	20.3	0.00	0.0013	0.036	63.0	28.66	0.50	28.70	28.81	28.63	2.07	14.52	21.17	-0.01	0.0737	0.271	65.2	28.66	0.30	28.68	28.85	28.78	15.54	109.99	
2/13/2023	17:07	19.3	0.01	0.0011	0.033	62.8	28.66	0.50	28.70	28.77	28.58	1.90	13.35	21.17	-0.01	0.0689	0.262	64.9	28.66	0.30	28.68	28.85	28.78	15.03	106.38	
2/13/2023	17:08	20.2	0.00	0.0016	0.040	62.7	28.66	0.50	28.70	28.81	28.65	2.29	16.14	21.17	-0.01	0.0707	0.266	64.7	28.66	0.30	28.68	28.85	28.78	15.22	107.78	
2/13/2023	17:09	19.3	0.01	0.0012	0.035	62.4	28.66	0.50	28.70	28.77	28.59	1.98	13.96	21.17	-0.01	0.0668	0.258	64.7	28.66	0.30	28.68	28.85	28.78	14.79	104.76	
2/13/2023	17:10	19.6	0.01	0.0010	0.032	62.3	28.66	0.50	28.70	28.78	28.62	1.81	12.77	21.17	-0.01	0.0662	0.257	64.5	28.66	0.30	28.68	28.85	28.78	14.72	104.30	
2/13/2023	17:11	19.9	0.01	0.0013	0.036	62.3	28.66	0.50	28.70	28.80	28.64	2.06	14.55	21.16	-0.01	0.0647	0.254	64.1	28.66	0.30	28.68	28.84	28.78	14.55	103.16	
2/13/2023	17:12	19.9	0.00	0.0011	0.033	62.1	28.66	0.50	28.70	28.79	28.61	1.90	13.36	21.16	-0.01	0.0704	0.265	64.0	28.66	0.30	28.68	28.84	28.78	15.18	107.62	
2/13/2023	17:13	19.6	0.01	0.0011	0.033	62.2	28.66	0.50	28.70	28.79	28.64	1.90	13.41	21.16	-0.01	0.0714	0.267	64.1	28.66	0.30	28.68	28.84	28.78	15.28	108.37	
2/13/2023	17:14	19.8	0.00	0.0010	0.032	61.9	28.66	0.50	28.70	28.79	28.61	1.81	12.75	21.16	-0.01	0.0714	0.267	64.1	28.66	0.30	28.68	28.84	28.78	15.28	108.37	
2/13/2023	17:15	19.9	0.01	0.0012	0.035	61.9	28.66	0.50	28.70	28.80	28.66	1.98	14.01	21.16	-0.01	0.0726	0.269	65.2	28.66	0.30	28.68	28.84	28.78	15.43	109.17	
2/13/2023	17:16	19.3	0.00	0.0012	0.035	61.9	28.66	0.50	28.70	28.77	28.59	1.98	13.97	21.15	-0.01	0.0700	0.265	67.7	28.66	0.30	28.68	28.84	28.78	15.18	106.95	
2/13/2023	17:17	20.3	0.00	0.0013	0.036	61.3	28.66	0.50	28.70	28.81	28.67	2.06	14.59	21.16	-0.01	0.0743	0.273	63.7	28.66	0.30	28.68	28.84	28.78	15.59	110.60	
2/13/2023	17:18	19.2	0.01	0.0010	0.032	61.2	28.66	0.50	28.70	28.77	28.60	1.81	12.78	21.15	-0.01	0.0737	0.271	63.5	28.66	0.30	28.68	28.84	28.78	15.52	110.17	
2/13/2023	17:19	20.33	0.00	0.0010	0.032	61.2	28.66	0.50	28.70	28.81	28.64	1.81	12.76	21.16	-0.01	0.0735	0.271	63.4	28.66	0.30	28.68	28.84	28.78	15.50	110.02	
2/13/2023	17:20	19.32	0.01	0.0011	0.033	61.0	28.66	0.50	28.70	28.77	28.63	1.90	13.43	21.15	-0.01	0.0758	0.275	63.2	28.66	0.30	28.68	28.84	28.78	15.73	111.75	
2/13/2023	17:21	20.08	0.00	0.0020	0.045	60.9	28.66	0.50	28.70	28.80	28.64	2.56	18.04	21.15	-0.01	0.0779	0.279	63.1	28.66	0.30	28.68	28.84	28.78	15.95	113.31	
2/13/2023	17:22	19.54	0.01	0.0010	0.032	60.7	28.66	0.50	28.70	28.78	28.65	1.81	12.81	21.15	0.00	0.0753	0.274	63.1	28.66	0.30	28.68	28.85	28.79	15.68	111.41	
2/13/2023	17:23	19.80	0.00	0.0012	0.035	60.6	28.66	0.50	28.70	28.79	28.63	1.98	14.00	21.15	-0.01	0.0745	0.273	62.8	28.66	0.30	28.68	28.84	28.78	15.59	110.84	
2/13/2023	17:24	19.70	0.00	0.0009	0.030	60.4	28.66	0.50	28.70	28.79	--	--	--	21.15	-0.01	0.0765	0.277	62.7	28.66	0.30	28.68	28.84	28.79	15.80	112.35	
2/13/2023	17:25	19.36	0.00	0.0009	0.030	60.4	28.66	0.50	28.70	28.77	28.62	1.71	12.14	21.16	-0.01	0.0746	0.273	62.5	28.66	0.30	28.68	28.84	--	--	--	
2/13/2023	17:26	20.18	0.01	0.0011	0.033	60.2	28.66	0.50	28.70	28.81	28.66	1.89	13.43	21.16	-0.01	0.0785	0.280	62.4	28.66	0.30	28.68	28.84	28.79	16.00	113.84	
2/13/2023	17:27	19.70	0.00	0.0009	0.030	60.2	28.66	0.50	28.70	28.79	28.62	1.71	12.13	21.15	-0.01	0.0794	0.282	62.5	28.66	0.30	28.68	28.84	28.79	16.09	114.48	
2/13/2023	17:28	19.73	0.01	0.0010	0.032	60.2	28.66	0.50	28.70	28.79	28.65	1.81	12.81	21.15	-0.01	0.0789	0.281	62.2	28.66	0.30	28.68	28.84	28.79	16.04	114.15	
2/13/2023	17:29	20.10	0.00	0.0008	0.028	60.0	28.66	0.50	28.70	28.80	28.62	1.62	11.42	21.15	-0.01	0.0758	0.275	62.2	28.66	0.30	28.68	28.84	28.78	15.72	111.88	
2/13/2023	17:30	19.31	0.01	0.0010	0.032	59.9	28.66	0.50	28.70	28.77	28.64	1.81	12.83	21.16	-0.01	0.0798	0.282	62.2	28.66	0.30	28.68	28.84	28.79	16.13	114.80	
2/13/2023	17:31	19.66	0.01	0.0009	0.030	59.8	28.66	0.50	28.70	28.79	28.60	1.71	12.11	21.15	-0.01	0.0798	0.282	62.1	28.66	0.30	28.68	28.84	28.78	16.13	114.81	
2/13/2023	17:32	19.88	0.01	0.0009	0.030	59.6	28.66	0.50	28.70	28.80	28.66	1.71	12.17	21.16	-0.01	0.0814	0.285	62.0	28.66	0.30	28.68	28.84	28.79	16.29	115.96	
2/13/2023	17:33	19.65	0.00	0.0009	0.030	59.5	28.66	0.50	28.70	28.79	28.60	1.71	12.12	21.15	-0.01	0.0827	0.288	61.8	28.66	0.30	28.68	28.84	28.78	16.41	116.90	
2/13/2023	17:34	19.97	0.00	0.0012	0.035	59.5	28.66	0.50	28.70	28.80	28.67	1.98	14.05	21.15	-0.01	0.0839	0.290	61.7	28.66	0.30	28.68	28.84	28.78	16.53	117.74	
2/13/2023	17:35	19.39	0.00	0.0008	0.028	59.2	28.66	0.50	28.70	28.78	28.60	1.61	11.44	21.15	-0.01	0.0911	0.302	61.6	28.66	0.30	28.68	28.84	28.78	17.22	122.71	
2/13/2023	17:36	20.21	0.00	0.0009	0.030	59.0	28.66	0.50	28.70	28.81	28.68	1.71	12.17	21.15	-0.01	0.0814	0.285	61.4	28.66	0.30	28.68	28.84	28.79	16.28	116.03	
2/13/2023	17:37	19.51	0.00	0.0009	0.030	59.0	28.66	0.50	28.70	28.78	28.62	1.71	12.15	21.15	-0.01	0.0848	0.291	61.1	28.66	0.30	28.68	28.84	28.79	16.61	118.48	
2/13/2023	17:38	20.06	0.00	0.0010	0.032	58.8	28.66	0.50	28.70	28.80	28.66	1.80	12.82	21.15	-0.01	0.0840	0.290	61.1	28.66	0.30	28.68	28.84	28.79	16.53	117.91	
2/13/2023	17:39	19.86	0.00	0.0009	0.030	58.6	28.66	0.50	28.70	28.79	28.65	1.71	12.17	21.15	0.00	0.0916	0.303	61.0	28.66	0.30	28.68	28.85	28.79	17.26	123.12	
2/13/2023	17:40	19.56	0.00	0.0010	0.032	58.5	28.66	0.50	28.70	28.78	28.64	1.80	12.83	21.15	0.00	0.0836	0.289	60.8	28.66	0.30	28.68	28.85	28.78	16.49	117.63	
2/13/2023	17:41	20.40	0.00	0.0008	0.028	58.5	28.66	0.50	28.70	28.82	28.67	1.61	11.47	21.15	-0.01	0.0841	0.290	60.8	28.66	0.30	28.68	28.84	28.78	16.53	117.99	
2/13/2023	17:42	19.09	0.01	0.0011	0.033	58.3	28.66	0.50	28.70	28.77	28.63	1.89	13.47	21.15	-0.01	0.0827	0.288	60.6	28.66	0.30	28.68	28.84	28.78	16.39	117.02	
2/13/2023	17:43	20.38	0.00	0.0008	0.028	58.2	28.66	0.50	28.70	28.82	28.66	1.61	11.46	21.15	-0.01	0.0846	0.291	60.5	28.66	0.30	28.68	28.84	28.78	16.58	118.37	
2/13/2023	17:44	19.08	0.01	0.0012	0.035	58.0	28.66	0.50	28.70	28.76	28.64	1.97	14.08	21.15	0.00	0.0870	0.295	60.3	28.66	0.30	28.68	28.85	28.78	16.81	120.05	
2/13/2023	17:45	20.45	0.00	0.0010	0.032	57.9	28.66	0.50	28.70	28.82	28.65	1.80	12.81	21.15	-0.01	0.0873	0.295	60.1	28.66	0.30	28.68	28.84	28.78	16.84	120.29	
2/13/2023	17:46	19.09	0.00	0.0011	0.033	57.8	28.66	0.50	28.70	28.76	--	--	--	21.14	0.00	0.0861	0.293	60.1	28.66	0.30	28.68	28.85	28.78	16.72	119.45	
2/13/2023	17:47	20.39	0.00	0.0009	0.030	57.6	28.66	0.50	28.70	28.82	28.68	1.71	12.18	21.15	0.00	0.0926	0.304	59.9	28.66	0.30	28.68	28.85	--	--	--	
2/13/2023	17:48	19.19	0.01	0.0010	0.032	57.4	28.66	0.50	28.70	28.77	28.62	1.80	12.84	21.14	0.00	0.0917	0.303	59.8	28.66	0.30	28.68	28.85	28.78	17.25	123.31	
2/13/2023	17:49	20.32	0.00	0.0010	0.032	57.3	28.66	0.50	28.70	28.81	28.69	1.80	12.86	21.14	0.00	0.0896	0.299	59.8	28.66	0.30	28.68	28.85	28.78	17.05	121.88	
2/13/2023	17:50	19.38	0.00	0.0009	0.030	57.2	28.66	0.50	28.70	28.78	28.62	1.71	12.18	21.13	0.00	0.0880	0.297	59.6	28.66	0.30	28.68	28.85	28.78	16.89	120.82	
2/13/2023	17:51	17.91	0.01	0.0009	0.030	57.0	28.66	0.50	28.70	28.72	28.60	1.71	12.22	21.11	0.00	0.0906	0.301	59.6	28.66	0.30	28.68	28.84	28.78	17.14	122.59	
2/13/2023	17:52	14.52	0.01	0.0011	0.033	56.8	28.66	0.50	28.70	28.58	28.42	1.90	13.50	21.13	0.00	0.0905	0.301	59.5	28.66	0.30	28.68	28.85	28.78	17.13	122.53	
2/13/2023	17:53	16.20	0.02	0.0010	0.032	56.9	28.66	0.50	28.70	28.65	28.53	1.80	12.90	21.13	0.00	0.0916	0.303	59.5	28.66	0.30	28.68	28.85	28.78	17.24	123.26	
2/13/2023	17:54	19.90	0.01	0.0010	0.032	56.5	28.66	0.50	28.70	28.80	28.63	1.80	12.83	21.13	0.00	0.0983	0.314	59.3	28.66	0.30	28.68	28.85	28.78	17.85	127.71	
2/13/2023	17:55	20.32	0.00	0.0012	0.035	56.4	28.66	0.50	28.70	28.81	28.67	1.97	14.07	21.13	0.00	0.0898	0.300	59.0	28.66	0.30	28.68	28.85	28.78	17.06	122.09	
2/13/2023	17:56	18.95	0.01	0.0009	0.030	56.6	28.66	0.50	28.70	28.76	28.73	1.70	12.30	21.10	0.00	0.0962	0.310	59.1	28.66	0.30	28.68	28.84	28.78	17.66	126.37	
2/13/2023	17:57	20.39	0.00	0.0010	0.032	56.3	28.66	0.50	28.70	28.82	28.67	1.80	12.84	21.08	0.00	0.0961	0.310	59.2	28.66	0.30	28.68	28.84	28.78	17.65	126.29	
2/13/2023	17:58	19.14	0.00	0.0012	0.035	56.3	28.66	0.50	28.70	28.77	28.65	1.97	14.12	20.96	0.00	0.0972	0.312	58.9	28.66	0.30	28.68	28.84	28.77	17.75	127.07	
2/13/2023	17:59	20.29	0.00	0.0013	0.036	56.0	28.66	0.50	28.70	28.81	28.64	2.05	14.63	20.94	0.00	0.0943	0.307	58.7	28.66	0.30	28.68	28.84	28.77	17.48	125.19	
2/13/2023	18:00	19.13	0.00	0.0009	0.030	56.0	28.66	0.50	28.70	28.77	28.65	1.71	12.23	21.01	0.00	0.0966	0.311	58.7	28.66	0.30	28.68	28.84	28.78	17.69	126.71	
2/13/2023	18:01	20.31	0.00	0.0011	0.033	55.8	28.66	0.50	28.70	28.81	28.66	1.89	13.48	21.10	0.00	0.0939	0.306	58.5	28.66	0.30	28.68	28.84	28.78	17.43	124.94	
2/13/2023	18:02	19.53	0.00	0.0011	0.033	55.8	28.66	0.50	28.70	28.78	28.66	1.89	13.51	21.09	0.00	0.0946	0.308	58.4	28.66	0.30	28.68	28.84	28.78	17.50	125.41	
2/13/2023	18:03	19.91	0.00	0.0009	0.030	55.6	28.66	0.50	28.70	28.80	28.64	1.71	12.19	21.12	0.00	0.0953	0.309	58.1	28.66	0.30	28.68	28.84	28.78	17.56	125.90	
2/13/2023	18:04	20.46	0.00	0.0010	0.032	55.5	28.66	0.50	28.70	28.82	28.70	1.80	12.88	21.11	0.00	0.1045	0.323	58.3	28.66	0.30	28.68	28.84	28.78	18.39	131.81	
2/13/2023	18:05	19.07	0.00	0.0010	0.032	55.2	28.66	0.50	28.70	28.76	28.62	1.80	12.88	21.12	0.01	0.0974	0.312	58.3	28.66	0.30	28.68	28.85	28.78	17.75	127.24	
2/13/2023	18:06	20.46	0.00	0.0010	0.032	55.2	28.66	0.50	28.70	28.82	28.69	1.80	12.88	21.12	0.00	0.0986	0.314	57.9	28.66	0.30	28.68	28.84	28.78	17.85	128.09	
2/13/2023	18:07	19.20	0.00	0.0010	0.032	55.2	28.66	0.50	28.70	28.77	28.65	1.80	12.90	21.12	0.00	0.0977	0.313	58.0	28.66	0.30	28.68	28.84	28.78	17.77	127.50	
2/13/2023	18:08	20.38	0.00	0.0022	0.047	54.9	28.66	0.50	28.70	28.82	--	--	--	21.13	0.00	0.0997	0.316	57.8	28.66	0.30	28.68	28.85	--	--	--	
2/13/2023	18:09	19.09	0.00	0.0010	0.032	54.9	28.66	0.50	28.70	28.76	28.62	1.80	12.87	21.13	0.00	0.0953	0.309	57.9	28.66	0.30	28.68	28.85	28.78	17.55	125.93	
2/13/2023	18:10	20.37	0.00	0.0020	0.045	54.8	28.66	0.50	28.70	28.81	28.70	2.54	18.24	21.14	0.00	0.0974	0.312	57.9	28.66	0.30	28.68	28.85	28.78	17.75	127.31	
2/13/2023	18:11	19.12	0.00	0.0010	0.032	54.7	28.66	0.50	28.70	28.76	28.61	1.80	12.87	21.12	0.00	0.0983	0.314	57.7	28.66	0.30	28.68	28.84	28.78	17.82	127.93	
2/13/2023	18:12	19.31	0.01	0.0022	0.047	54.7	28.66	0.50	28.70	28.77	28.66	2.66	19.15	21.12	0.00	0.0977	0.313	57.9	28.66	0.30	28.68	28.84	28.78	17.77	127.52	
2/13/2023	18:13	20.10	0.01	0.0010	0.032	54.6	28.66	0.50	28.70	28.81	28.65	1.80	12.87	21.12	0.00	0.0989	0.314	57.8	28.66	0.30	28.68	28.84	28.78	17.88	128.31	
2/13/2023	18:14	20.48	0.00	0.0010	0.032	54.4	28.66	0.50	28.70	28.82	28.71	1.79	12.90	21.13	0.00	0.1026	0.320	57.4	28.66	0.30	28.68	28.85	28.78	18.20	130.73	
2/13/2023	18:15	20.19	0.00	0.0010	0.032	54.4	28.66	0.50	28.70	28.81	28.65	1.80	12.87	21.12	0.00	0.0977	0.313	57.3	28.66	0.30	28.68	28.84	28.78	17.76	127.58	
2/13/2023	18:16	19.37	0.01	0.0010	0.032	54.3	28.66	0.50	28.70	28.78	28.63	1.80	12.88	21.14	0.00	0.1012	0.318	57.0	28.66	0.30	28.68	28.85	28.78	18.07	129.90	
2/13/2023	18:17	20.48	0.00	0.0009	0.030	54.2	28.66	0.50	28.70	28.82	28.71	1.70	12.24	21.12	0.00	0.1019	0.319	56.9	28.66	0.30	28.68	28.84	28.78	18.13	130.36	
2/13/2023	18:18	19.08	0.01	0.0009	0.030	53.9	28.66	0.50	28.70	28.76	28.65	1.70	12.26	21.11	0.00	0.1019	0.319	56.9	28.66	0.30	28.68	28.84	28.78	18.13	130.35	
2/13/2023	18:19	19.23	0.00	0.0010	0.032	53.8	28.66	0.50	28.70	28.77	28.62	1.80	12.88	21.12	0.00	0.1051	0.324	56.6	28.66	0.30	28.68	28.84	28.78	18.41	132.42	
2/13/2023	18:20	20.27	0.00	0.0015	0.039	53.7	28.66	0.50	28.70	28.81	28.70	2.20	15.82	21.12	0.00	0.1075	0.328	56.6	28.66	0.30	28.68	28.84	28.78	18.62	133.92	
2/13/2023	18:21	13.67	0.01	0.0010	0.032	53.5	28.66	0.50	28.70	28.55	28.40	1.80	12.94	21.12	0.00	0.1064	0.326	56.5	28.66	0.30	28.68	28.84	28.78	18.52	133.24	
2/13/2023	18:22	8.15	0.00	0.0010	0.032	53.6	28.66	0.50	28.70	28.33	28.20	1.81	13.01	21.00	0.01	0.1069	0.327	56.5	28.66	0.30	28.68	28.84	28.78	18.57	133.56	
2/13/2023	18:23	9.08	0.00	0.0009	0.030	53.5	28.66	0.50	28.70	28.36	28.24	1.71	12.34	21.13	0.01	0.1057	0.325	56.1	28.66	0.30	28.68	28.85	28.78	18.45	132.84	
2/13/2023	18:24	14.82	0.00	0.0010	0.032	53.4	28.66	0.50	28.70	28.59	28.44	1.80	12.93	21.10	0.00	0.2496	0.500	56.0	28.66	0.30	28.68	28.84	28.78	28.36	204.18	
2/13/2023	18:25	19.93	0.01	0.0008	0.028	53.2	28.66	0.

Alliance SOURCE TESTING

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	O₂ - Inlet	CO₂ - Inlet	Delta P	Sq Rt	Temperature	Barometric	Inlet Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O₂ - Outlet	CO₂ - Outlet	Delta P	Sq Rt	Temperature	Barometric	Outlet Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	Point in Process
	Unit	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	-
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/13/2023	18:49	20.09	-0.01	0.0018	0.042	50.6	28.66	0.50	28.70	28.80	28.68	2.40	17.36	21.10	0.00	0.1282	0.358	53.6	28.66	0.30	28.68	28.84	28.78	20.27	146.70	
2/13/2023	18:50	20.09	-0.01	0.0006	0.024	50.5	28.66	0.50	28.70	28.80	28.72	1.38	10.06	21.12	-0.01	0.1166	0.341	53.5	28.66	0.30	28.68	28.84	28.78	19.33	139.93	
2/13/2023	18:51	19.80	-0.01	0.0004	0.020	50.4	28.66	0.50	28.70	28.79	28.75	1.13	8.24	21.11	0.00	0.1178	0.343	53.7	28.66	0.30	28.68	28.84	--	--	--	
2/13/2023	18:52	17.92	-0.01	0.0006	0.024	50.5	28.66	0.50	28.70	28.72	--	--	--	21.12	0.00	0.1176	0.343	53.9	28.66	0.30	28.68	28.84	28.78	19.42	140.47	
2/13/2023	18:53	18.19	-0.01	0.0003	0.017	50.2	28.66	0.50	28.70	28.73	28.70	0.98	7.15	21.11	0.00	0.1168	0.342	53.6	28.66	0.30	28.68	28.84	28.78	19.35	140.03	
2/13/2023	18:54	19.32	-0.02	0.0003	0.017	50.1	28.66	0.50	28.70	28.77	28.75	0.98	7.15	21.11	0.00	0.1123	0.335	53.6	28.66	0.30	28.68	28.84	28.78	18.97	137.30	
2/13/2023	18:55	18.73	-0.01	0.0004	0.020	50.2	28.66	0.50	28.70	28.75	28.73	1.13	8.26	21.14	-0.01	0.1148	0.339	53.8	28.66	0.30	28.68	28.84	28.78	19.19	138.77	
2/13/2023	18:56	19.27	0.00	0.0003	0.017	50.1	28.66	0.50	28.70	28.77	28.75	0.98	7.15	21.18	0.00	0.1156	0.340	53.8	28.66	0.30	28.68	28.85	28.78	19.25	139.25	
2/13/2023	18:57	20.20	0.00	0.0006	0.024	49.9	28.66	0.50	28.70	28.81	28.79	1.38	10.11	21.18	-0.01	0.1123	0.335	53.6	28.66	0.30	28.68	28.85	28.78	18.97	137.28	
2/13/2023	18:58	20.28	0.00	0.0005	0.022	49.8	28.66	0.50	28.70	28.81	28.79	1.26	9.23	21.17	0.00	0.1076	0.328	53.6	28.66	0.30	28.68	28.85	28.78	18.57	134.37	
2/13/2023	18:59	18.87	0.00	0.0004	0.020	49.9	28.66	0.50	28.70	28.75	28.73	1.13	8.26	21.16	-0.01	0.1095	0.331	53.8	28.66	0.30	28.68	28.84	28.78	18.74	135.53	
2/13/2023	19:00	18.83	0.00	0.0004	0.020	49.8	28.66	0.50	28.70	28.75	28.73	1.13	8.26	21.17	0.00	0.1096	0.331	53.8	28.66	0.30	28.68	28.85	28.78	18.75	135.60	
2/13/2023	19:01	19.43	0.00	0.0004	0.020	49.8	28.66	0.50	28.70	28.78	28.72	1.13	8.24	21.17	-0.01	0.1126	0.336	53.7	28.66	0.30	28.68	28.85	28.78	19.00	137.45	
2/13/2023	19:02	19.98	0.01	0.0005	0.022	49.7	28.66	0.50	28.70	28.80	28.78	1.26	9.23	21.18	0.00	0.1084	0.329	53.6	28.66	0.30	28.68	28.85	28.79	18.64	134.87	
2/13/2023	19:03	20.31	0.01	0.0005	0.022	49.5	28.66	0.50	28.70	28.81	28.79	1.26	9.23	21.18	0.00	0.1081	0.329	53.8	28.66	0.30	28.68	28.85	28.79	18.62	134.67	
2/13/2023	19:04	20.47	0.01	0.0004	0.020	49.4	28.66	0.50	28.70	28.82	28.80	1.13	8.26	21.17	0.00	0.1062	0.326	53.4	28.66	0.30	28.68	28.85	28.79	18.45	133.54	
2/13/2023	19:05	20.58	0.01	0.0004	0.020	49.3	28.66	0.50	28.70	28.82	28.79	1.13	8.25	21.18	0.00	0.1103	0.332	53.4	28.66	0.30	28.68	28.85	28.79	18.80	136.09	
2/13/2023	19:06	20.60	0.01	0.0004	0.020	49.3	28.66	0.50	28.70	28.83	28.76	1.13	8.23	21.17	0.00	0.1124	0.335	53.2	28.66	0.30	28.68	28.85	28.79	18.97	137.41	
2/13/2023	19:07	20.65	0.01	0.0005	0.022	49.3	28.66	0.50	28.70	28.83	28.75	1.26	9.20	21.18	0.00	0.1107	0.333	53.2	28.66	0.30	28.68	28.85	28.79	18.83	136.37	
2/13/2023	19:08	20.68	0.01	0.0005	0.022	49.2	28.66	0.50	28.70	28.83	28.74	1.26	9.19	21.18	0.00	0.1122	0.335	53.3	28.66	0.30	28.68	28.85	28.79	18.96	137.27	
2/13/2023	19:09	20.70	0.01	0.0004	0.020	49.1	28.66	0.50	28.70	28.83	28.74	1.13	8.22	21.19	-0.01	0.1147	0.339	53.1	28.66	0.30	28.68	28.85	28.79	19.17	138.83	
2/13/2023	19:10	20.71	0.01	0.0004	0.020	49.1	28.66	0.50	28.70	28.83	28.74	1.13	8.22	21.19	-0.01	0.1105	0.332	53.0	28.66	0.30	28.68	28.85	28.79	18.81	136.27	
2/13/2023	19:11	20.71	0.01	0.0005	0.022	49.2	28.66	0.50	28.70	28.83	28.74	1.26	9.18	21.18	-0.01	0.1102	0.332	53.1	28.66	0.30	28.68	28.85	28.78	18.79	136.07	
2/13/2023	19:12	20.71	0.01	0.0005	0.022	49.1	28.66	0.50	28.70	28.83	28.73	1.26	9.18	21.18	0.00	0.1104	0.332	53.3	28.66	0.30	28.68	28.85	28.79	18.81	136.17	
2/13/2023	19:13	20.71	0.01	0.0004	0.020	49.0	28.66	0.50	28.70	28.83	28.73	1.13	8.21	21.18	0.00	0.1126	0.336	53.1	28.66	0.30	28.68	28.85	--	--	--	
2/13/2023	19:14	20.71	0.01	0.0005	0.022	49.0	28.66	0.50	28.70	28.83	--	--	--	21.18	0.00	0.1128	0.336	53.2	28.66	0.30	28.68	28.85	28.79	19.01	137.65	
2/13/2023	19:15	20.70	0.01	0.0005	0.022	48.8	28.66	0.50	28.70	28.83	28.73	1.26	9.18	21.18	0.00	0.1089	0.330	53.1	28.66	0.30	28.68	28.85	28.79	18.68	135.26	
2/13/2023	19:16	20.66	0.01	0.0004	0.020	48.8	28.66	0.50	28.70	28.83	28.73	1.13	8.21	21.18	0.00	0.1106	0.333	53.1	28.66	0.30	28.68	28.85	28.79	18.82	136.31	
2/13/2023	19:17	20.61	0.01	0.0004	0.020	48.8	28.66	0.50	28.70	28.83	28.73	1.13	8.21	21.18	0.00	0.1141	0.338	53.5	28.66	0.30	28.68	28.85	28.79	19.12	138.40	
2/13/2023	19:18	20.49	0.00	0.0004	0.020	48.8	28.66	0.50	28.70	28.82	28.72	1.13	8.22	21.18	0.00	0.1101	0.332	53.5	28.66	0.30	28.68	28.85	28.79	18.78	135.96	
2/13/2023	19:19	19.99	0.00	0.0004	0.020	48.7	28.66	0.50	28.70	28.80	28.70	1.13	8.22	21.18	0.00	0.1095	0.331	53.4	28.66	0.30	28.68	28.85	28.79	18.73	135.59	
2/13/2023	19:20	18.68	-0.01	0.0004	0.020	48.8	28.66	0.50	28.70	28.75	28.66	1.13	8.23	21.17	0.00	0.1108	0.333	53.3	28.66	0.30	28.68	28.85	28.79	18.84	136.41	
2/13/2023	19:21	17.82	0.00	0.0005	0.022	48.5	28.66	0.50	28.70	28.71	28.63	1.26	9.21	21.16	0.00	0.1100	0.332	53.2	28.66	0.30	28.68	28.85	28.79	18.77	135.93	
2/13/2023	19:22	17.76	0.00	0.0004	0.020	48.4	28.66	0.50	28.70	28.71	28.63	1.13	8.25	21.17	-0.01	0.1121	0.335	53.2	28.66	0.30	28.68	28.85	28.78	18.95	137.23	
2/13/2023	19:23	17.93	0.00	0.0004	0.020	48.5	28.66	0.50	28.70	28.72	28.67	1.13	8.27	21.17	0.00	0.1106	0.333	53.2	28.66	0.30	28.68	28.85	28.79	18.82	136.32	
2/13/2023	19:24	18.11	0.00	0.0004	0.020	48.3	28.66	0.50	28.70	28.72	28.70	1.13	8.28	21.16	0.00	0.1107	0.333	53.2	28.66	0.30	28.68	28.85	28.79	18.83	136.38	
2/13/2023	19:25	18.61	0.00	0.0004	0.020	48.4	28.66	0.50	28.70	28.74	28.72	1.13	8.28	21.17	0.00	0.1099	0.332	53.1	28.66	0.30	28.68	28.85	28.79	18.76	135.89	
2/13/2023	19:26	18.97	0.00	0.0004	0.020	48.3	28.66	0.50	28.70	28.76	28.74	1.13	8.28	21.18	0.00	0.1104	0.332	53.0	28.66	0.30	28.68	28.85	28.79	18.80	136.21	
2/13/2023	19:27	19.26	-0.01	0.0003	0.017	48.3	28.66	0.50	28.70	28.77	28.75	0.98	7.17	21.17	0.00	0.1097	0.331	53.2	28.66	0.30	28.68	28.85	28.79	18.75	135.75	
2/13/2023	19:28	19.62	-0.01	0.0004	0.020	48.3	28.66	0.50	28.70	28.78	28.76	1.13	8.27	21.18	0.00	0.1063	0.326	53.1	28.66	0.30	28.68	28.85	28.79	18.45	133.64	
2/13/2023	19:29	20.04	0.00	0.0004	0.020	48.3	28.66	0.50	28.70	28.80	28.78	1.13	8.27	21.18	0.00	0.1092	0.330	53.1	28.66	0.30	28.68	28.85	28.79	18.70	135.46	
2/13/2023	19:30	20.04	0.00	0.0004	0.020	48.3	28.66	0.50	28.70	28.80	28.78	1.13	8.27	21.18	0.00	0.1081	0.329	53.1	28.66	0.30	28.68	28.85	28.79	18.61	134.77	
2/13/2023	19:31	19.97	0.00	0.0004	0.020	48.2	28.66	0.50	28.70	28.80	28.78	1.13	8.27	21.18	0.00	0.1088	0.330	53.0	28.66	0.30	28.68	28.85	28.79	18.66	135.23	
2/13/2023	19:32	20.49	0.01	0.0004	0.020	48.1	28.66	0.50	28.70	28.82	28.80	1.13	8.27	21.20	0.00	0.1101	0.332	53.0	28.66	0.30	28.68	28.85	28.79	18.78	136.03	
2/13/2023	19:33	20.65	0.01	0.0006	0.024	48.1	28.66	0.50	28.70	28.83	28.81	1.38	10.13	21.19	0.00	0.1090	0.330	53.2	28.66	0.30	28.68	28.85	28.79	18.68	135.33	
2/13/2023	19:34	20.71	0.01	0.0004	0.020	48.0	28.66	0.50	28.70	28.83	28.81	1.13	8.27	21.19	0.00	0.1090	0.330	53.0	28.66	0.30	28.68	28.85	--	--	--	
2/13/2023	19:35	20.73	0.01	0.0005	0.022	48.2	28.66	0.50	28.70	28.83	--	--	--	21.19	0.00	0.1120	0.335	53.4	28.66	0.30	28.68	28.85	28.79	18.94	137.15	
2/13/2023	19:36	20.73	0.01	0.0006	0.024	48.1	28.66	0.50	28.70	28.83	28.81	1.38	10.13	21.20	0.00	0.1078	0.328	53.1	28.66	0.30	28.68	28.85	28.79	18.58	134.60	
2/13/2023	19:37	20.74	0.01	0.0005	0.022	48.0	28.66	0.50	28.70	28.83	28.77	1.26	9.22	21.20	0.00	0.1095	0.331	53.1	28.66	0.30	28.68	28.85	28.79	18.73	135.65	
2/13/2023	19:38	20.74	0.01	0.0006	0.024	48.0	28.66	0.50	28.70	28.83	28.75	1.38	10.08	21.20	0.00	0.1133	0.337	53.1	28.66	0.30	28.68	28.85	28.79	19.05	137.98	
2/13/2023	19:39	20.73	0.01	0.0005	0.022	47.9	28.66	0.50	28.70	28.83	28.75	1.26	9.20	21.20	0.00	0.1071	0.327	53.1	28.66	0.30	28.68	28.85	28.79	18.52	134.16	
2/13/2023	19:40	20.61	0.00	0.0005	0.022	47.7	28.66	0.50	28.70	28.82	28.74	1.26	9.20	21.20	0.00	0.1096	0.331	52.8	28.66	0.30	28.68	28.85	28.79	18.73	135.75	
2/13/2023	19:41	19.92	0.00	0.0006	0.024	47.7	28.66	0.50	28.70	28.80	28.71	1.38	10.08	21.19	0.00	0.1080	0.329	53.0	28.66	0.30	28.68	28.85	28.79	18.60	134.73	
2/13/2023	19:42	19.83	0.00	0.0006	0.024	47.7	28.66	0.50	28.70	28.79	28.70	1.38	10.08	21.20	0.01	0.1079	0.328	52.9	28.66	0.30	28.68	28.85	28.79	18.58	134.68	
2/13/2023	19:43	19.96	0.01	0.0006	0.024	47.6	28.66	0.50	28.70	28.80	28.72	1.38	10.09	21.20	0.01	0.1113	0.334	52.9	28.66	0.30	28.68	28.85	28.79	18.88	136.77	
2/13/2023	19:44	19.91	0.01	0.0005	0.022	47.7	28.66	0.50	28.70	28.80	28.75	1.26	9.23	21.19	0.01	0.1088	0.330	52.9	28.66	0.30	28.68	28.85	28.79	18.66	135.23	
2/13/2023	19:45	19.87	0.01	0.0007	0.026	47.7	28.66	0.50	28.70	28.80	28.73	1.49	10.91	21.19	0.00	0.1054	0.325	53.1	28.66	0.30	28.68	28.85	28.79	18.37	133.08	
2/13/2023	19:46	19.91	0.01	0.0006	0.024	47.6	28.66	0.50	28.70	28.80	28.72	1.38	10.09	21.20	0.00	0.1065	0.326	52.9	28.66	0.30	28.68	28.85	28.79	18.47	133.79	
2/13/2023	19:47	20.01	0.01	0.0006	0.024	47.6	28.66	0.50	28.70	28.80	28.72	1.38	10.08	21.20	0.01	0.1052	0.324	53.0	28.66	0.30	28.68	28.85	28.79	18.35	132.96	
2/13/2023	19:48	19.92	0.01	0.0006	0.024	47.5	28.66	0.50	28.70	28.80	28.71	1.38	10.08	21.20	0.01	0.1054	0.325	53.0	28.66	0.30	28.68	28.85	28.79	18.37	133.09	
2/13/2023	19:49	19.87	0.01	0.0006	0.024	47.6	28.66	0.50	28.70	28.80	28.71	1.38	10.08	21.20	0.01	0.1096	0.331	53.1	28.66	0.30	28.68	28.85	28.79	18.73	135.70	
2/13/2023	19:50	19.90	0.01	0.0006	0.024	47.5	28.66	0.50	28.70	28.80	28.70	1.38	10.08	21.20	0.01	0.1074	0.328	53.1	28.66	0.30	28.68	28.85	28.79	18.55	134.34	
2/13/2023	19:51	19.90	0.01	0.0005	0.022	47.5	28.66	0.50	28.70	28.80	28.70	1.26	9.20	21.20	0.01	0.1058	0.325	53.0	28.66	0.30	28.68	28.85	28.79	18.41	133.34	
2/13/2023	19:52	19.83	0.01	0.0007	0.026	47.4	28.66	0.50	28.70	28.79	28.70	1.49	10.89	21.21	0.01	0.1064	0.326	53.0	28.66	0.30	28.68	28.85	28.79	18.46	133.72	
2/13/2023	19:53	19.88	0.01	0.0007	0.026	47.3	28.66	0.50	28.70	28.80	28.70	1.49	10.89	21.20	0.01	0.1081	0.329	53.0	28.66	0.30	28.68	28.85	28.79	18.60	134.78	
2/13/2023	19:54	19.85	0.01	0.0006	0.024	47.4	28.66	0.50	28.70	28.80	28.70	1.38	10.08	21.21	0.01	0.1039	0.322	53.0	28.66	0.30	28.68	28.85	28.79	18.24	132.14	
2/13/2023	19:55	19.87	0.01	0.0007	0.026	47.2	28.66	0.50	28.70	28.80	28.70	1.49	10.89	21.20	0.01	0.1061	0.326	53.2	28.66	0.30	28.68	28.85	28.79	18.43	133.51	
2/13/2023	19:56	19.85	0.01	0.0007	0.026	47.4	28.66	0.50	28.70	28.80	28.70	1.49	10.89	21.20	0.01	0.1044	0.323	53.3	28.66	0.30	28.68	28.85	--	--	--	
2/13/2023	19:57	19.82	0.01	0.0006	0.024	47.3	28.66	0.50	28.70	28.79	--	--	--	21.20	0.01	0.1065	0.326	53.1	28.66	0.30	28.68	28.85	28.79	18.47	133.78	
2/13/2023	19:58	19.83	0.01	0.0006	0.024	47.2	28.66	0.50	28.70	28.79	28.70	1.38	10.08	21.21	0.01	0.1059	0.325	53.1	28.66	0.30	28.68	28.85	28.79	18.41	133.40	
2/13/2023	19:59	19.89	0.01	0.0006	0.024	47.2	28.66	0.50	28.70	28.80	28.70	1.49	10.89	21.21	0.02	0.1072	0.327	52.9	28.66	0.30	28.68	28.85	28.79	18.52	134.24	
2/13/2023	20:00	19.88	0.01	0.0007	0.026	47.1	28.66	0.50	28.70	28.80	28.70	1.49	10.89	21.21	0.01	0.1077	0.328	53.0	28.66	0.30	28.68	28.85	28.79	18.57	134.54	
2/13/2023	20:01	19.87	0.01	0.0007	0.026	47.1	28.66	0.50	28.70	28.80	28.69	1.49	10.89	21.20	0.01	0.1074	0.328	53.0	28.66	0.30	28.68	28.85	28.79	18.54	134.36	
2/13/2023	20:02	19.93	0.01	0.0007	0.026	47.0	28.66	0.50	28.70	28.80	28.70	1.49	10.89	21.20	0.01	0.1079	0.328	52.9	28.66	0.30	28.68	28.85	28.79	18.58	134.69	
2/13/2023	20:03	19.91	0.01	0.0007	0.026	47.2	28.66	0.50	28.70	28.80	28.70	1.49	10.89	21.21	0.01	0.1050	0.324	52.8	28.66	0.30	28.68	28.85	28.79	18.33	132.87	
2/13/2023	20:04	19.91	0.01	0.0006	0.024	47.1	28.66	0.50	28.70	28.80	28.70	1.38	10.08	21.21	0.01	0.1109	0.333	52.8	28.66	0.30	28.68	28.85	28.79	18.84	136.56	
2/13/2023	20:05	19.91	0.01	0.0006	0.024	47.1	28.66	0.50	28.70	28.80	28.70	1.38	10.08	21.21	0.01	0.1064	0.326	52.8	28.66	0.30	28.68	28.85	28.79	18.45	133.76	
2/13/2023	20:06	19.84	0.01	0.0006	0.024	47.0	28.66	0.50	28.70	28.80	28.69	1.38	10.08	21.21	0.01	0.1069	0.327	52.8	28.66	0.30	28.68	28.85	28.79	18.50	134.07	
2/13/2023	20:07	19.96	0.01	0.0006	0.024	47.1	28.66	0.50	28.70	28.80	28.70	1.38	10.08	21.21	0.01	0.1070	0.327	52.7	28.66	0.30	28.68	28.85	28.79	18.50	134.15	
2/13/2023	20:08	19.81	0.01	0.0005	0.022	47.1	28.66	0.50	28.70	28.79	28.69	1.26	9.20	21.21	0.01	0.1099	0.332	52.5	28.66	0.30	28.68	28.85	28.79	18.75	135.99	
2/13/2023	20:09	19.89	0.01	0.0005	0.022	47.1	28.66	0.50	28.70	28.80	28.70	1.26	9.20	21.21	0.02	0.1054	0.325	52.7	28.66	0.30	28.68	28.85	28.79	18.36	133.14	
2/13/2023	20:10	19.94	0.01	0.0006	0.024	47.0	28.66	0.50	28.70	28.80	28.70	1.38	10.08	21.21	0.01	0.1049	0.324	52.5	28.66	0.30	28.68	28.85	28.79	18.32	132.85	
2/13/2023	20:11	19.93	0.01	0.0007	0.026	47.1	28.66	0.50	28.70	28.80	28.70	1.49	10.88	21.21	0.01	0.1063	0.326	52.7	28.66	0.30	28.68	28.85	28.79	18.44	133.72	
2/13/2023	20:12	19.96	0.01	0.0006	0.024	46.8	28.66	0.50	28.70	28.80	28.70	1.38	10.08	21.21	0.01	0.1104	0.332	52.8	28.66	0.30	28.68	28.85	28.79	18.80	136.25	
2/13/2023	20:13	19.92	0.01	0.0007	0.026	47.0	28.66	0.50	28.70	28.80	28.70	1.49	10.89	21.21	0.01	0.1079	0.328	52.7	28.66	0.30	28.68	28.85	28.79	18.58	134.71	
2/13/2023	20:14	20.02	0.01	0.0006	0.024	46.9	28.66	0.50	28.70	28.80	28.70	1.38	10.08	21.21	0.01	0.1099	0.332	52.9	28.66	0.30	28.68	28.85	28.79	18.76	135.93	
2/13/2023	20:15	20.01	0.01	0.0006	0.024	46.8	28.66	0.50	28.70	28.80	28.70	1.38	10.08	21.21	0.01	0.1073	0.328	52.7	28.66	0.30	28.68	28.85	28.79	18.53	134.34	
2/13/2023	20:16	20.01	0.01	0.0006	0.024	46.9	28.66	0.50	28.70	28.80	28.70	1.38	10.08	21.21	0.01	0.1107	0.333	52.9	28.66	0.30	28.68	28.85	28.79	18.82	136.43	
2/13/2023	20:17	19.97	0.01	0.0006	0.024	46.8	28.66	0.50	28.70	28.80	28.70	1.38	10.08	21.21	0.01	0.1097	0.331	52.6	28.66	0.30	28.68	28.85	28.79	18.73	135.84	
2/13/2023	20:18	20.01	0.01	0.0007	0.026	46.8	28.66	0.50	28.70	28.80	28.70	1.49	10.89	21.20	0.01	0.1096	0.331	52.5	28.66	0.30	28.68	28.85	--	--	--	
2/13/2023	20:19	19.97	0.01	0.0007	0.026	46.8	28.66	0.50	28.70	28.80	--	--	--	21.21	0.01	0.1066	0.326	52.7	28.66	0.30	28.68	28.85	28.79	18.47	133.90	
2/13/2023	20:20	20.01	0.01	0.0006	0.024	46.8	28.66	0.50	28.70	28.80	28.70	1.38	10.08	21.21	0.01	0.1090	0.330	52.6	28.66	0.30	28.68	28.85	28.79	18.67	135.41	
2/13/2023	20:21	20.03	0.01	0.0007	0.026	46.8	28.66	0.50	28.70	28.80	28.70	1.49	10.89	21.21	0.01	0.1109	0.333	52.5	28.66	0.30	28.68	28.85	28.79	18.83	136.60	
2/13/2023	20:22	20.01	0.01	0.0007	0.026	46.7	28.66	0.50	28.70	28.80	28.70	1.49	10.89	21.21	0.01	0.1085	0.329	52.6	28.66	0.30	28.68	28.85	28.79	18.63	135.10	
2/13/2023	20:23	20.08	0.01	0.0007	0.026	46.8	28.66	0.50

Alliance SOURCE TESTING

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	O₂ - Inlet	CO₂ - Inlet	Delta P	Sq Rt	Temperature	Barometric	Inlet Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O₂ - Outlet	CO₂ - Outlet	Delta P	Sq Rt	Temperature	Barometric	Outlet Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	Point in Process
	Unit	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	-
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/13/2023	20:47	20.13	0.01	0.0007	0.026	46.3	28.66	0.50	28.70	28.81	28.71	1.49	10.90	21.21	0.01	0.1101	0.332	52.1	28.66	0.30	28.68	28.85	28.79	18.76	136.16	
2/13/2023	20:48	20.16	0.01	0.0007	0.026	46.4	28.66	0.50	28.70	28.81	28.71	1.49	10.89	21.21	0.01	0.1110	0.333	52.2	28.66	0.30	28.68	28.85	28.79	18.84	136.71	
2/13/2023	20:49	20.26	0.01	0.0006	0.024	46.3	28.66	0.50	28.70	28.81	28.71	1.38	10.09	21.22	0.01	0.1122	0.335	52.4	28.66	0.30	28.68	28.85	28.79	18.94	137.42	
2/13/2023	20:50	20.20	0.01	0.0006	0.024	46.4	28.66	0.50	28.70	28.81	28.71	1.38	10.09	21.21	0.01	0.1105	0.332	52.1	28.66	0.30	28.68	28.85	28.79	18.79	136.42	
2/13/2023	20:51	20.23	0.01	0.0007	0.026	46.4	28.66	0.50	28.70	28.81	28.71	1.49	10.89	21.21	0.01	0.1095	0.331	52.4	28.66	0.30	28.68	28.85	28.79	18.71	135.76	
2/13/2023	20:52	20.18	0.01	0.0005	0.022	46.5	28.66	0.50	28.70	28.81	28.71	1.26	9.21	21.22	0.01	0.1122	0.335	52.2	28.66	0.30	28.68	28.85	28.79	18.94	137.45	
2/13/2023	20:53	20.27	0.01	0.0006	0.024	46.4	28.66	0.50	28.70	28.81	28.71	1.38	10.08	21.21	0.01	0.1138	0.337	52.2	28.66	0.30	28.68	28.85	28.79	19.07	138.42	
2/13/2023	20:54	20.32	0.01	0.0006	0.024	46.3	28.66	0.50	28.70	28.81	28.71	1.38	10.08	21.21	0.01	0.1128	0.336	52.0	28.66	0.30	28.68	28.85	28.79	18.98	137.85	
2/13/2023	20:55	20.16	0.01	0.0006	0.024	46.3	28.66	0.50	28.70	28.81	28.71	1.38	10.09	21.22	0.01	0.1135	0.337	52.2	28.66	0.30	28.68	28.85	28.79	19.05	138.25	
2/13/2023	20:56	20.36	0.01	0.0005	0.022	46.4	28.66	0.50	28.70	28.82	28.72	1.26	9.21	21.22	0.00	0.1151	0.339	52.2	28.66	0.30	28.68	28.85	28.79	19.18	139.22	
2/13/2023	20:57	20.64	0.01	0.0005	0.022	46.4	28.66	0.50	28.70	28.83	28.73	1.26	9.20	21.22	0.00	0.1140	0.338	52.2	28.66	0.30	28.68	28.85	28.79	19.09	138.54	
2/13/2023	20:58	20.70	0.01	0.0004	0.020	46.5	28.66	0.50	28.70	28.83	28.73	1.13	8.23	21.22	0.01	0.1143	0.338	52.3	28.66	0.30	28.68	28.85	28.79	19.12	138.71	
2/13/2023	20:59	20.72	0.01	0.0004	0.020	46.5	28.66	0.50	28.70	28.83	28.73	1.13	8.23	21.21	0.01	0.1134	0.337	52.3	28.66	0.30	28.68	28.85	28.79	19.04	138.16	
2/13/2023	21:00	20.73	0.01	0.0004	0.020	46.4	28.66	0.50	28.70	28.83	28.74	1.13	8.23	21.21	0.01	0.1119	0.335	52.7	28.66	0.30	28.68	28.85	28.79	18.92	137.21	
2/13/2023	21:01	20.74	0.01	0.0005	0.022	46.5	28.66	0.50	28.70	28.83	28.74	1.26	9.21	21.22	0.00	0.1146	0.339	52.3	28.66	0.30	28.68	28.85	--	--	--	
2/13/2023	21:02	20.74	0.01	0.0005	0.022	46.5	28.66	0.50	28.70	28.83	28.74	1.26	9.21	21.22	0.00	0.1120	0.335	52.4	28.66	0.30	28.68	28.85	28.79	18.93	137.30	
2/13/2023	21:03	20.74	0.01	0.0005	0.022	46.5	28.66	0.50	28.70	28.83	--	--	--	21.21	0.01	0.1147	0.339	52.4	28.66	0.30	28.68	28.85	28.79	19.15	138.95	
2/13/2023	21:04	20.74	0.01	0.0005	0.022	46.7	28.66	0.50	28.70	28.83	28.74	1.26	9.21	21.22	0.00	0.1131	0.336	52.6	28.66	0.30	28.68	28.85	28.79	19.02	137.96	
2/13/2023	21:05	20.74	0.01	0.0004	0.020	46.6	28.66	0.50	28.70	28.83	28.74	1.13	8.23	21.22	0.00	0.1126	0.336	52.5	28.66	0.30	28.68	28.85	28.79	18.98	137.66	
2/13/2023	21:06	20.75	0.01	0.0004	0.020	46.5	28.66	0.50	28.70	28.83	28.74	1.13	8.24	21.22	0.00	0.1140	0.338	52.5	28.66	0.30	28.68	28.85	28.79	19.09	138.52	
2/13/2023	21:07	20.75	0.01	0.0004	0.020	46.6	28.66	0.50	28.70	28.83	28.74	1.13	8.23	21.22	0.00	0.1105	0.332	52.7	28.66	0.30	28.68	28.85	28.79	18.80	136.36	
2/13/2023	21:08	20.75	0.01	0.0005	0.022	46.7	28.66	0.50	28.70	28.83	28.74	1.26	9.21	21.23	0.00	0.1141	0.338	52.8	28.66	0.30	28.68	28.85	28.79	19.11	138.55	
2/13/2023	21:09	20.74	0.01	0.0005	0.022	46.8	28.66	0.50	28.70	28.83	28.74	1.26	9.21	21.21	0.01	0.1101	0.332	52.7	28.66	0.30	28.68	28.85	28.80	18.77	136.12	
2/13/2023	21:10	20.74	0.01	0.0004	0.020	46.8	28.66	0.50	28.70	28.83	28.74	1.13	8.23	21.22	0.00	0.1124	0.335	52.8	28.66	0.30	28.68	28.85	28.79	18.96	137.52	
2/13/2023	21:11	20.75	0.01	0.0005	0.022	46.7	28.66	0.50	28.70	28.83	28.74	1.26	9.21	21.22	0.00	0.1113	0.334	52.9	28.66	0.30	28.68	28.85	28.79	18.87	136.83	
2/13/2023	21:12	20.74	0.01	0.0005	0.022	46.9	28.66	0.50	28.70	28.83	28.74	1.26	9.20	21.23	0.00	0.1122	0.335	52.9	28.66	0.30	28.68	28.85	28.79	18.95	137.38	
2/13/2023	21:13	20.74	0.01	0.0003	0.017	46.7	28.66	0.50	28.70	28.83	28.74	0.97	7.13	21.21	0.00	0.1121	0.335	52.8	28.66	0.30	28.68	28.85	28.79	18.94	137.34	
2/13/2023	21:14	20.74	0.01	0.0006	0.024	46.8	28.66	0.50	28.70	28.83	28.74	1.38	10.08	21.22	0.00	0.1131	0.336	54.5	28.66	0.30	28.68	28.85	28.79	19.06	137.72	
2/13/2023	21:15	20.72	0.01	0.0004	0.020	46.9	28.66	0.50	28.70	28.83	28.74	1.13	8.23	21.22	0.01	0.1134	0.337	53.1	28.66	0.30	28.68	28.85	28.80	19.05	138.09	
2/13/2023	21:16	20.72	0.01	0.0004	0.020	46.9	28.66	0.50	28.70	28.83	28.74	1.13	8.23	21.22	0.00	0.1136	0.337	52.7	28.66	0.30	28.68	28.85	28.79	19.06	138.28	
2/13/2023	21:17	20.71	0.01	0.0005	0.022	47.0	28.66	0.50	28.70	28.83	28.74	1.26	9.20	21.22	0.00	0.1112	0.333	53.2	28.66	0.30	28.68	28.85	28.80	18.87	136.75	
2/13/2023	21:18	20.73	0.01	0.0004	0.020	46.9	28.66	0.50	28.70	28.83	28.74	1.13	8.23	21.22	0.00	0.1112	0.333	53.1	28.66	0.30	28.68	28.85	28.80	18.87	136.75	
2/13/2023	21:19	20.73	0.01	0.0004	0.020	47.2	28.66	0.50	28.70	28.83	28.74	1.13	8.23	21.22	0.01	0.1111	0.333	53.3	28.66	0.30	28.68	28.85	28.80	18.86	136.66	
2/13/2023	21:20	20.73	0.01	0.0005	0.022	47.1	28.66	0.50	28.70	28.83	28.74	1.26	9.20	21.22	0.00	0.1134	0.337	53.4	28.66	0.30	28.68	28.85	28.80	19.06	138.06	
2/13/2023	21:21	20.73	0.01	0.0005	0.022	47.2	28.66	0.50	28.70	28.83	28.74	1.26	9.20	21.23	0.01	0.1105	0.332	53.7	28.66	0.30	28.68	28.85	28.80	18.82	136.25	
2/13/2023	21:22	20.73	0.01	0.0005	0.022	47.2	28.66	0.50	28.70	28.83	28.74	1.26	9.20	21.23	0.00	0.1075	0.328	53.8	28.66	0.30	28.68	28.85	28.80	18.56	134.38	
2/13/2023	21:23	20.73	0.01	0.0003	0.017	47.3	28.66	0.50	28.70	28.83	28.74	0.98	7.13	21.22	0.00	0.1068	0.327	54.0	28.66	0.30	28.68	28.85	--	--	--	
2/13/2023	21:24	20.74	0.01	0.0004	0.020	47.5	28.66	0.50	28.70	28.83	28.74	1.13	8.23	21.23	0.00	0.1079	0.328	54.2	28.66	0.30	28.68	28.85	28.80	18.61	134.58	
2/13/2023	21:25	20.74	0.01	0.0004	0.020	47.5	28.66	0.50	28.70	28.83	--	--	--	21.23	0.01	0.1066	0.326	54.1	28.66	0.30	28.68	28.85	28.80	18.49	133.78	
2/13/2023	21:26	20.74	0.01	0.0005	0.022	47.5	28.66	0.50	28.70	28.83	28.74	1.26	9.20	21.23	0.01	0.1043	0.323	54.2	28.66	0.30	28.68	28.85	28.80	18.29	132.30	
2/13/2023	21:27	20.73	0.01	0.0004	0.020	47.7	28.66	0.50	28.70	28.83	28.74	1.13	8.22	21.23	0.00	0.1074	0.328	54.6	28.66	0.30	28.68	28.85	28.80	18.57	134.21	
2/13/2023	21:28	20.73	0.01	0.0004	0.020	47.8	28.66	0.50	28.70	28.83	28.74	1.13	8.22	21.23	0.01	0.1030	0.321	54.4	28.66	0.30	28.68	28.85	28.80	18.18	131.46	
2/13/2023	21:29	20.73	0.01	0.0004	0.020	47.8	28.66	0.50	28.70	28.83	28.74	1.13	8.22	21.23	0.01	0.1013	0.318	54.5	28.66	0.30	28.68	28.85	28.80	18.03	130.36	
2/13/2023	21:30	20.74	0.01	0.0004	0.020	47.9	28.66	0.50	28.70	28.83	28.74	1.13	8.22	21.23	0.00	0.1021	0.320	54.7	28.66	0.30	28.68	28.85	28.80	18.11	130.85	
2/13/2023	21:31	20.74	0.01	0.0006	0.024	47.9	28.66	0.50	28.70	28.83	28.74	1.38	10.07	21.23	0.01	0.1036	0.322	55.0	28.66	0.30	28.68	28.85	28.80	18.24	131.77	
2/13/2023	21:32	20.74	0.01	0.0004	0.020	48.1	28.66	0.50	28.70	28.83	28.74	1.13	8.22	21.22	0.01	0.1032	0.321	55.2	28.66	0.30	28.68	28.85	28.80	18.21	131.49	
2/13/2023	21:33	20.74	0.01	0.0004	0.020	48.2	28.66	0.50	28.70	28.83	28.74	1.13	8.22	21.23	0.00	0.1031	0.321	54.8	28.66	0.30	28.68	28.85	28.80	18.20	131.47	
2/13/2023	21:34	20.74	0.01	0.0004	0.020	48.4	28.66	0.50	28.70	28.83	28.73	1.13	8.22	21.23	0.00	0.0995	0.315	55.2	28.66	0.30	28.68	28.85	28.80	17.88	129.11	
2/13/2023	21:35	20.74	0.01	0.0004	0.020	48.5	28.66	0.50	28.70	28.83	28.74	1.13	8.22	21.23	0.01	0.1001	0.316	55.4	28.66	0.30	28.68	28.85	28.80	17.94	129.47	
2/13/2023	21:36	20.74	0.01	0.0004	0.020	48.6	28.66	0.50	28.70	28.83	28.73	1.13	8.22	21.22	0.00	0.1007	0.317	55.4	28.66	0.30	28.68	28.85	28.80	18.00	129.86	
2/13/2023	21:37	20.74	0.01	0.0005	0.022	48.5	28.66	0.50	28.70	28.83	28.73	1.26	9.19	21.23	0.01	0.1007	0.317	55.3	28.66	0.30	28.68	28.85	28.80	17.99	129.87	
2/13/2023	21:38	20.71	0.01	0.0005	0.022	48.7	28.66	0.50	28.70	28.83	28.73	1.26	9.19	21.23	0.01	0.1020	0.319	55.4	28.66	0.30	28.68	28.85	28.80	18.11	130.69	
2/13/2023	21:39	20.43	0.01	0.0005	0.022	48.8	28.66	0.50	28.70	28.82	28.72	1.26	9.19	21.21	0.01	0.1027	0.320	55.3	28.66	0.30	28.68	28.85	28.80	18.17	131.15	
2/13/2023	21:40	20.40	0.00	0.0002	0.014	49.0	28.66	0.50	28.70	28.82	28.72	0.80	5.81	21.21	0.01	0.1016	0.319	55.6	28.66	0.30	28.68	28.85	28.80	18.08	130.42	
2/13/2023	21:41	20.41	0.01	0.0002	0.014	49.1	28.66	0.50	28.70	28.82	28.72	0.80	5.81	21.22	0.01	0.0992	0.315	55.5	28.66	0.30	28.68	28.85	28.80	17.86	128.87	
2/13/2023	21:42	20.41	0.01	0.0002	0.014	49.2	28.66	0.50	28.70	28.82	28.71	0.80	5.80	21.22	0.00	0.0962	0.310	55.7	28.66	0.30	28.68	28.85	28.80	17.59	126.89	
2/13/2023	21:43	20.39	0.00	0.0004	0.020	49.4	28.66	0.50	28.70	28.82	28.70	1.13	8.20	21.22	0.01	0.1109	0.333	55.9	28.66	0.30	28.68	28.85	28.80	18.89	136.22	
2/13/2023	21:44	20.08	0.00	0.0003	0.017	49.4	28.66	0.50	28.70	28.80	28.69	0.98	7.11	21.22	0.00	0.1032	0.321	55.7	28.66	0.30	28.68	28.85	28.80	18.22	131.42	
2/13/2023	21:45	19.84	-0.01	0.0003	0.017	49.4	28.66	0.50	28.70	28.79	28.68	0.98	7.11	21.21	0.00	0.1062	0.326	55.8	28.66	0.30	28.68	28.85	--	--	--	
2/13/2023	21:46	19.77	-0.01	0.0003	0.017	49.6	28.66	0.50	28.70	28.79	28.68	0.98	7.11	21.21	0.01	0.1011	0.318	55.9	28.66	0.30	28.68	28.85	28.80	18.04	130.05	
2/13/2023	21:47	19.77	-0.02	0.0001	0.010	49.8	28.66	0.50	28.70	28.79	--	--	--	21.22	0.01	0.0993	0.315	56.0	28.66	0.30	28.68	28.85	28.80	17.88	128.86	
2/13/2023	21:48	19.76	-0.02	0.0002	0.014	49.8	28.66	0.50	28.70	28.79	28.67	0.80	5.80	21.22	0.01	0.0972	0.312	55.8	28.66	0.30	28.68	28.85	28.80	17.69	127.53	
2/13/2023	21:49	19.75	-0.02	0.0003	0.017	49.9	28.66	0.50	28.70	28.79	28.68	0.98	7.10	21.22	0.00	0.0996	0.316	56.2	28.66	0.30	28.68	28.85	28.80	17.91	129.05	
2/13/2023	21:50	19.76	-0.02	0.0002	0.014	50.0	28.66	0.50	28.70	28.79	28.69	0.80	5.81	21.22	0.01	0.0996	0.316	56.1	28.66	0.30	28.68	28.85	28.80	17.91	129.05	
2/13/2023	21:51	19.77	-0.02	0.0002	0.014	50.2	28.66	0.50	28.70	28.79	28.71	0.80	5.81	21.22	0.01	0.0995	0.315	56.7	28.66	0.30	28.68	28.85	28.80	17.91	128.92	
2/13/2023	21:52	19.84	-0.01	0.0003	0.017	50.3	28.66	0.50	28.70	28.79	28.74	0.98	7.13	21.23	0.01	0.1017	0.319	56.5	28.66	0.30	28.68	28.85	28.80	18.10	130.36	
2/13/2023	21:53	19.85	-0.01	0.0004	0.020	50.3	28.66	0.50	28.70	28.79	28.76	1.13	8.25	21.23	0.01	0.0953	0.309	57.0	28.66	0.30	28.68	28.85	28.80	17.53	126.13	
2/13/2023	21:54	19.79	-0.02	0.0003	0.017	50.4	28.66	0.50	28.70	28.79	28.77	0.98	7.15	21.22	0.00	0.0992	0.315	56.4	28.66	0.30	28.68	28.85	28.80	17.88	128.76	
2/13/2023	21:55	19.85	-0.01	0.0003	0.017	50.4	28.66	0.50	28.70	28.79	28.77	0.98	7.15	21.22	0.01	0.0975	0.312	56.7	28.66	0.30	28.68	28.85	28.80	17.73	127.61	
2/13/2023	21:56	19.80	-0.02	0.0003	0.017	50.6	28.66	0.50	28.70	28.79	28.77	0.98	7.15	21.22	0.01	0.0945	0.307	56.6	28.66	0.30	28.68	28.85	28.80	17.45	125.65	
2/13/2023	21:57	19.80	-0.02	0.0001	0.010	50.6	28.66	0.50	28.70	28.79	28.77	0.56	4.13	21.22	0.01	0.0950	0.308	56.6	28.66	0.30	28.68	28.85	28.80	17.50	125.98	
2/13/2023	21:58	19.79	-0.02	0.0003	0.017	50.7	28.66	0.50	28.70	28.79	28.77	0.98	7.15	21.23	0.01	0.0957	0.309	56.6	28.66	0.30	28.68	28.85	28.80	17.56	126.44	
2/13/2023	21:59	19.81	-0.02	0.0003	0.017	50.8	28.66	0.50	28.70	28.79	28.77	0.98	7.15	21.23	0.01	0.0973	0.312	56.7	28.66	0.30	28.68	28.85	28.80	17.71	127.48	
2/13/2023	22:00	19.82	-0.02	0.0004	0.020	50.8	28.66	0.50	28.70	28.79	28.77	1.13	8.25	21.22	0.01	0.0954	0.309	56.7	28.66	0.30	28.68	28.85	28.80	17.54	126.24	
2/13/2023	22:01	19.79	-0.02	0.0002	0.014	51.0	28.66	0.50	28.70	28.79	28.77	0.80	5.83	21.22	0.01	0.0960	0.310	56.7	28.66	0.30	28.68	28.85	28.80	17.59	126.62	
2/13/2023	22:02	19.78	-0.02	0.0003	0.017	51.1	28.66	0.50	28.70	28.79	28.77	0.98	7.14	21.22	0.01	0.0979	0.313	56.8	28.66	0.30	28.68	28.85	28.80	17.77	127.86	
2/13/2023	22:03	19.78	-0.02	0.0003	0.017	51.1	28.66	0.50	28.70	28.79	28.77	0.98	7.14	21.22	0.01	0.0950	0.308	57.0	28.66	0.30	28.68	28.85	28.80	17.51	125.93	
2/13/2023	22:04	19.79	-0.02	0.0003	0.017	51.3	28.66	0.50	28.70	28.79	28.77	0.98	7.14	21.22	0.01	0.0949	0.308	57.0	28.66	0.30	28.68	28.85	28.80	17.50	125.86	
2/13/2023	22:05	19.82	-0.02	0.0004	0.020	51.4	28.66	0.50	28.70	28.79	28.77	1.13	8.25	21.22	0.01	0.0943	0.307	57.0	28.66	0.30	28.68	28.85	28.80	17.44	125.46	
2/13/2023	22:06	19.79	-0.02	0.0003	0.017	51.3	28.66	0.50	28.70	28.79	28.77	0.98	7.14	21.22	0.01	0.0970	0.311	57.2	28.66	0.30	28.68	28.85	28.80	17.69	127.22	
2/13/2023	22:07	19.79	-0.02	0.0004	0.020	51.5	28.66	0.50	28.70	28.79	28.77	1.13	8.25	21.22	0.01	0.0963	0.310	57.3	28.66	0.30	28.68	28.85	--	--	--	
2/13/2023	22:08	19.83	-0.02	0.0003	0.017	51.5	28.66	0.50	28.70	28.79	28.77	0.98	7.14	21.22	0.01	0.0931	0.305	57.1	28.66	0.30	28.68	28.85	28.80	17.33	124.64	
2/13/2023	22:09	19.79	-0.02	0.0003	0.017	51.5	28.66	0.50	28.70	28.79	--	--	--	21.22	0.01	0.0942	0.307	57.3	28.66	0.30	28.68	28.85	28.80	17.44	125.36	
2/13/2023	22:10	19.79	-0.02	0.0004	0.020	51.6	28.66	0.50	28.70	28.79	28.77	1.13	8.24	21.22	0.01	0.0929	0.305	57.1	28.66	0.30	28.68	28.85	28.80	17.31	124.51	
2/13/2023	22:11	19.79	-0.02	0.0003	0.017	51.7	28.66	0.50	28.70	28.79	28.77	0.98	7.14	21.21	0.01	0.0950	0.308	57.3	28.66	0.30	28.68	28.85	28.80	17.51	125.89	
2/13/2023	22:12	19.79	-0.02	0.0002	0.014	51.9	28.66	0.50	28.70	28.79	28.77	0.80	5.83	21.22	0.01	0.0925	0.304	57.5	28.66	0.30	28.68	28.85	28.80	17.28	124.20	
2/13/2023	22:13	19.79	-0.02	0.0003	0.017	51.7	28.66	0.50	28.70	28.79	28.77	0.98	7.14	21.22	0.01	0.0914	0.302	57.4	28.66	0.30	28.68	28.85	28.80	17.18	123.47	
2/13/2023	22:14	19.79	-0.02	0.0003	0.017	51.8	28.66	0.50	28.70	28.79	28.77	0.98	7.14	21.22	0.01	0.0951	0.308	57.6	28.66	0.30	28.68	28.85	28.80	17.52	125.92	
2/13/2023	22:15	19.78	-0.02	0.0003	0.017	51.8	28.66	0.50	28.70	28.79	28.77	0.98	7.14	21.21	0.02	0.0951	0.308	57.5	28.66	0.30	28.68	28.85	28.80	17.52	125.93	
2/13/2023	22:16	19.78	-0.02	0.0003	0.017	52.0	28.66	0.50	28.70	28.79	28.77	0.98	7.14	21.21	0.02	0.0920	0.303	57.4	28.66	0.30	28.68	28.85	28.80	17.23	123.86	
2/13/2023	22:17	19.77	-0.02	0.0002	0.014	52.1	28.66	0.50	28.70	28.79	28.77	0.80	5.83	21.21	0.01	0.0920	0.303	57.8	28.66	0.30	28.68	28.85	28.80	17.24	123.82	
2/13/2023	22:18	19.78	-0.02	0.0003	0.017	52.2	28.66	0.50	28.70	28.79	28.77	0.98	7.14	21.22	0.01	0.0926	0.304	57.7	28.66	0.30	28.68	28.85	28.80	17.30	124.23	
2/13/2023	22:19	19.75	-0.02	0.0002	0.014	52.2	28.66	0.50	28.70	28.79	28.77	0.80	5.83	21.21	0.02	0.0914	0.302	57.7	28.66	0.30	28.68	28.85	28.80	17.18	123.43	
2/13/2023	22:20	19.79	-0.02	0.0003	0.017	52.2	28.66	0.50	28.70	28.79	28.77	0.98	7.14	21.21	0.01	0.0918	0.303	57.8	28.66	0.30	28.68	28.85	28.80	17.22	123.69	
2/13/2023	22:21	19.76	-0.02	0.0002	0.014

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	-
	Status	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	
		Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/13/2023	22:45	19.75	-0.02	0.0003	0.017	53.2	28.66	0.50	28.70	28.79	28.77	0.98	7.13	21.21	0.01	0.0914	0.302	58.3	28.66	0.30	28.68	28.85	28.80	17.19	123.36	
2/13/2023	22:46	19.78	-0.02	0.0003	0.017	53.2	28.66	0.50	28.70	28.79	28.77	0.98	7.13	21.21	0.01	0.0924	0.304	58.5	28.66	0.30	28.68	28.85	28.80	17.29	124.00	
2/13/2023	22:47	19.75	-0.02	0.0003	0.017	53.3	28.66	0.50	28.70	28.79	28.77	0.98	7.13	21.21	0.01	0.0912	0.302	58.4	28.66	0.30	28.68	28.85	28.80	17.18	123.22	
2/13/2023	22:48	19.77	-0.02	0.0002	0.014	53.3	28.66	0.50	28.70	28.79	28.77	0.80	5.82	21.20	0.01	0.0901	0.300	58.5	28.66	0.30	28.68	28.85	28.80	17.07	122.45	
2/13/2023	22:49	19.76	-0.02	0.0003	0.017	53.2	28.66	0.50	28.70	28.79	28.77	0.98	7.13	21.21	0.02	0.0890	0.298	58.2	28.66	0.30	28.68	28.85	28.80	16.96	121.73	
2/13/2023	22:50	19.75	-0.02	0.0002	0.014	53.2	28.66	0.50	28.70	28.79	28.77	0.80	5.82	21.20	0.01	0.0927	0.304	58.5	28.66	0.30	28.68	28.85	28.80	17.32	124.21	
2/13/2023	22:51	19.76	-0.02	0.0003	0.017	53.2	28.66	0.50	28.70	28.79	28.77	0.98	7.13	21.20	0.01	0.0929	0.305	58.3	28.66	0.30	28.68	28.85	28.80	17.33	124.36	
2/13/2023	22:52	19.76	-0.02	0.0003	0.017	53.4	28.66	0.50	28.70	28.79	--	--	--	21.20	0.01	0.0921	0.303	58.3	28.66	0.30	28.68	28.85	--	--	--	
2/13/2023	22:53	19.76	-0.02	0.0003	0.017	53.3	28.66	0.50	28.70	28.79	28.77	0.98	7.13	21.20	0.01	0.0924	0.304	58.3	28.66	0.30	28.68	28.85	28.80	17.29	124.03	
2/13/2023	22:54	19.74	-0.02	0.0003	0.017	53.3	28.66	0.50	28.70	28.79	28.76	0.98	7.13	21.21	0.01	0.0894	0.299	58.2	28.66	0.30	28.68	28.85	28.80	17.00	122.00	
2/13/2023	22:55	19.77	-0.02	0.0003	0.017	53.4	28.66	0.50	28.70	28.79	28.77	0.98	7.13	21.20	0.01	0.0896	0.299	58.2	28.66	0.30	28.68	28.85	28.80	17.02	122.14	
2/13/2023	22:56	19.74	-0.02	0.0002	0.014	53.3	28.66	0.50	28.70	28.79	28.76	0.80	5.82	21.20	0.01	0.0893	0.299	58.4	28.66	0.30	28.68	28.85	28.80	17.00	121.92	
2/13/2023	22:57	19.74	-0.02	0.0003	0.017	53.3	28.66	0.50	28.70	28.79	28.76	0.98	7.13	21.20	0.01	0.0923	0.304	58.3	28.66	0.30	28.68	28.85	28.80	17.28	123.97	
2/13/2023	22:58	19.75	-0.02	0.0003	0.017	53.3	28.66	0.50	28.70	28.79	28.77	0.98	7.13	21.21	0.02	0.0917	0.303	58.3	28.66	0.30	28.68	28.85	28.80	17.22	123.56	
2/13/2023	22:59	19.75	-0.02	0.0004	0.020	53.5	28.66	0.50	28.70	28.79	28.77	1.13	8.23	21.20	0.01	0.0910	0.302	58.5	28.66	0.30	28.68	28.85	28.80	17.16	123.07	
2/13/2023	23:00	19.77	-0.02	0.0003	0.017	53.4	28.66	0.50	28.70	28.79	28.77	0.98	7.13	21.20	0.01	0.0893	0.299	58.5	28.66	0.30	28.68	28.85	28.80	17.00	121.91	
2/13/2023	23:01	19.75	-0.02	0.0003	0.017	53.6	28.66	0.50	28.70	28.79	28.77	0.98	7.13	21.20	0.01	0.0921	0.303	58.4	28.66	0.30	28.68	28.85	28.80	17.26	123.81	
2/13/2023	23:02	19.75	-0.02	0.0003	0.017	53.4	28.66	0.50	28.70	28.79	28.77	0.98	7.13	21.20	0.01	0.0909	0.301	58.5	28.66	0.30	28.68	28.85	28.80	17.15	123.00	
2/13/2023	23:03	19.77	-0.02	0.0002	0.014	53.4	28.66	0.50	28.70	28.79	28.77	0.80	5.82	21.21	0.01	0.0915	0.302	58.3	28.66	0.30	28.68	28.85	28.80	17.20	123.42	
2/13/2023	23:04	19.74	-0.02	0.0003	0.017	53.5	28.66	0.50	28.70	28.79	28.76	0.98	7.13	21.20	0.01	0.0926	0.304	58.4	28.66	0.30	28.68	28.85	28.80	17.31	124.15	
2/13/2023	23:05	19.76	-0.02	0.0002	0.014	53.5	28.66	0.50	28.70	28.79	28.77	0.80	5.82	21.20	0.01	0.0918	0.303	58.3	28.66	0.30	28.68	28.85	28.80	17.23	123.62	
2/13/2023	23:06	19.72	-0.02	0.0003	0.017	53.4	28.66	0.50	28.70	28.79	28.76	0.98	7.13	21.20	0.01	0.0903	0.300	58.4	28.66	0.30	28.68	28.85	28.80	17.09	122.60	
2/13/2023	23:07	19.78	-0.02	0.0003	0.017	53.7	28.66	0.50	28.70	28.79	28.77	0.98	7.13	21.20	0.01	0.0884	0.297	62.4	28.66	0.30	28.68	28.85	28.80	16.98	120.83	
2/13/2023	23:08	19.74	-0.02	0.0002	0.014	53.8	28.66	0.50	28.70	28.79	28.76	0.80	5.82	21.21	0.01	0.0922	0.304	63.3	28.66	0.30	28.68	28.85	28.80	17.35	123.30	
2/13/2023	23:09	19.72	-0.02	0.0004	0.020	53.8	28.66	0.50	28.70	28.79	28.76	1.13	8.23	21.20	0.01	0.0901	0.300	63.0	28.66	0.30	28.68	28.85	28.80	17.15	121.93	
2/13/2023	23:10	19.78	-0.02	0.0004	0.020	53.8	28.66	0.50	28.70	28.79	28.77	1.13	8.23	21.20	0.01	0.0920	0.303	63.5	28.66	0.30	28.68	28.85	28.80	17.34	123.14	
2/13/2023	23:11	19.72	-0.02	0.0003	0.017	53.8	28.66	0.50	28.70	28.79	28.76	0.98	7.13	21.19	0.01	0.0931	0.305	62.7	28.66	0.30	28.68	28.85	28.80	17.43	123.97	
2/13/2023	23:12	19.76	-0.02	0.0003	0.017	53.7	28.66	0.50	28.70	28.79	28.77	0.98	7.13	21.20	0.01	0.0870	0.295	63.1	28.66	0.30	28.68	28.85	28.80	16.85	119.79	
2/13/2023	23:13	19.70	-0.02	0.0004	0.020	53.7	28.66	0.50	28.70	28.78	28.76	1.13	8.23	21.20	0.01	0.0896	0.299	63.5	28.66	0.30	28.68	28.85	28.80	17.11	121.52	
2/13/2023	23:14	19.75	-0.02	0.0004	0.020	53.8	28.66	0.50	28.70	28.79	--	--	--	21.20	0.01	0.0927	0.304	63.1	28.66	0.30	28.68	28.85	28.79	17.40	123.65	
2/13/2023	23:15	19.78	-0.02	0.0002	0.014	53.9	28.66	0.50	28.70	28.79	28.77	0.80	5.82	21.20	0.01	0.0912	0.302	64.1	28.66	0.30	28.68	28.85	--	--	--	
2/13/2023	23:16	19.74	-0.02	0.0002	0.014	53.9	28.66	0.50	28.70	28.79	28.76	0.80	5.82	21.20	0.01	0.0882	0.297	63.7	28.66	0.30	28.68	28.85	28.80	16.98	120.54	
2/13/2023	23:17	19.72	-0.02	0.0003	0.017	53.8	28.66	0.50	28.70	28.79	28.76	0.98	7.12	21.20	0.00	0.0888	0.298	63.5	28.66	0.30	28.68	28.85	28.79	17.03	120.99	
2/13/2023	23:18	19.72	-0.02	0.0003	0.017	53.8	28.66	0.50	28.70	28.79	28.76	0.98	7.12	21.20	0.00	0.0900	0.300	63.7	28.66	0.30	28.68	28.85	28.79	17.15	121.77	
2/13/2023	23:19	19.71	-0.02	0.0003	0.017	53.9	28.66	0.50	28.70	28.79	28.76	0.98	7.12	21.19	0.01	0.0916	0.303	63.0	28.66	0.30	28.68	28.85	28.79	17.29	122.93	
2/13/2023	23:20	19.75	-0.02	0.0002	0.014	53.9	28.66	0.50	28.70	28.79	28.77	0.80	5.82	21.19	0.01	0.0921	0.303	62.9	28.66	0.30	28.68	28.85	28.79	17.34	123.27	
2/13/2023	23:21	20.38	0.00	0.0004	0.020	53.9	28.66	0.50	28.70	28.82	28.79	1.13	8.22	21.21	0.01	0.0894	0.299	63.5	28.66	0.30	28.68	28.85	28.80	17.09	121.39	
2/13/2023	23:22	20.62	0.00	0.0004	0.020	53.8	28.66	0.50	28.70	28.82	28.80	1.13	8.22	21.21	0.00	0.0909	0.301	63.0	28.66	0.30	28.68	28.85	28.79	17.22	122.46	
2/13/2023	23:23	20.68	0.00	0.0004	0.020	53.7	28.66	0.50	28.70	28.83	28.81	1.13	8.22	21.21	0.00	0.0866	0.294	63.3	28.66	0.30	28.68	28.85	28.79	16.82	119.50	
2/13/2023	23:24	20.72	0.00	0.0005	0.022	53.7	28.66	0.50	28.70	28.83	28.80	1.27	9.19	21.21	0.00	0.0882	0.297	63.2	28.66	0.30	28.68	28.85	28.79	16.97	120.61	
2/13/2023	23:25	20.73	0.00	0.0005	0.022	53.7	28.66	0.50	28.70	28.83	28.75	1.27	9.16	21.20	0.00	0.0884	0.297	63.1	28.66	0.30	28.68	28.85	28.79	16.99	120.76	
2/13/2023	23:26	20.73	0.00	0.0004	0.020	53.7	28.66	0.50	28.70	28.83	28.74	1.13	8.18	21.20	0.00	0.0882	0.297	63.5	28.66	0.30	28.68	28.85	28.79	16.97	120.58	
2/13/2023	23:27	20.74	0.00	0.0005	0.022	53.7	28.66	0.50	28.70	28.83	28.74	1.27	9.14	21.21	0.00	0.0847	0.291	63.1	28.66	0.30	28.68	28.85	28.79	16.63	118.20	
2/13/2023	23:28	20.74	0.00	0.0005	0.022	53.7	28.66	0.50	28.70	28.83	28.74	1.27	9.14	21.20	0.00	0.0867	0.294	62.6	28.66	0.30	28.68	28.85	28.79	16.81	119.65	
2/13/2023	23:29	20.74	0.00	0.0006	0.024	53.7	28.66	0.50	28.70	28.83	28.73	1.39	10.01	21.21	0.00	0.0889	0.298	63.6	28.66	0.30	28.68	28.85	28.79	17.04	121.04	
2/13/2023	23:30	20.74	0.00	0.0005	0.022	53.7	28.66	0.50	28.70	28.83	28.73	1.27	9.14	21.21	0.00	0.0869	0.295	62.9	28.66	0.30	28.68	28.85	28.79	16.84	119.75	
2/13/2023	23:31	20.74	0.00	0.0005	0.022	53.6	28.66	0.50	28.70	28.83	28.73	1.27	9.14	21.20	0.01	0.0892	0.299	63.5	28.66	0.30	28.68	28.85	28.80	17.07	121.26	
2/13/2023	23:32	20.74	0.00	0.0005	0.022	53.7	28.66	0.50	28.70	28.83	28.73	1.27	9.14	21.20	0.00	0.0868	0.295	63.3	28.66	0.30	28.68	28.85	28.79	16.84	119.64	
2/13/2023	23:33	20.75	0.00	0.0005	0.022	53.7	28.66	0.50	28.70	28.83	28.73	1.27	9.14	21.20	0.00	0.0882	0.297	63.1	28.66	0.30	28.68	28.85	28.79	16.97	120.63	
2/13/2023	23:34	20.75	0.00	0.0004	0.020	53.6	28.66	0.50	28.70	28.83	28.73	1.13	8.18	21.21	0.00	0.0903	0.300	63.2	28.66	0.30	28.68	28.85	28.79	17.17	122.03	
2/13/2023	23:35	20.75	0.00	0.0005	0.022	53.7	28.66	0.50	28.70	28.83	28.73	1.27	9.14	21.20	0.00	0.0907	0.301	63.0	28.66	0.30	28.68	28.85	28.79	17.21	122.33	
2/13/2023	23:36	20.75	0.00	0.0005	0.022	53.6	28.66	0.50	28.70	28.83	--	--	--	21.20	0.01	0.0885	0.297	63.0	28.66	0.30	28.68	28.85	28.80	16.99	120.84	
2/13/2023	23:37	20.75	0.00	0.0005	0.022	53.6	28.66	0.50	28.70	28.83	28.73	1.27	9.14	21.20	0.00	0.0863	0.294	63.6	28.66	0.30	28.68	28.85	--	--	--	
2/13/2023	23:38	20.74	0.00	0.0005	0.022	53.6	28.66	0.50	28.70	28.83	28.73	1.27	9.14	21.21	0.00	0.0893	0.299	62.8	28.66	0.30	28.68	28.85	28.79	17.07	121.39	
2/13/2023	23:39	20.74	0.01	0.0004	0.020	53.5	28.66	0.50	28.70	28.83	28.73	1.13	8.18	21.20	0.01	0.0875	0.296	63.2	28.66	0.30	28.68	28.85	28.80	16.90	120.12	
2/13/2023	23:40	20.75	0.00	0.0004	0.020	53.6	28.66	0.50	28.70	28.83	28.73	1.13	8.17	21.20	0.00	0.0869	0.295	63.1	28.66	0.30	28.68	28.85	28.79	16.84	119.72	
2/13/2023	23:41	20.75	0.00	0.0005	0.022	53.5	28.66	0.50	28.70	28.83	28.73	1.27	9.14	21.21	0.00	0.0856	0.293	62.6	28.66	0.30	28.68	28.85	28.79	16.71	118.88	
2/13/2023	23:42	20.75	0.00	0.0004	0.020	53.6	28.66	0.50	28.70	28.83	28.73	1.13	8.17	21.20	0.00	0.0911	0.302	63.5	28.66	0.30	28.68	28.85	28.79	17.25	122.54	
2/13/2023	23:43	20.75	0.00	0.0004	0.020	53.5	28.66	0.50	28.70	28.83	28.73	1.13	8.18	21.21	0.00	0.0895	0.299	63.2	28.66	0.30	28.68	28.85	28.79	17.09	121.49	
2/13/2023	23:44	20.75	0.00	0.0005	0.022	53.6	28.66	0.50	28.70	28.83	28.73	1.27	9.14	21.20	0.00	0.0893	0.299	63.3	28.66	0.30	28.68	28.85	28.79	17.08	121.35	
2/13/2023	23:45	20.75	0.00	0.0005	0.022	53.6	28.66	0.50	28.70	28.83	28.73	1.27	9.14	21.21	0.00	0.0911	0.302	63.3	28.66	0.30	28.68	28.85	28.79	17.25	122.56	
2/13/2023	23:46	20.75	0.00	0.0004	0.020	53.6	28.66	0.50	28.70	28.83	28.73	1.13	8.17	21.20	0.00	0.0887	0.298	62.8	28.66	0.30	28.68	28.85	28.79	17.01	121.00	
2/13/2023	23:47	20.75	0.00	0.0005	0.022	53.7	28.66	0.50	28.70	28.83	28.73	1.27	9.14	21.20	0.00	0.0880	0.297	63.4	28.66	0.30	28.68	28.85	28.79	16.95	120.45	
2/13/2023	23:48	20.75	0.00	0.0005	0.022	53.5	28.66	0.50	28.70	28.83	28.73	1.27	9.14	21.19	0.00	0.0888	0.298	63.0	28.66	0.30	28.68	28.85	28.79	17.02	121.04	
2/13/2023	23:49	20.75	0.00	0.0004	0.020	53.5	28.66	0.50	28.70	28.83	28.73	1.13	8.17	21.20	0.00	0.0895	0.299	63.1	28.66	0.30	28.68	28.85	28.79	17.09	121.50	
2/13/2023	23:50	20.75	0.00	0.0004	0.020	53.6	28.66	0.50	28.70	28.83	28.73	1.13	8.17	21.20	0.01	0.0896	0.299	63.3	28.66	0.30	28.68	28.85	28.80	17.11	121.55	
2/13/2023	23:51	20.75	0.00	0.0006	0.024	53.6	28.66	0.50	28.70	28.83	28.73	1.39	10.01	21.20	0.01	0.0858	0.293	63.1	28.66	0.30	28.68	28.85	28.80	16.74	118.96	
2/13/2023	23:52	20.75	0.00	0.0004	0.020	53.6	28.66	0.50	28.70	28.83	28.73	1.13	8.17	21.20	0.00	0.0895	0.299	63.3	28.66	0.30	28.68	28.85	28.79	17.10	121.48	
2/13/2023	23:53	20.75	0.00	0.0003	0.017	53.5	28.66	0.50	28.70	28.83	28.73	0.98	7.08	21.19	0.00	0.0876	0.296	63.2	28.66	0.30	28.68	28.85	28.79	16.91	120.20	
2/13/2023	23:54	20.75	0.00	0.0005	0.022	53.7	28.66	0.50	28.70	28.83	28.73	1.27	9.14	21.20	0.00	0.0918	0.303	62.9	28.66	0.30	28.68	28.85	28.79	17.31	123.08	
2/13/2023	23:55	20.75	0.00	0.0004	0.020	53.6	28.66	0.50	28.70	28.83	28.73	1.13	8.17	21.20	0.00	0.0913	0.302	63.4	28.66	0.30	28.68	28.85	28.79	17.27	122.69	
2/13/2023	23:56	20.75	0.00	0.0005	0.022	53.6	28.66	0.50	28.70	28.83	28.73	1.27	9.14	21.20	0.00	0.0901	0.300	62.8	28.66	0.30	28.68	28.85	28.79	17.14	121.96	
2/13/2023	23:57	20.75	0.00	0.0005	0.022	53.7	28.66	0.50	28.70	28.83	28.73	1.27	9.14	21.20	0.00	0.0862	0.294	63.4	28.66	0.30	28.68	28.85	28.79	16.78	119.21	
2/13/2023	23:58	20.75	0.00	0.0004	0.020	53.6	28.66	0.50	28.70	28.83	--	--	--	21.20	0.00	0.0887	0.298	63.3	28.66	0.30	28.68	28.85	28.79	17.02	120.93	
2/13/2023	23:59	20.75	0.00	0.0006	0.024	53.5	28.66	0.50	28.70	28.83	28.73	1.39	10.01	21.20	0.00	0.0898	0.300	63.0	28.66	0.30	28.68	28.85	28.79	17.12	121.72	
2/14/2023	0:00	20.75	0.00	0.0004	0.020	53.5	28.34	0.50	28.38	28.83	28.73	1.14	8.13	21.20	0.00	0.0865	0.294	63.0	28.34	0.30	28.36	28.85	--	--	--	
2/14/2023	0:01	20.75	0.00	0.0005	0.022	53.5	28.34	0.50	28.38	28.83	28.73	1.27	9.09	21.20	0.00	0.0900	0.300	63.4	28.34	0.30	28.36	28.85	28.79	17.24	121.14	
2/14/2023	0:02	20.75	0.00	0.0004	0.020	53.5	28.34	0.50	28.38	28.83	28.73	1.14	8.13	21.21	0.00	0.0893	0.299	63.1	28.34	0.30	28.36	28.85	28.80	17.17	120.69	
2/14/2023	0:03	20.75	0.00	0.0005	0.022	53.6	28.34	0.50	28.38	28.83	28.73	1.27	9.09	21.20	0.00	0.0873	0.295	63.5	28.34	0.30	28.36	28.85	28.79	16.98	119.29	
2/14/2023	0:04	20.75	0.00	0.0005	0.022	53.6	28.34	0.50	28.38	28.83	28.73	1.27	9.09	21.20	0.01	0.0883	0.297	62.8	28.34	0.30	28.36	28.85	28.80	17.07	120.05	
2/14/2023	0:05	20.75	0.00	0.0005	0.022	53.6	28.34	0.50	28.38	28.83	28.73	1.27	9.09	21.21	0.01	0.0880	0.297	62.8	28.34	0.30	28.36	28.85	28.80	17.04	119.84	
2/14/2023	0:06	20.74	0.00	0.0005	0.022	53.7	28.34	0.50	28.38	28.83	28.73	1.27	9.09	21.20	0.00	0.0896	0.299	63.4	28.34	0.30	28.36	28.85	28.79	17.20	120.86	
2/14/2023	0:07	20.75	0.00	0.0005	0.022	53.5	28.34	0.50	28.38	28.83	28.73	1.27	9.09	21.20	0.00	0.0872	0.295	62.9	28.34	0.30	28.36	28.85	28.79	16.96	119.29	
2/14/2023	0:08	20.75	0.00	0.0005	0.022	53.6	28.34	0.50	28.38	28.83	28.73	1.27	9.09	21.20	0.00	0.0850	0.292	63.0	28.34	0.30	28.36	28.85	28.79	16.75	117.76	
2/14/2023	0:09	20.75	0.00	0.0005	0.022	53.6	28.34	0.50	28.38	28.83	28.73	1.27	9.09	21.20	0.00	0.0876	0.296	63.2	28.34	0.30	28.36	28.85	28.79	17.01	119.53	
2/14/2023	0:10	20.75	0.00	0.0004	0.020	53.6	28.34	0.50	28.38	28.83	28.73	1.14	8.13	21.20	0.00	0.0869	0.295	62.9	28.34	0.30	28.36	28.85	28.80	16.93	119.08	
2/14/2023	0:11	20.75	0.00	0.0006	0.024	53.7	28.34	0.50	28.38	28.83	28.73	1.40	9.95	21.20	0.01	0.0865	0.294	63.2	28.34	0.30	28.36	28.85	28.80	16.90	118.77	
2/14/2023	0:12	20.75	0.00	0.0003	0.017	53.8	28.34	0.50	28.38	28.83	28.73	0.99	7.04	21.20	0.01	0.0889	0.298	63.2	28.34	0.30	28.36	28.85	28.80	17.13	120.41	
2/14/2023	0:13	20.75	0.01	0.0005	0.022	53.6	28.34	0.50	28.38	28.83	28.73	1.27	9.09	21.20	0.00	0.0883	0.297	63.1	28.34	0.30	28.36	28.85	28.79	17.07	120.01	
2/14/2023	0:14	20.75	0.00	0.0005	0.022	53.6	28.34	0.50	28.38	28.83	28.73	1.27	9.09	21.20	0.00	0.0888	0.298	63.5	28.34	0.30	28.36	28.85	28.79	17.13	120.31	
2/14/2023	0:15	20.75	0.00	0.0004	0.020	53.6	28.34	0.50	28.38	28.83	28.73	1.14	8.13	21.20	0.00	0.0862	0.294	63.1	28.34	0.30	28.36	28.85	28.80	16.87	118.58	
2/14/2023	0:16	20.75	0.00	0.0005	0.022	53.7	28.34	0.50	28.38	28.83	28.73	1.27	9.09	21.20	0.01	0.0854	0.292	63.8	28.34	0.30	28.36	28.85	28.80	16.80	117.95	
2/14/2023	0:17	20.75	0.00	0.0005	0.022	53.8	28.34	0.50	28.38	28.83	28.73	1.27	9.08	21.20	0.00	0.0880	0.297	64.2	28.34	0.30	28.36	28.85	28.79	17.06	119.69	
2/14/2023	0:18	20.75	0.00	0.0005	0.022	53.8	28.34	0.50	28.38	28.83	28.73	1.27	9.08	21.20	0.01	0.0865	0.294	64.0	28.34	0.30	28.36	28.85	28.80	16.91	118.67	
2/14/2023	0:19	20.75	0.00

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet										Point in Process
	Unit	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	-
	Status	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	
		Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/14/2023	0:43	20.26	-0.01	0.0004	0.020	53.9	28.34	0.50	28.38	28.81	28.76	1.14	8.16	21.19	0.01	0.0851	0.292	64.3	28.34	0.30	28.36	28.85	28.79	16.78	117.67	
2/14/2023	0:44	20.49	0.00	0.0005	0.022	54.0	28.34	0.50	28.38	28.82	28.78	1.27	9.13	21.19	0.01	0.0867	0.294	63.8	28.34	0.30	28.36	28.85	28.80	16.93	118.84	
2/14/2023	0:45	20.02	-0.01	0.0016	0.040	54.1	28.34	0.50	28.38	28.80	28.74	2.28	16.31	21.14	0.01	0.0866	0.294	63.7	28.34	0.30	28.36	28.85	--	--	--	
2/14/2023	0:46	20.25	-0.01	0.0006	0.024	54.2	28.34	0.50	28.38	28.81	28.75	1.40	9.99	21.18	0.01	0.0851	0.292	63.8	28.34	0.30	28.36	28.85	28.79	16.77	117.74	
2/14/2023	0:47	17.02	-0.01	0.0005	0.022	54.2	28.34	0.50	28.38	28.68	28.62	1.28	9.14	21.15	0.02	0.1083	0.329	63.3	28.34	0.30	28.36	28.85	28.79	18.91	132.88	
2/14/2023	0:48	11.79	0.00	0.0005	0.022	54.2	28.34	0.50	28.38	28.47	28.39	1.28	9.15	21.15	0.01	0.0849	0.291	63.6	28.34	0.30	28.36	28.85	28.79	16.75	117.62	
2/14/2023	0:49	15.16	0.00	0.0004	0.020	54.2	28.34	0.50	28.38	28.61	28.59	1.14	8.20	21.17	0.01	0.0839	0.290	64.0	28.34	0.30	28.36	28.85	28.79	16.66	116.87	
2/14/2023	0:50	16.46	0.00	0.0006	0.024	54.3	28.34	0.50	28.38	28.66	28.61	1.40	10.02	21.17	0.01	0.0876	0.296	63.5	28.34	0.30	28.36	28.85	28.79	17.01	119.48	
2/14/2023	0:51	17.25	0.00	0.0004	0.020	54.1	28.34	0.50	28.38	28.69	28.54	1.14	8.11	21.18	0.01	0.0877	0.296	63.9	28.34	0.30	28.36	28.85	28.79	17.03	119.51	
2/14/2023	0:52	15.72	0.00	0.0005	0.022	54.3	28.34	0.50	28.38	28.63	28.53	1.28	9.12	21.17	0.01	0.0880	0.297	63.7	28.34	0.30	28.36	28.85	28.79	17.05	119.74	
2/14/2023	0:53	17.76	0.01	0.0005	0.022	54.1	28.34	0.50	28.38	28.71	28.61	1.28	9.10	21.18	0.01	0.0831	0.288	63.6	28.34	0.30	28.36	28.85	28.79	16.57	116.36	
2/14/2023	0:54	18.23	0.00	0.0004	0.020	54.2	28.34	0.50	28.38	28.73	28.63	1.14	8.14	21.18	0.02	0.0854	0.292	64.1	28.34	0.30	28.36	28.85	28.80	16.81	117.91	
2/14/2023	0:55	< 18.62	0.00	0.0005	0.022	54.1	28.34	0.50	28.38	28.74	28.66	1.28	9.10	21.19	0.01	0.0848	0.291	64.0	28.34	0.30	28.36	28.85	28.79	16.75	117.50	
2/14/2023	0:56	< 18.91	0.00	0.0005	0.022	54.1	28.34	0.50	28.38	28.76	28.66	1.28	9.10	21.18	0.01	0.0863	0.294	62.6	28.34	0.30	28.36	28.85	28.79	16.87	118.70	
2/14/2023	0:57	18.75	0.00	0.0005	0.022	53.7	28.34	0.50	28.38	28.75	28.66	1.28	9.10	21.19	0.01	0.0854	0.292	59.2	28.34	0.30	28.36	28.85	28.79	16.73	118.46	
2/14/2023	0:58	19.47	0.00	0.0006	0.024	53.8	28.34	0.50	28.38	28.78	28.69	1.40	9.97	21.19	0.01	0.0842	0.290	59.1	28.34	0.30	28.36	28.85	28.79	16.61	117.64	
2/14/2023	0:59	19.25	0.00	0.0004	0.020	53.8	28.34	0.50	28.38	28.77	28.67	1.14	8.14	21.18	0.01	0.0860	0.293	59.1	28.34	0.30	28.36	28.85	28.79	16.78	118.89	
2/14/2023	1:00	19.57	0.00	0.0005	0.022	53.9	28.34	0.50	28.38	28.78	28.68	1.28	9.09	21.18	0.01	0.0839	0.290	59.0	28.34	0.30	28.36	28.85	28.79	16.58	117.44	
2/14/2023	1:01	19.85	0.00	0.0003	0.017	54.0	28.34	0.50	28.38	28.79	28.70	0.99	7.04	21.19	0.01	0.0886	0.298	59.1	28.34	0.30	28.36	28.85	28.79	17.04	120.68	
2/14/2023	1:02	19.13	0.00	0.0005	0.022	53.9	28.34	0.50	28.38	28.77	28.68	1.28	9.10	21.19	0.01	0.0855	0.292	58.9	28.34	0.30	28.36	28.85	28.79	16.73	118.57	
2/14/2023	1:03	19.38	0.01	0.0005	0.022	53.9	28.34	0.50	28.38	28.78	28.68	1.28	9.10	21.18	0.01	0.0866	0.294	58.5	28.34	0.30	28.36	28.85	28.79	16.83	119.37	
2/14/2023	1:04	19.71	0.00	0.0005	0.022	53.8	28.34	0.50	28.38	28.79	--	--	--	21.18	0.01	0.0868	0.295	59.0	28.34	0.30	28.36	28.85	28.79	16.86	119.45	
2/14/2023	1:05	19.52	0.00	0.0004	0.020	53.8	28.34	0.50	28.38	28.78	28.68	1.14	8.14	21.18	0.01	0.0865	0.294	58.9	28.34	0.30	28.36	28.85	28.79	16.83	119.25	
2/14/2023	1:06	19.29	0.01	0.0005	0.022	53.8	28.34	0.50	28.38	28.77	28.67	1.28	9.09	21.18	0.01	0.0851	0.292	58.8	28.34	0.30	28.36	28.85	28.79	16.69	118.29	
2/14/2023	1:07	19.84	0.01	0.0004	0.020	53.8	28.34	0.50	28.38	28.80	28.70	1.14	8.14	21.17	0.02	0.0854	0.292	58.9	28.34	0.30	28.36	28.85	28.79	16.72	118.49	
2/14/2023	1:08	19.75	0.01	0.0003	0.017	53.8	28.34	0.50	28.38	28.79	28.70	0.99	7.04	21.17	0.01	0.0864	0.294	58.8	28.34	0.30	28.36	28.85	--	--	--	
2/14/2023	1:09	19.58	0.01	0.0005	0.022	53.7	28.34	0.50	28.38	28.78	28.69	1.28	9.10	21.17	0.01	0.0796	0.282	58.9	28.34	0.30	28.36	28.85	28.79	16.15	114.38	
2/14/2023	1:10	19.60	0.01	0.0005	0.022	53.8	28.34	0.50	28.38	28.79	28.69	1.28	9.10	21.17	0.01	0.0876	0.296	58.9	28.34	0.30	28.36	28.85	28.79	16.94	120.00	
2/14/2023	1:11	19.92	0.01	0.0004	0.020	53.8	28.34	0.50	28.38	28.80	28.70	1.14	8.13	21.17	0.01	0.0840	0.290	58.9	28.34	0.30	28.36	28.85	28.79	16.58	117.52	
2/14/2023	1:12	19.71	0.01	0.0005	0.022	53.8	28.34	0.50	28.38	28.79	28.69	1.28	9.09	21.16	0.01	0.0884	0.297	58.9	28.34	0.30	28.36	28.85	28.79	17.01	120.56	
2/14/2023	1:13	19.41	0.01	0.0004	0.020	53.8	28.34	0.50	28.38	28.78	28.68	1.14	8.14	21.16	0.01	0.0857	0.293	58.9	28.34	0.30	28.36	28.85	28.79	16.75	118.70	
2/14/2023	1:14	19.58	0.01	0.0005	0.022	53.8	28.34	0.50	28.38	28.78	28.69	1.28	9.09	21.17	0.01	0.0872	0.295	58.9	28.34	0.30	28.36	28.85	28.79	16.90	119.73	
2/14/2023	1:15	19.00	0.00	0.0005	0.022	53.8	28.34	0.50	28.38	28.76	28.66	1.28	9.10	21.16	0.01	0.0863	0.294	58.9	28.34	0.30	28.36	28.85	28.79	16.81	119.11	
2/14/2023	1:16	18.68	0.01	0.0005	0.022	53.7	28.34	0.50	28.38	28.75	28.65	1.28	9.10	21.15	0.01	0.0862	0.294	58.9	28.34	0.30	28.36	28.85	28.79	16.80	119.04	
2/14/2023	1:17	19.53	0.01	0.0005	0.022	53.9	28.34	0.50	28.38	28.78	28.69	1.28	9.10	21.16	0.01	0.0864	0.294	58.7	28.34	0.30	28.36	28.85	28.79	16.82	119.20	
2/14/2023	1:18	19.31	0.01	0.0004	0.020	53.8	28.34	0.50	28.38	28.77	28.68	1.14	8.14	21.15	0.01	0.0882	0.297	58.9	28.34	0.30	28.36	28.85	28.79	17.00	120.42	
2/14/2023	1:19	19.42	0.00	0.0005	0.022	53.8	28.34	0.50	28.38	28.78	28.67	1.28	9.09	21.15	0.01	0.0842	0.290	58.9	28.34	0.30	28.36	28.85	28.79	16.60	117.66	
2/14/2023	1:20	20.01	0.01	0.0006	0.024	53.7	28.34	0.50	28.38	28.80	28.70	1.40	9.96	21.16	0.01	0.0854	0.292	58.9	28.34	0.30	28.36	28.85	28.79	16.72	118.49	
2/14/2023	1:21	19.94	0.01	0.0005	0.022	53.8	28.34	0.50	28.38	28.80	28.70	1.27	9.09	21.15	0.01	0.0844	0.291	59.0	28.34	0.30	28.36	28.85	28.79	16.63	117.79	
2/14/2023	1:22	19.69	0.01	0.0005	0.022	53.8	28.34	0.50	28.38	28.79	28.69	1.28	9.09	21.15	0.01	0.0840	0.290	59.0	28.34	0.30	28.36	28.85	28.79	16.59	117.50	
2/14/2023	1:23	20.16	0.01	0.0005	0.022	53.9	28.34	0.50	28.38	28.81	28.71	1.27	9.09	21.16	0.00	0.0868	0.295	58.8	28.34	0.30	28.36	28.85	28.79	16.86	119.47	
2/14/2023	1:24	20.11	0.01	0.0005	0.022	53.8	28.34	0.50	28.38	28.81	28.70	1.27	9.09	21.15	0.01	0.0888	0.298	58.9	28.34	0.30	28.36	28.85	28.79	17.05	120.82	
2/14/2023	1:25	20.18	0.01	0.0005	0.022	53.7	28.34	0.50	28.38	28.81	28.71	1.27	9.09	21.16	0.01	0.0866	0.294	59.2	28.34	0.30	28.36	28.85	28.79	16.84	119.28	
2/14/2023	1:26	20.37	0.01	0.0005	0.022	53.8	28.34	0.50	28.38	28.82	--	--	--	21.15	0.01	0.0840	0.290	59.1	28.34	0.30	28.36	28.85	28.79	16.59	117.49	
2/14/2023	1:27	20.34	0.01	0.0006	0.024	53.8	28.34	0.50	28.38	28.82	28.71	1.40	9.95	21.15	0.01	0.0842	0.290	59.0	28.34	0.30	28.36	28.85	28.79	16.61	117.64	
2/14/2023	1:28	20.41	0.01	0.0005	0.022	53.9	28.34	0.50	28.38	28.82	28.72	1.27	9.09	21.14	0.01	0.0835	0.289	59.0	28.34	0.30	28.36	28.85	28.79	16.54	117.14	
2/14/2023	1:29	20.43	0.01	0.0004	0.020	53.8	28.34	0.50	28.38	28.82	28.72	1.14	8.13	21.14	0.01	0.0855	0.292	59.0	28.34	0.30	28.36	28.85	28.79	16.74	118.53	
2/14/2023	1:30	20.32	0.01	0.0004	0.020	53.9	28.34	0.50	28.38	28.81	28.71	1.14	8.13	21.15	0.01	0.0876	0.296	59.1	28.34	0.30	28.36	28.85	--	--	--	
2/14/2023	1:31	20.13	0.01	0.0004	0.020	53.8	28.34	0.50	28.38	28.81	28.70	1.14	8.13	21.14	0.01	0.0843	0.290	59.0	28.34	0.30	28.36	28.85	28.79	16.62	117.70	
2/14/2023	1:32	19.98	0.01	0.0005	0.022	54.0	28.34	0.50	28.38	28.80	28.70	1.28	9.09	21.14	0.01	0.0851	0.292	59.1	28.34	0.30	28.36	28.85	28.79	16.70	118.25	
2/14/2023	1:33	20.05	0.01	0.0006	0.024	53.9	28.34	0.50	28.38	28.80	28.70	1.40	9.95	21.15	0.00	0.0840	0.290	59.0	28.34	0.30	28.36	28.85	28.79	16.59	117.51	
2/14/2023	1:34	20.14	0.01	0.0005	0.022	53.9	28.34	0.50	28.38	28.81	28.70	1.28	9.09	21.14	0.01	0.0825	0.287	59.2	28.34	0.30	28.36	28.85	28.79	16.44	116.42	
2/14/2023	1:35	19.98	0.01	0.0005	0.022	54.0	28.34	0.50	28.38	28.80	28.70	1.28	9.09	21.14	0.01	0.0851	0.292	60.9	28.34	0.30	28.36	28.85	28.79	16.73	118.05	
2/14/2023	1:36	20.12	0.01	0.0004	0.020	54.2	28.34	0.50	28.38	28.81	28.70	1.14	8.13	21.14	0.01	0.0854	0.292	64.0	28.34	0.30	28.36	28.85	28.79	16.81	117.91	
2/14/2023	1:37	19.87	0.01	0.0005	0.022	54.2	28.34	0.50	28.38	28.80	28.69	1.28	9.09	21.13	0.01	0.0829	0.288	63.3	28.34	0.30	28.36	28.85	28.79	16.55	116.25	
2/14/2023	1:38	19.70	0.01	0.0004	0.020	54.3	28.34	0.50	28.38	28.79	28.69	1.14	8.13	21.13	0.01	0.0851	0.292	63.8	28.34	0.30	28.36	28.85	28.79	16.77	117.72	
2/14/2023	1:39	19.88	0.01	0.0005	0.022	54.2	28.34	0.50	28.38	28.80	28.69	1.28	9.08	21.14	0.01	0.0848	0.291	64.0	28.34	0.30	28.36	28.85	28.79	16.75	117.49	
2/14/2023	1:40	19.96	0.01	0.0005	0.022	54.1	28.34	0.50	28.38	28.80	28.70	1.28	9.09	21.14	0.01	0.0852	0.292	63.9	28.34	0.30	28.36	28.85	28.79	16.78	117.79	
2/14/2023	1:41	20.02	0.01	0.0006	0.024	54.4	28.34	0.50	28.38	28.80	28.70	1.40	9.95	21.13	0.00	0.0842	0.290	63.8	28.34	0.30	28.36	28.85	28.79	16.68	117.10	
2/14/2023	1:42	20.17	0.01	0.0006	0.024	54.2	28.34	0.50	28.38	28.81	28.71	1.40	9.95	21.14	0.00	0.0852	0.292	64.0	28.34	0.30	28.36	28.85	28.79	16.79	117.77	
2/14/2023	1:43	20.03	0.01	0.0005	0.022	54.1	28.34	0.50	28.38	28.80	28.70	1.28	9.09	21.13	0.00	0.0824	0.287	63.7	28.34	0.30	28.36	28.85	28.79	16.50	115.85	
2/14/2023	1:44	20.22	0.01	0.0005	0.022	54.2	28.34	0.50	28.38	28.81	28.71	1.28	9.08	21.14	0.00	0.0867	0.294	64.1	28.34	0.30	28.36	28.85	28.79	16.94	118.79	
2/14/2023	1:45	20.27	0.01	0.0005	0.022	54.3	28.34	0.50	28.38	28.81	28.71	1.28	9.08	21.14	0.00	0.0854	0.292	63.8	28.34	0.30	28.36	28.85	28.79	16.80	117.94	
2/14/2023	1:46	20.30	0.01	0.0005	0.022	54.3	28.34	0.50	28.38	28.81	28.71	1.28	9.08	21.14	0.00	0.0800	0.283	63.8	28.34	0.30	28.36	28.85	28.79	16.26	114.13	
2/14/2023	1:47	20.38	0.01	0.0003	0.017	54.3	28.34	0.50	28.38	28.82	28.71	0.99	7.03	21.13	0.00	0.0869	0.295	64.1	28.34	0.30	28.36	28.85	28.79	16.95	118.93	
2/14/2023	1:48	20.49	0.01	0.0003	0.017	54.3	28.34	0.50	28.38	28.82	--	--	--	21.14	0.00	0.0846	0.291	63.7	28.34	0.30	28.36	28.85	28.79	16.72	117.39	
2/14/2023	1:49	20.53	0.01	0.0004	0.020	54.3	28.34	0.50	28.38	28.82	28.72	1.14	8.12	21.13	0.00	0.0850	0.292	63.9	28.34	0.30	28.36	28.85	28.79	16.77	117.64	
2/14/2023	1:50	20.44	0.01	0.0004	0.020	54.3	28.34	0.50	28.38	28.82	28.71	1.14	8.12	21.13	0.00	0.0828	0.288	64.3	28.34	0.30	28.36	28.85	28.79	16.55	116.06	
2/14/2023	1:51	20.44	0.01	0.0005	0.022	54.4	28.34	0.50	28.38	28.82	28.71	1.28	9.08	21.14	0.00	0.0846	0.291	63.9	28.34	0.30	28.36	28.85	28.79	16.73	117.36	
2/14/2023	1:52	20.15	0.00	0.0004	0.020	54.2	28.34	0.50	28.38	28.81	28.70	1.14	8.12	21.14	0.00	0.0816	0.286	64.3	28.34	0.30	28.36	28.85	28.79	16.43	115.22	
2/14/2023	1:53	19.81	0.00	0.0005	0.022	54.3	28.34	0.50	28.38	28.79	28.69	1.28	9.08	21.14	0.00	0.0833	0.289	63.7	28.34	0.30	28.36	28.85	--	--	--	
2/14/2023	1:54	20.07	0.01	0.0003	0.017	54.5	28.34	0.50	28.38	28.80	28.70	0.99	7.03	21.14	0.00	0.0831	0.288	64.0	28.34	0.30	28.36	28.85	28.79	16.58	116.31	
2/14/2023	1:55	20.2	0.01	0.0006	0.024	54.4	28.34	0.50	28.38	28.81	28.70	1.40	9.95	21.15	0.00	0.0837	0.289	64.4	28.34	0.30	28.36	28.85	28.79	16.64	116.68	
2/14/2023	1:56	20.1	0.01	0.0005	0.022	54.5	28.34	0.50	28.38	28.80	28.70	1.28	9.08	21.14	0.01	0.0854	0.292	63.9	28.34	0.30	28.36	28.85	28.79	16.80	117.92	
2/14/2023	1:57	20.10	0.01	0.0004	0.020	54.5	28.34	0.50	28.38	28.81	28.70	1.14	8.12	21.13	0.01	0.0823	0.287	64.1	28.34	0.30	28.36	28.85	28.79	16.50	115.73	
2/14/2023	1:58	20.09	0.00	0.0004	0.020	54.4	28.34	0.50	28.38	28.80	28.70	1.14	8.12	21.14	0.00	0.0849	0.291	64.2	28.34	0.30	28.36	28.85	28.79	16.76	117.53	
2/14/2023	1:59	20.14	0.00	0.0005	0.022	54.4	28.34	0.50	28.38	28.81	28.70	1.28	9.08	21.14	0.00	0.0845	0.291	63.9	28.34	0.30	28.36	28.85	28.79	16.72	117.30	
2/14/2023	2:00	20.27	0.01	0.0004	0.020	54.4	28.34	0.50	28.38	28.81	28.71	1.14	8.12	21.14	0.01	0.0863	0.294	64.4	28.34	0.30	28.36	28.85	28.79	16.90	118.48	
2/14/2023	2:01	20.31	0.01	0.0005	0.022	54.3	28.34	0.50	28.38	28.81	28.71	1.28	9.08	21.13	0.01	0.0853	0.292	64.3	28.34	0.30	28.36	28.85	28.79	16.80	117.80	
2/14/2023	2:02	20.44	0.01	0.0005	0.022	54.4	28.34	0.50	28.38	28.82	28.71	1.28	9.08	21.14	0.01	0.0827	0.288	63.8	28.34	0.30	28.36	28.85	28.79	16.54	116.04	
2/14/2023	2:03	20.53	0.01	0.0004	0.020	54.3	28.34	0.50	28.38	28.82	28.72	1.14	8.12	21.14	0.00	0.0812	0.285	64.3	28.34	0.30	28.36	28.85	28.79	16.39	114.94	
2/14/2023	2:04	20.47	0.01	0.0006	0.024	54.3	28.34	0.50	28.38	28.82	28.71	1.40	9.95	21.14	0.00	0.0829	0.288	63.8	28.34	0.30	28.36	28.85	28.79	16.56	116.19	
2/14/2023	2:05	20.52	0.01	0.0003	0.017	54.4	28.34	0.50	28.38	28.82	28.72	0.99	7.03	21.14	0.00	0.0818	0.286	64.2	28.34	0.30	28.36	28.85	28.79	16.45	115.38	
2/14/2023	2:06	20.52	0.01	0.0005	0.022	54.4	28.34	0.50	28.38	28.82	28.72	1.28	9.08	21.14	0.00	0.0848	0.291	64.0	28.34	0.30	28.36	28.85	28.79	16.75	117.49	
2/14/2023	2:07	20.56	0.01	0.0005	0.022	54.4	28.34	0.50	28.38	28.82	28.72	1.28	9.08	21.14	0.00	0.0860	0.293	64.0	28.34	0.30	28.36	28.85	28.79	16.87	118.32	
2/14/2023	2:08	20.50	0.01	0.0006	0.024	54.5	28.34	0.50	28.38	28.82	28.72	1.40	9.94	21.13	0.00	0.0814	0.285	64.5	28.34	0.30	28.36	28.85	28.79	16.42	115.06	
2/14/2023	2:09	20.55	0.00	0.0005	0.022	54.4	28.34	0.50	28.38	28.82	28.72	1.28	9.08	21.14	0.00	0.0847	0.291	63.9	28.34	0.30	28.36	28.85	28.79	16.74	117.43	
2/14/2023	2:10	20.61	0.00	0.0004	0.020	54.3	28.34	0.50	28.38	28.82	--	--	--	21.14	0.00	0.0864	0.294	63.8	28.34	0.30	28.36	28.85	28.79	16.90	118.61	
2/14/2023	2:11	20.59	0.00	0.0006	0.024	54.6	28.34	0.50	28.38	28.82	28.72	1.40	9.94	21.14	0.00	0.0864	0.294	64.4	28.34	0.30	28.36	28.85	28.79	16.91	118.55	
2/14/2023	2:12	20.58	0.01	0.0003	0.017	54.6	28.34	0.50	28.38	28.82	28.72	0.99	7.03	21.14	0.00	0.0857	0.293	64.0	28.34	0.30	28.36	28.85	28.79	16.84	118.11	
2/14/2023	2:13	20.32	0.00	0.0004	0.020	54.3	28.34	0.50	28.38	28.81	28.71	1.14	8.12	21.13	0.01	0.0849	0.291	63.9	28.34	0.30	28.36	28.85	28.79	16.75	117.57	
2/14/2023	2:14	20.37	0.00	0.0005	0.022	54.5	28.34	0.50	28.38	28.81	28.71	1.28	9.08	21.14	0.01	0.0822	0.287	64.0	28.34	0.30	28.36	28.85	28.79	16.49	115.67	
2/14/2023	2:15	20.09	0.01	0.0005	0.022	54.3	28.34	0.50	28.38	28.81	28.70	1.28	9.08	21.14	0.01	0.0843	0.290	63.7	28.34	0.30	28.36	28.85	28.79	16.69	117.17	
2/14/2023	2:16	20.48	0.01	0.0004	0.020	54.3	28.34	0.50	28.38	28.82	28.71	1.14	8.12	21.14	0.01	0.0827	0.288	64.2	28.34	0.30	28.36	28.85	--	--	--	
2/14/2023	2:17	20.43	0.01	0

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	-
	Status	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	
		Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/14/2023	2:41	20.41	0.00	0.0004	0.020	54.1	28.34	0.50	28.38	28.82	28.71	1.14	8.12	21.13	0.01	0.0883	0.297	63.6	28.34	0.30	28.36	28.85	28.79	17.08	119.94	
2/14/2023	2:42	20.61	0.00	0.0004	0.020	54.1	28.34	0.50	28.38	28.82	28.72	1.14	8.12	21.13	0.00	0.0860	0.293	63.4	28.34	0.30	28.36	28.85	28.79	16.86	118.38	
2/14/2023	2:43	20.49	0.00	0.0005	0.022	54.1	28.34	0.50	28.38	28.82	28.72	1.28	9.08	21.13	0.00	0.0832	0.288	63.9	28.34	0.30	28.36	28.85	28.79	16.59	116.39	
2/14/2023	2:44	20.49	0.00	0.0005	0.022	54.1	28.34	0.50	28.38	28.82	28.71	1.27	9.08	21.13	0.01	0.0864	0.294	63.2	28.34	0.30	28.36	28.85	28.79	16.89	118.68	
2/14/2023	2:45	20.36	0.00	0.0005	0.022	54.0	28.34	0.50	28.38	28.81	28.71	1.28	9.08	21.13	0.01	0.0834	0.289	63.4	28.34	0.30	28.36	28.85	28.79	16.60	116.58	
2/14/2023	2:46	20.42	0.00	0.0005	0.022	54.1	28.34	0.50	28.38	28.82	28.71	1.28	9.08	21.13	0.01	0.0859	0.293	63.6	28.34	0.30	28.36	28.85	28.79	16.85	118.29	
2/14/2023	2:47	20.54	0.00	0.0005	0.022	54.0	28.34	0.50	28.38	28.82	28.72	1.27	9.08	21.13	0.01	0.0870	0.295	63.4	28.34	0.30	28.36	28.85	28.79	16.95	119.07	
2/14/2023	2:48	20.56	0.00	0.0005	0.022	54.1	28.34	0.50	28.38	28.82	28.72	1.28	9.08	21.13	0.01	0.0885	0.297	64.0	28.34	0.30	28.36	28.85	28.79	17.11	120.03	
2/14/2023	2:49	20.60	0.00	0.0004	0.020	54.1	28.34	0.50	28.38	28.82	28.72	1.14	8.12	21.13	0.00	0.0850	0.292	63.2	28.34	0.30	28.36	28.85	28.79	16.75	117.72	
2/14/2023	2:50	20.58	0.00	0.0004	0.020	54.0	28.34	0.50	28.38	28.82	28.72	1.14	8.12	21.13	0.01	0.0861	0.293	63.8	28.34	0.30	28.36	28.85	28.79	16.87	118.41	
2/14/2023	2:51	20.53	0.00	0.0005	0.022	54.0	28.34	0.50	28.38	28.82	28.72	1.27	9.08	21.13	0.01	0.0864	0.294	64.2	28.34	0.30	28.36	28.85	28.79	16.91	118.57	
2/14/2023	2:52	20.48	0.00	0.0004	0.020	54.0	28.34	0.50	28.38	28.82	28.71	1.14	8.12	21.14	0.01	0.0860	0.293	63.6	28.34	0.30	28.36	28.85	28.79	16.86	118.37	
2/14/2023	2:53	20.46	0.00	0.0004	0.020	54.1	28.34	0.50	28.38	28.82	28.71	1.14	8.12	21.13	0.01	0.0844	0.291	63.5	28.34	0.30	28.36	28.85	28.79	16.70	117.27	
2/14/2023	2:54	20.22	0.00	0.0005	0.022	54.0	28.34	0.50	28.38	28.81	--	--	--	21.13	0.02	0.0879	0.296	63.2	28.34	0.30	28.36	28.85	28.79	17.04	119.71	
2/14/2023	2:55	20.37	0.00	0.0004	0.020	53.9	28.34	0.50	28.38	28.81	28.71	1.14	8.13	21.13	0.01	0.0872	0.295	62.8	28.34	0.30	28.36	28.85	28.79	16.96	119.27	
2/14/2023	2:56	20.21	0.00	0.0004	0.020	53.8	28.34	0.50	28.38	28.81	28.71	1.14	8.13	21.12	0.01	0.0848	0.291	63.0	28.34	0.30	28.36	28.85	28.79	16.73	117.59	
2/14/2023	2:57	20.18	0.00	0.0004	0.020	53.8	28.34	0.50	28.38	28.81	28.70	1.14	8.13	21.12	0.01	0.0876	0.296	62.7	28.34	0.30	28.36	28.85	28.79	17.00	119.56	
2/14/2023	2:58	20.32	0.00	0.0005	0.022	53.9	28.34	0.50	28.38	28.81	28.71	1.27	9.08	21.13	0.01	0.0854	0.292	62.8	28.34	0.30	28.36	28.85	28.79	16.79	118.05	
2/14/2023	2:59	20.26	0.00	0.0004	0.020	53.8	28.34	0.50	28.38	28.81	28.71	1.14	8.13	21.12	0.01	0.0878	0.296	62.7	28.34	0.30	28.36	28.85	28.79	17.02	119.71	
2/14/2023	3:00	20.16	0.00	0.0003	0.017	53.7	28.34	0.50	28.38	28.81	28.70	0.99	7.04	21.12	0.01	0.0846	0.291	62.1	28.34	0.30	28.36	28.85	28.79	16.70	117.58	
2/14/2023	3:01	20.14	0.00	0.0005	0.022	53.8	28.34	0.50	28.38	28.81	28.70	1.27	9.09	21.12	0.01	0.0873	0.295	63.1	28.34	0.30	28.36	28.85	--	--	--	
2/14/2023	3:02	20.22	0.00	0.0004	0.020	53.7	28.34	0.50	28.38	28.81	28.70	1.14	8.13	21.13	0.01	0.0871	0.295	62.4	28.34	0.30	28.36	28.85	28.79	16.95	119.27	
2/14/2023	3:03	20.30	0.00	0.0004	0.020	53.8	28.34	0.50	28.38	28.81	28.71	1.14	8.13	21.13	0.01	0.0852	0.292	62.6	28.34	0.30	28.36	28.85	28.79	16.76	117.93	
2/14/2023	3:04	20.11	0.00	0.0003	0.017	53.7	28.34	0.50	28.38	28.80	28.70	0.99	7.04	21.12	0.01	0.0861	0.293	63.2	28.34	0.30	28.36	28.85	28.79	16.86	118.49	
2/14/2023	3:05	20.00	0.00	0.0004	0.020	53.6	28.34	0.50	28.38	28.80	28.70	1.14	8.13	21.12	0.01	0.0885	0.297	62.4	28.34	0.30	28.36	28.85	28.79	17.08	120.22	
2/14/2023	3:06	19.69	0.00	0.0005	0.022	53.6	28.34	0.50	28.38	28.79	28.69	1.28	9.09	21.12	0.01	0.0869	0.295	62.8	28.34	0.30	28.36	28.85	28.79	16.93	119.08	
2/14/2023	3:07	19.91	0.00	0.0004	0.020	53.7	28.34	0.50	28.38	28.80	28.69	1.14	8.13	21.12	0.01	0.0846	0.291	62.6	28.34	0.30	28.36	28.85	28.79	16.70	117.52	
2/14/2023	3:08	20.10	0.00	0.0005	0.022	53.7	28.34	0.50	28.38	28.80	28.70	1.27	9.09	21.12	0.01	0.0846	0.291	62.3	28.34	0.30	28.36	28.85	28.79	16.70	117.55	
2/14/2023	3:09	19.97	0.00	0.0005	0.022	53.6	28.34	0.50	28.38	28.80	28.70	1.27	9.09	21.12	0.01	0.0855	0.292	63.1	28.34	0.30	28.36	28.85	28.79	16.80	118.08	
2/14/2023	3:10	19.82	0.00	0.0005	0.022	53.7	28.34	0.50	28.38	28.79	28.69	1.28	9.09	21.12	0.01	0.0865	0.294	62.2	28.34	0.30	28.36	28.85	28.79	16.89	118.87	
2/14/2023	3:11	20.03	0.00	0.0005	0.022	53.6	28.34	0.50	28.38	28.80	28.70	1.27	9.09	21.11	0.01	0.0845	0.291	62.5	28.34	0.30	28.36	28.85	28.79	16.69	117.46	
2/14/2023	3:12	19.93	0.00	0.0004	0.020	53.5	28.34	0.50	28.38	28.80	28.69	1.14	8.13	21.12	0.00	0.0860	0.293	62.7	28.34	0.30	28.36	28.84	28.79	16.84	118.47	
2/14/2023	3:13	19.91	0.00	0.0005	0.022	53.6	28.34	0.50	28.38	28.80	28.69	1.27	9.09	21.12	0.01	0.0868	0.295	62.3	28.34	0.30	28.36	28.85	28.79	16.92	119.07	
2/14/2023	3:14	19.68	0.00	0.0005	0.022	53.8	28.34	0.50	28.38	28.79	28.69	1.28	9.09	21.11	0.01	0.0866	0.294	62.9	28.34	0.30	28.36	28.85	28.79	16.91	118.86	
2/14/2023	3:15	19.49	0.00	0.0004	0.020	53.8	28.34	0.50	28.38	28.78	28.68	1.14	8.13	21.12	0.01	0.0889	0.298	62.6	28.34	0.30	28.36	28.85	28.79	17.12	120.45	
2/14/2023	3:16	19.78	0.00	0.0004	0.020	53.7	28.34	0.50	28.38	28.79	--	--	--	21.12	0.01	0.0862	0.294	62.6	28.34	0.30	28.36	28.85	28.79	16.86	118.61	
2/14/2023	3:17	19.48	0.00	0.0005	0.022	53.6	28.34	0.50	28.38	28.78	28.68	1.28	9.09	21.11	0.01	0.0880	0.297	63.6	28.34	0.30	28.36	28.85	28.79	17.05	119.74	
2/14/2023	3:18	19.71	0.00	0.0005	0.022	53.6	28.34	0.50	28.38	28.79	28.69	1.28	9.09	21.12	0.01	0.0870	0.295	62.9	28.34	0.30	28.36	28.85	28.79	16.94	119.14	
2/14/2023	3:19	19.73	0.00	0.0005	0.022	53.7	28.34	0.50	28.38	28.79	28.69	1.28	9.09	21.11	0.00	0.0897	0.299	62.7	28.34	0.30	28.36	28.84	28.79	17.20	121.00	
2/14/2023	3:20	20.04	0.00	0.0005	0.022	53.7	28.34	0.50	28.38	28.80	28.70	1.27	9.09	21.11	0.00	0.0890	0.298	62.9	28.34	0.30	28.36	28.84	28.79	17.14	120.50	
2/14/2023	3:21	19.87	0.00	0.0005	0.022	53.6	28.34	0.50	28.38	28.79	28.69	1.27	9.09	21.11	0.01	0.0896	0.299	62.9	28.34	0.30	28.36	28.85	28.79	17.20	120.91	
2/14/2023	3:22	19.91	0.00	0.0004	0.020	53.5	28.34	0.50	28.38	28.80	28.70	1.14	8.13	21.12	0.01	0.0873	0.295	62.3	28.34	0.30	28.36	28.85	28.79	16.96	119.41	
2/14/2023	3:23	19.59	0.00	0.0005	0.022	53.6	28.34	0.50	28.38	28.78	28.68	1.28	9.09	21.12	0.01	0.0858	0.293	62.3	28.34	0.30	28.36	28.85	28.79	16.82	118.38	
2/14/2023	3:24	19.70	0.01	0.0005	0.022	53.5	28.34	0.50	28.38	28.79	28.69	1.27	9.09	21.11	0.01	0.0856	0.293	62.1	28.34	0.30	28.36	28.85	--	--	--	
2/14/2023	3:25	19.12	0.01	0.0006	0.024	53.4	28.34	0.50	28.38	28.77	28.67	1.40	9.97	21.11	0.01	0.0825	0.287	62.5	28.34	0.30	28.36	28.85	28.79	16.49	116.06	
2/14/2023	3:26	19.26	0.01	0.0004	0.020	53.5	28.34	0.50	28.38	28.77	28.67	1.14	8.14	21.11	0.01	0.0866	0.294	62.6	28.34	0.30	28.36	28.85	28.79	16.90	118.88	
2/14/2023	3:27	19.22	0.00	0.0005	0.022	53.4	28.34	0.50	28.38	28.77	28.67	1.28	9.10	21.12	0.01	0.0904	0.301	61.9	28.34	0.30	28.36	28.85	28.79	17.26	121.54	
2/14/2023	3:28	19.82	0.00	0.0004	0.020	53.6	28.34	0.50	28.38	28.79	28.69	1.14	8.13	21.11	0.01	0.0875	0.296	62.4	28.34	0.30	28.36	28.85	28.79	16.99	119.51	
2/14/2023	3:29	19.34	0.00	0.0006	0.024	53.4	28.34	0.50	28.38	28.77	28.67	1.40	9.97	21.11	0.01	0.0854	0.292	62.2	28.34	0.30	28.36	28.85	28.79	16.78	118.10	
2/14/2023	3:30	19.76	0.00	0.0005	0.022	53.6	28.34	0.50	28.38	28.79	28.69	1.27	9.09	21.11	0.01	0.0915	0.302	63.3	28.34	0.30	28.36	28.85	28.79	17.39	122.11	
2/14/2023	3:31	19.66	0.00	0.0005	0.022	53.5	28.34	0.50	28.38	28.79	28.68	1.27	9.09	21.10	0.01	0.0864	0.294	62.1	28.34	0.30	28.36	28.85	28.79	16.87	118.80	
2/14/2023	3:32	19.36	0.00	0.0004	0.020	53.3	28.34	0.50	28.38	28.77	28.67	1.14	8.14	21.11	0.01	0.0857	0.293	61.9	28.34	0.30	28.36	28.85	28.79	16.80	118.34	
2/14/2023	3:33	19.18	0.00	0.0004	0.020	53.5	28.34	0.50	28.38	28.77	28.67	1.14	8.14	21.10	0.01	0.0880	0.297	63.0	28.34	0.30	28.36	28.85	28.79	17.04	119.80	
2/14/2023	3:34	19.63	0.00	0.0004	0.020	53.6	28.34	0.50	28.38	28.79	28.68	1.14	8.13	21.10	0.00	0.0858	0.293	62.8	28.34	0.30	28.36	28.84	28.79	16.83	118.32	
2/14/2023	3:35	19.39	0.00	0.0006	0.024	53.5	28.34	0.50	28.38	28.78	28.67	1.40	9.96	21.10	0.01	0.0853	0.292	63.0	28.34	0.30	28.36	28.85	28.79	16.78	117.95	
2/14/2023	3:36	19.63	0.00	0.0005	0.022	53.6	28.34	0.50	28.38	28.79	28.69	1.28	9.09	21.10	0.00	0.0881	0.297	63.0	28.34	0.30	28.36	28.84	28.79	17.05	119.87	
2/14/2023	3:37	19.15	0.00	0.0006	0.024	53.4	28.34	0.50	28.38	28.77	--	--	--	21.10	0.01	0.0868	0.295	62.6	28.34	0.30	28.36	28.85	28.79	16.92	119.03	
2/14/2023	3:38	19.13	0.00	0.0005	0.022	53.5	28.34	0.50	28.38	28.77	28.66	1.28	9.10	21.10	0.01	0.0886	0.298	62.9	28.34	0.30	28.36	28.85	28.79	17.10	120.22	
2/14/2023	3:39	18.59	0.01	0.0004	0.020	53.3	28.34	0.50	28.38	28.75	28.65	1.14	8.14	21.09	0.01	0.0873	0.295	61.6	28.34	0.30	28.36	28.85	28.79	16.95	119.48	
2/14/2023	3:40	18.75	0.01	0.0005	0.022	53.4	28.34	0.50	28.38	28.75	28.65	1.28	9.10	21.09	0.01	0.0865	0.294	62.0	28.34	0.30	28.36	28.85	28.79	16.88	118.89	
2/14/2023	3:41	19.35	0.01	0.0004	0.020	53.5	28.34	0.50	28.38	28.78	28.68	1.14	8.14	21.09	0.01	0.0851	0.292	63.0	28.34	0.30	28.36	28.85	28.79	16.76	117.80	
2/14/2023	3:42	19.32	0.01	0.0006	0.024	53.5	28.34	0.50	28.38	28.78	28.67	1.40	9.97	21.09	0.01	0.0867	0.294	62.1	28.34	0.30	28.36	28.85	28.79	16.90	119.01	
2/14/2023	3:43	19.51	0.01	0.0006	0.024	53.5	28.34	0.50	28.38	28.78	28.67	1.40	9.96	21.09	0.00	0.0818	0.286	62.2	28.34	0.30	28.36	28.84	28.79	16.42	115.59	
2/14/2023	3:44	19.84	0.01	0.0004	0.020	53.4	28.34	0.50	28.38	28.80	28.69	1.14	8.13	21.09	0.01	0.0878	0.296	62.6	28.34	0.30	28.36	28.85	28.79	17.02	119.71	
2/14/2023	3:45	19.66	0.01	0.0005	0.022	53.4	28.34	0.50	28.38	28.79	28.69	1.27	9.09	21.09	0.01	0.0875	0.296	61.9	28.34	0.30	28.36	28.85	28.79	16.98	119.57	
2/14/2023	3:46	19.96	0.00	0.0005	0.022	53.5	28.34	0.50	28.38	28.80	28.70	1.27	9.09	21.09	0.00	0.0817	0.286	62.5	28.34	0.30	28.36	28.84	28.79	16.42	115.48	
2/14/2023	3:47	19.35	0.00	0.0005	0.022	53.5	28.34	0.50	28.38	28.77	28.67	1.28	9.10	21.08	0.01	0.0836	0.289	61.9	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	3:48	19.62	0.01	0.0006	0.024	53.3	28.34	0.50	28.38	28.79	28.68	1.40	9.96	21.08	0.00	0.0847	0.291	62.3	28.34	0.30	28.36	28.84	28.78	16.71	117.60	
2/14/2023	3:49	19.42	0.01	0.0004	0.020	53.3	28.34	0.50	28.38	28.78	28.68	1.14	8.14	21.08	0.00	0.0864	0.294	62.6	28.34	0.30	28.36	28.84	28.78	16.88	118.74	
2/14/2023	3:50	19.67	0.01	0.0008	0.028	53.3	28.34	0.50	28.38	28.79	28.68	1.61	11.50	21.08	0.01	0.0860	0.293	61.9	28.34	0.30	28.36	28.84	28.79	16.83	118.54	
2/14/2023	3:51	16.60	0.00	0.0005	0.022	53.2	28.34	0.50	28.38	28.66	28.56	1.28	9.11	21.06	0.00	0.0902	0.300	62.1	28.34	0.30	28.36	28.84	28.78	17.24	121.39	
2/14/2023	3:52	12.00	0.00	0.0006	0.024	53.3	28.34	0.50	28.38	28.48	28.38	1.40	10.02	21.04	0.00	0.0860	0.293	61.9	28.34	0.30	28.36	28.84	28.78	16.83	118.54	
2/14/2023	3:53	16.72	0.01	0.0006	0.024	53.3	28.34	0.50	28.38	28.67	28.57	1.40	9.98	21.07	0.00	0.0950	0.308	62.3	28.34	0.30	28.36	28.84	28.78	17.70	124.54	
2/14/2023	3:54	17.69	0.01	0.0006	0.024	53.2	28.34	0.50	28.38	28.71	28.59	1.40	9.96	21.07	0.00	0.0887	0.298	62.3	28.34	0.30	28.36	28.84	28.78	17.10	120.33	
2/14/2023	3:55	18.20	0.01	0.0004	0.020	53.2	28.34	0.50	28.38	28.73	28.65	1.14	8.16	21.07	0.01	0.0876	0.296	62.2	28.34	0.30	28.36	28.84	28.78	16.99	119.59	
2/14/2023	3:56	18.58	0.01	0.0005	0.022	53.3	28.34	0.50	28.38	28.74	28.63	1.28	9.10	21.07	0.01	0.0855	0.292	62.6	28.34	0.30	28.36	28.84	28.78	16.80	118.10	
2/14/2023	3:57	18.90	0.01	0.0007	0.026	53.3	28.34	0.50	28.38	28.76	28.65	1.51	10.76	21.07	0.01	0.0889	0.298	62.7	28.34	0.30	28.36	28.84	28.78	17.13	120.39	
2/14/2023	3:58	14.76	0.01	0.0005	0.022	53.0	28.34	0.50	28.38	28.59	28.48	1.28	9.12	21.04	0.01	0.0869	0.295	62.4	28.34	0.30	28.36	28.84	28.78	16.93	119.08	
2/14/2023	3:59	14.22	0.00	0.0005	0.022	53.2	28.34	0.50	28.38	28.57	--	--	--	21.03	0.00	0.0861	0.293	62.5	28.34	0.30	28.36	28.84	28.78	16.85	118.52	
2/14/2023	4:00	17.99	-0.01	0.0006	0.024	53.2	28.34	0.50	28.38	28.72	28.61	1.40	9.97	21.04	0.00	0.0926	0.304	62.5	28.34	0.30	28.36	28.84	28.78	17.48	122.92	
2/14/2023	4:01	19.08	-0.01	0.0006	0.024	53.1	28.34	0.50	28.38	28.76	28.65	1.40	9.96	21.03	0.00	0.0928	0.305	62.2	28.34	0.30	28.36	28.84	28.78	17.49	123.08	
2/14/2023	4:02	19.36	-0.02	0.0007	0.026	53.2	28.34	0.50	28.38	28.77	28.62	1.51	10.73	21.03	0.00	0.0912	0.302	61.7	28.34	0.30	28.36	28.84	28.78	17.33	122.07	
2/14/2023	4:03	19.47	-0.02	0.0004	0.020	53.0	28.34	0.50	28.38	28.78	28.71	1.14	8.16	21.03	0.00	0.0942	0.307	61.9	28.34	0.30	28.36	28.84	28.78	17.62	124.04	
2/14/2023	4:04	19.52	-0.02	0.0004	0.020	53.0	28.34	0.50	28.38	28.78	28.64	1.14	8.12	21.03	0.00	0.0935	0.306	61.8	28.34	0.30	28.36	28.84	28.78	17.55	123.57	
2/14/2023	4:05	19.53	-0.02	0.0002	0.014	52.8	28.34	0.50	28.38	28.78	28.67	0.81	5.75	21.02	0.00	0.0937	0.306	61.9	28.34	0.30	28.36	28.84	28.78	17.57	123.71	
2/14/2023	4:06	19.54	-0.02	0.0006	0.024	52.9	28.34	0.50	28.38	28.78	28.71	1.40	9.99	21.00	0.00	0.0910	0.302	61.4	28.34	0.30	28.36	28.84	28.78	17.31	121.97	
2/14/2023	4:07	19.55	-0.02	0.0005	0.022	53.0	28.34	0.50	28.38	28.78	28.73	1.27	9.14	20.99	0.00	0.0918	0.303	62.2	28.34	0.30	28.36	28.84	28.78	17.40	122.41	
2/14/2023	4:08	19.55	-0.02	0.0003	0.017	53.0	28.34	0.50	28.38	28.78	28.74	0.99	7.08	20.97	0.00	0.0901	0.300	61.9	28.34	0.30	28.36	28.84	28.78	17.23	121.31	
2/14/2023	4:09	19.56	-0.02	0.0004	0.020	53.0	28.34	0.50	28.38	28.78	28.75	1.14	8.18	20.96	0.00	0.0935	0.306	61.8	28.34	0.30	28.36	28.84	28.78	17.55	123.59	
2/14/2023	4:10	19.55	-0.02	0.0004	0.020	52.9	28.34	0.50	28.38	28.78	28.75	1.14	8.19	20.96	0.00	0.0957	0.309	62.0	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	4:11	19.55	-0.02	0.0004	0.020	53.0	28.34	0.50	28.38	28.78	28.75	1.14	8.19	20.97	0.00	0.0908	0.301	62.0	28.34	0.30	28.36	28.84	28.78	17.30	121.77	
2/14/2023	4:12	19.56	-0.02	0.0004	0.020	53.1	28.34	0.50	28.38	28.78	28.76	1.14	8.19	20.99	0.00	0.0945	0.307	61.8	28.34	0.30	28.36	28.84	28.78	17.65	124.25	
2/14/2023	4:13	19.56	-0.02	0.0004	0.020	53.0	28.34	0.50	28.38	28.78	28.76	1.14	8.19	20.99	0.00	0.0927	0.304	62.0	28.34	0.30	28.36	28.84	28.78	17.48	123.04	
2/14/2023	4:14	19.55	-0.02	0.0003	0.017	53.0	28.34	0.50	28.38	28.78	28.76	0.99	7.09	21.01	0.00	0.0913	0.302	61.4	28.34	0.30	28.36	28.84	28.78	17.34	122.19	
2/14/2023	4:15	19.55	-0.02

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Inlet Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Outlet Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	Point in Process
	Unit	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	-
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/14/2023	4:39	19.55	-0.02	0.0003	0.017	53.4	28.34	0.50	28.38	28.78	28.76	0.99	7.09	21.06	0.00	0.0887	0.298	62.3	28.34	0.30	28.36	28.84	28.78	17.10	120.31	
2/14/2023	4:40	19.54	-0.02	0.0003	0.017	53.3	28.34	0.50	28.38	28.78	28.76	0.99	7.09	21.07	0.00	0.0895	0.299	62.1	28.34	0.30	28.36	28.84	28.78	17.18	120.87	
2/14/2023	4:41	19.54	-0.02	0.0006	0.024	53.2	28.34	0.50	28.38	28.78	28.76	1.39	10.03	21.10	0.00	0.0906	0.301	61.5	28.34	0.30	28.36	28.84	28.78	17.27	121.68	
2/14/2023	4:42	19.76	-0.01	0.0006	0.024	53.2	28.34	0.50	28.38	28.79	28.77	1.39	10.03	21.14	0.00	0.0903	0.300	62.2	28.34	0.30	28.36	28.85	28.78	17.26	121.37	
2/14/2023	4:43	20.41	0.00	0.0006	0.024	53.1	28.34	0.50	28.38	28.82	--	--	--	21.14	0.00	0.0899	0.300	61.9	28.34	0.30	28.36	28.85	28.78	17.21	121.12	
2/14/2023	4:44	20.65	0.00	0.0007	0.026	53.0	28.34	0.50	28.38	28.83	28.80	1.50	10.82	21.14	0.00	0.0927	0.304	61.5	28.34	0.30	28.36	28.85	28.78	17.47	123.04	
2/14/2023	4:45	20.70	0.00	0.0006	0.024	52.8	28.34	0.50	28.38	28.83	28.81	1.39	10.02	21.12	0.00	0.0878	0.296	61.7	28.34	0.30	28.36	28.84	28.78	17.01	119.72	
2/14/2023	4:46	20.72	0.00	0.0006	0.024	52.6	28.34	0.50	28.38	28.83	28.78	1.39	10.01	21.10	0.00	0.0899	0.300	61.1	28.34	0.30	28.36	28.84	28.78	17.20	121.22	
2/14/2023	4:47	20.73	0.01	0.0006	0.024	52.5	28.34	0.50	28.38	28.83	28.74	1.39	9.97	21.11	0.00	0.0892	0.299	61.8	28.34	0.30	28.36	28.84	28.78	17.14	120.68	
2/14/2023	4:48	20.66	0.00	0.0007	0.026	52.3	28.34	0.50	28.38	28.83	28.72	1.51	10.76	21.10	0.00	0.0899	0.300	61.3	28.34	0.30	28.36	28.84	28.78	17.20	121.20	
2/14/2023	4:49	20.47	0.00	0.0006	0.024	52.2	28.34	0.50	28.38	28.82	28.71	1.39	9.97	21.13	0.00	0.0879	0.296	61.4	28.34	0.30	28.36	28.85	28.78	17.01	119.82	
2/14/2023	4:50	20.63	0.00	0.0006	0.024	52.4	28.34	0.50	28.38	28.83	28.72	1.39	9.96	21.12	0.00	0.1006	0.317	61.5	28.34	0.30	28.36	28.84	28.78	18.20	128.18	
2/14/2023	4:51	20.68	0.00	0.0007	0.026	52.1	28.34	0.50	28.38	28.83	28.72	1.51	10.76	21.11	0.00	0.0907	0.301	60.7	28.34	0.30	28.36	28.84	28.78	17.27	121.79	
2/14/2023	4:52	20.71	0.00	0.0007	0.026	52.0	28.34	0.50	28.38	28.83	28.74	1.50	10.78	21.12	0.00	0.0920	0.303	61.0	28.34	0.30	28.36	28.84	28.78	17.40	122.63	
2/14/2023	4:53	20.73	0.00	0.0005	0.022	52.0	28.34	0.50	28.38	28.83	28.73	1.27	9.10	21.12	0.00	0.0907	0.301	61.0	28.34	0.30	28.36	28.84	28.78	17.27	121.76	
2/14/2023	4:54	20.73	0.00	0.0006	0.024	51.8	28.34	0.50	28.38	28.83	28.73	1.39	9.97	21.12	0.01	0.0920	0.303	60.9	28.34	0.30	28.36	28.85	28.78	17.40	122.63	
2/14/2023	4:55	20.71	0.00	0.0006	0.024	51.7	28.34	0.50	28.38	28.83	28.72	1.39	9.97	21.12	0.00	0.0909	0.301	60.9	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	4:56	20.08	0.00	0.0006	0.024	51.6	28.34	0.50	28.38	28.80	28.70	1.39	9.97	21.11	0.00	0.0885	0.297	60.7	28.34	0.30	28.36	28.84	28.78	17.06	120.30	
2/14/2023	4:57	20.43	0.00	0.0006	0.024	51.6	28.34	0.50	28.38	28.82	28.71	1.39	9.97	21.12	0.01	0.0895	0.299	60.7	28.34	0.30	28.36	28.85	28.78	17.15	120.98	
2/14/2023	4:58	20.54	0.00	0.0006	0.024	51.5	28.34	0.50	28.38	28.82	28.71	1.39	9.97	21.12	0.00	0.0897	0.299	61.3	28.34	0.30	28.36	28.84	28.78	17.18	121.03	
2/14/2023	4:59	20.59	0.00	0.0005	0.022	51.4	28.34	0.50	28.38	28.82	28.73	1.27	9.12	21.12	0.01	0.0937	0.306	61.3	28.34	0.30	28.36	28.85	28.78	17.56	123.69	
2/14/2023	5:00	20.54	0.00	0.0005	0.022	51.3	28.34	0.50	28.38	28.82	28.72	1.27	9.11	21.12	0.01	0.0889	0.298	61.1	28.34	0.30	28.36	28.85	28.78	17.10	120.52	
2/14/2023	5:01	20.49	0.00	0.0006	0.024	51.2	28.34	0.50	28.38	28.82	28.72	1.39	9.98	21.11	0.01	0.0892	0.299	61.1	28.34	0.30	28.36	28.85	28.78	17.13	120.72	
2/14/2023	5:02	20.49	0.00	0.0005	0.022	51.2	28.34	0.50	28.38	28.82	28.72	1.27	9.11	21.11	0.01	0.0929	0.305	60.9	28.34	0.30	28.36	28.85	28.78	17.48	123.22	
2/14/2023	5:03	19.96	0.00	0.0005	0.022	50.9	28.34	0.50	28.38	28.80	28.70	1.27	9.12	21.11	0.01	0.0944	0.307	60.5	28.34	0.30	28.36	28.85	28.78	17.61	124.25	
2/14/2023	5:04	19.91	0.00	0.0005	0.022	50.9	28.34	0.50	28.38	28.80	28.69	1.27	9.12	21.11	0.01	0.0911	0.302	60.5	28.34	0.30	28.36	28.85	28.78	17.30	122.05	
2/14/2023	5:05	20.22	0.00	0.0005	0.022	50.9	28.34	0.50	28.38	28.81	--	--	--	21.12	0.01	0.0907	0.301	60.4	28.34	0.30	28.36	28.85	28.78	17.26	121.82	
2/14/2023	5:06	20.25	0.00	0.0005	0.022	50.7	28.34	0.50	28.38	28.81	28.71	1.27	9.11	21.11	0.00	0.0934	0.306	60.7	28.34	0.30	28.36	28.84	28.77	17.53	123.57	
2/14/2023	5:07	20.27	0.00	0.0006	0.024	50.8	28.34	0.50	28.38	28.81	28.70	1.39	9.98	21.10	0.01	0.0928	0.305	60.2	28.34	0.30	28.36	28.85	28.78	17.46	123.23	
2/14/2023	5:08	20.14	0.00	0.0006	0.024	50.7	28.34	0.50	28.38	28.81	28.71	1.39	9.99	21.10	0.01	0.0912	0.302	60.7	28.34	0.30	28.36	28.85	28.77	17.32	122.10	
2/14/2023	5:09	20.13	0.00	0.0005	0.022	50.6	28.34	0.50	28.38	28.81	28.71	1.27	9.12	21.10	0.01	0.0910	0.302	60.7	28.34	0.30	28.36	28.85	28.77	17.30	121.96	
2/14/2023	5:10	20.19	0.00	0.0005	0.022	50.5	28.34	0.50	28.38	28.81	28.71	1.27	9.12	21.11	0.01	0.0945	0.307	60.2	28.34	0.30	28.36	28.85	28.78	17.62	124.35	
2/14/2023	5:11	19.87	0.00	0.0005	0.022	50.4	28.34	0.50	28.38	28.79	28.70	1.27	9.12	21.09	0.01	0.0945	0.307	60.3	28.34	0.30	28.36	28.85	28.78	17.62	124.36	
2/14/2023	5:12	19.38	0.00	0.0005	0.022	50.4	28.34	0.50	28.38	28.78	28.68	1.27	9.13	21.09	0.01	0.0919	0.303	60.2	28.34	0.30	28.36	28.85	28.78	17.37	122.65	
2/14/2023	5:13	19.81	0.00	0.0005	0.022	50.2	28.34	0.50	28.38	28.79	28.70	1.27	9.13	21.10	0.01	0.0939	0.306	59.9	28.34	0.30	28.36	28.85	28.78	17.56	124.01	
2/14/2023	5:14	19.95	0.00	0.0005	0.022	50.3	28.34	0.50	28.38	28.80	28.70	1.27	9.12	21.10	0.01	0.0931	0.305	60.1	28.34	0.30	28.36	28.85	28.78	17.49	123.46	
2/14/2023	5:15	20.10	0.00	0.0005	0.022	50.3	28.34	0.50	28.38	28.80	28.70	1.27	9.12	21.10	0.01	0.0951	0.308	59.9	28.34	0.30	28.36	28.85	28.78	17.67	124.81	
2/14/2023	5:16	20.06	0.00	0.0005	0.022	50.3	28.34	0.50	28.38	28.80	28.71	1.27	9.13	21.10	0.01	0.0947	0.308	59.9	28.34	0.30	28.36	28.85	28.78	17.63	124.53	
2/14/2023	5:17	19.92	0.00	0.0005	0.022	50.0	28.34	0.50	28.38	28.80	28.70	1.27	9.13	21.10	0.01	0.0936	0.306	59.9	28.34	0.30	28.36	28.85	28.78	17.53	123.82	
2/14/2023	5:18	19.94	0.00	0.0004	0.020	50.3	28.34	0.50	28.38	28.80	28.70	1.14	8.16	21.10	0.01	0.0953	0.309	60.1	28.34	0.30	28.36	28.85	--	--	--	
2/14/2023	5:19	19.97	0.00	0.0004	0.020	50.0	28.34	0.50	28.38	28.80	28.70	1.14	8.16	21.10	0.01	0.0935	0.306	60.0	28.34	0.30	28.36	28.85	28.78	17.52	123.73	
2/14/2023	5:20	19.87	0.00	0.0005	0.022	50.1	28.34	0.50	28.38	28.79	28.70	1.27	9.13	21.10	0.01	0.0955	0.309	59.7	28.34	0.30	28.36	28.85	28.78	17.70	125.08	
2/14/2023	5:21	18.88	0.00	0.0005	0.022	50.0	28.34	0.50	28.38	28.76	28.66	1.27	9.13	21.09	0.01	0.0968	0.311	60.0	28.34	0.30	28.36	28.85	28.78	17.83	125.90	
2/14/2023	5:22	19.50	0.00	0.0005	0.022	50.0	28.34	0.50	28.38	28.78	28.68	1.27	9.13	21.09	0.01	0.0997	0.316	60.1	28.34	0.30	28.36	28.85	28.78	18.10	127.75	
2/14/2023	5:23	19.70	0.00	0.0005	0.022	50.0	28.34	0.50	28.38	28.79	28.69	1.27	9.13	21.09	0.01	0.0981	0.313	59.9	28.34	0.30	28.36	28.85	28.78	17.95	126.75	
2/14/2023	5:24	19.81	0.00	0.0005	0.022	49.9	28.34	0.50	28.38	28.79	28.68	1.27	9.12	21.09	0.01	0.0998	0.316	59.6	28.34	0.30	28.36	28.85	28.78	18.10	127.88	
2/14/2023	5:25	19.67	0.00	0.0004	0.020	49.9	28.34	0.50	28.38	28.79	28.68	1.14	8.16	21.09	0.01	0.0966	0.311	59.1	28.34	0.30	28.36	28.85	28.78	17.79	125.88	
2/14/2023	5:26	19.66	0.00	0.0004	0.020	49.7	28.34	0.50	28.38	28.79	28.68	1.14	8.16	21.09	0.01	0.0985	0.314	59.0	28.34	0.30	28.36	28.85	28.78	17.97	127.11	
2/14/2023	5:27	19.69	0.00	0.0005	0.022	49.7	28.34	0.50	28.38	28.79	--	--	--	21.09	0.01	0.0995	0.315	59.4	28.34	0.30	28.36	28.85	28.78	18.06	127.72	
2/14/2023	5:28	19.22	0.00	0.0004	0.020	49.7	28.34	0.50	28.38	28.77	28.67	1.14	8.17	21.08	0.01	0.0982	0.313	59.0	28.34	0.30	28.36	28.84	28.78	17.94	126.92	
2/14/2023	5:29	18.92	0.01	0.0004	0.020	49.6	28.34	0.50	28.38	28.76	28.65	1.14	8.17	21.08	0.01	0.0955	0.309	59.2	28.34	0.30	28.36	28.84	28.78	17.69	125.14	
2/14/2023	5:30	19.32	0.01	0.0005	0.022	49.8	28.34	0.50	28.38	28.77	28.67	1.27	9.13	21.08	0.01	0.0971	0.312	59.2	28.34	0.30	28.36	28.84	28.78	17.84	126.19	
2/14/2023	5:31	19.46	0.01	0.0005	0.022	49.7	28.34	0.50	28.38	28.78	28.67	1.27	9.13	21.09	0.01	0.0981	0.313	59.0	28.34	0.30	28.36	28.85	28.78	17.93	126.86	
2/14/2023	5:32	19.51	0.00	0.0005	0.022	49.5	28.34	0.50	28.38	28.78	28.65	1.27	9.11	21.08	0.01	0.0984	0.314	58.6	28.34	0.30	28.36	28.84	28.78	17.95	127.10	
2/14/2023	5:33	19.49	0.00	0.0005	0.022	49.5	28.34	0.50	28.38	28.78	28.67	1.27	9.13	21.08	0.01	0.1007	0.317	58.8	28.34	0.30	28.36	28.84	28.78	18.16	128.55	
2/14/2023	5:34	19.54	0.01	0.0004	0.020	49.6	28.34	0.50	28.38	28.78	28.68	1.14	8.16	21.09	0.01	0.1018	0.319	58.8	28.34	0.30	28.36	28.85	28.78	18.26	129.25	
2/14/2023	5:35	19.63	0.01	0.0004	0.020	49.5	28.34	0.50	28.38	28.79	28.68	1.14	8.16	21.08	0.01	0.0996	0.316	59.1	28.34	0.30	28.36	28.84	28.78	18.07	127.82	
2/14/2023	5:36	19.65	0.01	0.0004	0.020	49.5	28.34	0.50	28.38	28.79	28.68	1.14	8.16	21.08	0.01	0.0980	0.313	58.9	28.34	0.30	28.36	28.84	28.78	17.92	126.81	
2/14/2023	5:37	19.71	0.01	0.0004	0.020	49.4	28.34	0.50	28.38	28.79	28.68	1.14	8.16	21.08	0.01	0.1010	0.318	58.8	28.34	0.30	28.36	28.84	28.78	18.19	128.75	
2/14/2023	5:38	19.21	0.00	0.0004	0.020	49.4	28.34	0.50	28.38	28.77	28.66	1.14	8.17	21.08	0.01	0.0986	0.314	58.9	28.34	0.30	28.36	28.84	28.78	17.97	127.19	
2/14/2023	5:39	18.84	0.01	0.0005	0.022	49.3	28.34	0.50	28.38	28.76	28.65	1.27	9.13	21.09	0.01	0.0996	0.316	58.5	28.34	0.30	28.36	28.85	28.78	18.06	127.89	
2/14/2023	5:40	19.26	0.01	0.0004	0.020	49.5	28.34	0.50	28.38	28.77	28.66	1.14	8.16	21.08	0.01	0.1006	0.317	58.7	28.34	0.30	28.36	28.84	28.78	18.15	128.50	
2/14/2023	5:41	19.41	0.01	0.0005	0.022	49.5	28.34	0.50	28.38	28.78	28.67	1.27	9.13	21.09	0.01	0.0968	0.311	59.6	28.34	0.30	28.36	28.85	--	--	--	
2/14/2023	5:42	19.42	0.01	0.0006	0.024	49.4	28.34	0.50	28.38	28.78	28.66	1.39	9.99	21.08	0.01	0.0938	0.306	58.1	28.34	0.30	28.36	28.84	28.78	17.52	124.17	
2/14/2023	5:43	13.68	0.01	0.0005	0.022	49.4	28.34	0.50	28.38	28.55	28.44	1.28	9.16	21.04	0.01	0.0970	0.311	58.9	28.34	0.30	28.36	28.84	28.78	17.83	126.17	
2/14/2023	5:44	15.91	0.00	0.0006	0.024	49.6	28.34	0.50	28.38	28.64	28.53	1.40	10.02	21.04	0.01	0.0954	0.309	58.6	28.34	0.30	28.36	28.84	28.78	17.68	125.17	
2/14/2023	5:45	19.29	-0.02	0.0005	0.022	49.6	28.34	0.50	28.38	28.77	28.66	1.27	9.13	21.05	0.01	0.1044	0.323	58.6	28.34	0.30	28.36	28.84	28.78	18.49	130.95	
2/14/2023	5:46	19.47	-0.02	0.0004	0.020	49.7	28.34	0.50	28.38	28.78	28.64	1.14	8.15	21.05	0.00	0.1038	0.322	58.7	28.34	0.30	28.36	28.84	28.77	18.44	130.55	
2/14/2023	5:47	19.53	-0.02	0.0004	0.020	49.8	28.34	0.50	28.38	28.78	28.64	1.14	8.15	21.05	0.01	0.1045	0.323	59.3	28.34	0.30	28.36	28.84	28.78	18.51	130.91	
2/14/2023	5:48	19.64	-0.02	0.0004	0.020	49.7	28.34	0.50	28.38	28.78	28.75	1.13	8.21	21.06	0.01	0.1035	0.322	58.8	28.34	0.30	28.36	28.84	28.78	18.41	130.35	
2/14/2023	5:49	20.05	-0.01	0.0004	0.020	49.6	28.34	0.50	28.38	28.80	--	--	--	21.08	0.01	0.1031	0.321	58.8	28.34	0.30	28.36	28.84	28.78	18.38	130.08	
2/14/2023	5:50	20.48	0.00	0.0005	0.022	49.7	28.34	0.50	28.38	28.82	28.79	1.27	9.17	21.09	0.01	0.0987	0.314	58.9	28.34	0.30	28.36	28.85	28.78	17.98	127.27	
2/14/2023	5:51	20.61	0.00	0.0004	0.020	49.5	28.34	0.50	28.38	28.82	28.79	1.13	8.20	21.09	0.01	0.0959	0.310	59.6	28.34	0.30	28.36	28.85	28.78	17.74	125.38	
2/14/2023	5:52	20.66	0.00	0.0005	0.022	49.6	28.34	0.50	28.38	28.83	28.78	1.27	9.16	21.09	0.01	0.0994	0.315	59.2	28.34	0.30	28.36	28.85	28.78	18.05	127.68	
2/14/2023	5:53	20.67	0.01	0.0005	0.022	49.6	28.34	0.50	28.38	28.83	28.75	1.27	9.14	21.08	0.01	0.0938	0.306	59.5	28.34	0.30	28.36	28.84	28.78	17.54	123.99	
2/14/2023	5:54	20.68	0.00	0.0004	0.020	49.6	28.34	0.50	28.38	28.83	28.73	1.14	8.16	21.08	0.01	0.0972	0.312	59.8	28.34	0.30	28.36	28.84	28.78	17.86	126.17	
2/14/2023	5:55	20.70	0.00	0.0004	0.020	49.6	28.34	0.50	28.38	28.83	28.73	1.14	8.16	21.09	0.01	0.0971	0.312	58.8	28.34	0.30	28.36	28.85	28.78	17.83	126.24	
2/14/2023	5:56	20.70	0.00	0.0005	0.022	49.5	28.34	0.50	28.38	28.83	28.73	1.27	9.12	21.09	0.01	0.0957	0.309	58.8	28.34	0.30	28.36	28.85	28.78	17.71	125.33	
2/14/2023	5:57	20.70	0.00	0.0005	0.022	49.6	28.34	0.50	28.38	28.83	28.72	1.27	9.12	21.08	0.01	0.0957	0.309	59.0	28.34	0.30	28.36	28.84	28.78	17.71	125.31	
2/14/2023	5:58	20.69	0.00	0.0005	0.022	49.5	28.34	0.50	28.38	28.83	28.72	1.27	9.12	21.09	0.01	0.0981	0.313	59.3	28.34	0.30	28.36	28.85	28.78	17.93	126.84	
2/14/2023	5:59	20.69	0.00	0.0005	0.022	49.5	28.34	0.50	28.38	28.83	28.72	1.27	9.12	21.10	0.01	0.0981	0.313	59.5	28.34	0.30	28.36	28.85	28.78	17.94	126.82	
2/14/2023	6:00	20.70	0.00	0.0005	0.022	49.5	28.34	0.50	28.38	28.83	28.72	1.27	9.12	21.08	0.00	0.0972	0.312	58.9	28.34	0.30	28.36	28.84	28.78	17.85	126.31	
2/14/2023	6:01	20.71	0.00	0.0003	0.017	49.6	28.34	0.50	28.38	28.83	28.72	0.98	7.07	21.08	0.01	0.0976	0.312	58.9	28.34	0.30	28.36	28.84	28.78	17.88	126.56	
2/14/2023	6:02	20.71	0.00	0.0005	0.022	49.4	28.34	0.50	28.38	28.83	28.72	1.27	9.12	21.08	0.01	0.0958	0.310	59.3	28.34	0.30	28.36	28.84	28.78	17.72	125.32	
2/14/2023	6:03	20.71	0.01	0.0005	0.022	49.6	28.34	0.50	28.38	28.83	28.73	1.27	9.12	21.07	0.01	0.0966	0.311	58.7	28.34	0.30	28.36	28.84	28.77	17.79	125.92	
2/14/2023	6:04	20.72	0.01	0.0005	0.022	49.4	28.34	0.50	28.38	28.83	28.72	1.27	9.12	21.08	0.01	0.0972	0.312	59.2	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	6:05	20.71	0.00	0.0005	0.022	49.4	28.34	0.50	28.38	28.83	28.72	1.27	9.12	21.07	0.01	0.1001	0.316	58.8	28.34	0.30	28.36	28.84	28.77	18.11	128.17	
2/14/2023	6:06	20.71	0.00	0.0005	0.022	49.7	28.34	0.50	28.38	28.83	28.72	1.27	9.12	21.07	0.00	0.0960	0.310	59.6	28.34	0.30	28.36	28.84	28.77	17.75	125.43	
2/14/2023	6:07	20.72	0.00	0.0005	0.022	49.5	28.34	0.50	28.38	28.83	28.72	1.27	9.12	21.07	0.00	0.0970	0.311	59.1	28.34	0.30	28.36	28.84	28.77	17.83	126.14	
2/14/2023	6:08	20.72	0.00	0.0006	0.024	49.5	28.34	0.50	28.38	28.83	28.72	1.39	9.99	21.07	0.01	0.0952	0.309	59.2	28.34	0.30	28.36	28.84	28.78	17.67	124.96	
2/14/2023	6:09	20.72	0.01	0.0005	0.022	49.6	28.34	0.50	28.38	28.83	28.72	1.27	9.12	21.08	0.00	0.0963	0.310	59.2	28.34	0.30	28.36	28.84	28.78	17.77	125.68	
2/14/2023	6:10	20.72	0.01	0.0006	0.024	49.5	28.34	0.50	28.38	28.83	28.72	1.39	9.99	21.07	0.00	0.0964	0.310	59.2	28.34	0.30	28.36	28.84	28.78	17.78	125.75	
2/14/2023	6:11	20.72	0.01	0.0005	0.022	49.5	28.34	0.50	28.38	28.83	--	--	--	21.08	0.01	0.0979	0.313	58.6	28.34	0.30	28.36	28.84	28.78	17.90	126.80	
2/14/2023	6:12	20.73	0.01	0.0005	0.022	49.6	28.34	0.50	28.38	28.83	28.72	1.27	9.12	21.08	0.01	0.0959	0.310	59.4	28.34	0.30	28.36	28.84	28.78	17.74	125.39	
2/14/2023	6:13	20.73	0.01	0.0005	0.022	49.5	28.34	0

Alliance SOURCE TESTING

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	-
	Status	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	Valid
		Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	
2/14/2023	6:37	20.74	0.01	0.0005	0.022	50.0	28.34	0.50	28.38	28.83	28.72	1.27	9.11	21.07	0.00	0.0957	0.309	56.2	28.34	0.30	28.36	28.84	28.78	17.66	125.66	
2/14/2023	6:38	20.74	0.00	0.0003	0.017	50.0	28.34	0.50	28.38	28.83	28.72	0.98	7.06	21.07	0.00	0.0950	0.308	56.1	28.34	0.30	28.36	28.84	28.78	17.60	125.20	
2/14/2023	6:39	20.74	0.00	0.0005	0.022	49.9	28.34	0.50	28.38	28.83	28.72	1.27	9.11	21.07	0.00	0.0919	0.303	56.0	28.34	0.30	28.36	28.84	28.78	17.31	123.16	
2/14/2023	6:40	20.75	0.00	0.0005	0.022	50.0	28.34	0.50	28.38	28.83	28.72	1.27	9.11	21.07	0.00	0.0928	0.305	55.9	28.34	0.30	28.36	28.84	28.77	17.39	123.76	
2/14/2023	6:41	20.75	0.00	0.0004	0.020	50.0	28.34	0.50	28.38	28.83	28.72	1.14	8.15	21.07	0.00	0.0907	0.301	56.0	28.34	0.30	28.36	28.84	28.77	17.19	122.34	
2/14/2023	6:42	20.75	0.00	0.0006	0.024	49.8	28.34	0.50	28.38	28.83	28.72	1.39	9.98	21.07	0.00	0.0936	0.306	56.0	28.34	0.30	28.36	28.84	28.77	17.46	124.27	
2/14/2023	6:43	20.75	0.00	0.0005	0.022	49.9	28.34	0.50	28.38	28.83	28.72	1.27	9.11	21.07	0.00	0.0946	0.308	55.8	28.34	0.30	28.36	28.84	28.77	17.55	124.96	
2/14/2023	6:44	20.76	0.00	0.0006	0.024	49.8	28.34	0.50	28.38	28.83	28.72	1.39	9.98	21.07	0.00	0.0939	0.306	55.9	28.34	0.30	28.36	28.84	28.77	17.49	124.49	
2/14/2023	6:45	20.75	0.01	0.0006	0.024	49.9	28.34	0.50	28.38	28.83	28.72	1.39	9.98	21.08	0.00	0.0924	0.304	55.9	28.34	0.30	28.36	28.84	28.77	17.35	123.49	
2/14/2023	6:46	20.76	0.01	0.0005	0.022	49.7	28.34	0.50	28.38	28.83	28.72	1.27	9.12	21.08	0.00	0.0938	0.306	55.7	28.34	0.30	28.36	28.84	28.77	17.48	124.43	
2/14/2023	6:47	20.76	0.01	0.0006	0.024	49.7	28.34	0.50	28.38	28.83	28.72	1.39	9.99	21.08	0.00	0.0947	0.308	55.7	28.34	0.30	28.36	28.84	28.77	17.56	125.03	
2/14/2023	6:48	20.76	0.00	0.0006	0.024	49.7	28.34	0.50	28.38	28.83	28.72	1.39	9.99	21.08	0.01	0.0971	0.312	55.7	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	6:49	20.76	0.00	0.0006	0.024	49.8	28.34	0.50	28.38	28.83	28.72	1.39	9.98	21.08	0.01	0.0957	0.309	55.7	28.34	0.30	28.36	28.84	28.77	17.65	125.68	
2/14/2023	6:50	20.76	0.00	0.0005	0.022	49.5	28.34	0.50	28.38	28.83	28.72	1.27	9.12	21.08	0.00	0.0962	0.310	55.5	28.34	0.30	28.36	28.84	28.77	17.70	126.02	
2/14/2023	6:51	20.76	0.00	0.0007	0.026	49.7	28.34	0.50	28.38	28.83	28.72	1.50	10.78	21.07	0.00	0.0944	0.307	55.7	28.34	0.30	28.36	28.84	28.77	17.53	124.82	
2/14/2023	6:52	20.75	0.00	0.0006	0.024	49.7	28.34	0.50	28.38	28.83	28.72	1.39	9.99	21.08	0.00	0.0957	0.309	55.5	28.34	0.30	28.36	28.84	28.77	17.65	125.69	
2/14/2023	6:53	20.75	0.01	0.0006	0.024	49.4	28.34	0.50	28.38	28.83	28.72	1.39	9.99	21.08	0.00	0.0956	0.309	55.5	28.34	0.30	28.36	28.84	28.77	17.64	125.63	
2/14/2023	6:54	20.75	0.01	0.0005	0.022	49.6	28.34	0.50	28.38	28.83	28.72	1.27	9.12	21.07	0.00	0.0970	0.311	55.5	28.34	0.30	28.36	28.84	28.77	17.77	126.54	
2/14/2023	6:55	20.75	0.01	0.0006	0.024	49.6	28.34	0.50	28.38	28.83	--	--	--	21.07	0.00	0.0951	0.308	55.4	28.34	0.30	28.36	28.84	28.77	17.59	125.31	
2/14/2023	6:56	20.74	0.01	0.0005	0.022	49.5	28.34	0.50	28.38	28.83	28.72	1.27	9.12	21.07	0.00	0.0933	0.305	55.4	28.34	0.30	28.36	28.84	28.77	17.43	124.11	
2/14/2023	6:57	20.73	0.01	0.0315	0.177	49.5	28.34	0.50	28.38	28.83	28.72	10.07	72.36	21.07	0.00	0.0976	0.312	55.4	28.34	0.30	28.36	28.84	28.77	17.83	126.93	
2/14/2023	6:58	20.74	0.00	0.0005	0.022	49.6	28.34	0.50	28.38	28.83	28.72	1.27	9.12	21.07	0.00	0.0942	0.307	55.3	28.34	0.30	28.36	28.84	28.77	17.51	124.70	
2/14/2023	6:59	14.85	0.00	0.0004	0.020	49.9	28.34	0.50	28.38	28.59	28.49	1.14	8.18	20.89	0.01	0.0943	0.307	55.4	28.34	0.30	28.36	28.84	28.76	17.52	124.77	
2/14/2023	7:00	11.76	0.01	0.0005	0.022	49.7	28.34	0.50	28.38	28.47	28.36	1.28	9.17	21.02	0.00	0.0943	0.307	55.1	28.34	0.30	28.36	28.84	28.76	17.52	124.79	
2/14/2023	7:01	14.03	0.01	0.0004	0.020	49.5	28.34	0.50	28.38	28.56	28.45	1.14	8.19	21.05	0.01	0.1014	0.318	55.0	28.34	0.30	28.36	28.84	28.77	18.16	129.39	
2/14/2023	7:02	16.28	0.01	0.0006	0.024	49.5	28.34	0.50	28.38	28.65	28.54	1.39	10.01	21.06	0.00	0.0994	0.315	55.0	28.34	0.30	28.36	28.84	28.76	17.98	128.11	
2/14/2023	7:03	17.05	0.01	0.0006	0.024	49.3	28.34	0.50	28.38	28.68	28.55	1.39	10.00	21.05	0.00	0.0980	0.313	54.9	28.34	0.30	28.36	28.84	28.77	17.85	127.24	
2/14/2023	7:04	17.66	0.01	0.0005	0.022	49.3	28.34	0.50	28.38	28.71	28.63	1.27	9.16	21.06	0.00	0.0998	0.316	54.9	28.34	0.30	28.36	28.84	28.77	18.02	128.41	
2/14/2023	7:05	18.04	0.01	0.0005	0.022	49.3	28.34	0.50	28.38	28.72	28.62	1.27	9.14	21.06	0.00	0.0966	0.311	54.9	28.34	0.30	28.36	28.84	28.77	17.72	126.34	
2/14/2023	7:06	18.33	0.01	0.0005	0.022	49.1	28.34	0.50	28.38	28.73	28.63	1.27	9.14	21.05	0.01	0.0997	0.316	54.7	28.34	0.30	28.36	28.84	28.77	18.00	128.36	
2/14/2023	7:07	18.50	0.01	0.0005	0.022	49.1	28.34	0.50	28.38	28.74	28.64	1.27	9.14	21.05	0.00	0.0961	0.310	54.7	28.34	0.30	28.36	28.84	28.77	17.68	126.03	
2/14/2023	7:08	18.67	0.01	0.0005	0.022	49.1	28.34	0.50	28.38	28.75	28.64	1.27	9.14	21.05	0.00	0.0970	0.311	54.8	28.34	0.30	28.36	28.84	28.77	17.76	126.59	
2/14/2023	7:09	18.81	0.01	0.0004	0.020	49.0	28.34	0.50	28.38	28.75	28.64	1.14	8.17	21.05	0.01	0.0959	0.310	54.6	28.34	0.30	28.36	28.84	28.77	17.66	125.88	
2/14/2023	7:10	18.96	0.01	0.0005	0.022	49.0	28.34	0.50	28.38	28.76	28.65	1.27	9.13	21.05	0.01	0.0971	0.312	54.6	28.34	0.30	28.36	28.84	28.76	17.77	126.66	
2/14/2023	7:11	19.03	0.01	0.0004	0.020	49.1	28.34	0.50	28.38	28.76	28.65	1.14	8.17	21.05	0.00	0.0974	0.312	54.7	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	7:12	19.13	0.01	0.0004	0.020	49.1	28.34	0.50	28.38	28.77	28.65	1.14	8.16	21.06	0.01	0.0948	0.308	57.4	28.34	0.30	28.36	28.84	28.77	17.60	124.82	
2/14/2023	7:13	19.18	0.01	0.0004	0.020	49.2	28.34	0.50	28.38	28.77	28.66	1.14	8.16	21.05	0.00	0.0964	0.310	57.8	28.34	0.30	28.36	28.84	28.76	17.76	125.82	
2/14/2023	7:14	19.29	0.01	0.0005	0.022	49.2	28.34	0.50	28.38	28.77	28.66	1.27	9.13	21.06	0.01	0.0974	0.312	57.7	28.34	0.30	28.36	28.84	28.77	17.85	126.48	
2/14/2023	7:15	19.34	0.01	0.0005	0.022	49.4	28.34	0.50	28.38	28.78	28.66	1.27	9.12	21.05	0.01	0.0953	0.309	58.0	28.34	0.30	28.36	28.84	28.76	17.66	125.07	
2/14/2023	7:16	19.41	0.01	0.0004	0.020	49.3	28.34	0.50	28.38	28.78	28.66	1.14	8.16	21.05	0.01	0.0973	0.312	57.5	28.34	0.30	28.36	28.84	28.76	17.83	126.43	
2/14/2023	7:17	19.45	0.01	0.0005	0.022	49.1	28.34	0.50	28.38	28.78	--	--	--	21.05	0.01	0.0954	0.309	57.5	28.34	0.30	28.36	28.84	28.76	17.66	125.20	
2/14/2023	7:18	19.53	0.01	0.0006	0.024	49.2	28.34	0.50	28.38	28.78	28.67	1.39	9.99	21.04	0.01	0.0951	0.308	57.4	28.34	0.30	28.36	28.84	28.77	17.63	125.02	
2/14/2023	7:19	19.56	0.01	0.0004	0.020	49.2	28.34	0.50	28.38	28.78	28.67	1.14	8.16	21.04	0.00	0.0959	0.310	57.5	28.34	0.30	28.36	28.84	28.76	17.71	125.54	
2/14/2023	7:20	19.61	0.01	0.0005	0.022	49.1	28.34	0.50	28.38	28.79	28.67	1.27	9.12	21.04	0.01	0.0966	0.311	57.3	28.34	0.30	28.36	28.84	28.77	17.77	126.01	
2/14/2023	7:21	19.62	0.01	0.0004	0.020	49.1	28.34	0.50	28.38	28.79	28.67	1.14	8.16	21.03	0.01	0.0950	0.308	57.4	28.34	0.30	28.36	28.84	28.76	17.62	124.95	
2/14/2023	7:22	19.65	0.01	0.0004	0.020	49.2	28.34	0.50	28.38	28.79	28.67	1.14	8.16	21.02	0.01	0.0942	0.307	57.7	28.34	0.30	28.36	28.84	28.76	17.55	124.39	
2/14/2023	7:23	19.69	0.01	0.0006	0.024	49.1	28.34	0.50	28.38	28.79	28.67	1.39	9.99	21.01	0.01	0.0952	0.309	57.5	28.34	0.30	28.36	28.84	28.76	17.64	125.08	
2/14/2023	7:24	19.74	0.01	0.0005	0.022	49.1	28.34	0.50	28.38	28.79	28.68	1.27	9.12	21.01	0.01	0.0984	0.314	57.8	28.34	0.30	28.36	28.84	28.77	17.94	127.13	
2/14/2023	7:25	19.77	0.01	0.0006	0.024	49.0	28.34	0.50	28.38	28.79	28.68	1.39	9.99	21.00	0.01	0.0953	0.309	57.7	28.34	0.30	28.36	28.84	28.76	17.65	125.13	
2/14/2023	7:26	19.81	0.00	0.0004	0.020	49.2	28.34	0.50	28.38	28.79	28.68	1.14	8.16	21.00	0.01	0.0968	0.311	57.5	28.34	0.30	28.36	28.84	28.76	17.79	126.13	
2/14/2023	7:27	19.83	0.00	0.0005	0.022	49.1	28.34	0.50	28.38	28.79	28.69	1.27	9.13	20.99	0.00	0.0960	0.310	57.3	28.34	0.30	28.36	28.84	28.76	17.71	125.64	
2/14/2023	7:28	19.86	0.00	0.0004	0.020	49.0	28.34	0.50	28.38	28.79	28.69	1.14	8.17	20.99	0.01	0.0951	0.308	57.1	28.34	0.30	28.36	28.84	28.76	17.63	125.06	
2/14/2023	7:29	19.90	0.00	0.0004	0.020	48.9	28.34	0.50	28.38	28.80	28.69	1.14	8.17	21.00	0.01	0.0969	0.311	57.1	28.34	0.30	28.36	28.84	28.76	17.79	126.24	
2/14/2023	7:30	19.95	0.00	0.0004	0.020	48.9	28.34	0.50	28.38	28.80	28.69	1.14	8.17	21.00	0.01	0.0955	0.309	57.1	28.34	0.30	28.36	28.84	28.76	17.66	125.33	
2/14/2023	7:31	19.97	0.00	0.0004	0.020	49.0	28.34	0.50	28.38	28.80	28.69	1.14	8.16	21.01	0.01	0.0939	0.306	56.8	28.34	0.30	28.36	28.84	28.76	17.51	124.30	
2/14/2023	7:32	19.98	0.01	0.0004	0.020	48.9	28.34	0.50	28.38	28.80	28.69	1.14	8.17	20.99	0.01	0.0935	0.306	57.1	28.34	0.30	28.36	28.84	28.76	17.48	123.99	
2/14/2023	7:33	19.99	0.01	0.0004	0.020	48.9	28.34	0.50	28.38	28.80	28.69	1.14	8.16	20.99	0.01	0.0949	0.308	57.0	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	7:34	20.00	0.01	0.0004	0.020	48.8	28.34	0.50	28.38	28.80	28.69	1.13	8.16	21.00	0.01	0.0956	0.309	57.0	28.34	0.30	28.36	28.84	28.76	17.67	125.38	
2/14/2023	7:35	20.03	0.01	0.0004	0.020	48.9	28.34	0.50	28.38	28.80	28.69	1.14	8.16	21.00	0.02	0.0960	0.310	57.0	28.34	0.30	28.36	28.84	28.76	17.71	125.64	
2/14/2023	7:36	20.08	0.01	0.0004	0.020	49.0	28.34	0.50	28.38	28.80	28.69	1.14	8.16	21.00	0.02	0.0968	0.311	57.0	28.34	0.30	28.36	28.84	28.76	17.78	126.16	
2/14/2023	7:37	20.10	0.01	0.0005	0.022	48.9	28.34	0.50	28.38	28.81	28.70	1.27	9.13	21.00	0.01	0.0948	0.308	56.9	28.34	0.30	28.36	28.84	28.76	17.59	124.87	
2/14/2023	7:38	20.10	0.01	0.0005	0.022	48.9	28.34	0.50	28.38	28.81	28.70	1.27	9.13	21.00	0.02	0.0950	0.308	56.9	28.34	0.30	28.36	28.84	28.76	17.61	125.00	
2/14/2023	7:39	20.11	0.01	0.0004	0.020	48.9	28.34	0.50	28.38	28.81	--	--	--	20.99	0.01	0.0950	0.308	56.8	28.34	0.30	28.36	28.84	28.76	17.61	125.02	
2/14/2023	7:40	20.14	0.01	0.0005	0.022	48.9	28.34	0.50	28.38	28.81	28.70	1.27	9.13	21.00	0.01	0.0969	0.311	57.0	28.34	0.30	28.36	28.84	28.76	17.79	126.22	
2/14/2023	7:41	20.13	0.01	0.0004	0.020	48.7	28.34	0.50	28.38	28.81	28.70	1.13	8.16	21.00	0.01	0.0961	0.310	57.0	28.34	0.30	28.36	28.84	28.76	17.72	125.71	
2/14/2023	7:42	20.15	0.01	0.0005	0.022	48.8	28.34	0.50	28.38	28.81	28.70	1.27	9.13	20.99	0.02	0.0921	0.303	56.9	28.34	0.30	28.36	28.84	28.76	17.34	123.07	
2/14/2023	7:43	20.18	0.01	0.0005	0.022	48.9	28.34	0.50	28.38	28.81	28.70	1.27	9.12	21.00	0.01	0.0949	0.308	57.1	28.34	0.30	28.36	28.84	28.76	17.61	124.92	
2/14/2023	7:44	20.20	0.01	0.0004	0.020	48.9	28.34	0.50	28.38	28.81	28.70	1.14	8.16	21.00	0.01	0.0928	0.305	57.0	28.34	0.30	28.36	28.84	28.76	17.41	123.53	
2/14/2023	7:45	20.24	0.01	0.0005	0.022	48.8	28.34	0.50	28.38	28.81	28.70	1.27	9.13	20.99	0.02	0.0948	0.308	57.1	28.34	0.30	28.36	28.84	28.76	17.60	124.85	
2/14/2023	7:46	20.26	0.01	0.0005	0.022	49.0	28.34	0.50	28.38	28.81	28.70	1.27	9.12	21.00	0.02	0.0937	0.306	57.2	28.34	0.30	28.36	28.84	28.76	17.50	124.10	
2/14/2023	7:47	20.28	0.01	0.0005	0.022	49.0	28.34	0.50	28.38	28.81	28.70	1.27	9.12	21.01	0.01	0.0955	0.309	57.0	28.34	0.30	28.36	28.84	28.76	17.66	125.31	
2/14/2023	7:48	20.33	0.01	0.0004	0.020	48.8	28.34	0.50	28.38	28.81	28.70	1.13	8.16	21.00	0.01	0.0929	0.305	57.2	28.34	0.30	28.36	28.84	28.76	17.42	123.58	
2/14/2023	7:49	20.35	0.01	0.0005	0.022	49.0	28.34	0.50	28.38	28.82	28.70	1.27	9.12	21.00	0.01	0.0949	0.308	57.1	28.34	0.30	28.36	28.84	28.76	17.61	124.92	
2/14/2023	7:50	20.37	0.01	0.0005	0.022	49.2	28.34	0.50	28.38	28.82	28.70	1.27	9.12	21.00	0.02	0.0963	0.310	57.2	28.34	0.30	28.36	28.84	28.76	17.74	125.82	
2/14/2023	7:51	20.43	0.01	0.0006	0.024	48.9	28.34	0.50	28.38	28.82	28.71	1.39	9.99	21.00	0.01	0.0943	0.307	57.3	28.34	0.30	28.36	28.84	28.76	17.56	124.50	
2/14/2023	7:52	20.48	0.01	0.0005	0.022	48.8	28.34	0.50	28.38	28.82	28.71	1.27	9.12	21.00	0.02	0.0930	0.305	55.2	28.34	0.30	28.36	28.84	28.76	17.40	123.89	
2/14/2023	7:53	20.52	0.01	0.0005	0.022	48.7	28.34	0.50	28.38	28.82	28.71	1.27	9.12	21.01	0.01	0.0944	0.307	54.5	28.34	0.30	28.36	28.84	28.76	17.52	124.91	
2/14/2023	7:54	20.56	0.01	0.0005	0.022	48.7	28.34	0.50	28.38	28.82	28.71	1.27	9.12	21.00	0.02	0.0923	0.304	54.6	28.34	0.30	28.36	28.84	28.76	17.32	123.49	
2/14/2023	7:55	20.60	0.01	0.0005	0.022	48.8	28.34	0.50	28.38	28.83	28.71	1.27	9.12	20.99	0.02	0.0946	0.308	54.6	28.34	0.30	28.36	28.84	28.76	17.54	125.01	
2/14/2023	7:56	20.61	0.01	0.0005	0.022	48.8	28.34	0.50	28.38	28.83	28.71	1.27	9.12	20.99	0.02	0.0932	0.305	54.7	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	7:57	20.60	0.01	0.0005	0.022	48.8	28.34	0.50	28.38	28.83	28.71	1.27	9.12	21.00	0.02	0.0957	0.309	54.7	28.34	0.30	28.36	28.84	28.76	17.64	125.73	
2/14/2023	7:58	20.54	0.01	0.0005	0.022	48.9	28.34	0.50	28.38	28.82	28.71	1.27	9.12	20.99	0.01	0.0944	0.307	54.8	28.34	0.30	28.36	28.84	28.76	17.52	124.87	
2/14/2023	7:59	20.49	0.01	0.0005	0.022	49.2	28.34	0.50	28.38	28.82	28.71	1.27	9.12	21.00	0.02	0.0914	0.302	54.9	28.34	0.30	28.36	28.84	28.76	17.24	122.85	
2/14/2023	8:00	20.44	0.01	0.0005	0.022	48.9	28.34	0.50	28.38	28.82	28.70	1.27	9.12	21.00	0.01	0.0932	0.305	54.8	28.34	0.30	28.36	28.84	28.76	17.41	124.07	
2/14/2023	8:01	20.42	0.01	0.0005	0.022	49.2	28.34	0.50	28.38	28.82	--	--	--	21.00	0.01	0.0933	0.305	55.0	28.34	0.30	28.36	28.84	28.76	17.42	124.12	
2/14/2023	8:02	20.42	0.01	0.0005	0.022	49.1	28.34	0.50	28.38	28.82	28.70	1.27	9.12	21.00	0.01	0.0897	0.299	54.8	28.34	0.30	28.36	28.84	28.76	17.08	121.72	
2/14/2023	8:03	20.42	0.01	0.0006	0.024	49.2	28.34	0.50	28.38	28.82	28.70	1.39	9.99	21.00	0.02	0.0920	0.303	54.8	28.34	0.30	28.36	28.84	28.76	17.30	123.27	
2/14/2023	8:04	20.42	0.01	0.0005	0.022	49.2	28.34	0.50	28.38	28.82	28.70	1.27	9.12	21.00	0.01	0.0916	0.303	54.8	28.34	0.30	28.36	28.84	28.76	17.26	123.00	
2/14/2023	8:05	20.41	0.01	0.0004	0.020	49.1	28.34	0.50	28.38	28.82	28.70	1.14	8.16	21.00	0.01	0.0918	0.303	54.8	28.34	0.30	28.36	28.84	28.76	17.28	123.13	
2/14/2023	8:06	20.41	0.01	0.0004	0.020	49.4	28.34	0.50	28.38	28.82	28.70	1.14	8.15	21.00	0.01	0.0927	0.304	55.0	28.34	0.30	28.36	28.84	28.76	17.37	123.72	
2/14/2023	8:07	20.41	0.01	0.0004	0.020	49.2	28.34	0.50	28.38	28.82	28.70	1.14	8.15	21.00	0.01	0.0936	0.306	54.9	28.34	0.30	28.36	28.84	28.76	17.45	124.32	
2/14/2023	8:08	20.39	0.01	0.0005	0.022	49.4	28.34	0.50	28.38	28.82	28.70	1.27	9.12	21.00	0.02	0.0944	0.307	54.8	28.34	0.30	28.36	28.84	28.76	17.52	124.86	
2/14/2023	8:09	20.39	0.01	0.0005	0.022	49.3	28.34	0.50	28.38	28.82	28.70	1.27	9.12	20.99	0.01	0.0931	0.305	55.0	28.34	0.30	28.36	28.84	28.76	17.40	123.98	
2/14/2023	8:10	20.37	0.01	0.0004	0.020	49.3	28.34	0.50	28.38	28.82	28.70	1.14	8.15	21.00	0.02	0.0896	0.299	54.9	28.34	0.30	28.36	28.84	28.76	17.07	121.62	
2/14/2023	8

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	-
	Status	% dry Valid	% dry Valid	in. W.C. Valid	Delta P Valid	(°F) Valid	in. Hg Valid	in. W.C. Valid	in. Hg Valid	Md Valid	Mw Valid	ft/sec Valid	(DSCFM) Valid	% dry Valid	% dry Valid	in. W.C. Valid	Delta P Valid	(°F) Valid	in. Hg Valid	in. W.C. Valid	in. Hg Valid	Md Valid	Mw Valid	ft/sec Valid	(DSCFM) Valid	Valid
2/14/2023	8:35	16.90	0.05	0.0003	0.017	50.4	28.34	0.50	28.38	28.68	28.58	0.99	7.07	20.93	0.01	0.0858	0.293	56.6	28.34	0.30	28.36	28.84	28.76	16.73	118.83	
2/14/2023	8:36	15.04	0.05	0.0005	0.022	50.6	28.34	0.50	28.38	28.61	28.50	1.28	9.14	20.95	0.01	0.0847	0.291	56.6	28.34	0.30	28.36	28.84	28.76	16.63	118.05	
2/14/2023	8:37	12.98	0.05	0.0003	0.017	50.7	28.34	0.50	28.38	28.53	28.41	0.99	7.09	20.95	0.01	0.0855	0.292	56.6	28.34	0.30	28.36	28.84	28.76	16.71	118.61	
2/14/2023	8:38	12.56	0.06	0.0004	0.020	50.7	28.34	0.50	28.38	28.51	28.41	1.14	8.19	20.95	0.01	0.0825	0.287	56.7	28.34	0.30	28.36	28.84	28.76	16.41	116.50	
2/14/2023	8:39	12.32	0.06	0.0004	0.020	51.0	28.34	0.50	28.38	28.50	--	--	--	20.96	0.01	0.0879	0.296	56.6	28.34	0.30	28.36	28.84	28.76	16.94	120.26	
2/14/2023	8:40	11.77	0.06	0.0003	0.017	50.7	28.34	0.50	28.38	28.48	28.45	0.99	7.14	20.96	0.00	0.0846	0.291	56.5	28.34	0.30	28.36	28.84	28.76	16.62	117.99	
2/14/2023	8:41	10.83	0.07	0.0003	0.017	50.7	28.34	0.50	28.38	28.44	28.42	0.99	7.15	20.96	0.01	0.0855	0.292	56.6	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	8:42	9.73	0.07	0.0004	0.020	50.8	28.34	0.50	28.38	28.40	28.38	1.14	8.26	20.96	0.00	0.0856	0.293	56.5	28.34	0.30	28.36	28.84	28.76	16.71	118.68	
2/14/2023	8:43	8.25	0.07	0.0004	0.020	50.6	28.34	0.50	28.38	28.34	28.32	1.14	8.27	20.94	0.00	0.0849	0.291	56.5	28.34	0.30	28.36	28.84	28.75	16.65	118.20	
2/14/2023	8:44	8.87	0.07	0.0004	0.020	51.0	28.34	0.50	28.38	28.37	28.35	1.14	8.26	20.96	0.00	0.0880	0.297	56.5	28.34	0.30	28.36	28.84	28.76	16.95	120.34	
2/14/2023	8:45	11.05	0.07	0.0003	0.017	51.0	28.34	0.50	28.38	28.45	28.42	0.99	7.14	20.96	0.01	0.0873	0.295	56.5	28.34	0.30	28.36	28.84	28.76	16.88	119.85	
2/14/2023	8:46	14.84	0.06	0.0003	0.017	50.7	28.34	0.50	28.38	28.60	28.55	0.99	7.11	20.96	0.01	0.0893	0.299	56.4	28.34	0.30	28.36	28.84	28.76	17.07	121.23	
2/14/2023	8:47	17.55	0.06	0.0004	0.020	50.8	28.34	0.50	28.38	28.71	--	--	--	20.96	0.00	0.0847	0.291	56.5	28.34	0.30	28.36	28.84	28.76	16.63	118.05	
2/14/2023	8:48	18.46	0.06	0.0002	0.014	50.9	28.34	0.50	28.38	28.75	28.72	0.80	5.80	20.96	0.00	0.0879	0.296	56.4	28.34	0.30	28.36	28.84	28.75	16.94	120.27	
2/14/2023	8:49	18.92	0.05	0.0004	0.020	50.8	28.34	0.50	28.38	28.76	28.73	1.14	8.20	20.96	0.00	0.0872	0.295	56.5	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	8:50	19.15	0.05	0.0004	0.020	51.0	28.34	0.50	28.38	28.77	--	--	--	20.97	0.00	0.0882	0.297	56.5	28.34	0.30	28.36	28.84	28.75	16.97	120.46	
2/14/2023	8:51	19.25	0.05	0.0003	0.017	50.9	28.34	0.50	28.38	28.78	28.67	0.99	7.06	20.97	0.01	0.0866	0.294	56.5	28.34	0.30	28.36	28.84	28.76	16.81	119.35	
2/14/2023	8:52	19.34	0.05	0.0387	0.197	50.9	28.34	0.50	28.38	28.78	28.66	11.19	80.07	20.98	0.00	0.0879	0.296	56.6	28.34	0.30	28.36	28.84	28.75	16.94	120.23	
2/14/2023	8:53	19.37	0.05	0.0266	0.163	51.0	28.34	0.50	28.38	28.78	28.66	9.28	66.40	20.97	0.00	0.2388	0.489	56.6	28.34	0.30	28.36	28.84	28.75	27.92	198.15	
2/14/2023	8:54	19.27	0.06	0.0226	0.150	51.3	28.34	0.50	28.38	28.78	28.67	8.56	61.23	20.83	0.00	0.2108	0.459	56.7	28.34	0.30	28.36	28.83	28.75	26.24	186.17	
2/14/2023	8:55	13.22	0.66	0.0193	0.139	51.7	28.34	0.50	28.38	28.63	28.53	7.93	56.75	18.82	0.08	0.1944	0.441	56.7	28.34	0.30	28.36	28.77	28.68	25.23	179.00	
2/14/2023	8:56	13.18	0.68	0.0163	0.128	52.4	28.34	0.50	28.38	28.64	28.55	7.29	52.16	17.60	0.28	0.1840	0.429	56.5	28.34	0.30	28.36	28.75	28.66	24.54	174.23	
2/14/2023	8:57	13.18	0.70	0.0143	0.120	52.4	28.34	0.50	28.38	28.64	28.57	6.83	48.91	17.82	0.28	0.1753	0.419	56.5	28.34	0.30	28.36	28.76	28.67	23.95	170.03	
2/14/2023	8:58	13.41	0.69	0.0133	0.115	52.6	28.34	0.50	28.38	28.65	28.54	6.59	47.02	18.03	0.26	0.1628	0.403	56.4	28.34	0.30	28.36	28.76	28.68	23.08	163.84	
2/14/2023	8:59	13.57	0.68	0.1550	0.394	52.4	28.34	0.50	28.38	28.65	--	--	--	18.23	0.25	0.1550	0.394	56.3	28.34	0.30	28.36	28.77	28.68	22.52	159.87	
2/14/2023	9:00				--	52.7	28.34	0.50	28.38	--	--	--	--				--	56.5	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:01				--	52.7	28.34	0.50	28.38	--	--	--	--				--	56.5	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:02				--	52.6	28.34	0.50	28.38	--	--	--	--				--	56.4	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:03				--	52.6	28.34	0.50	28.38	--	--	--	--				--	56.4	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:04				--	52.7	28.34	0.50	28.38	--	--	--	--				--	56.5	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:05				--	52.2	28.34	0.50	28.38	--	--	--	--				--	56.4	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:06				--	52.1	28.34	0.50	28.38	--	--	--	--				--	56.5	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:07				--	51.8	28.34	0.50	28.38	--	--	--	--				--	56.5	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:08				--	51.8	28.34	0.50	28.38	--	--	--	--			0.0827	0.288	56.6	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:09			0.0004	0.020	51.6	28.34	0.50	28.38	--	--	--	--			0.0844	0.291	56.5	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:10			0.0004	0.020	51.6	28.34	0.50	28.38	--	--	--	--			0.0821	0.287	56.6	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:11			0.0006	0.024	51.7	28.34	0.50	28.38	--	--	--	--			0.0829	0.288	56.5	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:12			0.0005	0.022	51.6	28.34	0.50	28.38	--	--	--	--			0.0809	0.284	56.6	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:13			0.0004	0.020	51.5	28.34	0.50	28.38	--	--	--	--			0.0824	0.287	56.6	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:14			0.0005	0.022	51.5	28.34	0.50	28.38	--	--	--	--			0.0793	0.282	56.6	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:15			0.0003	0.017	51.7	28.34	0.50	28.38	--	--	--	--			0.0845	0.291	56.6	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:16			0.0005	0.022	51.6	28.34	0.50	28.38	--	--	--	--			0.0843	0.290	56.7	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:17			0.0007	0.026	51.5	28.34	0.50	28.38	--	--	--	--			0.0827	0.288	56.6	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:18			0.0005	0.022	51.6	28.34	0.50	28.38	--	--	--	--			0.0820	0.286	56.8	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:19			0.0005	0.022	51.5	28.34	0.50	28.38	--	--	--	--			0.0833	0.289	56.7	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:20			0.0004	0.020	51.4	28.34	0.50	28.38	--	--	--	--			0.0850	0.292	56.9	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:21			0.0005	0.022	51.7	28.34	0.50	28.38	--	--	--	--			0.0817	0.286	56.8	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:22			0.0004	0.020	51.8	28.34	0.50	28.38	--	--	--	--			0.0816	0.286	56.8	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:23			0.0004	0.020	51.5	28.34	0.50	28.38	--	--	--	--			0.0800	0.283	56.8	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:24			0.0006	0.024	51.6	28.34	0.50	28.38	--	--	--	--			0.0804	0.284	56.7	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:25			0.0005	0.022	51.5	28.34	0.50	28.38	--	--	--	--			0.0807	0.284	56.7	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:26			0.0004	0.020	51.5	28.34	0.50	28.38	--	--	--	--			0.0815	0.285	56.6	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:27			0.0005	0.022	51.5	28.34	0.50	28.38	--	--	--	--			0.0782	0.280	56.5	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:28			0.0005	0.022	51.5	28.34	0.50	28.38	--	--	--	--			0.0798	0.282	56.4	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:29			0.0003	0.017	51.7	28.34	0.50	28.38	--	--	--	--			0.0835	0.289	56.4	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:30			0.0006	0.024	51.5	28.34	0.50	28.38	--	--	--	--			0.0792	0.281	56.3	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:31			0.0006	0.024	51.3	28.34	0.50	28.38	--	--	--	--			0.0787	0.281	56.1	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:32			0.0004	0.020	51.3	28.34	0.50	28.38	--	--	--	--			0.0804	0.284	56.2	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:33			0.0006	0.024	51.4	28.34	0.50	28.38	--	--	--	--			0.0817	0.286	56.0	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:34			0.0005	0.022	51.5	28.34	0.50	28.38	--	--	--	--			0.0806	0.284	56.0	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:35			0.0005	0.022	51.3	28.34	0.50	28.38	--	--	--	--			0.0829	0.288	55.9	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:36			0.0005	0.022	51.2	28.34	0.50	28.38	--	--	--	--			0.0816	0.286	56.0	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:37			0.0006	0.024	51.2	28.34	0.50	28.38	--	--	--	--			0.0823	0.287	55.9	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:38			0.0005	0.022	51.4	28.34	0.50	28.38	--	--	--	--			0.0798	0.282	56.0	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:39			0.0005	0.022	51.5	28.34	0.50	28.38	--	--	--	--			0.0815	0.285	56.3	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:40			0.0005	0.022	51.6	28.34	0.50	28.38	--	--	--	--			0.0808	0.284	56.0	28.34	0.30	28.36	--	--	--	--	
2/14/2023	9:41	19.77	0.17	0.0005	0.022	51.4	28.34	0.50	28.38	28.82	28.78	1.27	9.15	20.98	0.02	0.0801	0.283	55.9	28.34	0.30	28.36	28.84	28.75	16.16	114.79	
2/14/2023	9:42	19.25	0.19	0.0005	0.022	51.5	28.34	0.50	28.38	28.80	28.67	1.27	9.09	20.95	0.02	0.0800	0.283	55.9	28.34	0.30	28.36	28.84	28.75	16.15	114.71	
2/14/2023	9:43	19.92	0.15	0.0005	0.022	51.5	28.34	0.50	28.38	28.82	28.69	1.27	9.08	20.98	0.02	0.0825	0.287	55.9	28.34	0.30	28.36	28.84	28.75	16.40	116.49	
2/14/2023	9:44	19.75	0.15	0.0004	0.020	51.6	28.34	0.50	28.38	28.81	28.68	1.14	8.12	20.96	0.02	0.0789	0.281	57.1	28.34	0.30	28.36	28.84	28.75	16.06	113.78	
2/14/2023	9:45	19.87	0.14	0.0004	0.020	51.4	28.34	0.50	28.38	28.82	28.68	1.14	8.12	20.98	0.02	0.0822	0.287	55.9	28.34	0.30	28.36	28.84	28.75	16.37	116.28	
2/14/2023	9:46	20.04	0.13	0.0005	0.022	51.3	28.34	0.50	28.38	28.82	28.68	1.27	9.08	20.97	0.02	0.0828	0.288	55.9	28.34	0.30	28.36	28.84	28.75	16.43	116.70	
2/14/2023	9:47	19.80	0.13	0.0005	0.022	51.4	28.34	0.50	28.38	28.81	28.67	1.27	9.08	20.96	0.02	0.0821	0.287	55.9	28.34	0.30	28.36	28.84	28.75	16.36	116.21	
2/14/2023	9:48	20.08	0.12	0.0003	0.017	51.4	28.34	0.50	28.38	28.82	28.68	0.99	7.03	20.97	0.02	0.0754	0.275	55.9	28.34	0.30	28.36	28.84	28.75	15.68	111.36	
2/14/2023	9:49	19.93	0.12	0.0003	0.017	51.5	28.34	0.50	28.38	28.82	28.67	0.99	7.03	20.97	0.02	0.0787	0.281	55.9	28.34	0.30	28.36	28.84	28.75	16.02	113.76	
2/14/2023	9:50	20.07	0.12	0.0004	0.020	51.6	28.34	0.50	28.38	28.82	28.68	1.14	8.12	20.97	0.02	0.0778	0.279	56.1	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	9:51	20.04	0.12	0.0003	0.017	51.6	28.34	0.50	28.38	28.82	28.68	0.99	7.03	20.97	0.02	0.0744	0.273	56.2	28.34	0.30	28.36	28.84	28.75	15.58	110.59	
2/14/2023	9:52	20.14	0.12	0.0004	0.020	51.8	28.34	0.50	28.38	28.82	28.68	1.14	8.12	20.98	0.02	0.0748	0.273	56.1	28.34	0.30	28.36	28.84	28.75	15.62	110.88	
2/14/2023	9:53	20.08	0.12	0.0003	0.017	51.7	28.34	0.50	28.38	28.82	28.68	0.99	7.03	20.97	0.02	0.0784	0.280	56.2	28.34	0.30	28.36	28.84	28.75	15.99	113.51	
2/14/2023	9:54	20.13	0.12	0.0005	0.022	51.8	28.34	0.50	28.38	28.82	--	--	--	20.98	0.02	0.0772	0.278	56.3	28.34	0.30	28.36	28.84	28.75	15.87	112.63	
2/14/2023	9:55	20.27	0.12	0.0002	0.014	51.8	28.34	0.50	28.38	28.83	28.69	0.80	5.74	20.99	0.02	0.0794	0.282	56.3	28.34	0.30	28.36	28.84	28.75	16.10	114.22	
2/14/2023	9:56	20.08	0.12	0.0004	0.020	52.0	28.34	0.50	28.38	28.82	28.68	1.14	8.11	20.99	0.02	0.0770	0.277	56.3	28.34	0.30	28.36	28.84	28.75	15.85	112.48	
2/14/2023	9:57	20.20	0.12	0.0005	0.022	51.9	28.34	0.50	28.38	28.83	28.68	1.27	9.07	20.99	0.02	0.0785	0.280	56.1	28.34	0.30	28.36	28.84	28.75	16.00	113.60	
2/14/2023	9:58	20.10	0.12	0.0005	0.022	51.7	28.34	0.50	28.38	28.82	28.68	1.27	9.08	20.98	0.02	0.0789	0.281	56.3	28.34	0.30	28.36	28.84	28.75	16.05	113.86	
2/14/2023	9:59	20.03	0.12	0.0002	0.014	51.8	28.34	0.50	28.38	28.82	28.68	0.81	5.74	20.98	0.03	0.0782	0.280	56.1	28.34	0.30	28.36	28.84	28.75	15.97	113.37	
2/14/2023	10:00	19.94	0.11	0.0003	0.017	51.9	28.34	0.50	28.38	28.82	28.67	0.99	7.03	20.98	0.03	0.0774	0.278	56.7	28.34	0.30	28.36	28.84	28.75	15.90	112.72	
2/14/2023	10:01	20.03	0.12	0.0003	0.017	52.0	28.34	0.50	28.38	28.82	28.68	0.99	7.03	20.98	0.03	0.0802	0.283	56.2	28.34	0.30	28.36	28.84	28.75	16.18	114.79	
2/14/2023	10:02	20.06	0.11	0.0004	0.020	51.9	28.34	0.50	28.38	28.82	28.68	1.14	8.12	20.99	0.02	0.0774	0.278	56.3	28.34	0.30	28.36	28.84	28.75	15.89	112.76	
2/14/2023	10:03	20.04	0.11	0.0004	0.020	51.9	28.34	0.50	28.38	28.82	28.67	1.14	8.12	20.99	0.02	0.0793	0.282	56.4	28.34	0.30	28.36	28.84	28.75	16.09	114.14	
2/14/2023	10:04	20.17	0.11	0.0004	0.020	52.0	28.34	0.50	28.38	28.82	28.68	1.14	8.11	20.99	0.02	0.0773	0.278	56.6	28.34	0.30	28.36	28.84	28.75	15.89	112.67	
2/14/2023	10:05	20.12	0.11	0.0005	0.022	52.0	28.34	0.50	28.38	28.82	28.68	1.27	9.07	20.98	0.03	0.0791	0.281	56.5	28.34	0.30	28.36	28.84	28.75	16.07	113.96	
2/14/2023	10:06	20.19	0.11	0.0005	0.022	52.0	28.34	0.50	28.38	28.83	28.68	1.27	9.07	20.99	0.03	0.0733	0.271	56.7	28.34	0.30	28.36	28.84	28.75	15.47	109.69	
2/14/2023	10:07	20.07	0.11	0.0004	0.020	51.9	28.34	0.50	28.38	28.82	28.68	1.14	8.11	20.99	0.03	0.0772	0.278	56.6	28.34	0.30	28.36	28.84	28.75	15.88	112.58	
2/14/2023	10:08	20.07	0.11	0.0003	0.017	52.0	28.34	0.50	28.38	28.82	28.67	0.99	7.03	20.99	0.03	0.0804	0.284	56.6	28.34	0.30	28.36	28.84	28.75	16.20	114.89	
2/14/2023	10:09	20.13	0.11	0.0004	0.020	52.0	28.34	0.50	28.38	28.82	28.68	1.14	8.11	20.99	0.03	0.0754	0.275	56.7	28.34	0.30	28.36	28.84	28.75	15.69	111.25	
2/14/2023	10:10	20.06	0.11	0.0004	0.020	52.0	28.34	0.50	28.38	28.82	28.67	1.14	8.11	20.99	0.02	0.0745	0.273	56.8	28.34	0.30	28.36	28.84	28.75	15.60	110.57	
2/14/2023	10:11	20.12	0.11	0.0003	0.017	52.1	28.34	0.50	28.38	28.82	28.68	0.99	7.03	20.99	0.02	0.0762	0.276	57.3	28.34	0.30	28.36	28.84	28.75	15.78	111.77	
2/14/2023	10:12	20.10	0.11	0.0004	0.020	52.3	28.34	0.50	28.38	28.82	28.68	1.14	8.11	20.98	0.02	0.0755	0.275	56.8	28.34	0.30	28.36	28.84	28.75	15.70	111.31	
2/14/2023	10:13	20.06	0.11	0.0003	0.017	52.1	28.34	0.50	28.38	28.82	28.67	0.99	7.03	20.98	0.03	0.0765	0.277	56.9	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	10:14	20.08	0.11	0.0003	0.017	52.1	28.34	0.50	28.38	28.82	28.67	0.99	7.03	20.98	0.03	0.0766	0.277	56.9	28.34	0.30	28.36	28.84	28.75	15.82	112.10	
2/14/2023	10:15	20.05	0.11	0.0005	0.022	52.3	28.34	0.50	28.38	28.82	28.67	1.27	9.07	20.99	0.03	0.0756	0.275	56.9	28.34	0.30	28.36	28.84	28.75	15.72	111.36	
2/14/2023	10:16	20.04	0.10	0.0004	0.020	52.4	28.34	0.50	28.38	28.82	--	--	--	20.99	0.02	0.0760	0.276	57.1	28.34	0.30	28.36	28.84	28.75	15.76	111.63	
2/14/2023	10:17	20.06	0.10	0.0004	0.020	52.4	28.34	0.50	28.38	28.82	28.67	1.14	8.11	21.00	0.02	0.0751	0.274	57.2	28.34	0.30	28.36	28.84	28.75	15.67	110.96	
2/14/2023	10:18	20.11	0.10	0.0004	0.020	52.5	28.34	0.50	28.38	28.82	28.67	1.14	8.11	20.99	0.02	0.0736	0.271	57.1	28.34	0.30	28.36	28.84	28.75	15.51	109.86	
2/14/2023	10:19	20.11	0.10	0.0004	0.020	52.5	28.34	0.50	28.38	28.82	28.68	1.14	8.11	20.99	0.02	0.0778	0.279	57.1	28.34	0.30	28.36	28.84	28.75	15.95	112.95	
2/14/2023	10:20	19.96	0.10	0.0003	0.017	52.5	28.34	0.50	28.38	28.81	28.67	0.99	7.03	20.98	0.03	0.0752	0.274	57.2	28.34	0.30	28.36	28.84	28.75	15.68	111.03	
2/14/2023	10:21	20.12	0.10	0.0004	0.020	52.6	28.34	0.50	28.

Alliance SOURCE TESTING

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	O2 - Inlet	CO2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Inlet Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O2 - Outlet	CO2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Outlet Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	Point in Process
	Unit	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	-
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/14/2023	10:33	19.80	0.08	0.0003	0.017	52.7	28.34	0.50	28.38	28.80	28.68	0.99	7.03	21.00	0.02	0.0746	0.273	57.6	28.34	0.30	28.36	28.84	28.75	15.62	110.54	
2/14/2023	10:34	19.73	0.08	0.0003	0.017	53.1	28.34	0.50	28.38	28.80	28.68	0.99	7.03	21.00	0.02	0.0744	0.273	57.7	28.34	0.30	28.36	28.84	28.74	15.60	110.38	
2/14/2023	10:35	19.74	0.07	0.0004	0.020	52.7	28.34	0.50	28.38	28.80	28.67	1.14	8.12	20.99	0.02	0.0734	0.271	57.6	28.34	0.30	28.36	28.84	28.74	15.50	109.64	
2/14/2023	10:36	19.91	0.08	0.0005	0.022	52.8	28.34	0.50	28.38	28.81	28.69	1.27	9.08	20.99	0.02	0.0724	0.269	57.6	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	10:37	19.99	0.07	0.0008	0.028	52.8	28.34	0.50	28.38	28.81	28.69	1.61	11.49	21.00	0.02	0.0729	0.270	57.7	28.34	0.30	28.36	28.84	28.74	15.45	109.25	
2/14/2023	10:38	20.08	0.07	0.0004	0.020	52.9	28.34	0.50	28.38	28.81	--	--	--	21.00	0.02	0.0736	0.271	57.8	28.34	0.30	28.36	28.84	28.74	15.52	109.77	
2/14/2023	10:39	19.92	0.07	0.0004	0.020	52.9	28.34	0.50	28.38	28.81	28.69	1.14	8.13	21.00	0.02	0.0757	0.275	57.7	28.34	0.30	28.36	28.84	28.74	15.74	111.33	
2/14/2023	10:40	19.92	0.07	0.0004	0.020	53.0	28.34	0.50	28.38	28.81	28.69	1.14	8.12	21.00	0.02	0.0713	0.267	57.7	28.34	0.30	28.36	28.84	28.74	15.28	108.05	
2/14/2023	10:41	20.01	0.07	0.0004	0.020	53.0	28.34	0.50	28.38	28.81	28.69	1.14	8.12	21.00	0.02	0.0722	0.269	57.8	28.34	0.30	28.36	28.84	28.74	15.37	108.72	
2/14/2023	10:42	20.08	0.07	0.0003	0.017	53.1	28.34	0.50	28.38	28.81	28.69	0.99	7.03	21.01	0.01	0.0706	0.266	57.9	28.34	0.30	28.36	28.84	28.74	15.20	107.49	
2/14/2023	10:43	19.86	0.06	0.0003	0.017	53.1	28.34	0.50	28.38	28.80	28.70	0.99	7.04	21.00	0.02	0.0756	0.275	57.8	28.34	0.30	28.36	28.84	28.75	15.73	111.25	
2/14/2023	10:44	19.72	0.06	0.0004	0.020	53.0	28.34	0.50	28.38	28.80	28.69	1.14	8.13	21.01	0.02	0.0734	0.271	57.8	28.34	0.30	28.36	28.84	28.75	15.50	109.61	
2/14/2023	10:45	19.53	0.06	0.0005	0.022	53.1	28.34	0.50	28.38	28.79	28.68	1.27	9.09	21.00	0.02	0.0732	0.271	57.8	28.34	0.30	28.36	28.84	28.74	15.48	109.47	
2/14/2023	10:46	19.37	0.06	0.0003	0.017	53.1	28.34	0.50	28.38	28.78	28.67	0.99	7.04	21.00	0.02	0.0722	0.269	57.8	28.34	0.30	28.36	28.84	28.74	15.37	108.72	
2/14/2023	10:47	19.16	0.06	0.0003	0.017	53.3	28.34	0.50	28.38	28.78	28.67	0.99	7.04	20.99	0.02	0.0701	0.265	57.7	28.34	0.30	28.36	28.84	28.74	15.15	107.13	
2/14/2023	10:48	19.08	0.06	0.0004	0.020	53.2	28.34	0.50	28.38	28.77	28.66	1.14	8.13	21.00	0.02	0.0702	0.265	57.8	28.34	0.30	28.36	28.84	28.74	15.16	107.19	
2/14/2023	10:49	18.85	0.06	0.0003	0.017	53.3	28.34	0.50	28.38	28.76	28.66	0.99	7.05	20.99	0.02	0.0705	0.266	57.9	28.34	0.30	28.36	28.84	28.74	15.19	107.41	
2/14/2023	10:50	18.86	0.06	0.0005	0.022	53.3	28.34	0.50	28.38	28.76	28.65	1.28	9.09	21.00	0.01	0.0712	0.267	58.0	28.34	0.30	28.36	28.84	28.74	15.27	107.93	
2/14/2023	10:51	18.63	0.06	0.0004	0.020	53.1	28.34	0.50	28.38	28.75	28.64	1.14	8.14	21.00	0.02	0.0701	0.265	57.8	28.34	0.30	28.36	28.84	28.74	15.15	107.11	
2/14/2023	10:52	19.25	0.06	0.0004	0.020	53.5	28.34	0.50	28.38	28.78	28.67	1.14	8.13	21.01	0.01	0.0700	0.265	58.0	28.34	0.30	28.36	28.84	28.74	15.14	107.02	
2/14/2023	10:53	19.67	0.06	0.0005	0.022	53.4	28.34	0.50	28.38	28.80	28.68	1.27	9.09	21.01	0.01	0.0702	0.265	58.1	28.34	0.30	28.36	28.84	28.74	15.16	107.16	
2/14/2023	10:54	19.64	0.06	0.0005	0.022	53.5	28.34	0.50	28.38	28.80	28.69	1.27	9.09	21.02	0.01	0.0737	0.271	58.0	28.34	0.30	28.36	28.84	28.74	15.54	109.81	
2/14/2023	10:55	19.74	0.06	0.0003	0.017	53.4	28.34	0.50	28.38	28.80	28.68	0.99	7.03	21.03	0.01	0.0718	0.268	57.9	28.34	0.30	28.36	28.84	28.74	15.33	108.39	
2/14/2023	10:56	20.01	0.06	0.0004	0.020	53.4	28.34	0.50	28.38	28.81	28.69	1.14	8.12	21.03	0.02	0.0696	0.264	57.9	28.34	0.30	28.36	28.84	28.74	15.10	106.71	
2/14/2023	10:57	19.90	0.06	0.0006	0.024	53.7	28.34	0.50	28.38	28.81	28.69	1.40	9.95	21.02	0.01	0.0739	0.272	57.8	28.34	0.30	28.36	28.84	28.74	15.55	109.97	
2/14/2023	10:58	20.06	0.06	0.0006	0.024	53.4	28.34	0.50	28.38	28.81	28.70	1.40	9.95	21.03	0.01	0.0691	0.263	57.8	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	10:59	20.14	0.06	0.0004	0.020	53.7	28.34	0.50	28.38	28.82	28.69	1.14	8.12	21.03	0.01	0.0700	0.265	57.6	28.34	0.30	28.36	28.84	28.74	15.13	107.06	
2/14/2023	11:00	20.17	0.06	0.0005	0.022	53.4	28.34	0.50	28.38	28.82	--	--	--	21.03	0.02	0.0712	0.267	57.5	28.34	0.30	28.36	28.84	28.75	15.26	107.99	
2/14/2023	11:01	20.09	0.06	0.0004	0.020	53.4	28.34	0.50	28.38	28.81	28.70	1.14	8.12	21.02	0.02	0.0698	0.264	57.4	28.34	0.30	28.36	28.84	28.75	15.11	106.94	
2/14/2023	11:02	20.14	0.06	0.0005	0.022	53.4	28.34	0.50	28.38	28.82	28.70	1.27	9.08	21.02	0.01	0.0738	0.272	57.4	28.34	0.30	28.36	28.84	28.74	15.54	109.97	
2/14/2023	11:03	20.12	0.05	0.0004	0.020	53.4	28.34	0.50	28.38	28.81	28.69	1.14	8.12	21.03	0.01	0.0714	0.267	57.3	28.34	0.30	28.36	28.84	28.75	15.28	108.17	
2/14/2023	11:04	20.22	0.05	0.0004	0.020	53.4	28.34	0.50	28.38	28.82	28.70	1.14	8.12	21.03	0.01	0.0725	0.269	57.3	28.34	0.30	28.36	28.84	28.75	15.40	109.01	
2/14/2023	11:05	20.05	0.05	0.0004	0.020	54.7	28.34	0.50	28.38	28.81	28.70	1.14	8.11	21.03	0.01	0.0738	0.272	63.0	28.34	0.30	28.36	28.84	28.75	15.62	109.39	
2/14/2023	11:06	20.10	0.05	0.0005	0.022	55.0	28.34	0.50	28.38	28.81	28.70	1.28	9.07	21.03	0.02	0.0708	0.266	63.8	28.34	0.30	28.36	28.84	28.75	15.31	107.04	
2/14/2023	11:07	20.10	0.05	0.0005	0.022	55.1	28.34	0.50	28.38	28.81	28.70	1.28	9.07	21.03	0.01	0.0741	0.272	63.9	28.34	0.30	28.36	28.84	28.75	15.67	109.50	
2/14/2023	11:08	20.04	0.05	0.0005	0.022	55.1	28.34	0.50	28.38	28.81	28.70	1.28	9.07	21.04	0.01	0.0721	0.269	64.3	28.34	0.30	28.36	28.84	28.75	15.46	107.98	
2/14/2023	11:09	20.07	0.05	0.0004	0.020	55.5	28.34	0.50	28.38	28.81	28.70	1.14	8.11	21.03	0.01	0.0730	0.270	65.3	28.34	0.30	28.36	28.84	28.75	15.57	108.55	
2/14/2023	11:10	20.11	0.05	0.0005	0.022	54.2	28.34	0.50	28.38	28.81	28.70	1.28	9.08	21.03	0.01	0.0724	0.269	61.2	28.34	0.30	28.36	28.84	28.75	15.44	108.53	
2/14/2023	11:11	20.12	0.05	0.0005	0.022	53.6	28.34	0.50	28.38	28.81	28.71	1.27	9.09	21.03	0.01	0.0720	0.268	57.6	28.34	0.30	28.36	28.84	28.75	15.35	108.60	
2/14/2023	11:12	20.04	0.05	0.0004	0.020	53.7	28.34	0.50	28.38	28.81	28.71	1.14	8.13	21.03	0.01	0.0768	0.277	57.5	28.34	0.30	28.36	28.84	28.75	15.85	112.17	
2/14/2023	11:13	20.16	0.05	0.0004	0.020	54.0	28.34	0.50	28.38	28.81	28.71	1.14	8.13	21.03	0.01	0.0724	0.269	57.4	28.34	0.30	28.36	28.84	28.75	15.39	108.93	
2/14/2023	11:14	20.21	0.05	0.0004	0.020	54.0	28.34	0.50	28.38	28.82	28.71	1.14	8.12	21.04	0.01	0.0732	0.271	57.5	28.34	0.30	28.36	28.84	28.75	15.47	109.51	
2/14/2023	11:15	20.15	0.05	0.0005	0.022	53.8	28.34	0.50	28.38	28.81	28.71	1.27	9.09	21.04	0.01	0.0726	0.269	57.6	28.34	0.30	28.36	28.84	28.75	15.41	109.05	
2/14/2023	11:16	20.15	0.05	0.0003	0.017	53.9	28.34	0.50	28.38	28.81	28.71	0.99	7.04	21.04	0.01	0.0748	0.273	57.4	28.34	0.30	28.36	28.84	28.75	15.64	110.72	
2/14/2023	11:17	20.16	0.05	0.0004	0.020	53.9	28.34	0.50	28.38	28.81	28.70	1.14	8.12	21.04	0.01	0.0755	0.275	57.7	28.34	0.30	28.36	28.84	28.75	15.72	111.20	
2/14/2023	11:18	20.13	0.05	0.0005	0.022	54.1	28.34	0.50	28.38	28.81	28.71	1.28	9.08	21.04	0.00	0.0721	0.269	57.5	28.34	0.30	28.36	28.84	28.74	15.36	108.69	
2/14/2023	11:19	20.08	0.05	0.0007	0.026	53.7	28.34	0.50	28.38	28.81	28.71	1.51	10.75	21.03	0.02	0.0705	0.266	57.4	28.34	0.30	28.36	28.84	28.75	15.18	107.49	
2/14/2023	11:20	20.03	0.05	0.0006	0.024	53.7	28.34	0.50	28.38	28.81	28.70	1.40	9.95	21.03	0.01	0.0702	0.265	57.3	28.34	0.30	28.36	28.84	28.75	15.15	107.27	
2/14/2023	11:21	20.10	0.05	0.0007	0.026	54.1	28.34	0.50	28.38	28.81	28.71	1.51	10.75	21.04	0.00	0.0719	0.268	57.2	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	11:22	20.41	0.05	0.0006	0.024	53.8	28.34	0.50	28.38	28.82	--	--	--	21.05	0.01	0.0710	0.266	57.2	28.34	0.30	28.36	28.84	28.75	15.24	107.88	
2/14/2023	11:23	20.47	0.06	0.0006	0.024	53.9	28.34	0.50	28.38	28.83	28.73	1.40	9.95	21.05	0.01	0.0725	0.269	57.3	28.34	0.30	28.36	28.84	28.75	15.40	109.00	
2/14/2023	11:24	20.39	0.06	0.0006	0.024	54.0	28.34	0.50	28.38	28.83	28.73	1.40	9.95	21.05	0.01	0.0706	0.266	57.6	28.34	0.30	28.36	28.84	28.75	15.20	107.54	
2/14/2023	11:25	20.14	0.06	0.0006	0.024	53.8	28.34	0.50	28.38	28.82	28.71	1.40	9.95	21.05	0.01	0.0709	0.266	57.0	28.34	0.30	28.36	28.84	28.75	15.22	107.83	
2/14/2023	11:26	20.04	0.06	0.0005	0.022	54.1	28.34	0.50	28.38	28.81	28.69	1.28	9.07	21.05	0.01	0.0723	0.269	57.0	28.34	0.30	28.36	28.84	28.75	15.37	108.88	
2/14/2023	11:27	19.83	0.07	0.0007	0.026	54.0	28.34	0.50	28.38	28.80	28.67	1.51	10.73	21.05	0.01	0.0668	0.258	57.4	28.34	0.30	28.36	28.84	28.75	14.78	104.63	
2/14/2023	11:28	20.04	0.07	0.0006	0.024	53.9	28.34	0.50	28.38	28.81	28.68	1.40	9.93	21.05	0.01	0.0710	0.266	56.8	28.34	0.30	28.36	28.84	28.75	15.23	107.92	
2/14/2023	11:29	20.06	0.07	0.0036	0.060	54.2	28.34	0.50	28.38	28.81	28.68	3.42	24.32	21.05	0.00	0.0808	0.284	57.2	28.34	0.30	28.36	28.84	28.74	16.25	115.09	
2/14/2023	11:30	19.92	0.07	0.0037	0.061	54.0	28.34	0.50	28.38	28.81	28.67	3.47	24.65	21.04	0.01	0.0911	0.302	57.1	28.34	0.30	28.36	28.84	28.75	17.26	122.21	
2/14/2023	11:31	19.88	0.07	0.0039	0.062	54.2	28.34	0.50	28.38	28.81	28.67	3.56	25.30	20.99	0.01	0.0921	0.303	57.1	28.34	0.30	28.36	28.84	28.74	17.35	122.89	
2/14/2023	11:32	6.46	0.10	0.0220	0.148	54.4	28.34	0.50	28.38	28.27	28.14	8.55	60.63	20.82	0.01	0.0907	0.301	57.1	28.34	0.30	28.36	28.83	28.74	17.22	121.97	
2/14/2023	11:33	5.24	0.11	0.0215	0.147	54.2	28.34	0.50	28.38	28.23	28.09	8.45	60.00	20.84	0.01	0.1392	0.373	57.0	28.34	0.30	28.36	28.84	28.74	21.33	151.12	
2/14/2023	11:34	5.10	0.11	0.0037	0.061	54.8	28.34	0.50	28.38	28.22	28.09	3.51	24.88	20.74	0.01	0.0945	0.307	56.6	28.34	0.30	28.36	28.83	28.73	17.57	124.57	
2/14/2023	11:35	4.11	0.12	0.0032	0.057	54.3	28.34	0.50	28.38	28.18	28.08	3.26	23.21	16.52	0.00	0.0909	0.301	56.9	28.34	0.30	28.36	28.66	28.57	17.29	122.50	
2/14/2023	11:36	4.79	0.12	0.0005	0.022	54.1	28.34	0.50	28.38	28.21	28.19	1.29	9.24	17.44	0.00	0.0699	0.264	56.9	28.34	0.30	28.36	28.70	28.60	15.15	107.37	
2/14/2023	11:37	5.07	0.11	0.0005	0.022	54.3	28.34	0.50	28.38	28.22	28.20	1.29	9.23	18.72	0.00	0.0712	0.267	56.7	28.34	0.30	28.36	28.75	28.65	15.27	108.29	
2/14/2023	11:38	7.79	0.11	0.0006	0.024	54.2	28.34	0.50	28.38	28.33	28.31	1.41	10.10	19.73	0.00	0.0761	0.276	56.6	28.34	0.30	28.36	28.79	28.69	15.78	111.88	
2/14/2023	11:39	10.05	0.10	0.0007	0.026	54.1	28.34	0.50	28.38	28.42	28.40	1.52	10.89	21.01	0.01	0.0722	0.269	56.6	28.34	0.30	28.36	28.84	28.75	15.35	108.87	
2/14/2023	11:40	10.74	0.10	0.0006	0.024	53.9	28.34	0.50	28.38	28.45	28.42	1.40	10.08	21.02	0.00	0.0748	0.273	56.6	28.34	0.30	28.36	28.84	28.75	15.63	110.81	
2/14/2023	11:41	10.31	0.09	0.0007	0.026	53.8	28.34	0.50	28.38	28.43	28.29	1.52	10.79	21.03	0.01	0.0719	0.268	56.4	28.34	0.30	28.36	28.84	28.75	15.32	108.67	
2/14/2023	11:42	10.75	0.08	0.0006	0.024	54.5	28.34	0.50	28.38	28.44	28.42	1.40	10.07	21.04	0.01	0.0753	0.274	56.1	28.34	0.30	28.36	28.84	28.75	15.67	111.25	
2/14/2023	11:43	10.25	0.08	0.0006	0.024	53.8	28.34	0.50	28.38	28.42	28.37	1.40	10.06	21.04	0.01	0.0747	0.273	56.2	28.34	0.30	28.36	28.84	28.75	15.61	110.78	
2/14/2023	11:44	10.63	0.08	0.0006	0.024	53.5	28.34	0.50	28.38	28.44	--	--	--	21.04	0.00	0.0743	0.273	56.4	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	11:45	10.87	0.08	0.0006	0.024	53.9	28.34	0.50	28.38	28.45	28.36	1.41	10.02	21.03	0.01	0.0755	0.275	56.2	28.34	0.30	28.36	28.84	28.75	15.70	111.38	
2/14/2023	11:46	10.79	0.08	0.0006	0.024	53.9	28.34	0.50	28.38	28.44	28.32	1.41	9.99	21.04	0.00	0.0751	0.274	56.3	28.34	0.30	28.36	28.84	28.75	15.66	111.08	
2/14/2023	11:47	11.13	0.07	0.0006	0.024	53.7	28.34	0.50	28.38	28.46	28.32	1.41	9.99	21.03	0.01	0.0734	0.271	56.2	28.34	0.30	28.36	28.84	28.75	15.47	109.83	
2/14/2023	11:48	11.49	0.07	0.0007	0.026	53.6	28.34	0.50	28.38	28.47	28.34	1.52	10.79	21.03	0.00	0.0713	0.267	56.3	28.34	0.30	28.36	28.84	28.75	15.25	108.24	
2/14/2023	11:49	11.05	0.07	0.0004	0.020	53.5	28.34	0.50	28.38	28.45	28.32	1.15	8.16	21.03	0.01	0.0727	0.270	56.1	28.34	0.30	28.36	28.84	28.75	15.40	109.31	
2/14/2023	11:50	11.04	0.07	0.0006	0.024	53.2	28.34	0.50	28.38	28.45	28.32	1.41	9.99	21.03	0.01	0.0738	0.272	56.0	28.34	0.30	28.36	28.84	28.75	15.51	110.14	
2/14/2023	11:51	10.90	0.07	0.0006	0.024	53.1	28.34	0.50	28.38	28.45	28.31	1.41	9.99	21.02	0.01	0.0725	0.269	56.2	28.34	0.30	28.36	28.84	28.75	15.38	109.15	
2/14/2023	11:52	11.68	0.07	0.0007	0.026	53.3	28.34	0.50	28.38	28.48	28.35	1.52	10.79	21.03	0.01	0.0747	0.273	56.1	28.34	0.30	28.36	28.84	28.75	15.61	110.80	
2/14/2023	11:53	11.24	0.07	0.0006	0.024	53.2	28.34	0.50	28.38	28.46	28.33	1.41	10.00	21.03	0.01	0.0716	0.268	55.8	28.34	0.30	28.36	28.84	28.75	15.28	108.51	
2/14/2023	11:54	12.04	0.07	0.0005	0.022	53.2	28.34	0.50	28.38	28.49	28.36	1.28	9.12	21.03	0.01	0.0738	0.272	56.1	28.34	0.30	28.36	28.84	28.75	15.52	110.13	
2/14/2023	11:55	11.74	0.07	0.0006	0.024	53.2	28.34	0.50	28.38	28.48	28.35	1.40	9.99	21.03	0.00	0.0764	0.276	55.9	28.34	0.30	28.36	28.84	28.75	15.78	112.08	
2/14/2023	11:56	11.90	0.07	0.0006	0.024	53.3	28.34	0.50	28.38	28.49	28.35	1.40	9.99	21.03	0.01	0.0742	0.272	55.9	28.34	0.30	28.36	28.84	28.75	15.55	110.46	
2/14/2023	11:57	11.96	0.06	0.0006	0.024	53.2	28.34	0.50	28.38	28.49	28.35	1.40	9.99	21.03	0.00	0.0736	0.271	55.8	28.34	0.30	28.36	28.84	28.75	15.49	110.03	
2/14/2023	11:58	11.62	0.06	0.0006	0.024	53.3	28.34	0.50	28.38	28.47	28.34	1.40	9.99	21.03	0.00	0.0734	0.271	55.4	28.34	0.30	28.36	28.84	28.75	15.46	109.93	
2/14/2023	11:59	11.75	0.06	0.0006	0.024	53.4	28.34	0.50	28.38	28.48	28.35	1.40	9.99	21.03	0.01	0.0719	0.268	55.7	28.34	0.30	28.36	28.84	28.75	15.31	108.76	
2/14/2023	12:00	12.18	0.06	0.0007	0.026	53.6	28.34	0.50	28.38	28.50	28.36	1.52	10.78	21.03	0.01	0.0764	0.276	55.7	28.34	0.30	28.36	28.84	28.75	15.78	112.12	
2/14/2023	12:01	11.48	0.06	0.0006	0.024	53.5	28.34	0.50	28.38	28.47	28.34	1.41	9.99	21.03	0.01	0.0768	0.277	55.8	28.34	0.30	28.36	28.84	28.75	15.82	112.40	
2/14/2023	12:02	13.18	0.07	0.0006	0.024	53.8	28.34	0.50	28.38	28.54	28.41	1.40	9.98	21.03	0.01	0.0763	0.276	55.6	28.34	0.30	28.36	28.84	28.75	15.77	112.06	
2/14/2023	12:03	13.00	0.06	0.0006	0.024	53.9	28.34	0.50	28.38	28.53	28.40	1.40	9.98	21.03	0.00	0.0738	0.272	55.3	28.34	0.30	28.36	28.84	28.75	15.50	110.24	
2/14/2023	12:04	12.21	0.06	0.0004	0.020	53.6	28.34	0.50	28.38	28.50	28.37	1.15	8.15	21.03	0.01	0.0800	0.283	55.2	28.34	0.30	28.36	28.84	28.75	16.14	114.79	
2/14/2023	12:05	13.61	0.06	0.0003	0.017	53.4	28.34	0.50	28.38	28.55	28.42	0.99	7.05	21.03	0.01	0.0787	0.281	55.1	28.34	0.30	28.36	28.84	28.75	16.01	113.86	
2/14/2023	12:06	16.94	0.07	0.0005	0.022	53.7	28.34	0.50	28.38	28.69	--	--	--	21.03	0.01	0.0797	0.282	55.0	28.34	0.30	28.36	28.84	28.75	16.11	114.59	
2/14/2023	12:07	18.38	0.07	0.0006	0.024	53.6	28.34

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	-
	Status	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	Valid
		Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	
2/14/2023	12:31	20.72	0.06	0.0005	0.022	53.2	28.34	0.50	28.38	28.84	28.71	1.27	9.07	21.03	0.01	0.0805	0.284	53.3	28.34	0.30	28.36	28.84	28.75	16.16	115.39	
2/14/2023	12:32	20.72	0.06	0.0005	0.022	53.6	28.34	0.50	28.38	28.84	28.71	1.27	9.07	21.02	0.01	0.0814	0.285	53.2	28.34	0.30	28.36	28.84	28.75	16.25	116.05	
2/14/2023	12:33	20.73	0.06	0.0005	0.022	53.2	28.34	0.50	28.38	28.84	28.71	1.27	9.07	21.03	0.01	0.0815	0.285	53.1	28.34	0.30	28.36	28.84	28.75	16.26	116.13	
2/14/2023	12:34	20.73	0.06	0.0005	0.022	53.4	28.34	0.50	28.38	28.84	28.71	1.27	9.07	21.02	0.01	0.0818	0.286	53.2	28.34	0.30	28.36	28.84	28.75	16.29	116.33	
2/14/2023	12:35	20.74	0.06	0.0005	0.022	53.2	28.34	0.50	28.38	28.84	28.71	1.27	9.07	21.02	0.01	0.0810	0.285	52.9	28.34	0.30	28.36	28.84	28.75	16.20	115.80	
2/14/2023	12:36	20.75	0.06	0.0005	0.022	53.4	28.34	0.50	28.38	28.84	28.71	1.27	9.07	21.02	0.02	0.0842	0.290	53.1	28.34	0.30	28.36	28.84	28.76	16.52	118.03	
2/14/2023	12:37	20.75	0.06	0.0006	0.024	53.3	28.34	0.50	28.38	28.84	28.71	1.40	9.93	21.01	0.01	0.0809	0.284	53.4	28.34	0.30	28.36	28.84	28.75	16.20	115.66	
2/14/2023	12:38	20.75	0.06	0.0005	0.022	54.1	28.34	0.50	28.38	28.84	28.71	1.28	9.06	21.01	0.01	0.0819	0.286	53.1	28.34	0.30	28.36	28.84	28.75	16.30	116.40	
2/14/2023	12:39	20.75	0.06	0.0005	0.022	53.7	28.34	0.50	28.38	28.84	28.71	1.27	9.07	21.01	0.01	0.0830	0.288	53.1	28.34	0.30	28.36	28.84	28.75	16.41	117.19	
2/14/2023	12:40	20.75	0.06	0.0006	0.024	54.4	28.34	0.50	28.38	28.84	28.71	1.40	9.92	21.01	0.01	0.0807	0.284	53.2	28.34	0.30	28.36	28.84	28.75	16.18	115.54	
2/14/2023	12:41	20.75	0.06	0.0006	0.024	53.0	28.34	0.50	28.38	28.84	28.71	1.40	9.94	21.01	0.01	0.0794	0.282	53.5	28.34	0.30	28.36	28.84	28.75	16.05	114.58	
2/14/2023	12:42	20.75	0.06	0.0005	0.022	53.4	28.34	0.50	28.38	28.84	28.71	1.27	9.07	21.01	0.01	0.0801	0.283	53.1	28.34	0.30	28.36	28.84	28.75	16.12	115.13	
2/14/2023	12:43	20.75	0.06	0.0004	0.020	54.2	28.34	0.50	28.38	28.84	28.71	1.14	8.10	21.00	0.01	0.0805	0.284	52.7	28.34	0.30	28.36	28.84	28.75	16.15	115.45	
2/14/2023	12:44	20.75	0.06	0.0005	0.022	53.6	28.34	0.50	28.38	28.84	28.71	1.27	9.07	21.00	0.02	0.0796	0.282	52.7	28.34	0.30	28.36	28.84	28.75	16.06	114.80	
2/14/2023	12:45	20.75	0.06	0.0004	0.020	54.0	28.34	0.50	28.38	28.84	28.71	1.14	8.11	20.99	0.02	0.0830	0.288	52.3	28.34	0.30	28.36	28.84	28.75	16.39	117.28	
2/14/2023	12:46	20.74	0.06	0.0004	0.020	54.6	28.34	0.50	28.38	28.84	28.71	1.14	8.10	20.98	0.02	0.0831	0.288	52.0	28.34	0.30	28.36	28.84	28.75	16.40	117.38	
2/14/2023	12:47	20.74	0.06	0.0005	0.022	55.5	28.34	0.50	28.38	28.84	28.71	1.28	9.05	20.98	0.02	0.0820	0.286	51.4	28.34	0.30	28.36	28.84	28.75	16.28	116.67	
2/14/2023	12:48	20.75	0.06	0.0005	0.022	52.7	28.34	0.50	28.38	28.84	28.71	1.27	9.07	20.98	0.02	0.0818	0.286	53.1	28.34	0.30	28.36	28.84	28.75	16.29	116.33	
2/14/2023	12:49	20.75	0.06	0.0005	0.022	54.6	28.34	0.50	28.38	28.84	28.71	1.28	9.06	20.97	0.02	0.0814	0.285	52.2	28.34	0.30	28.36	28.84	28.75	16.23	116.15	
2/14/2023	12:50	20.75	0.06	0.0005	0.022	52.9	28.34	0.50	28.38	28.84	--	--	--	20.97	0.02	0.0845	0.291	53.1	28.34	0.30	28.36	28.84	28.75	16.55	118.24	
2/14/2023	12:51	20.75	0.06	0.0004	0.020	53.2	28.34	0.50	28.38	28.84	28.71	1.14	8.11	20.97	0.02	0.0808	0.284	52.6	28.34	0.30	28.36	28.84	28.75	16.18	115.69	
2/14/2023	12:52	20.75	0.06	0.0005	0.022	53.6	28.34	0.50	28.38	28.84	28.71	1.27	9.07	20.97	0.02	0.0845	0.291	52.6	28.34	0.30	28.36	28.84	28.75	16.55	118.30	
2/14/2023	12:53	20.75	0.06	0.0004	0.020	53.2	28.34	0.50	28.38	28.84	28.71	1.14	8.11	20.96	0.03	0.0797	0.282	53.0	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	12:54	20.75	0.06	0.0005	0.022	52.8	28.34	0.50	28.38	28.84	28.72	1.27	9.08	20.96	0.02	0.0836	0.289	52.6	28.34	0.30	28.36	28.84	28.75	16.46	117.66	
2/14/2023	12:55	20.75	0.06	0.0005	0.022	52.9	28.34	0.50	28.38	28.84	28.71	1.27	9.07	20.96	0.02	0.0828	0.288	53.4	28.34	0.30	28.36	28.84	28.75	16.39	117.00	
2/14/2023	12:56	20.75	0.06	0.0004	0.020	53.1	28.34	0.50	28.38	28.84	28.71	1.14	8.11	20.96	0.02	0.0820	0.286	52.3	28.34	0.30	28.36	28.84	28.75	16.29	116.57	
2/14/2023	12:57	20.76	0.06	0.0003	0.017	52.5	28.34	0.50	28.38	28.84	28.71	0.99	7.03	20.95	0.02	0.0803	0.283	53.2	28.34	0.30	28.36	28.84	28.75	16.14	115.26	
2/14/2023	12:58	20.76	0.06	0.0006	0.024	52.6	28.34	0.50	28.38	28.84	28.71	1.39	9.94	20.95	0.02	0.0792	0.281	53.6	28.34	0.30	28.36	28.84	28.75	16.03	114.42	
2/14/2023	12:59	20.75	0.06	0.0002	0.014	53.0	28.34	0.50	28.38	28.84	28.72	0.81	5.74	20.95	0.02	0.0837	0.289	53.8	28.34	0.30	28.36	28.84	28.75	16.49	117.60	
2/14/2023	13:00	20.75	0.06	0.0002	0.014	53.2	28.34	0.50	28.38	28.84	28.71	0.81	5.74	20.95	0.02	0.0798	0.282	53.4	28.34	0.30	28.36	28.84	28.75	16.09	114.88	
2/14/2023	13:01	20.75	0.06	0.0002	0.014	53.5	28.34	0.50	28.38	28.84	28.71	0.81	5.74	20.95	0.02	0.0788	0.281	52.9	28.34	0.30	28.36	28.84	28.75	15.98	114.21	
2/14/2023	13:02	20.75	0.06	0.0006	0.024	53.7	28.34	0.50	28.38	28.84	28.71	1.40	9.93	20.94	0.02	0.0794	0.282	53.4	28.34	0.30	28.36	28.84	28.75	16.05	114.58	
2/14/2023	13:03	20.75	0.06	0.0003	0.017	53.9	28.34	0.50	28.38	28.84	28.71	0.99	7.02	20.94	0.02	0.0814	0.285	53.7	28.34	0.30	28.36	28.84	28.75	16.26	115.97	
2/14/2023	13:04	20.75	0.06	0.0004	0.020	53.6	28.34	0.50	28.38	28.84	28.71	1.14	8.11	20.91	0.03	0.0811	0.285	53.2	28.34	0.30	28.36	28.84	28.75	16.22	115.81	
2/14/2023	13:05	20.75	0.06	0.0004	0.020	53.6	28.34	0.50	28.38	28.84	28.71	1.14	8.11	20.89	0.02	0.0784	0.280	53.7	28.34	0.30	28.36	28.84	28.75	15.96	113.81	
2/14/2023	13:06	20.75	0.06	0.0005	0.022	53.0	28.34	0.50	28.38	28.84	28.71	1.27	9.07	20.89	0.02	0.0801	0.283	54.0	28.34	0.30	28.36	28.84	28.75	16.13	115.00	
2/14/2023	13:07	20.75	0.06	0.0006	0.024	53.3	28.34	0.50	28.38	28.84	28.71	1.40	9.93	20.89	0.03	0.0802	0.283	53.4	28.34	0.30	28.36	28.84	28.75	16.13	115.14	
2/14/2023	13:08	20.75	0.06	0.0004	0.020	52.8	28.34	0.50	28.38	28.84	28.71	1.14	8.11	20.90	0.03	0.0794	0.282	53.9	28.34	0.30	28.36	28.84	28.75	16.06	114.52	
2/14/2023	13:09	20.75	0.06	0.0007	0.026	53.1	28.34	0.50	28.38	28.84	28.71	1.51	10.73	20.89	0.02	0.0781	0.279	53.7	28.34	0.30	28.36	28.84	28.75	15.92	113.60	
2/14/2023	13:10	20.75	0.06	0.0006	0.024	53.5	28.34	0.50	28.38	28.84	28.71	1.40	9.93	20.90	0.02	0.0791	0.281	53.9	28.34	0.30	28.36	28.84	28.75	16.03	114.32	
2/14/2023	13:11	20.75	0.06	0.0005	0.022	52.7	28.34	0.50	28.38	28.84	28.71	1.27	9.07	20.90	0.02	0.0784	0.280	54.1	28.34	0.30	28.36	28.84	28.75	15.96	113.79	
2/14/2023	13:12	20.75	0.06	0.0006	0.024	53.5	28.34	0.50	28.38	28.84	--	--	--	20.89	0.02	0.0818	0.286	53.9	28.34	0.30	28.36	28.84	28.75	16.30	116.26	
2/14/2023	13:13	20.75	0.06	0.0004	0.020	53.2	28.34	0.50	28.38	28.84	28.71	1.14	8.11	20.88	0.02	0.0777	0.279	54.1	28.34	0.30	28.36	28.84	28.75	15.89	113.28	
2/14/2023	13:14	20.75	0.06	0.0003	0.017	53.1	28.34	0.50	28.38	28.84	28.71	0.99	7.03	20.88	0.02	0.0779	0.279	54.1	28.34	0.30	28.36	28.84	28.75	15.91	113.42	
2/14/2023	13:15	20.75	0.06	0.0003	0.017	52.9	28.34	0.50	28.38	28.84	28.71	0.99	7.03	20.88	0.02	0.0795	0.282	54.4	28.34	0.30	28.36	28.84	28.75	16.08	114.55	
2/14/2023	13:16	20.75	0.06	0.0003	0.017	53.1	28.34	0.50	28.38	28.84	28.71	0.99	7.03	20.87	0.02	0.0777	0.279	54.3	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	13:17	20.75	0.06	0.0003	0.017	53.2	28.34	0.50	28.38	28.84	28.71	0.99	7.02	20.87	0.03	0.0822	0.287	54.6	28.34	0.30	28.36	28.84	28.75	16.35	116.46	
2/14/2023	13:18	20.75	0.06	0.0236	0.154	54.2	28.34	0.50	28.38	28.84	28.71	8.76	62.24	20.87	0.02	0.0743	0.273	54.4	28.34	0.30	28.36	28.84	28.75	15.54	110.74	
2/14/2023	13:19	20.75	0.06	0.0236	0.154	53.3	28.34	0.50	28.38	28.84	28.71	8.75	62.29	20.73	0.02	0.1621	0.403	54.9	28.34	0.30	28.36	28.83	28.74	22.97	163.51	
2/14/2023	13:20	20.74	0.06	0.0233	0.153	54.1	28.34	0.50	28.38	28.84	28.71	8.71	61.84	20.73	0.02	0.1463	0.382	54.8	28.34	0.30	28.36	28.83	28.74	21.82	155.36	
2/14/2023	13:21	13.25	0.07	0.0233	0.153	54.8	28.34	0.50	28.38	28.54	28.41	8.76	62.12	19.03	0.02	0.1468	0.383	54.7	28.34	0.30	28.36	28.76	28.68	21.88	155.82	
2/14/2023	13:22	4.21	0.10	0.0232	0.152	55.5	28.34	0.50	28.38	28.18	28.06	8.80	62.33	18.09	0.01	0.1434	0.379	54.9	28.34	0.30	28.36	28.73	28.64	21.65	154.07	
2/14/2023	13:23	4.21	0.10	0.0235	0.153	55.0	28.34	0.50	28.38	28.18	28.06	8.85	62.75	15.27	0.01	0.1392	0.373	55.2	28.34	0.30	28.36	28.61	28.53	21.37	152.08	
2/14/2023	13:24	4.21	0.10	0.0055	0.074	54.8	28.34	0.50	28.38	28.18	28.05	4.28	30.35	15.27	0.01	0.1413	0.376	55.3	28.34	0.30	28.36	28.61	28.54	21.53	153.32	
2/14/2023	13:25	4.18	0.10	0.0044	0.066	54.8	28.34	0.50	28.38	28.18	28.16	3.82	27.39	15.24	0.01	0.0972	0.312	55.5	28.34	0.30	28.36	28.61	28.55	17.86	127.24	
2/14/2023	13:26	4.17	0.10	0.0002	0.014	54.6	28.34	0.50	28.38	28.18	28.16	0.81	5.84	15.22	0.01	0.0951	0.308	54.9	28.34	0.30	28.36	28.61	28.55	17.65	125.97	
2/14/2023	13:27	4.94	0.10	0.0001	0.010	54.8	28.34	0.50	28.38	28.21	28.19	0.58	4.13	16.59	0.01	0.0744	0.273	55.6	28.34	0.30	28.36	28.67	28.61	15.61	111.27	
2/14/2023	13:28	5.71	0.10	0.0003	0.017	55.1	28.34	0.50	28.38	28.24	28.22	1.00	7.14	18.37	0.02	0.0722	0.269	55.5	28.34	0.30	28.36	28.74	28.66	15.36	109.35	
2/14/2023	13:29	7.25	0.10	0.0004	0.020	55.7	28.34	0.50	28.38	28.31	28.29	1.15	8.24	19.58	0.02	0.0734	0.271	55.5	28.34	0.30	28.36	28.79	28.70	15.48	110.09	
2/14/2023	13:30	8.85	0.10	0.0000	0.000	54.6	28.34	0.50	28.38	28.37	28.35	0.00	0.00	20.75	0.02	0.0734	0.271	55.9	28.34	0.30	28.36	28.83	28.74	15.47	109.91	
2/14/2023	13:31	8.79	0.10	0.0003	0.017	55.6	28.34	0.50	28.38	28.37	28.35	1.00	7.12	20.67	0.02	0.0749	0.274	55.7	28.34	0.30	28.36	28.83	28.74	15.63	111.07	
2/14/2023	13:32	8.77	0.10	0.0005	0.022	55.4	28.34	0.50	28.38	28.37	28.35	1.28	9.20	20.64	0.02	0.0720	0.268	55.8	28.34	0.30	28.36	28.83	28.74	15.32	108.88	
2/14/2023	13:33	8.58	0.10	0.0000	0.000	55.3	28.34	0.50	28.38	28.36	28.34	0.00	0.00	20.61	0.02	0.0723	0.269	56.1	28.34	0.30	28.36	28.83	28.74	15.36	109.08	
2/14/2023	13:34	8.88	0.09	0.0003	0.017	55.4	28.34	0.50	28.38	28.37	--	--	--	20.64	0.02	0.0697	0.264	56.0	28.34	0.30	28.36	28.83	28.74	15.08	107.11	
2/14/2023	13:35	8.88	0.09	0.0000	0.000	55.2	28.34	0.50	28.38	28.37	28.35	0.00	0.00	20.60	0.02	0.0743	0.273	56.5	28.34	0.30	28.36	28.83	28.74	15.58	110.53	
2/14/2023	13:36	10.87	0.08	0.0000	0.000	55.2	28.34	0.50	28.38	28.45	28.43	0.00	0.00	20.59	0.02	0.0726	0.269	56.2	28.34	0.30	28.36	28.83	28.74	15.39	109.29	
2/14/2023	13:37	12.94	0.06	0.0001	0.010	56.0	28.34	0.50	28.38	28.53	28.51	0.57	4.10	20.60	0.03	0.0723	0.269	56.5	28.34	0.30	28.36	28.83	28.74	15.37	109.02	
2/14/2023	13:38	14.76	0.05	0.0000	0.000	56.3	28.34	0.50	28.38	28.60	28.58	0.00	0.00	20.57	0.03	0.0706	0.266	56.8	28.34	0.30	28.36	28.83	28.74	15.19	107.70	
2/14/2023	13:39	15.89	0.03	0.0000	0.000	56.6	28.34	0.50	28.38	28.64	28.62	0.00	0.00	20.56	0.02	0.0745	0.273	56.7	28.34	0.30	28.36	28.83	--	--	--	
2/14/2023	13:40	16.62	0.03	0.0000	0.000	57.0	28.34	0.50	28.38	28.67	28.62	0.00	0.00	20.54	0.03	0.0766	0.277	57.0	28.34	0.30	28.36	28.83	28.74	15.82	112.17	
2/14/2023	13:41	17.06	0.02	0.0000	0.000	57.4	28.34	0.50	28.38	28.69	28.66	0.00	0.00	20.55	0.03	0.0765	0.277	57.3	28.34	0.30	28.36	28.83	28.74	15.82	112.06	
2/14/2023	13:42	17.16	0.02	0.0000	0.000	57.3	28.34	0.50	28.38	28.69	28.61	0.00	0.00	20.55	0.02	0.0759	0.275	57.4	28.34	0.30	28.36	28.83	28.73	15.76	111.61	
2/14/2023	13:43	17.32	0.02	0.0000	0.000	57.2	28.34	0.50	28.38	28.70	28.65	0.00	0.00	20.57	0.02	0.0763	0.276	57.6	28.34	0.30	28.36	28.83	28.73	15.80	111.87	
2/14/2023	13:44	17.39	0.01	0.0001	0.010	57.2	28.34	0.50	28.38	28.70	28.61	0.57	4.06	20.60	0.02	0.0739	0.272	57.9	28.34	0.30	28.36	28.83	28.73	15.56	110.06	
2/14/2023	13:45	17.45	0.01	0.0001	0.010	57.8	28.34	0.50	28.38	28.70	28.60	0.57	4.06	20.62	0.02	0.0763	0.276	57.9	28.34	0.30	28.36	28.83	28.74	15.81	111.83	
2/14/2023	13:46	17.44	0.01	0.0001	0.010	57.6	28.34	0.50	28.38	28.70	28.61	0.57	4.06	20.64	0.03	0.0764	0.276	58.3	28.34	0.30	28.36	28.83	28.74	15.82	111.86	
2/14/2023	13:47	17.40	0.01	0.0001	0.010	58.2	28.34	0.50	28.38	28.70	28.61	0.57	4.06	20.64	0.02	0.0764	0.276	58.3	28.34	0.30	28.36	28.83	28.74	15.82	111.86	
2/14/2023	13:48	17.49	0.01	0.0003	0.017	58.1	28.34	0.50	28.38	28.70	28.62	0.99	7.03	20.69	0.02	0.0788	0.281	58.6	28.34	0.30	28.36	28.83	28.74	16.07	113.58	
2/14/2023	13:49	17.49	0.01	0.0002	0.014	58.2	28.34	0.50	28.38	28.70	28.63	0.81	5.75	20.69	0.02	0.0754	0.275	58.5	28.34	0.30	28.36	28.83	28.74	15.72	111.11	
2/14/2023	13:50	17.57	0.01	0.0006	0.024	58.2	28.34	0.50	28.38	28.70	28.64	1.40	9.96	20.72	0.02	0.0785	0.280	58.6	28.34	0.30	28.36	28.83	28.74	16.04	113.36	
2/14/2023	13:51	17.57	0.01	0.0000	0.000	58.3	28.34	0.50	28.38	28.70	28.64	0.00	0.00	20.73	0.02	0.0818	0.286	58.6	28.34	0.30	28.36	28.83	28.74	16.38	115.72	
2/14/2023	13:52	17.57	0.01	0.0000	0.000	58.2	28.34	0.50	28.38	28.70	28.64	0.00	0.00	20.76	0.02	0.0776	0.279	58.8	28.34	0.30	28.36	28.83	28.74	15.95	112.69	
2/14/2023	13:53	17.58	0.02	0.0004	0.020	58.5	28.34	0.50	28.38	28.71	28.64	1.15	8.13	20.76	0.02	0.0771	0.278	58.8	28.34	0.30	28.36	28.83	28.74	15.90	112.33	
2/14/2023	13:54	17.61	0.02	0.0003	0.017	58.0	28.34	0.50	28.38	28.71	28.65	0.99	7.04	20.78	0.02	0.0791	0.281	59.0	28.34	0.30	28.36	28.83	28.74	16.11	113.75	
2/14/2023	13:55	17.60	0.02	0.0004	0.020	58.7	28.34	0.50	28.38	28.71	--	--	--	20.80	0.02	0.0826	0.287	58.8	28.34	0.30	28.36	28.84	28.74	16.46	116.26	
2/14/2023	13:56	17.66	0.03	0.0001	0.010	58.4	28.34	0.50	28.38	28.71	28.65	0.57	4.07	20.82	0.02	0.0744	0.273	59.1	28.34	0.30	28.36	28.84	28.74	15.62	110.30	
2/14/2023	13:57	17.70	0.03	0.0004	0.020	59.1	28.34	0.50	28.38	28.71	28.65	1.15	8.13	20.83	0.02	0.0769	0.277	59.1	28.34	0.30	28.36	28.84	28.75	15.89	112.13	
2/14/2023	13:58	17.70	0.03	0.0000	0.000	59.1	28.34	0.50	28.38	28.71	28.65	0.00	0.00	20.85	0.01	0.0778	0.279	59.2	28.34	0.30	28.36	28.84	28.75	15.98	112.79	
2/14/2023	13:59	17.75	0.04	0.0002	0.014	59.0	28.34	0.50	28.38	28.72	28.66	0.81	5.75	20.86	0.02	0.0771	0.278	59.2	28.34	0.30	28.36	28.84	28.75	15.91	112.28	
2/14/2023	14:00	17.72	0.04	0.0000	0.000	59.2	28.34	0.50	28.38	28.72	28.66	0.00	0.00	20.86	0.02	0.0795	0.282	59.3	28.34	0.30	28.36	28.84	28.75	16.15	114.01	
2/14/2023	14:01	17.72	0.04	0.0000	0.000	59.0	28.34	0.50	28.38	28.72	28.66	0.00	0.00	20.87	0.01	0.0810	0.285	59.3	28.34	0.30	28.36	28.84	28.75	16.31	115.07	
2/14/2023	14:02	17.70	0.04	0.0005	0.022	59.2	28.34	0.50	28.38	28.71	28.66	1.28	9.09	20.87	0.01	0.0799	0.283	59.5	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	14:03	17.68	0.04	0.0000	0.000	58.9	28.34	0.50	28.38	28.71	28.66	0.00	0.00	20.87	0.02	0.0761	0.276	59.8	28.34	0.30	28.36	28.84	28.75	15.81	111.47	
2/14/2023	14:04	17.72	0.05	0.0001	0.010	59.0	28.34	0.50	28.38	28.72	28.67	0.57	4.07	20.87	0.02	0.0746	0.273	59.9	28.34	0.30	28.36	28.84	28.75	15.66	110.37	
2/14/2023	14:05	17.75	0.05

Alliance SOURCE TESTING

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	O₂ - Inlet	CO₂ - Inlet	Delta P	Sq Rt	Temperature	Barometric	Inlet Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O₂ - Outlet	CO₂ - Outlet	Delta P	Sq Rt	Temperature	Barometric	Outlet Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	Point in Process
	Unit	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	-
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/14/2023	14:29	20.75	0.07	0.0006	0.024	61.0	28.34	0.50	28.38	28.84	28.67	1.41	9.83	20.96	0.01	0.0726	0.269	62.1	28.34	0.30	28.36	28.84	28.75	15.48	108.68	
2/14/2023	14:30	20.75	0.07	0.0005	0.022	61.4	28.34	0.50	28.38	28.84	28.67	1.28	8.97	20.97	0.01	0.0742	0.272	62.1	28.34	0.30	28.36	28.84	28.76	15.65	109.87	
2/14/2023	14:31	20.74	0.07	0.0005	0.022	61.4	28.34	0.50	28.38	28.84	28.67	1.29	8.97	20.97	0.01	0.0729	0.270	62.3	28.34	0.30	28.36	28.84	28.75	15.51	108.89	
2/14/2023	14:32	20.74	0.07	0.0007	0.026	61.7	28.34	0.50	28.38	28.84	28.67	1.52	10.61	20.97	0.01	0.0752	0.274	62.3	28.34	0.30	28.36	28.84	28.76	15.75	110.59	
2/14/2023	14:33	20.74	0.07	0.0003	0.017	61.1	28.34	0.50	28.38	28.84	28.67	1.00	6.95	20.96	0.01	0.0725	0.269	62.3	28.34	0.30	28.36	28.84	28.76	15.47	108.60	
2/14/2023	14:34	20.74	0.07	0.0002	0.014	61.4	28.34	0.50	28.38	28.84	28.67	0.81	5.67	20.97	0.00	0.0720	0.268	62.3	28.34	0.30	28.36	28.84	28.75	15.41	108.23	
2/14/2023	14:35	20.74	0.07	0.0003	0.017	61.6	28.34	0.50	28.38	28.84	28.67	1.00	6.95	20.97	0.01	0.0677	0.260	62.3	28.34	0.30	28.36	28.84	28.76	14.95	104.95	
2/14/2023	14:36	20.75	0.07	0.0003	0.017	61.5	28.34	0.50	28.38	28.84	28.67	1.00	6.95	20.97	0.01	0.0700	0.265	62.3	28.34	0.30	28.36	28.84	28.76	15.20	106.72	
2/14/2023	14:37	20.74	0.07	0.0005	0.022	61.9	28.34	0.50	28.38	28.84	28.67	1.29	8.96	20.97	0.01	0.0719	0.268	62.4	28.34	0.30	28.36	28.84	28.76	15.41	108.14	
2/14/2023	14:38	20.74	0.07	0.0002	0.014	61.9	28.34	0.50	28.38	28.84	28.67	0.81	5.67	20.96	0.01	0.0760	0.276	62.6	28.34	0.30	28.36	28.84	28.76	15.84	111.15	
2/14/2023	14:39	20.75	0.07	0.0005	0.022	61.7	28.34	0.50	28.38	28.84	--	--	--	20.95	0.00	0.0703	0.265	62.5	28.34	0.30	28.36	28.84	28.75	15.24	106.92	
2/14/2023	14:40	20.75	0.07	0.0007	0.026	62.0	28.34	0.50	28.38	28.84	28.67	1.52	10.61	20.96	0.01	0.0682	0.261	62.7	28.34	0.30	28.36	28.84	28.76	15.01	105.29	
2/14/2023	14:41	20.75	0.07	0.0008	0.028	62.0	28.34	0.50	28.38	28.84	28.67	1.63	11.34	20.96	0.00	0.0683	0.261	62.8	28.34	0.30	28.36	28.84	28.76	15.02	105.38	
2/14/2023	14:42	20.75	0.07	0.0002	0.014	62.3	28.34	0.50	28.38	28.84	28.67	0.81	5.67	20.97	0.00	0.0658	0.257	63.0	28.34	0.30	28.36	28.84	28.76	14.75	103.40	
2/14/2023	14:43	20.75	0.07	0.0004	0.020	62.6	28.34	0.50	28.38	28.84	28.67	1.15	8.01	20.96	0.00	0.0662	0.257	62.9	28.34	0.30	28.36	28.84	28.76	14.79	103.73	
2/14/2023	14:44	20.75	0.07	0.0005	0.022	62.8	28.34	0.50	28.38	28.84	28.67	1.29	8.96	20.97	0.01	0.0622	0.249	63.0	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	14:45	20.74	0.07	0.0002	0.014	62.9	28.34	0.50	28.38	28.84	28.67	0.81	5.66	20.97	0.01	0.0605	0.246	63.2	28.34	0.30	28.36	28.84	28.76	14.14	99.12	
2/14/2023	14:46	20.75	0.07	0.0002	0.014	62.8	28.34	0.50	28.38	28.84	28.67	0.81	5.66	20.96	0.00	0.0613	0.248	63.1	28.34	0.30	28.36	28.84	28.76	14.23	99.81	
2/14/2023	14:47	20.75	0.07	0.0000	0.000	63.0	28.34	0.50	28.38	28.84	28.67	0.00	0.00	20.96	0.00	0.0639	0.253	62.9	28.34	0.30	28.36	28.84	28.76	14.53	101.93	
2/14/2023	14:48	20.75	0.07	0.0005	0.022	63.1	28.34	0.50	28.38	28.84	28.67	1.29	8.95	20.96	0.01	0.0670	0.259	62.7	28.34	0.30	28.36	28.84	28.76	14.88	104.39	
2/14/2023	14:49	20.75	0.07	0.0008	0.028	63.1	28.34	0.50	28.38	28.84	28.67	1.63	11.33	20.96	0.01	0.0652	0.255	62.8	28.34	0.30	28.36	28.84	28.76	14.67	102.97	
2/14/2023	14:50	20.75	0.06	0.0007	0.026	63.1	28.34	0.50	28.38	28.84	28.67	1.52	10.60	20.96	0.01	0.0606	0.246	63.0	28.34	0.30	28.36	28.84	28.76	14.15	99.24	
2/14/2023	14:51	20.75	0.06	0.0003	0.017	63.1	28.34	0.50	28.38	28.84	28.67	1.00	6.94	20.95	0.01	0.0634	0.252	63.0	28.34	0.30	28.36	28.84	28.76	14.47	101.50	
2/14/2023	14:52	20.75	0.06	0.0001	0.010	63.3	28.34	0.50	28.38	28.84	28.67	0.58	4.01	20.96	0.01	0.0604	0.246	63.0	28.34	0.30	28.36	28.84	28.76	14.13	99.07	
2/14/2023	14:53	20.76	0.06	0.0004	0.020	63.4	28.34	0.50	28.38	28.84	28.67	1.15	8.01	20.97	0.01	0.0637	0.252	63.1	28.34	0.30	28.36	28.84	28.76	14.51	101.75	
2/14/2023	14:54	20.75	0.06	0.0003	0.017	63.4	28.34	0.50	28.38	28.84	28.67	1.00	6.94	20.96	0.01	0.0622	0.249	63.0	28.34	0.30	28.36	28.84	28.76	14.34	100.56	
2/14/2023	14:55	20.75	0.06	0.0005	0.022	63.3	28.34	0.50	28.38	28.84	28.68	1.29	8.96	20.96	0.01	0.0644	0.254	63.0	28.34	0.30	28.36	28.84	28.76	14.59	102.31	
2/14/2023	14:56	20.76	0.06	0.0003	0.017	63.3	28.34	0.50	28.38	28.84	28.68	1.00	6.94	20.96	0.01	0.0622	0.249	63.0	28.34	0.30	28.36	28.84	28.76	14.34	100.54	
2/14/2023	14:57	20.76	0.06	0.0004	0.020	63.6	28.34	0.50	28.38	28.84	28.68	1.15	8.01	20.96	0.01	0.0600	0.245	63.1	28.34	0.30	28.36	28.84	28.76	14.08	98.74	
2/14/2023	14:58	20.75	0.06	0.0003	0.017	63.6	28.34	0.50	28.38	28.84	28.68	1.00	6.94	20.94	0.01	0.0643	0.254	63.2	28.34	0.30	28.36	28.84	28.76	14.58	102.22	
2/14/2023	14:59	20.75	0.06	0.0003	0.017	63.7	28.34	0.50	28.38	28.84	28.68	1.00	6.94	20.95	0.01	0.0603	0.246	63.3	28.34	0.30	28.36	28.84	28.76	14.12	98.99	
2/14/2023	15:00	20.75	0.06	0.0003	0.017	63.7	28.34	0.50	28.38	28.84	28.68	1.00	6.94	20.96	0.01	0.0583	0.241	63.2	28.34	0.30	28.36	28.84	28.76	13.88	97.34	
2/14/2023	15:01	20.76	0.06	0.0007	0.026	63.8	28.34	0.50	28.38	28.84	--	--	--	20.96	0.01	0.0571	0.239	63.3	28.34	0.30	28.36	28.84	28.76	13.74	96.32	
2/14/2023	15:02	20.76	0.06	0.0008	0.028	63.8	28.34	0.50	28.38	28.84	28.68	1.63	11.33	20.95	0.01	0.0600	0.245	63.4	28.34	0.30	28.36	28.84	28.76	14.09	98.73	
2/14/2023	15:03	20.76	0.06	0.0004	0.020	63.8	28.34	0.50	28.38	28.84	28.68	1.15	8.01	20.95	0.01	0.0574	0.240	63.2	28.34	0.30	28.36	28.84	28.76	13.77	96.59	
2/14/2023	15:04	20.75	0.06	0.0004	0.020	63.9	28.34	0.50	28.38	28.84	28.68	1.15	8.01	20.95	0.01	0.0584	0.242	63.4	28.34	0.30	28.36	28.84	28.76	13.90	97.41	
2/14/2023	15:05	20.74	0.06	0.0007	0.026	64.1	28.34	0.50	28.38	28.84	--	--	--	20.96	0.01	0.0608	0.247	63.3	28.34	0.30	28.36	28.84	28.76	14.18	99.39	
2/14/2023	15:06	20.74	0.06	0.0002	0.014	64.0	28.34	0.50	28.38	28.84	28.68	0.81	5.67	20.97	0.01	0.0601	0.245	63.5	28.34	0.30	28.36	28.84	28.76	14.10	98.80	
2/14/2023	15:07	20.75	0.06	0.0002	0.014	64.3	28.34	0.50	28.38	28.84	28.69	0.81	5.66	20.97	0.01	0.0583	0.241	63.5	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	15:08	20.75	0.06	0.0004	0.020	64.0	28.34	0.50	28.38	28.84	28.69	1.15	8.01	20.97	0.01	0.0558	0.236	63.4	28.34	0.30	28.36	28.84	28.76	13.58	95.21	
2/14/2023	15:09	20.75	0.06	0.0005	0.022	64.1	28.34	0.50	28.38	28.84	28.69	1.29	8.96	20.97	0.01	0.0609	0.247	63.3	28.34	0.30	28.36	28.84	28.76	14.19	99.47	
2/14/2023	15:10	20.76	0.06	0.0007	0.026	64.4	28.34	0.50	28.38	28.84	28.69	1.52	10.60	20.96	0.01	0.0564	0.237	63.4	28.34	0.30	28.36	28.84	28.76	13.66	95.73	
2/14/2023	15:11	20.76	0.06	0.0007	0.026	64.4	28.34	0.50	28.38	28.84	28.69	1.52	10.60	20.96	0.01	0.0562	0.237	63.6	28.34	0.30	28.36	28.84	28.76	13.63	95.54	
2/14/2023	15:12	20.76	0.06	0.0006	0.024	64.4	28.34	0.50	28.38	28.84	28.69	1.41	9.81	20.96	0.02	0.0547	0.234	63.5	28.34	0.30	28.36	28.84	28.76	13.45	94.26	
2/14/2023	15:13	20.76	0.06	0.0004	0.020	64.6	28.34	0.50	28.38	28.84	28.69	1.15	8.01	20.97	0.01	0.0513	0.226	63.5	28.34	0.30	28.36	28.84	28.76	13.03	91.29	
2/14/2023	15:14	20.76	0.06	0.0011	0.033	64.4	28.34	0.50	28.38	28.84	28.69	1.91	13.29	20.96	0.01	0.0540	0.232	63.4	28.34	0.30	28.36	28.84	28.76	13.36	93.67	
2/14/2023	15:15	20.76	0.06	0.0004	0.020	64.4	28.34	0.50	28.38	28.84	28.69	1.15	8.01	20.97	0.01	0.0522	0.228	63.4	28.34	0.30	28.36	28.84	28.76	13.14	92.10	
2/14/2023	15:16	20.76	0.05	0.0007	0.026	64.2	28.34	0.50	28.38	28.84	28.69	1.52	10.60	20.97	0.01	0.0534	0.231	63.3	28.34	0.30	28.36	28.84	28.76	13.29	93.15	
2/14/2023	15:17	20.76	0.05	0.0008	0.028	64.4	28.34	0.50	28.38	28.84	28.69	1.63	11.33	20.97	0.01	0.0542	0.233	63.3	28.34	0.30	28.36	28.84	28.76	13.39	93.86	
2/14/2023	15:18	20.76	0.04	0.0003	0.017	64.3	28.34	0.50	28.38	28.84	28.69	1.00	6.94	20.97	0.01	0.0545	0.233	63.3	28.34	0.30	28.36	28.84	28.76	13.42	94.12	
2/14/2023	15:19	20.76	0.04	0.0007	0.026	64.1	28.34	0.50	28.38	28.84	28.69	1.52	10.60	20.98	0.01	0.0557	0.236	63.2	28.34	0.30	28.36	28.84	28.76	13.57	95.16	
2/14/2023	15:20	20.76	0.03	0.0003	0.017	64.1	28.34	0.50	28.38	28.84	28.69	1.00	6.94	20.98	0.01	0.0553	0.235	63.0	28.34	0.30	28.36	28.84	28.76	13.52	94.83	
2/14/2023	15:21	20.77	0.03	0.0002	0.014	64.2	28.34	0.50	28.38	28.84	28.69	0.81	5.67	20.99	0.02	0.0511	0.226	63.0	28.34	0.30	28.36	28.84	28.77	12.99	91.16	
2/14/2023	15:22	20.77	0.03	0.0006	0.024	64.0	28.34	0.50	28.38	28.84	28.69	1.41	9.82	20.99	0.01	0.0560	0.237	63.1	28.34	0.30	28.36	28.84	28.77	13.60	95.42	
2/14/2023	15:23	20.77	0.03	0.0006	0.024	64.0	28.34	0.50	28.38	28.84	28.69	1.41	9.82	20.98	0.02	0.0570	0.239	63.2	28.34	0.30	28.36	28.84	28.77	13.72	96.27	
2/14/2023	15:24	20.76	0.02	0.0007	0.026	63.5	28.34	0.50	28.38	28.83	28.69	1.52	10.61	20.98	0.01	0.0552	0.235	63.1	28.34	0.30	28.36	28.84	28.76	13.51	94.73	
2/14/2023	15:25	20.77	0.02	0.0004	0.020	63.7	28.34	0.50	28.38	28.83	28.69	1.15	8.02	20.99	0.01	0.0547	0.234	63.1	28.34	0.30	28.36	28.84	28.76	13.45	94.30	
2/14/2023	15:26	20.77	0.02	0.0005	0.022	63.6	28.34	0.50	28.38	28.83	28.69	1.29	8.97	20.98	0.02	0.0532	0.231	63.1	28.34	0.30	28.36	28.84	28.76	13.26	93.00	
2/14/2023	15:27	20.77	0.02	0.0002	0.014	63.5	28.34	0.50	28.38	28.83	--	--	--	20.97	0.02	0.0559	0.236	63.1	28.34	0.30	28.36	28.84	28.76	13.59	95.33	
2/14/2023	15:28	20.77	0.02	0.0002	0.014	63.6	28.34	0.50	28.38	28.83	28.69	0.81	5.67	20.98	0.02	0.0542	0.233	63.0	28.34	0.30	28.36	28.84	28.76	13.38	93.87	
2/14/2023	15:29	20.77	0.01	0.0002	0.014	63.2	28.34	0.50	28.38	28.83	28.69	0.81	5.67	20.98	0.02	0.0578	0.240	62.8	28.34	0.30	28.36	28.84	28.76	13.82	96.96	
2/14/2023	15:30	20.77	0.01	0.0003	0.017	63.1	28.34	0.50	28.38	28.83	28.69	1.00	6.95	20.98	0.02	0.0535	0.231	63.0	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	15:31	20.77	0.01	0.0003	0.017	63.3	28.34	0.50	28.38	28.83	28.69	1.00	6.95	20.97	0.02	0.0567	0.238	62.9	28.34	0.30	28.36	28.84	28.76	13.69	96.03	
2/14/2023	15:32	20.77	0.01	0.0003	0.017	63.3	28.34	0.50	28.38	28.83	28.69	1.00	6.95	20.97	0.02	0.0537	0.232	63.1	28.34	0.30	28.36	28.84	28.76	13.32	93.43	
2/14/2023	15:33	20.77	0.01	0.0002	0.014	63.3	28.34	0.50	28.38	28.83	28.69	0.81	5.67	20.98	0.02	0.0543	0.233	63.0	28.34	0.30	28.36	28.84	28.76	13.39	93.96	
2/14/2023	15:34	20.77	0.01	0.0004	0.020	63.3	28.34	0.50	28.38	28.83	28.69	1.15	8.02	20.98	0.03	0.0568	0.238	62.9	28.34	0.30	28.36	28.84	28.77	13.70	96.11	
2/14/2023	15:35	20.77	0.01	0.0006	0.024	63.1	28.34	0.50	28.38	28.83	28.69	1.41	9.83	20.98	0.02	0.0519	0.228	63.0	28.34	0.30	28.36	28.84	28.76	13.09	91.86	
2/14/2023	15:36	20.77	0.01	0.0006	0.024	63.2	28.34	0.50	28.38	28.83	28.69	1.41	9.83	20.98	0.03	0.0541	0.233	62.9	28.34	0.30	28.36	28.84	28.77	13.37	93.79	
2/14/2023	15:37	20.77	0.01	0.0005	0.022	63.3	28.34	0.50	28.38	28.83	28.69	1.29	8.97	20.98	0.02	0.0583	0.241	63.1	28.34	0.30	28.36	28.84	28.76	13.88	97.36	
2/14/2023	15:38	20.77	0.01	0.0006	0.024	63.2	28.34	0.50	28.38	28.83	28.69	1.41	9.83	20.98	0.02	0.0533	0.231	63.0	28.34	0.30	28.36	28.84	28.77	13.27	93.10	
2/14/2023	15:39	20.77	0.01	0.0006	0.024	63.2	28.34	0.50	28.38	28.83	28.69	1.41	9.83	20.97	0.02	0.0551	0.235	63.0	28.34	0.30	28.36	28.84	28.76	13.49	94.66	
2/14/2023	15:40	20.77	0.01	0.0005	0.022	63.2	28.34	0.50	28.38	28.83	28.69	1.29	8.97	20.98	0.02	0.0545	0.233	63.0	28.34	0.30	28.36	28.84	28.77	13.42	94.14	
2/14/2023	15:41	20.77	0.01	0.0007	0.026	63.0	28.34	0.50	28.38	28.83	28.69	1.52	10.62	20.98	0.02	0.0517	0.227	62.8	28.34	0.30	28.36	28.84	28.77	13.07	91.71	
2/14/2023	15:42	20.77	0.01	0.0006	0.024	63.1	28.34	0.50	28.38	28.83	28.69	1.41	9.83	20.98	0.02	0.0555	0.236	62.7	28.34	0.30	28.36	28.84	28.77	13.54	95.03	
2/14/2023	15:43	20.77	0.01	0.0005	0.022	62.7	28.34	0.50	28.38	28.83	28.69	1.29	8.98	20.98	0.02	0.0517	0.227	62.8	28.34	0.30	28.36	28.84	28.77	13.07	91.71	
2/14/2023	15:44	20.77	0.01	0.0004	0.020	62.8	28.34	0.50	28.38	28.83	28.69	1.15	8.03	20.98	0.02	0.0575	0.240	62.8	28.34	0.30	28.36	28.84	28.76	13.78	96.71	
2/14/2023	15:45	20.77	0.00	0.0007	0.026	62.8	28.34	0.50	28.38	28.83	28.69	1.52	10.62	20.99	0.02	0.0545	0.233	62.7	28.34	0.30	28.36	28.84	28.77	13.41	94.16	
2/14/2023	15:46	20.77	0.00	0.0005	0.022	62.3	28.34	0.50	28.38	28.83	28.69	1.29	8.98	20.98	0.03	0.0508	0.225	62.6	28.34	0.30	28.36	28.84	28.76	12.95	90.91	
2/14/2023	15:47	20.77	0.00	0.0006	0.024	62.2	28.34	0.50	28.38	28.83	28.69	1.41	9.84	20.99	0.02	0.0559	0.236	62.9	28.34	0.30	28.36	28.84	28.76	13.59	95.35	
2/14/2023	15:48	20.77	0.00	0.0004	0.020	62.2	28.34	0.50	28.38	28.83	28.69	1.15	8.03	20.98	0.02	0.0546	0.234	62.6	28.34	0.30	28.36	28.84	28.76	13.43	94.26	
2/14/2023	15:49	20.77	0.00	0.0005	0.022	62.0	28.34	0.50	28.38	28.83	--	--	--	20.98	0.02	0.0549	0.234	62.6	28.34	0.30	28.36	28.84	28.76	13.46	94.52	
2/14/2023	15:50	20.77	0.00	0.0004	0.020	61.8	28.34	0.50	28.38	28.83	28.69	1.15	8.04	20.98	0.02	0.0561	0.237	62.5	28.34	0.30	28.36	28.84	28.77	13.61	95.56	
2/14/2023	15:51	20.77	0.00	0.0004	0.020	61.8	28.34	0.50	28.38	28.83	28.69	1.15	8.04	20.98	0.02	0.0552	0.235	62.5	28.34	0.30	28.36	28.84	28.76	13.50	94.78	
2/14/2023	15:52	20.77	0.00	0.0005	0.022	61.6	28.34	0.50	28.38	28.83	28.69	1.28	8.99	20.98	0.02	0.0537	0.232	62.4	28.34	0.30	28.36	28.84	28.76	13.31	93.50	
2/14/2023	15:53	20.77	0.00	0.0005	0.022	61.5	28.34	0.50	28.38	28.83	28.69	1.28	8.99	20.98	0.02	0.0554	0.235	62.5	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	15:54	20.77	0.00	0.0005	0.022	61.5	28.34	0.50	28.38	28.83	28.69	1.28	8.99	20.97	0.02	0.0538	0.232	62.6	28.34	0.30	28.36	28.84	28.76	13.33	93.57	
2/14/2023	15:55	20.76	0.00	0.0004	0.020	61.3	28.34	0.50	28.38	28.83	28.69	1.15	8.04	20.97	0.02	0.0572	0.239	62.4	28.34	0.30	28.36	28.84	28.76	13.74	96.49	
2/14/2023	15:56	20.77	0.00	0.0005	0.022	61.4	28.34	0.50	28.38	28.83	28.69	1.28	8.99	20.97	0.02	0.0556	0.236	62.5	28.34	0.30	28.36	28.84	28.76	13.55	95.12	
2/14/2023	15:57	20.77	0.00	0.0004	0.020	61.3	28.34	0.50	28.38	28.83	28.69	1.15	8.04	20.98	0.02	0.0576	0.240	62.4	28.34	0.30	28.36	28.84	28.76	13.79	96.83	
2/14/2023	15:58	20.76	0.00	0.0005	0.022	61.2	28.34	0.50	28.38	28.83	28.69	1.28	8.99	20.97	0.02	0.0564	0.237	62.3	28.34	0.30	28.36	28.84	28.76	13.64	95.82	
2/14/2023	15:59	20.77	0.00	0.0005	0.022	61.0	28.34	0.50	28.38	28.83	28.69	1.28	9.00	20.97	0.02	0.0555	0.236	62.5	28.34	0.30	28.36	28.84	28.76	13.53	95.04	
2/14/2023	16:00	20.77	0.00	0.0005	0.022	61.0	28.34	0.50	28.38	28.83	28.69	1.28	9.00	20.96	0.02	0.0551	0.235	62.4	28.34	0.30	28.36	28.84	28.76	13.48	94.71	
2/14/2023	16:01	20.76	0.00	0.0005	0.022	60.8	28.34	0.50	28.38	28.83	28.69	1.28	9.00	20.96	0.02	0.0537	0.232	62.4	28.34	0.30	28.36	28.84	28.76	13.31	93.50	
2/14/2023	16:02	20.76	0.00	0.0006	0.024	60.9	28.34	0.50	28.38	28.83	28.69	1.41	9.86	20.97	0.02	0.0558	0.236	62.5	28.34	0.30	28.36	28.84	28.76	13.57	95.30	
2/14/2023	16:03	20.76	0.00	0.0005	0.022	60.7	28

Alliance SOURCE TESTING

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Inlet Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Outlet Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	Point in Process
	Unit	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	-
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/14/2023	16:27	20.76	0.00	0.0004	0.020	59.2	28.34	0.50	28.38	28.83	28.69	1.15	8.06	20.96	0.02	0.0569	0.239	62.2	28.34	0.30	28.36	28.84	28.76	13.70	96.26	
2/14/2023	16:28	20.76	0.00	0.0005	0.022	59.2	28.34	0.50	28.38	28.83	28.69	1.28	9.01	20.95	0.02	0.0584	0.242	62.2	28.34	0.30	28.36	28.84	28.76	13.88	97.51	
2/14/2023	16:29	20.76	0.00	0.0005	0.022	59.2	28.34	0.50	28.38	28.83	28.69	1.28	9.01	20.96	0.01	0.0586	0.242	62.2	28.34	0.30	28.36	28.84	28.76	13.90	97.68	
2/14/2023	16:30	20.76	0.00	0.0005	0.022	59.0	28.34	0.50	28.38	28.83	28.69	1.28	9.02	20.96	0.02	0.0574	0.240	62.1	28.34	0.30	28.36	28.84	28.76	13.76	96.69	
2/14/2023	16:31	20.76	0.00	0.0004	0.020	59.0	28.34	0.50	28.38	28.83	28.69	1.15	8.06	20.96	0.01	0.0559	0.236	62.1	28.34	0.30	28.36	28.84	28.76	13.58	95.41	
2/14/2023	16:32	20.76	0.00	0.0005	0.022	58.9	28.34	0.50	28.38	28.83	28.69	1.28	9.02	20.96	0.02	0.0583	0.241	62.0	28.34	0.30	28.36	28.84	28.76	13.87	97.45	
2/14/2023	16:33	20.76	0.00	0.0005	0.022	58.8	28.34	0.50	28.38	28.83	--	--	--	20.97	0.02	0.0562	0.237	62.0	28.34	0.30	28.36	28.84	28.76	13.61	95.67	
2/14/2023	16:34	20.76	0.00	0.0005	0.022	58.8	28.34	0.50	28.38	28.83	28.69	1.28	9.02	20.95	0.01	0.0562	0.237	62.1	28.34	0.30	28.36	28.84	28.76	13.62	95.66	
2/14/2023	16:35	20.76	0.00	0.0005	0.022	58.9	28.34	0.50	28.38	28.83	28.69	1.28	9.02	20.96	0.01	0.0510	0.226	62.1	28.34	0.30	28.36	28.84	28.76	12.97	91.14	
2/14/2023	16:36	20.76	0.00	0.0005	0.022	58.8	28.34	0.50	28.38	28.83	28.69	1.28	9.02	20.96	0.01	0.0581	0.241	62.1	28.34	0.30	28.36	28.84	28.76	13.84	97.28	
2/14/2023	16:37	20.76	0.00	0.0004	0.020	58.8	28.34	0.50	28.38	28.83	28.69	1.15	8.06	20.97	0.02	0.0580	0.241	62.1	28.34	0.30	28.36	28.84	28.76	13.83	97.18	
2/14/2023	16:38	20.76	0.00	0.0006	0.024	58.7	28.34	0.50	28.38	28.83	28.69	1.40	9.88	20.96	0.01	0.0565	0.238	62.1	28.34	0.30	28.36	28.84	28.76	13.65	95.92	
2/14/2023	16:39	20.76	0.00	0.0004	0.020	58.7	28.34	0.50	28.38	28.83	28.69	1.15	8.07	20.97	0.01	0.0552	0.235	62.0	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	16:40	20.76	0.00	0.0004	0.020	58.6	28.34	0.50	28.38	28.83	28.69	1.15	8.07	20.96	0.01	0.0604	0.246	62.0	28.34	0.30	28.36	28.84	28.76	14.11	99.19	
2/14/2023	16:41	20.76	0.00	0.0005	0.022	58.5	28.34	0.50	28.38	28.83	28.69	1.28	9.02	20.96	0.01	0.0562	0.237	62.0	28.34	0.30	28.36	28.84	28.76	13.61	95.68	
2/14/2023	16:42	20.76	0.00	0.0004	0.020	58.6	28.34	0.50	28.38	28.83	28.69	1.15	8.07	20.96	0.01	0.0560	0.237	62.0	28.34	0.30	28.36	28.84	28.76	13.59	95.50	
2/14/2023	16:43	20.76	0.00	0.0005	0.022	58.6	28.34	0.50	28.38	28.83	28.69	1.28	9.02	20.96	0.01	0.0570	0.239	61.9	28.34	0.30	28.36	28.84	28.76	13.71	96.36	
2/14/2023	16:44	20.76	0.00	0.0004	0.020	58.3	28.34	0.50	28.38	28.83	28.69	1.15	8.07	20.96	0.01	0.0573	0.239	62.0	28.34	0.30	28.36	28.84	28.76	13.75	96.61	
2/14/2023	16:45	20.76	0.00	0.0004	0.020	58.6	28.34	0.50	28.38	28.83	28.69	1.15	8.07	20.95	0.01	0.0567	0.238	61.9	28.34	0.30	28.36	28.84	28.76	13.67	96.11	
2/14/2023	16:46	20.76	0.00	0.0005	0.022	58.4	28.34	0.50	28.38	28.83	28.69	1.28	9.02	20.96	0.02	0.0558	0.236	62.1	28.34	0.30	28.36	28.84	28.76	13.57	95.32	
2/14/2023	16:47	20.76	0.00	0.0004	0.020	58.3	28.34	0.50	28.38	28.83	28.69	1.15	8.07	20.95	0.01	0.0600	0.245	62.1	28.34	0.30	28.36	28.84	28.76	14.07	98.85	
2/14/2023	16:48	20.76	0.00	0.0004	0.020	58.4	28.34	0.50	28.38	28.83	28.69	1.15	8.07	20.96	0.01	0.0591	0.243	62.0	28.34	0.30	28.36	28.84	28.76	13.96	98.11	
2/14/2023	16:49	20.76	0.00	0.0006	0.024	58.2	28.34	0.50	28.38	28.83	28.69	1.40	9.88	20.96	0.01	0.0586	0.242	62.0	28.34	0.30	28.36	28.84	28.76	13.90	97.69	
2/14/2023	16:50	20.76	0.00	0.0005	0.022	58.2	28.34	0.50	28.38	28.83	28.69	1.28	9.02	20.96	0.01	0.0595	0.244	62.0	28.34	0.30	28.36	28.84	28.76	14.01	98.44	
2/14/2023	16:51	20.76	0.00	0.0005	0.022	58.3	28.34	0.50	28.38	28.83	28.69	1.28	9.02	20.96	0.01	0.0583	0.241	62.1	28.34	0.30	28.36	28.84	28.76	13.87	97.44	
2/14/2023	16:52	20.76	0.00	0.0005	0.022	58.2	28.34	0.50	28.38	28.83	28.69	1.28	9.02	20.96	0.01	0.0569	0.239	61.9	28.34	0.30	28.36	28.84	28.76	13.70	96.28	
2/14/2023	16:53	20.76	0.00	0.0005	0.022	58.1	28.34	0.50	28.38	28.83	28.69	1.28	9.02	20.94	0.01	0.0560	0.237	61.8	28.34	0.30	28.36	28.84	28.76	13.59	95.53	
2/14/2023	16:54	20.76	0.00	0.0005	0.022	58.1	28.34	0.50	28.38	28.83	28.69	1.28	9.02	20.96	0.01	0.0605	0.246	61.9	28.34	0.30	28.36	28.84	28.76	14.12	99.28	
2/14/2023	16:55	20.76	0.00	0.0005	0.022	57.9	28.34	0.50	28.38	28.83	--	--	--	20.96	0.01	0.0571	0.239	62.0	28.34	0.30	28.36	28.84	28.76	13.72	96.44	
2/14/2023	16:56	20.76	0.00	0.0004	0.020	58.0	28.34	0.50	28.38	28.83	28.69	1.15	8.07	20.97	0.01	0.0586	0.242	61.8	28.34	0.30	28.36	28.84	28.76	13.90	97.72	
2/14/2023	16:57	20.76	0.00	0.0006	0.024	58.0	28.34	0.50	28.38	28.83	28.69	1.40	9.88	20.96	0.01	0.0589	0.243	61.9	28.34	0.30	28.36	28.84	28.76	13.94	97.96	
2/14/2023	16:58	20.76	0.00	0.0004	0.020	57.8	28.34	0.50	28.38	28.83	28.69	1.14	8.07	20.94	0.00	0.0585	0.242	61.9	28.34	0.30	28.36	28.84	28.76	13.89	97.63	
2/14/2023	16:59	20.76	0.00	0.0004	0.020	58.0	28.34	0.50	28.38	28.83	28.69	1.15	8.07	20.96	0.01	0.0552	0.235	61.8	28.34	0.30	28.36	28.84	28.76	13.49	94.84	
2/14/2023	17:00	20.76	0.00	0.0003	0.017	57.9	28.34	0.50	28.38	28.83	28.69	0.99	6.99	20.95	0.00	0.0580	0.241	62.0	28.34	0.30	28.36	28.84	28.76	13.83	97.20	
2/14/2023	17:01	20.59	0.00	0.0004	0.020	58.0	28.34	0.50	28.38	28.82	28.69	1.15	8.07	20.93	0.01	0.0583	0.241	62.0	28.34	0.30	28.36	28.84	28.76	13.87	97.45	
2/14/2023	17:02	20.14	0.00	0.0013	0.036	57.9	28.34	0.50	28.38	28.81	28.67	2.07	14.56	20.93	0.01	0.0575	0.240	61.8	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	17:03	19.28	0.00	0.0005	0.022	57.8	28.34	0.50	28.38	28.77	28.63	1.28	9.03	20.94	0.01	0.0592	0.243	61.9	28.34	0.30	28.36	28.84	28.76	13.97	98.21	
2/14/2023	17:04	19.42	0.00	0.0004	0.020	58.0	28.34	0.50	28.38	28.78	28.64	1.15	8.08	20.95	0.01	0.0557	0.236	61.9	28.34	0.30	28.36	28.84	28.76	13.55	95.25	
2/14/2023	17:05	18.22	0.00	0.0008	0.028	58.0	28.34	0.50	28.38	28.73	28.59	1.62	11.43	20.94	0.00	0.0599	0.245	61.9	28.34	0.30	28.36	28.84	28.76	14.05	98.78	
2/14/2023	17:06	18.13	0.00	0.0006	0.024	57.8	28.34	0.50	28.38	28.73	28.58	1.41	9.90	20.94	0.01	0.0602	0.245	61.8	28.34	0.30	28.36	28.84	28.76	14.09	99.04	
2/14/2023	17:07	16.59	0.01	0.0004	0.020	57.9	28.34	0.50	28.38	28.67	28.52	1.15	8.09	20.93	0.01	0.0564	0.237	61.8	28.34	0.30	28.36	28.84	28.76	13.64	95.86	
2/14/2023	17:08	17.77	0.01	0.0003	0.017	57.8	28.34	0.50	28.38	28.71	28.54	0.99	6.99	20.95	0.01	0.0582	0.241	61.8	28.34	0.30	28.36	28.84	28.76	13.85	97.38	
2/14/2023	17:09	14.86	0.01	0.0003	0.017	57.8	28.34	0.50	28.38	28.60	28.46	1.00	7.02	20.91	0.01	0.0556	0.236	61.7	28.34	0.30	28.36	28.84	28.76	13.54	95.19	
2/14/2023	17:10	14.35	0.01	0.0005	0.022	57.7	28.34	0.50	28.38	28.58	28.42	1.29	9.05	20.92	0.01	0.0577	0.240	61.7	28.34	0.30	28.36	28.84	28.76	13.79	96.97	
2/14/2023	17:11	14.20	0.01	0.0005	0.022	57.8	28.34	0.50	28.38	28.57	28.44	1.29	9.07	20.93	0.01	0.0585	0.242	61.8	28.34	0.30	28.36	28.84	28.76	13.89	97.63	
2/14/2023	17:12	14.53	0.01	0.0005	0.022	57.7	28.34	0.50	28.38	28.58	28.41	1.29	9.04	20.93	0.01	0.0593	0.244	61.7	28.34	0.30	28.36	28.84	28.76	13.98	98.30	
2/14/2023	17:13	15.73	0.01	0.0004	0.020	57.7	28.34	0.50	28.38	28.63	28.54	1.15	8.13	20.94	0.01	0.0596	0.244	62.1	28.34	0.30	28.36	28.84	28.76	14.02	98.51	
2/14/2023	17:14	14.81	0.01	0.0004	0.020	58.4	28.34	0.50	28.38	28.59	28.52	1.15	8.14	20.94	0.01	0.0599	0.245	64.0	28.34	0.30	28.36	28.84	28.76	14.08	98.59	
2/14/2023	17:15	14.46	0.01	0.0004	0.020	58.3	28.34	0.50	28.38	28.58	28.48	1.15	8.13	20.93	0.01	0.0557	0.236	64.0	28.34	0.30	28.36	28.84	28.76	13.58	95.07	
2/14/2023	17:16	14.12	0.01	0.0004	0.020	57.7	28.34	0.50	28.38	28.57	28.47	1.15	8.13	20.93	0.01	0.0584	0.242	62.0	28.34	0.30	28.36	28.84	28.76	13.88	97.53	
2/14/2023	17:17	14.63	0.01	0.0004	0.020	57.6	28.34	0.50	28.38	28.59	--	--	--	20.94	0.01	0.0602	0.245	61.9	28.34	0.30	28.36	28.84	28.76	14.09	99.03	
2/14/2023	17:18	15.61	0.01	0.0004	0.020	57.6	28.34	0.50	28.38	28.63	28.54	1.15	8.13	20.94	0.01	0.0648	0.255	61.7	28.34	0.30	28.36	28.84	28.76	14.62	102.76	
2/14/2023	17:19	14.27	0.02	0.0004	0.020	57.6	28.34	0.50	28.38	28.57	28.50	1.15	8.15	20.93	0.01	0.0585	0.242	61.8	28.34	0.30	28.36	28.84	28.76	13.89	97.62	
2/14/2023	17:20	15.03	0.01	0.0004	0.020	57.8	28.34	0.50	28.38	28.60	28.53	1.15	8.15	20.95	0.01	0.0564	0.237	61.7	28.34	0.30	28.36	28.84	28.76	13.63	95.87	
2/14/2023	17:21	14.28	0.01	0.0004	0.020	57.6	28.34	0.50	28.38	28.57	28.50	1.15	8.15	20.93	0.01	0.0601	0.245	62.0	28.34	0.30	28.36	28.84	28.76	14.08	98.93	
2/14/2023	17:22	13.89	0.02	0.0003	0.017	57.6	28.34	0.50	28.38	28.56	28.47	1.00	7.05	20.93	0.01	0.0603	0.246	61.7	28.34	0.30	28.36	28.84	28.76	14.10	99.13	
2/14/2023	17:23	15.02	0.02	0.0005	0.022	57.5	28.34	0.50	28.38	28.60	28.56	1.28	9.13	20.94	0.01	0.0591	0.243	61.7	28.34	0.30	28.36	28.84	28.76	13.96	98.14	
2/14/2023	17:24	15.88	0.01	0.0003	0.017	57.6	28.34	0.50	28.38	28.64	28.58	0.99	7.06	20.95	0.01	0.0597	0.244	61.8	28.34	0.30	28.36	28.84	28.76	14.03	98.63	
2/14/2023	17:25	14.35	0.02	0.0004	0.020	57.7	28.34	0.50	28.38	28.58	28.55	1.15	8.18	20.93	0.01	0.0597	0.244	61.9	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	17:26	14.68	0.01	0.0004	0.020	57.5	28.34	0.50	28.38	28.59	28.50	1.15	8.13	20.93	0.01	0.0595	0.244	61.9	28.34	0.30	28.36	28.84	28.76	14.01	98.45	
2/14/2023	17:27	15.62	0.01	0.0004	0.020	57.6	28.34	0.50	28.38	28.63	28.56	1.15	8.14	20.95	0.01	0.0603	0.246	61.8	28.34	0.30	28.36	28.84	28.76	14.10	99.12	
2/14/2023	17:28	15.39	0.01	0.0004	0.020	57.5	28.34	0.50	28.38	28.62	28.53	1.15	8.14	20.93	0.01	0.0598	0.245	61.8	28.34	0.30	28.36	28.84	28.76	14.04	98.71	
2/14/2023	17:29	15.01	0.01	0.0005	0.022	57.5	28.34	0.50	28.38	28.60	28.52	1.28	9.10	20.94	0.01	0.0580	0.241	61.8	28.34	0.30	28.36	28.84	28.76	13.83	97.21	
2/14/2023	17:30	14.15	0.02	0.0005	0.022	57.5	28.34	0.50	28.38	28.57	28.50	1.28	9.12	20.93	0.01	0.0589	0.243	61.9	28.34	0.30	28.36	28.84	28.76	13.94	97.95	
2/14/2023	17:31	16.08	0.01	0.0004	0.020	57.4	28.34	0.50	28.38	28.64	28.56	1.15	8.13	20.95	0.01	0.0594	0.244	61.9	28.34	0.30	28.36	28.84	28.76	14.00	98.36	
2/14/2023	17:32	14.30	0.02	0.0004	0.020	57.6	28.34	0.50	28.38	28.58	28.52	1.15	8.16	20.92	0.01	0.0574	0.240	61.9	28.34	0.30	28.36	28.84	28.76	13.76	96.70	
2/14/2023	17:33	16.14	0.01	0.0005	0.022	57.5	28.34	0.50	28.38	28.65	28.60	1.28	9.12	20.95	0.01	0.0600	0.245	61.8	28.34	0.30	28.36	28.84	28.76	14.06	98.87	
2/14/2023	17:34	14.65	0.02	0.0004	0.020	57.3	28.34	0.50	28.38	28.59	28.49	1.15	8.13	20.93	0.01	0.0604	0.246	61.7	28.34	0.30	28.36	28.84	28.76	14.11	99.22	
2/14/2023	17:35	15.98	0.01	0.0006	0.024	57.4	28.34	0.50	28.38	28.64	28.55	1.41	9.95	20.94	0.01	0.0589	0.243	61.9	28.34	0.30	28.36	28.84	28.76	13.94	97.96	
2/14/2023	17:36	14.32	0.02	0.0004	0.020	57.4	28.34	0.50	28.38	28.58	28.50	1.15	8.15	20.92	0.01	0.0590	0.243	61.9	28.34	0.30	28.36	28.84	28.76	13.95	98.04	
2/14/2023	17:37	15.39	0.01	0.0004	0.020	57.2	28.34	0.50	28.38	28.62	28.52	1.15	8.13	20.93	0.01	0.0591	0.243	61.8	28.34	0.30	28.36	28.84	28.76	13.96	98.14	
2/14/2023	17:38	17.00	0.01	0.0004	0.020	57.2	28.34	0.50	28.38	28.68	28.59	1.15	8.12	20.94	0.01	0.0600	0.245	61.7	28.34	0.30	28.36	28.84	28.76	14.06	98.88	
2/14/2023	17:39	15.91	0.01	0.0003	0.017	57.3	28.34	0.50	28.38	28.64	--	--	--	20.92	0.01	0.0574	0.240	61.7	28.34	0.30	28.36	28.84	28.76	13.76	96.72	
2/14/2023	17:40	14.79	0.02	0.0006	0.024	57.3	28.34	0.50	28.38	28.59	28.55	1.41	10.00	20.91	0.01	0.0628	0.251	61.9	28.34	0.30	28.36	28.84	28.76	14.39	101.15	
2/14/2023	17:41	16.33	0.01	0.0003	0.017	57.4	28.34	0.50	28.38	28.65	28.58	0.99	7.05	20.94	0.01	0.0570	0.239	61.9	28.34	0.30	28.36	28.84	28.76	13.71	96.37	
2/14/2023	17:42	15.66	0.01	0.0004	0.020	57.3	28.34	0.50	28.38	28.63	28.52	1.15	8.12	20.92	0.01	0.0642	0.253	61.8	28.34	0.30	28.36	28.84	28.76	14.55	102.28	
2/14/2023	17:43	15.75	0.01	0.0003	0.017	57.3	28.34	0.50	28.38	28.63	28.56	0.99	7.05	20.93	0.01	0.0600	0.245	61.7	28.34	0.30	28.36	28.84	28.76	14.06	98.89	
2/14/2023	17:44	16.58	0.01	0.0004	0.020	57.5	28.34	0.50	28.38	28.66	28.60	1.15	8.14	20.93	0.01	0.0588	0.242	61.9	28.34	0.30	28.36	28.84	28.76	13.92	97.88	
2/14/2023	17:45	16.58	0.01	0.0006	0.024	57.3	28.34	0.50	28.38	28.66	28.58	1.40	9.96	20.93	0.01	0.0595	0.244	61.9	28.34	0.30	28.36	28.84	28.76	14.01	98.46	
2/14/2023	17:46	16.38	0.01	0.0006	0.024	57.2	28.34	0.50	28.38	28.66	28.60	1.40	9.99	20.93	0.01	0.0583	0.241	61.7	28.34	0.30	28.36	28.84	28.76	13.86	97.47	
2/14/2023	17:47	16.05	0.01	0.0005	0.022	57.4	28.34	0.50	28.38	28.64	28.57	1.28	9.10	20.93	0.01	0.0573	0.239	61.7	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	17:48	16.37	0.01	0.0005	0.022	57.2	28.34	0.50	28.38	28.66	28.55	1.28	9.08	20.92	0.01	0.0561	0.237	61.8	28.34	0.30	28.36	28.84	28.76	13.60	95.61	
2/14/2023	17:49	16.82	0.01	0.0004	0.020	57.2	28.34	0.50	28.38	28.67	28.59	1.15	8.13	20.93	0.01	0.0605	0.246	61.9	28.34	0.30	28.36	28.84	28.76	14.12	99.28	
2/14/2023	17:50	17.53	0.01	0.0004	0.020	57.2	28.34	0.50	28.38	28.70	28.63	1.15	8.13	20.94	0.01	0.0594	0.244	61.9	28.34	0.30	28.36	28.84	28.76	14.00	98.37	
2/14/2023	17:51	19.38	0.00	0.0003	0.017	57.2	28.34	0.50	28.38	28.78	28.68	0.99	7.02	20.96	0.01	0.0614	0.248	61.8	28.34	0.30	28.36	28.84	28.76	14.23	100.02	
2/14/2023	17:52	19.90	0.00	0.0004	0.020	57.2	28.34	0.50	28.38	28.80	28.70	1.14	8.11	20.96	0.01	0.0570	0.239	61.8	28.34	0.30	28.36	28.84	28.76	13.71	96.38	
2/14/2023	17:53	19.26	0.00	0.0005	0.022	57.3	28.34	0.50	28.38	28.77	28.62	1.28	9.03	20.93	0.01	0.0582	0.241	61.9	28.34	0.30	28.36	28.84	28.76	13.85	97.38	
2/14/2023	17:54	18.37	0.01	0.0005	0.022	57.1	28.34	0.50	28.38	28.74	28.58	1.28	9.03	20.93	0.02	0.0591	0.243	61.8	28.34	0.30	28.36	28.84	28.76	13.96	98.14	
2/14/2023	17:55	19.25	0.00	0.0004	0.020	57.2	28.34	0.50	28.38	28.77	28.64	1.15	8.09	20.95	0.01	0.0590	0.243	62.0	28.34	0.30	28.36	28.84	28.76	13.95	98.04	
2/14/2023	17:56	18.46	0.01	0.0003	0.017	57.2	28.34	0.50	28.38	28.74	28.60	0.99	7.00	20.92	0.02	0.0600	0.245	62.0	28.34	0.30	28.36	28.84	28.76	14.07	98.86	
2/14/2023	17:57	17.78	0.01	0.0004	0.020	57.3	28.34	0.50	28.38	28.71	28.58	1.15	8.10	20.92	0.02	0.0588	0.242	61.9	28.34	0.30	28.36	28.84	28.76	13.92	97.88	
2/14/2023	17:58	18.94	0.01	0.0004	0.020	57.4	28.34	0.50	28.38	28.76	28.62	1.15	8.08	20.94	0.02	0.0602	0.245	62.1	28.34	0.30	28.36	28.84	28.76	14.09	99.01	
2/14/2023	17:59	18.67	0.01	0.0002	0.014	57.3	28.34	0.50	28.38	28.75	28.60	0.81	5.71	20.94	0.02	0.0621	0.249	62.0	28.34	0.30	28.36	28.84	28.76	14.31	100.57	
2/14/2023	18:00	17.37	0.01	0.0005	0.022	57.1	28.34	0.50	28.38	28.70	28.55	1.28	9.05	20.91	0.01	0.0578	0.240	61.9	28.34	0.30	28.36	28.84	28.76	13.81	97.05	
2/14/2023	18:01	15.85	0.01	0.0

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Inlet Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Outlet Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	Point in Process
	Unit	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	-
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/14/2023	18:25	19.45	0.00	0.0005	0.022	56.6	28.34	0.50	28.38	28.78	28.64	1.28	9.04	20.93	0.02	0.0665	0.258	61.5	28.34	0.30	28.36	28.84	28.76	14.80	104.14	
2/14/2023	18:26	19.55	0.00	0.0005	0.022	56.7	28.34	0.50	28.38	28.78	28.65	1.28	9.04	20.93	0.02	0.0652	0.255	61.6	28.34	0.30	28.36	28.84	28.76	14.66	103.13	
2/14/2023	18:27	19.91	0.00	0.0005	0.022	56.6	28.34	0.50	28.38	28.80	28.66	1.28	9.04	20.94	0.02	0.0638	0.253	61.4	28.34	0.30	28.36	28.84	28.77	14.50	102.03	
2/14/2023	18:28	19.83	0.00	0.0004	0.020	56.4	28.34	0.50	28.38	28.79	28.66	1.14	8.09	20.94	0.02	0.0665	0.258	61.4	28.34	0.30	28.36	28.84	28.76	14.80	104.16	
2/14/2023	18:29	19.78	0.00	0.0005	0.022	56.5	28.34	0.50	28.38	28.79	28.66	1.28	9.05	20.94	0.02	0.0639	0.253	61.4	28.34	0.30	28.36	28.84	28.77	14.51	102.11	
2/14/2023	18:30	20.05	0.00	0.0006	0.024	56.5	28.34	0.50	28.38	28.80	28.67	1.40	9.91	20.94	0.01	0.0624	0.250	61.4	28.34	0.30	28.36	28.84	28.76	14.34	100.90	
2/14/2023	18:31	19.78	0.00	0.0006	0.024	56.4	28.34	0.50	28.38	28.79	28.66	1.40	9.91	20.94	0.02	0.0624	0.250	61.4	28.34	0.30	28.36	28.84	28.77	14.34	100.90	
2/14/2023	18:32	19.60	0.00	0.0004	0.020	56.6	28.34	0.50	28.38	28.78	28.65	1.14	8.09	20.94	0.02	0.0634	0.252	61.3	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	18:33	19.94	0.00	0.0014	0.037	56.4	28.34	0.50	28.38	28.80	28.67	2.14	15.14	20.95	0.02	0.0634	0.252	61.5	28.34	0.30	28.36	28.84	28.77	14.45	101.71	
2/14/2023	18:34	20.42	0.00	0.0005	0.022	56.4	28.34	0.50	28.38	28.82	28.68	1.28	9.04	20.97	0.01	0.0619	0.249	61.3	28.34	0.30	28.36	28.84	28.77	14.28	100.53	
2/14/2023	18:35	20.46	0.00	0.0005	0.022	56.4	28.34	0.50	28.38	28.82	28.69	1.28	9.04	20.95	0.02	0.0852	0.292	61.2	28.34	0.30	28.36	28.84	28.77	16.75	117.95	
2/14/2023	18:36	20.54	0.00	0.0004	0.020	56.3	28.34	0.50	28.38	28.82	28.69	1.14	8.09	20.95	0.01	0.0642	0.253	61.3	28.34	0.30	28.36	28.84	28.77	14.54	102.38	
2/14/2023	18:37	16.76	0.00	0.0005	0.022	56.4	28.34	0.50	28.38	28.67	28.55	1.28	9.07	20.65	0.01	0.0643	0.254	61.4	28.34	0.30	28.36	28.83	28.75	14.56	102.45	
2/14/2023	18:38	10.39	0.00	0.0011	0.033	56.6	28.34	0.50	28.38	28.42	28.29	1.91	13.51	20.78	0.01	0.0665	0.258	61.4	28.34	0.30	28.36	28.83	28.76	14.80	104.18	
2/14/2023	18:39	14.60	0.00	0.0004	0.020	56.4	28.34	0.50	28.38	28.58	28.46	1.15	8.13	20.95	0.02	0.0819	0.286	61.3	28.34	0.30	28.36	28.84	28.77	16.42	115.63	
2/14/2023	18:40	14.10	0.00	0.0004	0.020	56.2	28.34	0.50	28.38	28.56	28.42	1.15	8.12	20.93	0.02	0.0631	0.251	61.2	28.34	0.30	28.36	28.84	28.77	14.41	101.51	
2/14/2023	18:41	13.73	0.00	0.0004	0.020	56.3	28.34	0.50	28.38	28.55	28.46	1.15	8.15	20.93	0.02	0.0639	0.253	61.4	28.34	0.30	28.36	28.84	28.77	14.51	102.13	
2/14/2023	18:42	13.21	0.00	0.0006	0.024	56.4	28.34	0.50	28.38	28.53	28.41	1.41	9.96	20.91	0.02	0.0633	0.252	61.4	28.34	0.30	28.36	28.84	28.77	14.44	101.66	
2/14/2023	18:43	12.63	0.00	0.0004	0.020	56.5	28.34	0.50	28.38	28.51	28.38	1.15	8.14	20.92	0.01	0.0633	0.252	61.3	28.34	0.30	28.36	28.84	28.77	14.44	101.67	
2/14/2023	18:44	17.82	0.00	0.0002	0.014	56.3	28.34	0.50	28.38	28.71	28.58	0.81	5.73	20.96	0.02	0.0636	0.252	61.3	28.34	0.30	28.36	28.84	28.77	14.47	101.90	
2/14/2023	18:45	16.69	0.00	0.0004	0.020	56.4	28.34	0.50	28.38	28.67	--	--	--	20.95	0.02	0.0664	0.258	61.2	28.34	0.30	28.36	28.84	28.77	14.78	104.13	
2/14/2023	18:46	16.18	0.00	0.0004	0.020	56.4	28.34	0.50	28.38	28.65	28.48	1.15	8.09	20.95	0.01	0.0661	0.257	61.4	28.34	0.30	28.36	28.84	28.77	14.75	103.89	
2/14/2023	18:47	14.28	0.00	0.0006	0.024	56.2	28.34	0.50	28.38	28.57	28.40	1.41	9.92	20.95	0.02	0.0629	0.251	61.5	28.34	0.30	28.36	28.84	28.77	14.39	101.33	
2/14/2023	18:48	8.47	-0.01	0.0004	0.020	56.3	28.34	0.50	28.38	28.34	28.21	1.15	8.16	20.91	0.02	0.0671	0.259	61.4	28.34	0.30	28.36	28.84	28.77	14.86	104.68	
2/14/2023	18:49	9.29	0.00	0.0005	0.022	56.3	28.34	0.50	28.38	28.37	28.25	1.29	9.12	20.92	0.02	0.0651	0.255	61.3	28.34	0.30	28.36	28.84	28.77	14.64	103.12	
2/14/2023	18:50	13.97	0.00	0.0005	0.022	56.4	28.34	0.50	28.38	28.56	28.43	1.28	9.09	20.94	0.02	0.0653	0.256	61.6	28.34	0.30	28.36	28.84	28.77	14.67	103.25	
2/14/2023	18:51	12.30	0.00	0.0005	0.022	56.3	28.34	0.50	28.38	28.49	28.33	1.29	9.07	20.93	0.01	0.0657	0.256	61.3	28.34	0.30	28.36	28.84	28.77	14.71	103.60	
2/14/2023	18:52	16.15	0.00	0.0004	0.020	56.3	28.34	0.50	28.38	28.65	28.57	1.15	8.15	20.95	0.01	0.0622	0.249	61.5	28.34	0.30	28.36	28.84	28.77	14.31	100.79	
2/14/2023	18:53	16.38	0.00	0.0004	0.020	56.4	28.34	0.50	28.38	28.66	28.49	1.15	8.09	20.94	0.02	0.0644	0.254	61.5	28.34	0.30	28.36	28.84	28.77	14.56	102.56	
2/14/2023	18:54	17.23	0.00	0.0005	0.022	56.2	28.34	0.50	28.38	28.69	28.56	1.28	9.06	20.95	0.02	0.0655	0.256	61.2	28.34	0.30	28.36	28.84	28.77	14.68	103.46	
2/14/2023	18:55	16.77	0.00	0.0005	0.022	56.3	28.34	0.50	28.38	28.67	28.54	1.28	9.07	20.94	0.01	0.0661	0.257	61.5	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	18:56	15.95	0.00	0.0003	0.017	56.3	28.34	0.50	28.38	28.64	28.51	0.99	7.03	20.93	0.02	0.0624	0.250	61.5	28.34	0.30	28.36	28.84	28.77	14.34	100.96	
2/14/2023	18:57	16.85	0.00	0.0004	0.020	56.3	28.34	0.50	28.38	28.67	28.55	1.15	8.11	20.94	0.02	0.0643	0.254	61.4	28.34	0.30	28.36	28.84	28.77	14.55	102.49	
2/14/2023	18:58	16.61	0.00	0.0004	0.020	56.4	28.34	0.50	28.38	28.66	28.54	1.15	8.11	20.93	0.01	0.0627	0.250	61.5	28.34	0.30	28.36	28.84	28.77	14.37	101.21	
2/14/2023	18:59	16.74	0.00	0.0004	0.020	56.5	28.34	0.50	28.38	28.67	28.54	1.15	8.11	20.92	0.01	0.0634	0.252	61.4	28.34	0.30	28.36	28.84	28.77	14.45	101.78	
2/14/2023	19:00	17.29	0.00	0.0004	0.020	56.5	28.34	0.50	28.38	28.69	28.56	1.15	8.11	20.93	0.01	0.0639	0.253	61.5	28.34	0.30	28.36	28.84	28.77	14.51	102.17	
2/14/2023	19:01	16.94	0.00	0.0004	0.020	56.4	28.34	0.50	28.38	28.68	28.56	1.15	8.11	20.92	0.01	0.0664	0.258	61.5	28.34	0.30	28.36	28.84	28.77	14.79	104.16	
2/14/2023	19:02	17.06	0.00	0.0004	0.020	56.4	28.34	0.50	28.38	28.68	28.56	1.15	8.11	20.92	0.01	0.0631	0.251	61.5	28.34	0.30	28.36	28.84	28.77	14.42	101.53	
2/14/2023	19:03	16.83	0.00	0.0002	0.014	56.5	28.34	0.50	28.38	28.67	28.55	0.81	5.74	20.92	0.01	0.0624	0.250	61.6	28.34	0.30	28.36	28.84	28.77	14.34	100.96	
2/14/2023	19:04	16.66	0.00	0.0006	0.024	56.5	28.34	0.50	28.38	28.67	28.54	1.40	9.94	20.91	0.01	0.0620	0.249	61.6	28.34	0.30	28.36	28.84	28.77	14.29	100.64	
2/14/2023	19:05	16.83	0.00	0.0005	0.022	56.4	28.34	0.50	28.38	28.67	28.55	1.28	9.07	20.92	0.02	0.0602	0.245	61.5	28.34	0.30	28.36	28.84	28.78	14.08	99.18	
2/14/2023	19:06	15.44	0.00	0.0003	0.017	56.6	28.34	0.50	28.38	28.62	28.50	0.99	7.03	20.89	0.01	0.0607	0.246	61.7	28.34	0.30	28.36	28.84	28.77	14.14	99.58	
2/14/2023	19:07	16.59	0.00	0.0002	0.014	56.6	28.34	0.50	28.38	28.66	--	--	--	20.92	0.01	0.0625	0.250	61.7	28.34	0.30	28.36	28.84	28.77	14.35	101.05	
2/14/2023	19:08	16.48	0.00	0.0003	0.017	56.5	28.34	0.50	28.38	28.66	28.54	0.99	7.03	20.91	0.01	0.0596	0.244	61.7	28.34	0.30	28.36	28.84	28.77	14.01	98.67	
2/14/2023	19:09	17.35	0.00	0.0004	0.020	56.6	28.34	0.50	28.38	28.69	28.57	1.15	8.11	20.93	0.01	0.0622	0.249	61.6	28.34	0.30	28.36	28.84	28.77	14.31	100.81	
2/14/2023	19:10	17.17	0.00	0.0004	0.020	56.6	28.34	0.50	28.38	28.69	28.53	1.15	8.09	20.91	0.01	0.0652	0.255	61.7	28.34	0.30	28.36	28.84	28.77	14.66	103.21	
2/14/2023	19:11	17.75	0.00	0.0003	0.017	56.4	28.34	0.50	28.38	28.71	28.59	0.99	7.02	20.93	0.01	0.0654	0.256	61.7	28.34	0.30	28.36	28.84	28.77	14.68	103.36	
2/14/2023	19:12	18.16	0.00	0.0003	0.017	56.5	28.34	0.50	28.38	28.73	28.60	0.99	7.02	20.92	0.01	0.0649	0.255	61.8	28.34	0.30	28.36	28.84	28.77	14.62	102.96	
2/14/2023	19:13	17.36	0.00	0.0004	0.020	56.5	28.34	0.50	28.38	28.69	28.57	1.15	8.11	20.92	0.01	0.0611	0.247	62.0	28.34	0.30	28.36	28.84	28.77	14.19	99.88	
2/14/2023	19:14	17.29	0.00	0.0005	0.022	56.7	28.34	0.50	28.38	28.69	28.57	1.28	9.06	20.93	0.01	0.0620	0.249	61.9	28.34	0.30	28.36	28.84	28.78	14.29	100.62	
2/14/2023	19:15	17.05	0.00	0.0004	0.020	56.7	28.34	0.50	28.38	28.68	28.56	1.15	8.11	20.92	0.01	0.0633	0.252	62.0	28.34	0.30	28.36	28.84	28.77	14.45	101.66	
2/14/2023	19:16	16.50	0.00	0.0006	0.024	56.7	28.34	0.50	28.38	28.66	28.54	1.40	9.94	20.92	0.01	0.0647	0.254	62.1	28.34	0.30	28.36	28.84	28.77	14.61	102.77	
2/14/2023	19:17	16.50	0.00	0.0004	0.020	56.7	28.34	0.50	28.38	28.66	28.54	1.15	8.11	20.90	0.01	0.0660	0.257	61.8	28.34	0.30	28.36	28.84	28.77	14.75	103.83	
2/14/2023	19:18	16.78	0.00	0.0005	0.022	56.8	28.34	0.50	28.38	28.67	28.55	1.28	9.07	20.93	0.01	0.0616	0.248	62.0	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	19:19	16.51	0.00	0.0006	0.024	56.8	28.34	0.50	28.38	28.66	28.54	1.40	9.93	20.92	0.01	0.0632	0.251	61.9	28.34	0.30	28.36	28.84	28.77	14.43	101.59	
2/14/2023	19:20	17.00	0.00	0.0003	0.017	56.7	28.34	0.50	28.38	28.68	28.56	0.99	7.02	20.92	0.00	0.0672	0.259	61.9	28.34	0.30	28.36	28.84	28.77	14.88	104.76	
2/14/2023	19:21	16.54	0.00	0.0006	0.024	56.8	28.34	0.50	28.38	28.66	28.54	1.40	9.94	20.92	0.01	0.0652	0.255	62.0	28.34	0.30	28.36	28.84	28.77	14.66	103.18	
2/14/2023	19:22	17.16	0.00	0.0004	0.020	56.9	28.34	0.50	28.38	28.69	28.57	1.15	8.11	20.92	0.01	0.0594	0.244	62.0	28.34	0.30	28.36	28.84	28.78	13.99	98.48	
2/14/2023	19:23	15.72	0.00	0.0003	0.017	57.0	28.34	0.50	28.38	28.63	28.50	0.99	7.03	20.90	0.01	0.0615	0.248	62.0	28.34	0.30	28.36	28.84	28.77	14.24	100.21	
2/14/2023	19:24	15.81	0.00	0.0004	0.020	56.8	28.34	0.50	28.38	28.63	28.51	1.15	8.11	20.92	0.01	0.0613	0.248	62.1	28.34	0.30	28.36	28.84	28.77	14.22	100.04	
2/14/2023	19:25	16.73	0.00	0.0003	0.017	56.9	28.34	0.50	28.38	28.67	28.55	0.99	7.02	20.92	0.01	0.0629	0.251	61.9	28.34	0.30	28.36	28.84	28.77	14.40	101.35	
2/14/2023	19:26	16.93	0.00	0.0005	0.022	56.9	28.34	0.50	28.38	28.68	28.54	1.28	9.06	20.93	0.01	0.0629	0.251	62.1	28.34	0.30	28.36	28.84	28.78	14.40	101.33	
2/14/2023	19:27	16.96	0.00	0.0005	0.022	57.0	28.34	0.50	28.38	28.68	28.54	1.28	9.06	20.93	0.01	0.0587	0.242	62.1	28.34	0.30	28.36	28.84	28.78	13.91	97.89	
2/14/2023	19:28	16.69	0.00	0.0003	0.017	56.9	28.34	0.50	28.38	28.67	28.54	0.99	7.02	20.92	0.01	0.0610	0.247	62.0	28.34	0.30	28.36	28.84	28.77	14.18	99.79	
2/14/2023	19:29	17.22	0.00	0.0004	0.020	56.8	28.34	0.50	28.38	28.69	--	--	--	20.92	0.00	0.0610	0.247	62.0	28.34	0.30	28.36	28.84	28.77	14.18	99.80	
2/14/2023	19:30	17.39	0.00	0.0004	0.020	57.1	28.34	0.50	28.38	28.70	28.57	1.15	8.10	20.92	0.01	0.0617	0.248	62.1	28.34	0.30	28.36	28.84	28.77	14.26	100.36	
2/14/2023	19:31	18.73	0.00	0.0004	0.020	57.0	28.34	0.50	28.38	28.75	28.62	1.15	8.10	20.95	0.01	0.0618	0.249	62.1	28.34	0.30	28.36	28.84	28.78	14.27	100.44	
2/14/2023	19:32	18.27	0.00	0.0005	0.022	56.9	28.34	0.50	28.38	28.73	28.60	1.28	9.06	20.93	0.01	0.0609	0.247	62.1	28.34	0.30	28.36	28.84	28.78	14.17	99.71	
2/14/2023	19:33	18.40	0.00	0.0003	0.017	56.9	28.34	0.50	28.38	28.74	28.61	0.99	7.01	20.94	0.01	0.0638	0.253	62.1	28.34	0.30	28.36	28.84	28.78	14.50	102.05	
2/14/2023	19:34	18.41	0.00	0.0005	0.022	57.1	28.34	0.50	28.38	28.74	28.60	1.28	9.05	20.94	0.01	0.0610	0.247	62.1	28.34	0.30	28.36	28.84	28.78	14.18	99.79	
2/14/2023	19:35	18.14	0.00	0.0004	0.020	57.0	28.34	0.50	28.38	28.73	28.60	1.15	8.10	20.93	0.01	0.0624	0.250	62.2	28.34	0.30	28.36	28.84	28.77	14.34	100.92	
2/14/2023	19:36	18.51	0.00	0.0007	0.026	57.0	28.34	0.50	28.38	28.74	28.62	1.52	10.71	20.94	0.01	0.0616	0.248	62.1	28.34	0.30	28.36	28.84	28.78	14.25	100.27	
2/14/2023	19:37	19.03	0.00	0.0005	0.022	57.1	28.34	0.50	28.38	28.76	28.64	1.28	9.05	20.96	0.00	0.0605	0.246	62.2	28.34	0.30	28.36	28.84	28.77	14.12	99.37	
2/14/2023	19:38	18.42	0.00	0.0005	0.022	57.1	28.34	0.50	28.38	28.74	28.61	1.28	9.05	20.94	0.01	0.0616	0.248	62.2	28.34	0.30	28.36	28.84	28.78	14.25	100.27	
2/14/2023	19:39	18.79	0.00	0.0005	0.022	57.0	28.34	0.50	28.38	28.75	28.62	1.28	9.05	20.95	0.01	0.0610	0.247	62.2	28.34	0.30	28.36	28.84	28.78	14.18	99.78	
2/14/2023	19:40	18.72	0.00	0.0003	0.017	57.0	28.34	0.50	28.38	28.75	28.62	0.99	7.01	20.94	0.01	0.0606	0.246	62.3	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	19:41	18.13	-0.01	0.0005	0.022	57.1	28.34	0.50	28.38	28.72	28.59	1.28	9.05	20.92	0.01	0.0623	0.250	62.3	28.34	0.30	28.36	28.84	28.78	14.33	100.84	
2/14/2023	19:42	18.79	-0.01	0.0003	0.017	57.0	28.34	0.50	28.38	28.75	28.62	0.99	7.01	20.95	0.01	0.0666	0.258	62.3	28.34	0.30	28.36	28.84	28.78	14.82	104.25	
2/14/2023	19:43	18.75	-0.01	0.0004	0.020	57.1	28.34	0.50	28.38	28.75	28.62	1.15	8.10	20.94	0.01	0.0618	0.249	62.3	28.34	0.30	28.36	28.84	28.78	14.28	100.42	
2/14/2023	19:44	19.33	-0.01	0.0004	0.020	57.0	28.34	0.50	28.38	28.77	28.63	1.15	8.08	20.96	0.01	0.0623	0.250	62.2	28.34	0.30	28.36	28.84	28.78	14.33	100.83	
2/14/2023	19:45	19.33	0.00	0.0006	0.024	57.0	28.34	0.50	28.38	28.77	28.65	1.40	9.91	20.95	0.01	0.0626	0.250	62.4	28.34	0.30	28.36	28.84	28.78	14.37	101.06	
2/14/2023	19:46	19.56	0.00	0.0005	0.022	57.1	28.34	0.50	28.38	28.78	28.66	1.28	9.05	20.96	0.01	0.0610	0.247	62.4	28.34	0.30	28.36	28.84	28.78	14.19	99.76	
2/14/2023	19:47	19.60	0.00	0.0005	0.022	57.0	28.34	0.50	28.38	28.78	28.66	1.28	9.05	20.96	0.01	0.0617	0.248	62.3	28.34	0.30	28.36	28.84	28.78	14.27	100.33	
2/14/2023	19:48	19.43	0.00	0.0006	0.024	57.1	28.34	0.50	28.38	28.78	28.65	1.40	9.91	20.96	0.01	0.0592	0.243	62.5	28.34	0.30	28.36	28.84	28.78	13.98	98.27	
2/14/2023	19:49	19.42	0.00	0.0005	0.022	57.1	28.34	0.50	28.38	28.78	28.66	1.28	9.05	20.96	0.01	0.0659	0.257	62.4	28.34	0.30	28.36	28.84	28.78	14.74	103.69	
2/14/2023	19:50	19.25	0.00	0.0006	0.024	57.0	28.34	0.50	28.38	28.77	28.66	1.40	9.92	20.96	0.01	0.0601	0.245	62.3	28.34	0.30	28.36	28.84	28.78	14.08	99.02	
2/14/2023	19:51	19.31	-0.01	0.0005	0.022	57.0	28.34	0.50	28.38	28.77	--	--	--	20.96	0.02	0.0608	0.247	62.4	28.34	0.30	28.36	28.84	28.78	14.16	99.60	
2/14/2023	19:52	19.05	0.00	0.0004	0.020	57.1	28.34	0.50	28.38	28.76	28.64	1.15	8.10	20.95	0.01	0.0603	0.246	62.2	28.34	0.30	28.36	28.84	28.78	14.10	99.20	
2/14/2023	19:53	20.06	0.00	0.0006	0.024	57.2	28.34	0.50	28.38	28.80	28.68	1.40	9.91	20.99	0.01	0.0588	0.242	62.4	28.34	0.30	28.36	28.84	28.78	13.93	97.94	
2/14/2023	19:54	20.49	0.00	0.0005	0.022	57.2	28.34	0.50	28.38	28.82	28.70	1.28	9.04	21.00	0.01	0.0634	0.252	62.3	28.34	0.30	28.36	28.84	28.78	14.46	101.71	
2/14/2023	19:55	20.54	0.00	0.0006	0.024	57.0	28.34	0.50	28.38	28.82	28.70	1.40	9.91	21.00	0.01	0.0612	0.247	62.3	28.34	0.30	28.36	28.84	28.78	14.21	99.93	
2/14/2023	19:56	20.51	0.00	0.0004	0.020	57.0	28.34	0.50	28.38	28.82	28.69	1.14	8.09	21.01	0.01	0.0591	0.243	62.2	28.34	0.30	28.36	28.84	28.78	13.96	98.20	
2/14/2023	19:57	20.48	0.00	0.0004	0.020	57.2	28.34	0.50	28.38	28.82	28.70	1.14	8.09	21.01	0.01	0.0610	0.247	62.4	28.34	0.30	28.36	28.84	28.78	14.18	99.75	
2/14/2023	19:58	20.59	0.00	0.0005	0.022	57.1	28.34	0.50	28.38	28.82	28.71	1.28	9.05	21.00	0.01	0.0598	0.245	62.5	28.34	0.30	28.36	28.84	28.78	14.05	98.76	
2/14/2023	19:59	20.70	0.00	0.0005	0.022	57.1

Alliance SOURCE TESTING

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	-
	Status	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	Valid
		Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	
2/14/2023	20:23	20.51	0.00	0.0006	0.024	57.2	28.34	0.50	28.38	28.82	28.70	1.40	9.91	21.03	0.01	0.0594	0.244	62.8	28.34	0.30	28.36	28.84	28.78	14.00	98.39	
2/14/2023	20:24	20.42	0.00	0.0006	0.024	57.2	28.34	0.50	28.38	28.82	28.70	1.40	9.91	21.03	0.02	0.0581	0.241	62.5	28.34	0.30	28.36	28.84	28.78	13.84	97.35	
2/14/2023	20:25	20.09	0.00	0.0006	0.024	57.3	28.34	0.50	28.38	28.80	28.68	1.40	9.91	21.02	0.01	0.0599	0.245	62.7	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	20:26	20.34	0.00	0.0007	0.026	57.1	28.34	0.50	28.38	28.81	28.69	1.51	10.70	21.03	0.01	0.0590	0.243	62.7	28.34	0.30	28.36	28.84	28.78	13.95	98.06	
2/14/2023	20:27	20.12	0.00	0.0006	0.024	57.2	28.34	0.50	28.38	28.80	28.68	1.40	9.91	21.03	0.02	0.0600	0.245	62.7	28.34	0.30	28.36	28.84	28.78	14.07	98.90	
2/14/2023	20:28	20.12	0.00	0.0007	0.026	57.2	28.34	0.50	28.38	28.80	28.68	1.51	10.70	21.03	0.02	0.0578	0.240	62.7	28.34	0.30	28.36	28.84	28.78	13.81	97.07	
2/14/2023	20:29	19.90	0.00	0.0005	0.022	57.1	28.34	0.50	28.38	28.80	28.68	1.28	9.05	21.04	0.02	0.0581	0.241	62.6	28.34	0.30	28.36	28.84	28.78	13.85	97.33	
2/14/2023	20:30	20.14	0.00	0.0005	0.022	57.3	28.34	0.50	28.38	28.81	28.68	1.28	9.04	21.03	0.01	0.0584	0.242	62.6	28.34	0.30	28.36	28.84	28.78	13.88	97.58	
2/14/2023	20:31	20.29	0.00	0.0006	0.024	57.3	28.34	0.50	28.38	28.81	28.69	1.40	9.91	21.04	0.02	0.0649	0.255	62.6	28.34	0.30	28.36	28.84	28.78	14.63	102.86	
2/14/2023	20:32	20.54	0.00	0.0006	0.024	57.1	28.34	0.50	28.38	28.82	28.70	1.40	9.91	21.04	0.02	0.0616	0.248	62.5	28.34	0.30	28.36	28.84	28.78	14.26	100.22	
2/14/2023	20:33	20.66	0.00	0.0006	0.024	57.1	28.34	0.50	28.38	28.83	28.71	1.40	9.91	21.03	0.02	0.0620	0.249	62.6	28.34	0.30	28.36	28.84	28.78	14.30	100.53	
2/14/2023	20:34	20.72	0.00	0.0005	0.022	57.1	28.34	0.50	28.38	28.83	28.71	1.28	9.04	21.03	0.02	0.0611	0.247	62.8	28.34	0.30	28.36	28.84	28.78	14.20	99.78	
2/14/2023	20:35	20.74	0.00	0.0005	0.022	57.2	28.34	0.50	28.38	28.83	--	--	--	21.03	0.02	0.0598	0.245	62.8	28.34	0.30	28.36	28.84	28.78	14.05	98.72	
2/14/2023	20:36	20.74	0.00	0.0007	0.026	57.1	28.34	0.50	28.38	28.83	28.71	1.51	10.70	21.03	0.02	0.0596	0.244	62.8	28.34	0.30	28.36	28.84	28.78	14.03	98.55	
2/14/2023	20:37	20.70	0.00	0.0004	0.020	57.0	28.34	0.50	28.38	28.83	28.70	1.14	8.09	21.04	0.02	0.0625	0.250	62.7	28.34	0.30	28.36	28.84	28.78	14.36	100.92	
2/14/2023	20:38	20.56	0.00	0.0005	0.022	57.2	28.34	0.50	28.38	28.82	28.70	1.28	9.04	21.04	0.02	0.0595	0.244	62.6	28.34	0.30	28.36	28.84	28.78	14.01	98.49	
2/14/2023	20:39	20.57	0.00	0.0007	0.026	57.0	28.34	0.50	28.38	28.82	28.70	1.51	10.70	21.04	0.02	0.0603	0.246	62.7	28.34	0.30	28.36	28.84	28.78	14.11	99.15	
2/14/2023	20:40	20.62	0.00	0.0005	0.022	57.2	28.34	0.50	28.38	28.82	28.70	1.28	9.04	21.04	0.02	0.0631	0.251	62.5	28.34	0.30	28.36	28.84	28.78	14.43	101.44	
2/14/2023	20:41	20.35	0.00	0.0004	0.020	57.0	28.34	0.50	28.38	28.81	28.69	1.14	8.09	21.04	0.02	0.0609	0.247	62.4	28.34	0.30	28.36	28.84	28.78	14.17	99.66	
2/14/2023	20:42	20.27	0.00	0.0005	0.022	57.0	28.34	0.50	28.38	28.81	28.69	1.28	9.04	21.04	0.02	0.0584	0.242	62.4	28.34	0.30	28.36	28.84	28.78	13.88	97.59	
2/14/2023	20:43	20.35	0.00	0.0006	0.024	57.1	28.34	0.50	28.38	28.81	28.69	1.40	9.91	21.04	0.02	0.0585	0.242	62.4	28.34	0.30	28.36	28.84	28.78	13.89	97.67	
2/14/2023	20:44	20.54	0.00	0.0005	0.022	57.1	28.34	0.50	28.38	28.82	28.70	1.28	9.04	21.04	0.02	0.0608	0.247	62.4	28.34	0.30	28.36	28.84	28.78	14.16	99.57	
2/14/2023	20:45	20.32	0.00	0.0007	0.026	57.1	28.34	0.50	28.38	28.81	28.69	1.51	10.70	21.04	0.02	0.0609	0.247	62.5	28.34	0.30	28.36	28.84	28.78	14.17	99.65	
2/14/2023	20:46	20.34	0.00	0.0006	0.024	57.1	28.34	0.50	28.38	28.81	28.69	1.40	9.91	21.05	0.02	0.0601	0.245	62.4	28.34	0.30	28.36	28.85	28.78	14.08	99.00	
2/14/2023	20:47	20.32	0.00	0.0005	0.022	56.8	28.34	0.50	28.38	28.81	28.69	1.28	9.05	21.04	0.02	0.0618	0.249	62.4	28.34	0.30	28.36	28.84	28.78	14.28	100.38	
2/14/2023	20:48	20.49	0.00	0.0006	0.024	57.1	28.34	0.50	28.38	28.82	28.70	1.40	9.91	21.05	0.02	0.0595	0.244	62.3	28.34	0.30	28.36	28.85	--	--	--	
2/14/2023	20:49	20.65	0.00	0.0006	0.024	57.0	28.34	0.50	28.38	28.83	28.70	1.40	9.90	21.04	0.02	0.0636	0.252	62.4	28.34	0.30	28.36	28.84	28.78	14.48	101.83	
2/14/2023	20:50	20.71	0.00	0.0006	0.024	57.0	28.34	0.50	28.38	28.83	28.70	1.40	9.90	21.04	0.02	0.0609	0.247	62.4	28.34	0.30	28.36	28.84	28.78	14.17	99.65	
2/14/2023	20:51	20.64	0.00	0.0006	0.024	57.0	28.34	0.50	28.38	28.83	28.70	1.40	9.91	21.04	0.02	0.0574	0.240	62.4	28.34	0.30	28.36	28.84	28.78	13.76	96.75	
2/14/2023	20:52	20.51	0.00	0.0005	0.022	56.8	28.34	0.50	28.38	28.82	28.70	1.28	9.05	21.05	0.02	0.0666	0.258	62.4	28.34	0.30	28.36	28.85	28.78	14.82	104.21	
2/14/2023	20:53	20.12	0.00	0.0005	0.022	57.0	28.34	0.50	28.38	28.80	28.68	1.28	9.05	21.04	0.02	0.0600	0.245	62.5	28.34	0.30	28.36	28.84	28.78	14.07	98.91	
2/14/2023	20:54	20.16	0.00	0.0006	0.024	57.0	28.34	0.50	28.38	28.81	28.68	1.40	9.91	21.04	0.02	0.0617	0.248	62.5	28.34	0.30	28.36	28.84	28.78	14.27	100.30	
2/14/2023	20:55	20.50	0.00	0.0005	0.022	56.9	28.34	0.50	28.38	28.82	28.70	1.28	9.04	21.04	0.02	0.0611	0.247	62.6	28.34	0.30	28.36	28.84	28.78	14.20	99.80	
2/14/2023	20:56	20.69	0.00	0.0005	0.022	56.8	28.34	0.50	28.38	28.83	28.70	1.28	9.04	21.03	0.02	0.0593	0.244	62.5	28.34	0.30	28.36	28.84	28.78	13.99	98.32	
2/14/2023	20:57	20.73	0.00	0.0005	0.022	56.9	28.34	0.50	28.38	28.83	--	--	--	21.03	0.02	0.0637	0.252	62.3	28.34	0.30	28.36	28.84	28.78	14.49	101.92	
2/14/2023	20:58	20.74	0.00	0.0005	0.022	56.9	28.34	0.50	28.38	28.83	28.71	1.28	9.04	21.03	0.02	0.0607	0.246	62.3	28.34	0.30	28.36	28.84	28.78	14.15	99.49	
2/14/2023	20:59	20.75	0.00	0.0006	0.024	56.9	28.34	0.50	28.38	28.83	28.71	1.40	9.90	21.03	0.02	0.0605	0.246	62.2	28.34	0.30	28.36	28.84	28.78	14.12	99.34	
2/14/2023	21:00	20.75	0.00	0.0005	0.022	57.0	28.34	0.50	28.38	28.83	28.71	1.28	9.04	21.02	0.01	0.0600	0.245	62.2	28.34	0.30	28.36	28.84	28.78	14.07	98.93	
2/14/2023	21:01	20.75	0.00	0.0005	0.022	56.8	28.34	0.50	28.38	28.83	28.71	1.28	9.04	21.02	0.02	0.0598	0.245	62.4	28.34	0.30	28.36	28.84	28.78	14.04	98.75	
2/14/2023	21:02	20.75	0.00	0.0006	0.024	56.9	28.34	0.50	28.38	28.83	28.71	1.40	9.91	21.03	0.02	0.0630	0.251	62.4	28.34	0.30	28.36	28.84	28.78	14.41	101.36	
2/14/2023	21:03	20.75	0.00	0.0005	0.022	56.8	28.34	0.50	28.38	28.83	28.71	1.28	9.05	21.03	0.02	0.0617	0.248	64.0	28.34	0.30	28.36	28.84	28.78	14.29	100.15	
2/14/2023	21:04	20.76	0.00	0.0006	0.024	56.8	28.34	0.50	28.38	28.83	28.71	1.40	9.91	21.03	0.02	0.0592	0.243	65.5	28.34	0.30	28.36	28.84	28.78	14.02	97.96	
2/14/2023	21:05	20.75	0.00	0.0004	0.020	57.1	28.34	0.50	28.38	28.83	28.71	1.14	8.09	21.03	0.02	0.0619	0.249	65.8	28.34	0.30	28.36	28.84	28.78	14.34	100.14	
2/14/2023	21:06	20.75	0.00	0.0005	0.022	57.0	28.34	0.50	28.38	28.83	28.71	1.28	9.04	21.03	0.01	0.0601	0.245	65.8	28.34	0.30	28.36	28.84	28.78	14.13	98.68	
2/14/2023	21:07	20.76	0.00	0.0003	0.017	57.1	28.34	0.50	28.38	28.83	28.71	0.99	7.00	21.03	0.02	0.0605	0.246	65.9	28.34	0.30	28.36	28.84	28.78	14.17	98.98	
2/14/2023	21:08	20.76	0.00	0.0006	0.024	57.0	28.34	0.50	28.38	28.83	28.71	1.40	9.90	21.04	0.01	0.0587	0.242	65.6	28.34	0.30	28.36	28.84	28.78	13.96	97.54	
2/14/2023	21:09	20.75	0.00	0.0005	0.022	57.0	28.34	0.50	28.38	28.83	28.71	1.28	9.04	21.03	0.01	0.0588	0.242	65.9	28.34	0.30	28.36	28.84	28.78	13.97	97.60	
2/14/2023	21:10	20.76	0.00	0.0005	0.022	57.1	28.34	0.50	28.38	28.83	28.71	1.28	9.04	21.05	0.02	0.0621	0.249	66.5	28.34	0.30	28.36	28.85	28.78	14.37	100.23	
2/14/2023	21:11	20.76	0.00	0.0004	0.020	57.1	28.34	0.50	28.38	28.83	28.71	1.14	8.09	21.04	0.02	0.0615	0.248	66.5	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	21:12	20.76	0.00	0.0005	0.022	57.0	28.34	0.50	28.38	28.83	28.71	1.28	9.04	21.04	0.02	0.0593	0.244	66.2	28.34	0.30	28.36	28.84	28.78	14.04	97.98	
2/14/2023	21:13	20.76	0.00	0.0005	0.022	57.0	28.34	0.50	28.38	28.83	28.71	1.28	9.04	21.04	0.02	0.0620	0.249	66.3	28.34	0.30	28.36	28.84	28.78	14.35	100.17	
2/14/2023	21:14	20.76	0.00	0.0005	0.022	57.0	28.34	0.50	28.38	28.83	28.71	1.28	9.04	21.04	0.02	0.0585	0.242	66.4	28.34	0.30	28.36	28.84	28.78	13.94	97.30	
2/14/2023	21:15	20.60	0.00	0.0004	0.020	57.1	28.34	0.50	28.38	28.82	28.70	1.14	8.09	21.03	0.02	0.0575	0.240	65.4	28.34	0.30	28.36	28.84	28.78	13.81	96.54	
2/14/2023	21:16	20.68	0.00	0.0007	0.026	56.9	28.34	0.50	28.38	28.83	28.70	1.51	10.70	21.04	0.02	0.0613	0.248	65.9	28.34	0.30	28.36	28.84	28.78	14.27	99.64	
2/14/2023	21:17	20.72	0.00	0.0005	0.022	57.0	28.34	0.50	28.38	28.83	28.71	1.28	9.04	21.04	0.02	0.0620	0.249	65.7	28.34	0.30	28.36	28.84	28.78	14.35	100.22	
2/14/2023	21:18	20.73	0.00	0.0004	0.020	56.9	28.34	0.50	28.38	28.83	28.70	1.14	8.08	21.05	0.01	0.0591	0.243	65.9	28.34	0.30	28.36	28.84	28.78	14.01	97.83	
2/14/2023	21:19	20.74	0.00	0.0005	0.022	57.0	28.34	0.50	28.38	28.83	--	--	--	21.05	0.01	0.0610	0.247	66.2	28.34	0.30	28.36	28.84	28.78	14.24	99.37	
2/14/2023	21:20	20.73	0.00	0.0005	0.022	57.1	28.34	0.50	28.38	28.83	28.70	1.28	9.04	21.05	0.02	0.0625	0.250	66.2	28.34	0.30	28.36	28.85	28.78	14.41	100.58	
2/14/2023	21:21	20.69	0.00	0.0005	0.022	57.0	28.34	0.50	28.38	28.83	28.70	1.28	9.04	21.05	0.02	0.0595	0.244	66.0	28.34	0.30	28.36	28.85	28.78	14.06	98.15	
2/14/2023	21:22	20.68	0.00	0.0006	0.024	57.1	28.34	0.50	28.38	28.83	28.70	1.40	9.90	21.05	0.02	0.0581	0.241	66.1	28.34	0.30	28.36	28.85	28.78	13.89	96.98	
2/14/2023	21:23	20.68	0.00	0.0005	0.022	57.1	28.34	0.50	28.38	28.83	28.70	1.28	9.04	21.05	0.02	0.0612	0.247	65.8	28.34	0.30	28.36	28.85	28.78	14.25	99.56	
2/14/2023	21:24	20.71	0.00	0.0004	0.020	56.9	28.34	0.50	28.38	28.83	28.70	1.14	8.09	21.05	0.01	0.0592	0.243	66.1	28.34	0.30	28.36	28.84	28.78	14.02	97.90	
2/14/2023	21:25	20.73	0.00	0.0005	0.022	56.9	28.34	0.50	28.38	28.83	28.70	1.28	9.04	21.05	0.02	0.0588	0.242	66.3	28.34	0.30	28.36	28.85	28.78	13.98	97.54	
2/14/2023	21:26	20.74	0.00	0.0004	0.020	56.8	28.34	0.50	28.38	28.83	28.70	1.14	8.09	21.06	0.01	0.0620	0.249	66.6	28.34	0.30	28.36	28.84	28.78	14.36	100.13	
2/14/2023	21:27	20.75	0.00	0.0005	0.022	57.1	28.34	0.50	28.38	28.83	28.70	1.28	9.04	21.05	0.02	0.0590	0.243	65.9	28.34	0.30	28.36	28.85	28.78	14.00	97.74	
2/14/2023	21:28	20.75	0.00	0.0004	0.020	57.1	28.34	0.50	28.38	28.83	28.70	1.14	8.09	21.06	0.02	0.0594	0.244	65.9	28.34	0.30	28.36	28.85	28.78	14.04	98.07	
2/14/2023	21:29	20.75	0.00	0.0004	0.020	56.8	28.34	0.50	28.38	28.83	28.70	1.14	8.09	21.06	0.01	0.0584	0.242	66.6	28.34	0.30	28.36	28.84	28.78	13.94	97.18	
2/14/2023	21:30	20.75	0.00	0.0004	0.020	57.1	28.34	0.50	28.38	28.83	28.70	1.14	8.08	21.06	0.01	0.0609	0.247	66.4	28.34	0.30	28.36	28.84	28.78	14.23	99.25	
2/14/2023	21:31	20.75	0.00	0.0005	0.022	56.8	28.34	0.50	28.38	28.83	28.71	1.28	9.04	21.06	0.02	0.0617	0.248	65.7	28.34	0.30	28.36	28.85	28.78	14.31	99.96	
2/14/2023	21:32	20.75	0.00	0.0004	0.020	56.9	28.34	0.50	28.38	28.83	28.71	1.14	8.09	21.07	0.02	0.0587	0.242	66.4	28.34	0.30	28.36	28.85	28.78	13.97	97.43	
2/14/2023	21:33	20.75	0.00	0.0005	0.022	56.9	28.34	0.50	28.38	28.83	28.71	1.28	9.04	21.07	0.01	0.0604	0.246	65.9	28.34	0.30	28.36	28.84	28.77	14.16	98.88	
2/14/2023	21:34	20.75	0.00	0.0005	0.022	56.9	28.34	0.50	28.38	28.83	28.71	1.28	9.04	21.06	0.01	0.0660	0.257	65.9	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	21:35	20.75	0.00	0.0005	0.022	56.9	28.34	0.50	28.38	28.83	28.71	1.28	9.04	21.07	0.02	0.0615	0.248	66.2	28.34	0.30	28.36	28.85	28.78	14.29	99.76	
2/14/2023	21:36	20.75	0.00	0.0006	0.024	57.0	28.34	0.50	28.38	28.83	28.70	1.40	9.90	21.07	0.01	0.0571	0.239	65.8	28.34	0.30	28.36	28.84	28.78	13.77	96.16	
2/14/2023	21:37	20.70	0.00	0.0005	0.022	56.9	28.34	0.50	28.38	28.83	28.70	1.28	9.04	21.06	0.01	0.0631	0.251	65.9	28.34	0.30	28.36	28.84	28.78	14.48	101.08	
2/14/2023	21:38	20.43	0.00	0.0006	0.024	57.1	28.34	0.50	28.38	28.82	28.69	1.40	9.90	21.06	0.01	0.0618	0.249	66.8	28.34	0.30	28.36	28.84	28.78	14.34	99.95	
2/14/2023	21:39	20.38	0.00	0.0005	0.022	56.9	28.34	0.50	28.38	28.82	28.69	1.28	9.04	21.06	0.01	0.0586	0.242	65.2	28.34	0.30	28.36	28.84	28.78	13.94	97.48	
2/14/2023	21:40	20.27	0.00	0.0005	0.022	56.6	28.34	0.50	28.38	28.81	28.68	1.28	9.04	21.07	0.01	0.0614	0.248	62.4	28.34	0.30	28.36	28.84	28.78	14.23	100.05	
2/14/2023	21:41	20.15	0.00	0.0006	0.024	56.6	28.34	0.50	28.38	28.81	--	--	--	21.06	0.01	0.0615	0.248	62.4	28.34	0.30	28.36	28.84	28.78	14.24	100.14	
2/14/2023	21:42	19.45	0.00	0.0003	0.017	56.6	28.34	0.50	28.38	28.78	28.65	0.99	7.01	21.06	0.01	0.0610	0.247	62.3	28.34	0.30	28.36	28.84	28.78	14.18	99.74	
2/14/2023	21:43	19.37	0.00	0.0004	0.020	56.7	28.34	0.50	28.38	28.77	28.65	1.14	8.10	21.07	0.01	0.0625	0.250	62.1	28.34	0.30	28.36	28.84	28.78	14.35	100.98	
2/14/2023	21:44	19.67	0.00	0.0004	0.020	56.6	28.34	0.50	28.38	28.79	28.67	1.14	8.10	21.08	0.01	0.0635	0.252	62.1	28.34	0.30	28.36	28.84	28.78	14.47	101.77	
2/14/2023	21:45	19.50	0.00	0.0005	0.022	56.6	28.34	0.50	28.38	28.78	28.66	1.28	9.06	21.07	0.01	0.0622	0.249	62.0	28.34	0.30	28.36	28.84	28.78	14.32	100.75	
2/14/2023	21:46	19.48	0.00	0.0006	0.024	56.4	28.34	0.50	28.38	28.78	28.64	1.40	9.90	21.07	0.01	0.0615	0.248	62.0	28.34	0.30	28.36	28.84	28.78	14.24	100.18	
2/14/2023	21:47	19.67	0.00	0.0005	0.022	56.5	28.34	0.50	28.38	28.79	28.66	1.28	9.05	21.08	0.00	0.0616	0.248	61.9	28.34	0.30	28.36	28.84	28.78	14.25	100.28	
2/14/2023	21:48	19.47	0.00	0.0005	0.022	56.7	28.34	0.50	28.38	28.78	28.65	1.28	9.05	21.08	0.01	0.0645	0.254	61.8	28.34	0.30	28.36	28.84	28.78	14.58	102.61	
2/14/2023	21:49	19.69	0.00	0.0004	0.020	56.4	28.34	0.50	28.38	28.79	28.66	1.14	8.09	21.08	0.01	0.0664	0.258	61.7	28.34	0.30	28.36	28.84	28.78	14.79	104.11	
2/14/2023	21:50	19.36	0.00	0.0005	0.022	56.4	28.34	0.50	28.38	28.77	28.65	1.28	9.05	21.08	0.01	0.0620	0.249	61.7	28.34	0.30	28.36	28.84	28.78	14.29	100.62	
2/14/2023	21:51	19.83	0.00	0.0004	0.020	56.3	28.34	0.50	28.38	28.79	28.67	1.14	8.10	21.08	0.01	0.0627	0.250	61.8	28.34	0.30	28.36	28.84	28.78	14.37	101.16	
2/14/2023	21:52	19.92	0.00	0.0006	0.024	56.5	28.34	0.50	28.38	28.80	28.67	1.40	9.91	21.08	0.01	0.0647	0.254	61.7	28.34	0.30	28.36	28.84	28.78	14.60	102.78	
2/14/2023	21:53	19.92	0.00	0.0006	0.024	56.1	28.34	0.50	28.38	28.80	28.67	1.40	9.92	21.08	0.01	0.0649	0.255	61.7	28.34	0.30	28.36	28.84	28.78	14.62	102.93	
2/14/2023	21:54	20.12	0.00	0.0005	0.022	56.0	28.34	0.50	28.38	28.80	28.68	1.28	9.05	21.08	0.01	0.0657	0.256	61.7	28.34	0.30	28.36	28.84	28.78	14.71	103.56	
2/14/2023	21:55	20.27	0.00	0.0005	0.022	56.0	28.34	0.50	28.38	28.81	28.69	1.28	9.06	21.08	0.01	0.0632	0.251	61.6	28.34	0.30	28.36	28.84	28.78	14.43	101.58	
2/14/2023	21:56	20.26	0.00	0.0005	0.022	56.0	28.34	0.50	28.38	28.81	28.70	1.28	9.06	21.08	0.01	0.0662	0.257	61.5	28.34	0.30	28.36	28.84	--	--	--	
2/14/2023	21:57	20.38

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	-
	Status	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	
		Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/14/2023	22:21	20.67	0.01	0.0005	0.022	54.4	28.34	0.50	28.38	28.83	28.71	1.28	9.07	21.10	0.01	0.0696	0.264	59.9	28.34	0.30	28.36	28.85	28.78	15.12	106.77	
2/14/2023	22:22	20.70	0.01	0.0005	0.022	54.3	28.34	0.50	28.38	28.83	28.71	1.28	9.07	21.10	0.01	0.0720	0.268	59.7	28.34	0.30	28.36	28.85	28.78	15.37	108.62	
2/14/2023	22:23	20.68	0.01	0.0005	0.022	54.1	28.34	0.50	28.38	28.83	28.71	1.28	9.07	21.10	0.01	0.0710	0.266	59.7	28.34	0.30	28.36	28.85	28.78	15.26	107.86	
2/14/2023	22:24	20.68	0.01	0.0005	0.022	54.1	28.34	0.50	28.38	28.83	28.71	1.28	9.07	21.10	0.02	0.0706	0.266	59.9	28.34	0.30	28.36	28.85	28.78	15.22	107.54	
2/14/2023	22:25	20.67	0.01	0.0005	0.022	54.1	28.34	0.50	28.38	28.83	--	--	--	21.10	0.01	0.0711	0.267	59.7	28.34	0.30	28.36	28.85	28.78	15.27	107.95	
2/14/2023	22:26	20.72	0.01	0.0005	0.022	53.9	28.34	0.50	28.38	28.83	28.71	1.27	9.07	21.11	0.01	0.0727	0.270	59.7	28.34	0.30	28.36	28.85	28.78	15.44	109.15	
2/14/2023	22:27	20.73	0.01	0.0005	0.022	53.7	28.34	0.50	28.38	28.83	28.72	1.27	9.08	21.10	0.01	0.0727	0.270	59.6	28.34	0.30	28.36	28.85	28.78	15.44	109.17	
2/14/2023	22:28	20.74	0.01	0.0005	0.022	53.8	28.34	0.50	28.38	28.83	28.71	1.27	9.07	21.11	0.02	0.0716	0.268	59.6	28.34	0.30	28.36	28.85	28.78	15.33	108.33	
2/14/2023	22:29	20.74	0.01	0.0006	0.024	53.5	28.34	0.50	28.38	28.83	28.71	1.40	9.94	21.10	0.02	0.0723	0.269	59.5	28.34	0.30	28.36	28.85	28.78	15.40	108.87	
2/14/2023	22:30	20.71	0.01	0.0005	0.022	53.6	28.34	0.50	28.38	28.83	28.71	1.27	9.08	21.10	0.01	0.0741	0.272	59.4	28.34	0.30	28.36	28.85	28.78	15.59	110.23	
2/14/2023	22:31	20.70	0.00	0.0004	0.020	53.5	28.34	0.50	28.38	28.83	28.71	1.14	8.12	21.11	0.01	0.0727	0.270	59.4	28.34	0.30	28.36	28.85	28.78	15.44	109.19	
2/14/2023	22:32	20.72	0.00	0.0005	0.022	53.6	28.34	0.50	28.38	28.83	28.71	1.27	9.08	21.11	0.01	0.0745	0.273	59.4	28.34	0.30	28.36	28.85	28.78	15.63	110.53	
2/14/2023	22:33	20.74	0.00	0.0005	0.022	53.7	28.34	0.50	28.38	28.83	28.71	1.27	9.07	21.11	0.01	0.0727	0.270	59.2	28.34	0.30	28.36	28.85	28.78	15.44	109.21	
2/14/2023	22:34	20.74	0.00	0.0004	0.020	53.6	28.34	0.50	28.38	28.83	28.71	1.14	8.12	21.11	0.02	0.0720	0.268	59.4	28.34	0.30	28.36	28.85	28.78	15.37	108.66	
2/14/2023	22:35	20.75	0.00	0.0005	0.022	53.4	28.34	0.50	28.38	28.83	28.71	1.27	9.08	21.11	0.02	0.0713	0.267	59.2	28.34	0.30	28.36	28.85	28.78	15.29	108.16	
2/14/2023	22:36	20.75	0.00	0.0004	0.020	53.5	28.34	0.50	28.38	28.83	28.71	1.14	8.12	21.11	0.01	0.0716	0.268	59.4	28.34	0.30	28.36	28.85	28.78	15.32	108.36	
2/14/2023	22:37	20.75	0.00	0.0005	0.022	53.1	28.34	0.50	28.38	28.83	28.71	1.27	9.08	21.10	0.02	0.0735	0.271	59.5	28.34	0.30	28.36	28.85	28.78	15.53	109.78	
2/14/2023	22:38	20.75	0.00	0.0005	0.022	53.4	28.34	0.50	28.38	28.83	28.72	1.27	9.08	21.11	0.01	0.0748	0.273	59.1	28.34	0.30	28.36	28.85	28.78	15.66	110.79	
2/14/2023	22:39	20.75	0.00	0.0006	0.024	53.5	28.34	0.50	28.38	28.83	28.72	1.40	9.95	21.11	0.01	0.0741	0.272	59.2	28.34	0.30	28.36	28.85	28.78	15.59	110.26	
2/14/2023	22:40	20.75	0.00	0.0005	0.022	53.3	28.34	0.50	28.38	28.83	28.72	1.27	9.08	21.10	0.02	0.0724	0.269	59.2	28.34	0.30	28.36	28.85	--	--	--	
2/14/2023	22:41	20.75	0.00	0.0003	0.017	53.3	28.34	0.50	28.38	28.83	28.72	0.99	7.03	21.11	0.02	0.0772	0.278	59.0	28.34	0.30	28.36	28.85	28.78	15.90	112.55	
2/14/2023	22:42	20.75	0.00	0.0004	0.020	53.2	28.34	0.50	28.38	28.83	28.72	1.14	8.12	21.11	0.01	0.0756	0.275	59.1	28.34	0.30	28.36	28.85	28.78	15.74	111.38	
2/14/2023	22:43	20.74	0.00	0.0005	0.022	53.1	28.34	0.50	28.38	28.83	28.72	1.27	9.08	21.11	0.02	0.0758	0.275	58.8	28.34	0.30	28.36	28.85	28.78	15.76	111.56	
2/14/2023	22:44	20.75	0.00	0.0005	0.022	53.1	28.34	0.50	28.38	28.83	28.72	1.27	9.08	21.11	0.02	0.0762	0.276	58.9	28.34	0.30	28.36	28.85	28.78	15.80	111.85	
2/14/2023	22:45	20.74	0.00	0.0004	0.020	53.1	28.34	0.50	28.38	28.83	28.71	1.14	8.12	21.11	0.01	0.0718	0.268	58.9	28.34	0.30	28.36	28.85	28.78	15.34	108.57	
2/14/2023	22:46	20.75	0.00	0.0005	0.022	53.0	28.34	0.50	28.38	28.83	28.72	1.27	9.08	21.11	0.01	0.0766	0.277	58.9	28.34	0.30	28.36	28.85	28.78	15.84	112.14	
2/14/2023	22:47	20.75	0.00	0.0005	0.022	52.8	28.34	0.50	28.38	28.83	--	--	--	21.11	0.02	0.0759	0.275	58.8	28.34	0.30	28.36	28.85	28.78	15.77	111.64	
2/14/2023	22:48	20.75	0.00	0.0004	0.020	53.0	28.34	0.50	28.38	28.83	28.72	1.14	8.13	21.11	0.02	0.0761	0.276	58.8	28.34	0.30	28.36	28.85	28.78	15.79	111.78	
2/14/2023	22:49	20.69	0.00	0.0005	0.022	52.8	28.34	0.50	28.38	28.83	28.72	1.27	9.09	21.11	0.02	0.0722	0.269	58.7	28.34	0.30	28.36	28.85	28.78	15.38	108.89	
2/14/2023	22:50	20.49	0.00	0.0005	0.022	52.7	28.34	0.50	28.38	28.82	28.71	1.27	9.09	21.11	0.02	0.0746	0.273	58.8	28.34	0.30	28.36	28.85	28.78	15.63	110.66	
2/14/2023	22:51	20.56	0.00	0.0005	0.022	52.7	28.34	0.50	28.38	28.82	28.71	1.27	9.09	21.11	0.02	0.0779	0.279	58.7	28.34	0.30	28.36	28.85	28.78	15.97	113.10	
2/14/2023	22:52	20.60	0.00	0.0006	0.024	52.7	28.34	0.50	28.38	28.82	28.71	1.39	9.96	21.11	0.02	0.0897	0.299	58.7	28.34	0.30	28.36	28.85	28.78	17.14	121.37	
2/14/2023	22:53	18.09	0.00	0.0005	0.022	52.7	28.34	0.50	28.38	28.72	28.61	1.28	9.10	21.07	0.02	0.0770	0.277	58.7	28.34	0.30	28.36	28.85	28.78	15.88	112.45	
2/14/2023	22:54	18.91	0.00	0.0005	0.022	52.9	28.34	0.50	28.38	28.76	28.65	1.28	9.10	21.11	0.02	0.0764	0.276	58.5	28.34	0.30	28.36	28.85	28.78	15.81	112.03	
2/14/2023	22:55	19.65	0.00	0.0005	0.022	52.8	28.34	0.50	28.38	28.79	28.68	1.27	9.10	21.10	0.02	0.0770	0.277	58.6	28.34	0.30	28.36	28.85	28.78	15.88	112.46	
2/14/2023	22:56	20.43	0.00	0.0005	0.022	52.4	28.34	0.50	28.38	28.82	28.70	1.27	9.09	21.12	0.02	0.0775	0.278	58.5	28.34	0.30	28.36	28.85	28.78	15.93	112.84	
2/14/2023	22:57	20.62	0.00	0.0005	0.022	52.7	28.34	0.50	28.38	28.82	28.68	1.27	9.06	21.11	0.02	0.0788	0.281	58.4	28.34	0.30	28.36	28.85	28.78	16.06	113.80	
2/14/2023	22:58	20.63	0.00	0.0005	0.022	52.9	28.34	0.50	28.38	28.83	28.70	1.27	9.08	21.11	0.02	0.0773	0.278	58.5	28.34	0.30	28.36	28.85	28.78	15.91	112.69	
2/14/2023	22:59	20.67	0.00	0.0004	0.020	52.8	28.34	0.50	28.38	28.83	28.72	1.14	8.13	21.11	0.02	0.0762	0.276	58.3	28.34	0.30	28.36	28.85	28.78	15.79	111.90	
2/14/2023	23:00	20.60	0.00	0.0005	0.022	52.5	28.34	0.50	28.38	28.82	28.71	1.27	9.09	21.12	0.02	0.0756	0.275	58.4	28.34	0.30	28.36	28.85	28.78	15.73	111.46	
2/14/2023	23:01	20.64	0.00	0.0005	0.022	52.0	28.34	0.50	28.38	28.83	28.71	1.27	9.09	21.11	0.02	0.0749	0.274	58.5	28.34	0.30	28.36	28.85	28.78	15.66	110.93	
2/14/2023	23:02	20.65	0.00	0.0003	0.017	52.4	28.34	0.50	28.38	28.83	28.72	0.99	7.04	21.12	0.02	0.0771	0.278	58.4	28.34	0.30	28.36	28.85	28.78	15.88	112.56	
2/14/2023	23:03	20.65	0.00	0.0006	0.024	52.2	28.34	0.50	28.38	28.83	28.71	1.39	9.96	21.12	0.02	0.0780	0.279	58.3	28.34	0.30	28.36	28.85	--	--	--	
2/14/2023	23:04	20.68	0.00	0.0005	0.022	52.3	28.34	0.50	28.38	28.83	28.72	1.27	9.09	21.12	0.02	0.0776	0.279	58.4	28.34	0.30	28.36	28.85	28.78	15.94	112.92	
2/14/2023	23:05	20.66	0.00	0.0005	0.022	52.0	28.34	0.50	28.38	28.83	28.72	1.27	9.10	21.11	0.02	0.0785	0.280	58.2	28.34	0.30	28.36	28.85	28.78	16.03	113.59	
2/14/2023	23:06	20.59	0.00	0.0005	0.022	52.1	28.34	0.50	28.38	28.82	28.71	1.27	9.10	21.12	0.02	0.0784	0.280	58.3	28.34	0.30	28.36	28.85	28.78	16.02	113.51	
2/14/2023	23:07	20.67	0.00	0.0005	0.022	51.9	28.34	0.50	28.38	28.83	28.72	1.27	9.10	21.12	0.02	0.0772	0.278	58.3	28.34	0.30	28.36	28.85	28.78	15.89	112.65	
2/14/2023	23:08	20.69	0.00	0.0007	0.026	51.9	28.34	0.50	28.38	28.83	28.72	1.51	10.76	21.11	0.02	0.0786	0.280	58.1	28.34	0.30	28.36	28.85	28.78	16.03	113.67	
2/14/2023	23:09	20.70	0.00	0.0005	0.022	52.1	28.34	0.50	28.38	28.83	--	--	--	21.12	0.02	0.0823	0.287	58.0	28.34	0.30	28.36	28.85	28.78	16.41	116.32	
2/14/2023	23:10	20.71	0.00	0.0004	0.020	52.4	28.34	0.50	28.38	28.83	28.72	1.14	8.13	21.12	0.02	0.0778	0.279	58.0	28.34	0.30	28.36	28.85	28.78	15.95	113.10	
2/14/2023	23:11	20.73	0.00	0.0006	0.024	52.1	28.34	0.50	28.38	28.83	28.72	1.39	9.96	21.12	0.02	0.0791	0.281	58.0	28.34	0.30	28.36	28.85	28.78	16.08	114.05	
2/14/2023	23:12	20.73	0.00	0.0006	0.024	51.8	28.34	0.50	28.38	28.83	28.72	1.39	9.96	21.12	0.02	0.0776	0.279	58.1	28.34	0.30	28.36	28.85	28.78	15.93	112.95	
2/14/2023	23:13	20.72	0.00	0.0006	0.024	51.9	28.34	0.50	28.38	28.83	28.72	1.39	9.96	21.12	0.02	0.0791	0.281	58.0	28.34	0.30	28.36	28.85	28.78	16.08	114.05	
2/14/2023	23:14	20.72	0.00	0.0153	0.124	51.8	28.34	0.50	28.38	28.83	28.72	7.04	50.32	21.12	0.03	0.0813	0.285	59.9	28.34	0.30	28.36	28.85	28.78	16.33	115.40	
2/14/2023	23:15	20.69	0.00	0.0005	0.022	51.9	28.34	0.50	28.38	28.83	28.72	1.27	9.09	21.12	0.02	0.0780	0.279	58.0	28.34	0.30	28.36	28.85	28.78	15.97	113.25	
2/14/2023	23:16	20.70	0.00	0.0006	0.024	51.7	28.34	0.50	28.38	28.83	28.72	1.39	9.96	21.12	0.02	0.0798	0.282	58.0	28.34	0.30	28.36	28.85	28.78	16.15	114.55	
2/14/2023	23:17	20.73	0.00	0.0005	0.022	51.9	28.34	0.50	28.38	28.83	28.72	1.27	9.10	21.12	0.02	0.0794	0.282	58.0	28.34	0.30	28.36	28.85	28.78	16.11	114.27	
2/14/2023	23:18	20.74	0.00	0.0005	0.022	51.8	28.34	0.50	28.38	28.83	28.72	1.27	9.10	21.12	0.02	0.0791	0.281	58.0	28.34	0.30	28.36	28.85	28.78	16.08	114.05	
2/14/2023	23:19	20.50	0.00	0.0004	0.020	51.7	28.34	0.50	28.38	28.82	28.71	1.14	8.14	21.12	0.02	0.1042	0.323	58.0	28.34	0.30	28.36	28.85	28.78	18.46	130.88	
2/14/2023	23:20	12.86	0.01	0.0005	0.022	51.8	28.34	0.50	28.38	28.52	28.41	1.28	9.15	20.97	0.02	0.0803	0.283	58.0	28.34	0.30	28.36	28.84	28.77	16.21	114.90	
2/14/2023	23:21	11.11	0.03	0.0004	0.020	51.6	28.34	0.50	28.38	28.45	28.34	1.15	8.19	21.08	0.02	0.0802	0.283	58.1	28.34	0.30	28.36	28.85	28.78	16.20	114.82	
2/14/2023	23:22	9.61	-0.01	0.0005	0.022	51.6	28.34	0.50	28.38	28.38	28.27	1.28	9.17	21.03	0.02	0.0796	0.282	58.0	28.34	0.30	28.36	28.84	28.78	16.14	114.41	
2/14/2023	23:23	15.40	0.00	0.0005	0.022	51.9	28.34	0.50	28.38	28.62	28.49	1.28	9.12	21.13	0.02	0.0795	0.282	57.7	28.34	0.30	28.36	28.85	28.78	16.12	114.36	
2/14/2023	23:24	17.41	0.00	0.0004	0.020	51.9	28.34	0.50	28.38	28.70	28.64	1.14	8.19	21.13	0.03	0.0780	0.279	57.7	28.34	0.30	28.36	28.85	28.78	15.97	113.28	
2/14/2023	23:25	12.39	-0.01	0.0005	0.022	51.6	28.34	0.50	28.38	28.49	28.36	1.28	9.13	21.11	0.03	0.0811	0.285	57.7	28.34	0.30	28.36	28.85	28.78	16.28	115.50	
2/14/2023	23:26	16.10	0.00	0.0004	0.020	51.8	28.34	0.50	28.38	28.64	28.53	1.14	8.16	21.12	0.02	0.0779	0.279	57.7	28.34	0.30	28.36	28.85	--	--	--	
2/14/2023	23:27	15.87	0.00	0.0004	0.020	51.6	28.34	0.50	28.38	28.63	28.53	1.14	8.17	21.13	0.02	0.0790	0.281	57.7	28.34	0.30	28.36	28.85	28.78	16.07	114.01	
2/14/2023	23:28	16.90	0.00	0.0004	0.020	51.7	28.34	0.50	28.38	28.68	28.53	1.14	8.14	21.12	0.03	0.0810	0.285	57.6	28.34	0.30	28.36	28.85	28.78	16.27	115.45	
2/14/2023	23:29	11.48	0.01	0.0005	0.022	51.6	28.34	0.50	28.38	28.46	28.34	1.28	9.15	20.38	0.02	0.0770	0.277	57.6	28.34	0.30	28.36	28.82	28.75	15.87	112.61	
2/14/2023	23:30	8.24	0.03	0.0006	0.024	51.7	28.34	0.50	28.38	28.33	28.20	1.41	10.03	20.09	0.02	0.0785	0.280	57.6	28.34	0.30	28.36	28.81	28.74	16.03	113.73	
2/14/2023	23:31	13.45	0.01	0.0004	0.020	51.9	28.34	0.50	28.38	28.54	--	--	--	21.06	0.03	0.0773	0.278	57.5	28.34	0.30	28.36	28.85	28.78	15.89	112.79	
2/14/2023	23:32	12.47	0.01	0.0005	0.022	51.6	28.34	0.50	28.38	28.50	28.39	1.28	9.15	20.88	0.02	0.0796	0.282	57.6	28.34	0.30	28.36	28.84	28.77	16.13	114.47	
2/14/2023	23:33	14.34	0.01	0.0004	0.020	51.7	28.34	0.50	28.38	28.58	28.43	1.14	8.15	21.03	0.02	0.0787	0.281	57.6	28.34	0.30	28.36	28.84	28.78	16.04	113.81	
2/14/2023	23:34	15.17	0.01	0.0004	0.020	51.5	28.34	0.50	28.38	28.61	28.50	1.14	8.17	21.06	0.02	0.0852	0.292	57.5	28.34	0.30	28.36	28.85	28.78	16.69	118.42	
2/14/2023	23:35	16.87	0.00	0.0005	0.022	51.6	28.34	0.50	28.38	28.67	28.58	1.27	9.13	21.07	0.02	0.0805	0.284	57.5	28.34	0.30	28.36	28.85	28.78	16.22	115.11	
2/14/2023	23:36	18.79	0.00	0.0006	0.024	51.4	28.34	0.50	28.38	28.75	28.64	1.27	9.11	21.10	0.02	0.0823	0.287	57.5	28.34	0.30	28.36	28.85	28.78	16.40	116.40	
2/14/2023	23:37	18.34	0.00	0.0005	0.022	51.7	28.34	0.50	28.38	28.73	28.62	1.27	9.11	21.06	0.02	0.0813	0.285	57.4	28.34	0.30	28.36	28.85	28.78	16.30	115.70	
2/14/2023	23:38	18.57	0.00	0.0004	0.020	51.4	28.34	0.50	28.38	28.74	28.63	1.14	8.15	21.07	0.02	0.0795	0.282	57.6	28.34	0.30	28.36	28.85	28.78	16.12	114.39	
2/14/2023	23:39	18.24	0.00	0.0006	0.024	51.4	28.34	0.50	28.38	28.73	28.60	1.40	9.97	21.05	0.02	0.0810	0.285	57.6	28.34	0.30	28.36	28.85	28.78	16.27	115.47	
2/14/2023	23:40	18.53	0.00	0.0004	0.020	51.4	28.34	0.50	28.38	28.74	28.63	1.14	8.15	21.06	0.02	0.0780	0.279	57.4	28.34	0.30	28.36	28.85	28.78	15.96	113.33	
2/14/2023	23:41	18.43	0.00	0.0004	0.020	51.4	28.34	0.50	28.38	28.74	28.62	1.14	8.15	21.06	0.02	0.0836	0.289	57.5	28.34	0.30	28.36	28.85	28.78	16.53	117.32	
2/14/2023	23:42	19.32	0.00	0.0007	0.026	51.6	28.34	0.50	28.38	28.77	28.66	1.51	10.77	21.09	0.02	0.0826	0.287	57.6	28.34	0.30	28.36	28.85	28.78	16.43	116.60	
2/14/2023	23:43	19.04	0.00	0.0005	0.022	51.4	28.34	0.50	28.38	28.76	28.64	1.27	9.11	21.06	0.02	0.0829	0.288	57.7	28.34	0.30	28.36	28.85	28.78	16.46	116.80	
2/14/2023	23:44	18.71	0.00	0.0004	0.020	51.6	28.34	0.50	28.38	28.75	28.64	1.14	8.15	21.06	0.02	0.0820	0.286	58.2	28.34	0.30	28.36	28.85	28.78	16.38	116.11	
2/14/2023	23:45	19.38	0.00	0.0006	0.024	51.3	28.34	0.50	28.38	28.78	28.66	1.39	9.98	21.08	0.02	0.0804	0.284	57.6	28.34	0.30	28.36	28.85	28.78	16.21	115.04	
2/14/2023	23:46	19.58	0.00	0.0004	0.020	51.3	28.34	0.50	28.38	28.78	28.67	1.14	8.15	21.07	0.02	0.0848	0.291	57.5	28.34	0.30	28.36	28.85	28.78	16.64	118.16	
2/14/2023	23:47	19.33	0.00	0.0006	0.024	51.6	28.34	0.50	28.38	28.77	28.66	1.39	9.98	21.06	0.02	0.0815	0.285	57.5	28.34	0.30	28.36	28.85	28.78	16.32	115.83	
2/14/2023	23:48	19.78	0.00	0.0004	0.020	51.5	28.34	0.50	28.38	28.79	28.68	1.14	8.14	21.10	0.02	0.0816	0.286	57.4	28.34	0.30	28.36	28.85	28.78	16.33	115.91	
2/14/2023	23:49	19.09	0.00	0.0006	0.024	51.4	28.34	0.50	28.38	28.76	28.66	1.39	9.99	21.07	0.02	0.0835	0.289	57.5	28.34	0.30	28.36	28.85	--	--	--	
2/14/2023	23:50	18.77	0.00	0.0006	0.024	51.3	28.34	0.50	28.38	28.75	28.64	1.39	9.98	21.08	0.02	0.0810	0.285	57.4	28.34	0.30	28.36	28.85	28.78	16.27	115.48	
2/14/2023	23:51	18.82	0.00	0.0004	0.020	51.5	28.34	0.50	28.38	28.75	28.65	1.14	8.15	21.08	0.02	0.0783	0.280	57.6	28.34	0.30	28.36	28.85	28.78	16.00	113.53	
2/14/2023	23:52	18.82	0.00	0.0006	0.024	51.4	28.34	0.50	28.38	28.75	28.64	1.39	9.98	21.07	0.02	0.0812	0.285	57.4	28.34	0.30	28.36	28.85	28.78	16.29	115.62	
2/14/2023	23:53	18.98	0.00	0.0004	0.020	51.4	28.34	0.50	28.38	28.76	--	--	--	21.08	0.02	0.0829	0.288	57.5	28.34	0.30	28.36	28.85	28.78	16.46	116.82	
2/14/2023	23:54	18.52	0.00	0.0006	0.024	51.2	28.34	0.50	28.38	28.74	28.63	1.39	9.98	21.05	0.02	0.0812	0.285	57.4	28.34	0.30	28.36	28.85	28.78	16.29	115.63

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Inlet Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Outlet Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	Point in Process
	Unit	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	-
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	0:19	18.49	0.00	0.0005	0.022	50.7	28.51	0.50	28.55	28.74	28.63	1.27	9.15	21.10	0.01	0.0837	0.289	57.2	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:20	18.56	0.00	0.0005	0.022	51.1	28.51	0.50	28.55	28.74	28.63	1.27	9.14	21.09	0.01	0.0850	0.292	56.9	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:21	19.28	0.00	0.0004	0.020	51.1	28.51	0.50	28.55	28.77	28.66	1.13	8.17	21.11	0.01	0.0830	0.288	57.1	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:22	19.17	0.00	0.0005	0.022	50.9	28.51	0.50	28.55	28.77	28.66	1.27	9.14	21.10	0.01	0.0828	0.288	57.0	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:23	19.32	0.00	0.0005	0.022	50.7	28.51	0.50	28.55	28.77	28.66	1.27	9.14	21.11	0.01	0.0857	0.293	57.2	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:24	19.43	0.00	0.0005	0.022	50.9	28.51	0.50	28.55	28.78	28.66	1.27	9.14	21.11	0.01	0.0823	0.287	57.0	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:25	19.31	0.00	0.0005	0.022	50.9	28.51	0.50	28.55	28.77	28.66	1.27	9.14	21.10	0.01	0.0820	0.286	57.1	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:26	19.30	0.00	0.0005	0.022	50.7	28.51	0.50	28.55	28.77	28.66	1.27	9.14	21.10	0.01	0.0833	0.289	57.2	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:27	19.55	0.00	0.0005	0.022	50.9	28.51	0.50	28.55	28.78	28.67	1.27	9.14	21.11	0.01	0.0848	0.291	57.0	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:28	18.98	0.00	0.0004	0.020	50.8	28.51	0.50	28.55	28.76	28.65	1.13	8.18	21.09	0.01	0.0835	0.289	57.0	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:29	19.29	0.00	0.0006	0.024	50.7	28.51	0.50	28.55	28.77	28.66	1.39	10.02	21.12	0.02	0.0821	0.287	57.2	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:30	18.75	0.00	0.0005	0.022	50.9	28.51	0.50	28.55	28.75	28.65	1.27	9.15	21.10	0.01	0.0823	0.287	56.9	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:31	17.90	0.00	0.0005	0.022	50.8	28.51	0.50	28.55	28.72	28.61	1.27	9.15	21.10	0.01	0.0831	0.288	56.9	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:32	18.23	0.00	0.0004	0.020	50.7	28.51	0.50	28.55	28.73	28.62	1.14	8.18	21.11	0.01	0.0803	0.283	56.9	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:33	18.07	0.00	0.0006	0.024	50.9	28.51	0.50	28.55	28.72	28.61	1.39	10.02	21.11	0.01	0.0801	0.283	57.0	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:34	18.47	0.00	0.0004	0.020	50.8	28.51	0.50	28.55	28.74	28.63	1.14	8.18	21.12	0.02	0.0842	0.290	56.9	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:35	19.10	0.00	0.0006	0.024	50.8	28.51	0.50	28.55	28.76	28.65	1.39	10.02	21.13	0.01	0.0815	0.285	57.0	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:36	19.22	0.00	0.0005	0.022	50.5	28.51	0.50	28.55	28.77	28.66	1.27	9.14	21.12	0.01	0.0831	0.288	57.0	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:37	19.03	0.00	0.0005	0.022	50.6	28.51	0.50	28.55	28.76	--	--	--	21.11	0.01	0.0851	0.292	57.0	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:38	19.03	0.00	0.0005	0.022	50.8	28.51	0.50	28.55	28.76	28.65	1.27	9.14	21.11	0.01	0.0848	0.291	56.9	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:39	17.82	0.00	0.0005	0.022	50.6	28.51	0.50	28.55	28.71	28.61	1.27	9.15	21.11	0.02	0.0860	0.293	57.0	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:40	17.22	0.01	0.0004	0.020	50.7	28.51	0.50	28.55	28.69	28.58	1.14	8.19	21.12	0.01	0.0835	0.289	57.0	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:41	18.59	0.00	0.0004	0.020	50.5	28.51	0.50	28.55	28.74	28.64	1.13	8.18	21.14	0.01	0.0796	0.282	57.2	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:42	18.17	0.01	0.0003	0.017	50.4	28.51	0.50	28.55	28.73	28.62	0.98	7.09	21.13	0.01	0.0825	0.287	57.3	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:43	18.27	0.01	0.0006	0.024	50.4	28.51	0.50	28.55	28.73	28.61	1.39	10.02	21.13	0.01	0.0799	0.283	57.1	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:44	18.17	0.00	0.0006	0.024	50.6	28.51	0.50	28.55	28.73	28.61	1.39	10.02	21.13	0.02	0.0835	0.289	57.2	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:45	18.11	0.01	0.0005	0.022	50.5	28.51	0.50	28.55	28.73	28.62	1.27	9.15	21.14	0.01	0.0828	0.288	57.1	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:46	18.62	0.00	0.0005	0.022	50.8	28.51	0.50	28.55	28.74	28.64	1.27	9.15	21.14	0.02	0.0833	0.289	57.0	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:47	17.94	0.01	0.0005	0.022	50.5	28.51	0.50	28.55	28.72	28.61	1.27	9.15	21.13	0.01	0.0834	0.289	57.1	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:48	18.64	0.01	0.0005	0.022	50.7	28.51	0.50	28.55	28.75	28.64	1.27	9.15	21.14	0.01	0.0836	0.289	56.8	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:49	18.38	0.00	0.0005	0.022	50.6	28.51	0.50	28.55	28.74	28.63	1.27	9.15	21.14	0.02	0.0844	0.291	57.0	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:50	18.76	0.00	0.0005	0.022	50.9	28.51	0.50	28.55	28.75	28.64	1.27	9.14	21.14	0.01	0.0836	0.289	57.0	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:51	18.51	0.00	0.0005	0.022	50.4	28.51	0.50	28.55	28.74	28.63	1.27	9.15	21.14	0.01	0.0823	0.287	57.0	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:52	18.50	0.00	0.0005	0.022	50.7	28.51	0.50	28.55	28.74	28.63	1.27	9.15	21.15	0.02	0.0824	0.287	56.9	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:53	17.44	0.01	0.0005	0.022	50.9	28.51	0.50	28.55	28.70	28.59	1.27	9.15	21.12	0.01	0.0815	0.285	56.9	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:54	17.32	0.01	0.0005	0.022	50.7	28.51	0.50	28.55	28.69	28.58	1.27	9.15	21.14	0.02	0.0844	0.291	56.8	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:55	17.78	0.01	0.0005	0.022	50.4	28.51	0.50	28.55	28.71	28.60	1.27	9.16	21.14	0.02	0.0824	0.287	57.0	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:56	17.19	0.01	0.0006	0.024	50.7	28.51	0.50	28.55	28.69	28.58	1.39	10.03	21.14	0.01	0.0829	0.288	56.8	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:57	18.49	0.01	0.0005	0.022	50.8	28.51	0.50	28.55	28.74	28.62	1.27	9.14	21.15	0.01	0.0831	0.288	56.8	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:58	18.07	0.01	0.0004	0.020	50.4	28.51	0.50	28.55	28.72	28.62	1.13	8.19	21.14	0.02	0.0818	0.286	57.0	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	0:59	18.25	0.01	0.0005	0.022	50.7	28.51	0.50	28.55	28.73	--	--	--	21.14	0.01	0.0831	0.288	56.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:00	18.57	0.01	0.0004	0.020	50.4	28.51	0.50	28.55	28.74	28.63	1.13	8.18	21.15	0.01	0.0848	0.291	56.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:01	18.56	0.01	0.0005	0.022	50.5	28.51	0.50	28.55	28.74	28.63	1.27	9.15	21.15	0.01	0.0833	0.289	56.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:02	18.12	0.01	0.0006	0.024	50.4	28.51	0.50	28.55	28.73	28.61	1.39	10.02	21.14	0.02	0.0849	0.291	56.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:03	18.07	0.01	0.0005	0.022	50.5	28.51	0.50	28.55	28.72	28.62	1.27	9.15	21.15	0.01	0.0860	0.293	56.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:04	17.73	0.01	0.0005	0.022	50.5	28.51	0.50	28.55	28.71	28.60	1.27	9.16	21.15	0.01	0.0850	0.292	56.8	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:05	16.96	0.01	0.0005	0.022	50.5	28.51	0.50	28.55	28.68	28.57	1.27	9.16	21.14	0.01	0.0825	0.287	56.8	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:06	18.09	0.01	0.0004	0.020	50.3	28.51	0.50	28.55	28.73	28.62	1.13	8.19	21.15	0.01	0.0856	0.293	56.8	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:07	17.67	0.01	0.0006	0.024	50.4	28.51	0.50	28.55	28.71	28.60	1.39	10.03	21.14	0.02	0.0830	0.288	56.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:08	16.80	0.01	0.0005	0.022	50.3	28.51	0.50	28.55	28.67	28.56	1.27	9.16	21.14	0.02	0.0869	0.295	56.8	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:09	17.77	0.01	0.0004	0.020	50.3	28.51	0.50	28.55	28.71	28.60	1.14	8.19	21.16	0.01	0.0859	0.293	56.4	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:10	17.89	0.01	0.0004	0.020	50.3	28.51	0.50	28.55	28.72	28.61	1.13	8.19	21.15	0.02	0.0865	0.294	56.5	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:11	17.59	0.01	0.0004	0.020	50.1	28.51	0.50	28.55	28.71	28.60	1.13	8.19	21.15	0.01	0.0855	0.292	56.5	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:12	19.12	0.01	0.0005	0.022	50.2	28.51	0.50	28.55	28.77	28.65	1.27	9.15	21.16	0.02	0.0876	0.296	56.3	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:13	18.20	0.01	0.0003	0.017	50.3	28.51	0.50	28.55	28.73	28.62	0.98	7.09	21.15	0.02	0.0854	0.292	56.4	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:14	19.36	0.01	0.0005	0.022	50.2	28.51	0.50	28.55	28.78	28.66	1.27	9.14	21.17	0.02	0.0856	0.293	56.4	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:15	18.42	0.01	0.0005	0.022	50.2	28.51	0.50	28.55	28.74	28.63	1.27	9.15	21.15	0.01	0.0870	0.295	56.3	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:16	18.34	0.01	0.0004	0.020	50.3	28.51	0.50	28.55	28.74	28.62	1.13	8.18	21.16	0.02	0.0878	0.296	56.3	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:17	18.94	0.01	0.0004	0.020	50.4	28.51	0.50	28.55	28.76	28.65	1.13	8.18	21.16	0.01	0.0884	0.297	56.1	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:18	18.42	0.01	0.0004	0.020	50.1	28.51	0.50	28.55	28.74	28.62	1.13	8.18	21.15	0.02	0.0886	0.298	56.2	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:19	18.17	0.01	0.0006	0.024	50.1	28.51	0.50	28.55	28.73	28.62	1.39	10.03	21.15	0.01	0.0884	0.297	56.2	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:20	18.25	0.01	0.0004	0.020	50.0	28.51	0.50	28.55	28.73	28.62	1.13	8.19	21.16	0.02	0.0891	0.298	56.1	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:21	18.33	0.01	0.0004	0.020	49.8	28.51	0.50	28.55	28.73	--	--	--	21.15	0.02	0.0926	0.304	56.1	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:22	18.09	0.01	0.0004	0.020	49.8	28.51	0.50	28.55	28.73	28.62	1.13	8.19	21.15	0.02	0.0938	0.306	56.0	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:23	18.04	0.01	0.0005	0.022	49.5	28.51	0.50	28.55	28.72	28.61	1.27	9.16	21.16	0.03	0.0933	0.305	55.8	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:24	18.11	0.01	0.0004	0.020	49.9	28.51	0.50	28.55	28.73	28.62	1.13	8.19	21.16	0.02	0.0921	0.303	55.6	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:25	17.92	0.01	0.0003	0.017	49.6	28.51	0.50	28.55	28.72	28.61	0.98	7.10	21.16	0.02	0.0919	0.303	55.6	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:26	18.28	0.01	0.0005	0.022	49.5	28.51	0.50	28.55	28.73	28.63	1.27	9.16	21.16	0.02	0.0927	0.304	55.5	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:27	17.78	0.01	0.0004	0.020	49.6	28.51	0.50	28.55	28.71	28.60	1.13	8.20	21.15	0.02	0.0918	0.303	55.6	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:28	17.97	0.01	0.0004	0.020	49.4	28.51	0.50	28.55	28.72	28.62	1.13	8.20	21.16	0.02	0.0921	0.303	55.5	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:29	17.92	0.01	0.0004	0.020	49.6	28.51	0.50	28.55	28.72	28.61	1.13	8.19	21.16	0.02	0.0932	0.305	55.4	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:30	18.05	0.01	0.0004	0.020	49.2	28.51	0.50	28.55	28.72	28.62	1.13	8.20	21.16	0.02	0.0928	0.305	55.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:31	17.75	0.01	0.0004	0.020	49.3	28.51	0.50	28.55	28.71	28.61	1.13	8.20	21.16	0.02	0.0933	0.305	55.5	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:32	17.84	0.01	0.0005	0.022	49.4	28.51	0.50	28.55	28.72	28.61	1.27	9.16	21.16	0.02	0.0911	0.302	55.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:33	17.87	0.01	0.0005	0.022	49.3	28.51	0.50	28.55	28.72	28.61	1.27	9.17	21.16	0.02	0.0900	0.300	55.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:34	18.07	0.01	0.0004	0.020	49.5	28.51	0.50	28.55	28.72	28.62	1.13	8.20	21.16	0.02	0.0906	0.301	55.6	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:35	18.33	0.01	0.0005	0.022	49.3	28.51	0.50	28.55	28.73	28.62	1.27	9.16	21.16	0.03	0.0896	0.299	55.6	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:36	17.99	0.01	0.0004	0.020	49.5	28.51	0.50	28.55	28.72	28.60	1.13	8.19	21.16	0.02	0.0930	0.305	55.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:37	18.72	0.01	0.0005	0.022	49.2	28.51	0.50	28.55	28.75	28.65	1.27	9.16	21.17	0.03	0.0922	0.304	55.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:38	18.88	0.01	0.0005	0.022	49.4	28.51	0.50	28.55	28.76	28.65	1.27	9.16	21.17	0.02	0.0893	0.299	55.8	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:39	18.87	0.01	0.0005	0.022	49.2	28.51	0.50	28.55	28.76	28.63	1.27	9.15	21.17	0.02	0.0899	0.300	55.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:40	18.76	0.01	0.0004	0.020	49.6	28.51	0.50	28.55	28.75	28.64	1.13	8.19	21.17	0.03	0.0940	0.307	55.8	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:41	18.70	0.01	0.0004	0.020	49.2	28.51	0.50	28.55	28.75	28.64	1.13	8.19	21.16	0.03	0.0926	0.304	55.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:42	18.83	0.01	0.0005	0.022	49.1	28.51	0.50	28.55	28.75	28.65	1.27	9.16	21.16	0.03	0.0913	0.302	55.8	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:43	18.89	0.01	0.0005	0.022	49.0	28.51	0.50	28.55	28.76	--	--	--	21.16	0.02	0.0926	0.304	55.8	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:44	19.02	0.01	0.0004	0.020	49.4	28.51	0.50	28.55	28.76	28.66	1.13	8.19	21.17	0.02	0.0926	0.304	55.6	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:45	18.62	0.01	0.0005	0.022	49.0	28.51	0.50	28.55	28.75	28.64	1.27	9.16	21.16	0.02	0.0895	0.299	55.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:46	19.03	0.01	0.0004	0.020	49.1	28.51	0.50	28.55	28.76	28.66	1.13	8.19	21.17	0.03	0.0880	0.297	55.6	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:47	18.89	0.01	0.0005	0.022	49.2	28.51	0.50	28.55	28.76	28.65	1.27	9.16	21.17	0.03	0.0908	0.301	55.5	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:48	18.64	0.01	0.0005	0.022	49.2	28.51	0.50	28.55	28.75	28.64	1.27	9.16	21.17	0.03	0.0924	0.304	55.5	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:49	19.12	0.01	0.0004	0.020	49.1	28.51	0.50	28.55	28.77	28.66	1.13	8.19	21.17	0.02	0.0925	0.304	55.6	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:50	18.96	0.01	0.0004	0.020	49.1	28.51	0.50	28.55	28.76	28.65	1.13	8.19	21.17	0.02	0.0928	0.305	55.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:51	18.50	0.01	0.0004	0.020	49.1	28.51	0.50	28.55	28.74	28.64	1.13	8.20	21.17	0.02	0.0944	0.307	55.5	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:52	19.17	0.01	0.0005	0.022	49.1	28.51	0.50	28.55	28.77	28.66	1.27	9.16	21.17	0.03	0.0920	0.303	55.5	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:53	19.12	0.01	0.0004	0.020	49.0	28.51	0.50	28.55	28.77	28.66	1.13	8.20	21.17	0.02	0.0907	0.301	55.6	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:54	19.53	0.01	0.0003	0.017	49.1	28.51	0.50	28.55	28.78	28.65	0.98	7.08	21.18	0.02	0.0925	0.304	55.6	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:55	19.32	0.01	0.0004	0.020	49.1	28.51	0.50	28.55	28.77	28.66	1.13	8.19	21.18	0.03	0.0940	0.307	55.4	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:56	19.60	0.00	0.0004	0.020	49.1	28.51	0.50	28.55	28.78	28.68	1.13	8.19	21.18	0.03	0.0941	0.307	55.4	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:57	19.70	0.00	0.0050	0.071	49.1	28.51	0.50	28.55	28.79	28.68	4.00	28.95	21.18	0.02	0.0943	0.307	55.3	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	1:58	19.58	0.00	0.0111	0.105	48.9	28.51	0.50	28.55	28.78	28.67	5.96

Alliance SOURCE TESTING

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet O_2 - Inlet % dry	Inlet CO_2 - Inlet % dry	Inlet Delta P in. W.C.	Inlet Sq Rt Delta P	Inlet Temperature (°F)	Inlet Barometric in. Hg	Inlet Stack Pressure in. W.C.	Inlet Stack Pressure in. Hg	Inlet Molecular Weight Md	Inlet Molecular Weight Mw	Inlet Velocity ft/sec	Inlet Flow Rate (DSCFM)	Outlet O_2 - Outlet % dry	Outlet CO_2 - Outlet % dry	Outlet Delta P in. W.C.	Outlet Sq Rt Delta P	Outlet Temperature (°F)	Outlet Barometric in. Hg	Outlet Stack Pressure in. W.C.	Outlet Stack Pressure in. Hg	Outlet Molecular Weight Md	Outlet Molecular Weight Mw	Outlet Velocity ft/sec	Outlet Flow Rate (DSCFM)	Point in Process -
	Unit Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	2:17	16.56	0.01	0.0005	0.022	48.2	28.51	0.50	28.55	28.66	28.57	1.27	9.20	21.08	0.02	0.1038	0.322	53.6	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:18	17.42	0.01	0.0005	0.022	48.3	28.51	0.50	28.55	28.70	28.61	1.27	9.19	21.11	0.03	0.1042	0.323	53.5	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:19	16.64	0.01	0.0003	0.017	48.3	28.51	0.50	28.55	28.67	28.57	0.98	7.12	21.08	0.03	0.1054	0.325	53.3	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:20	16.93	0.01	0.0005	0.022	48.1	28.51	0.50	28.55	28.68	28.58	1.27	9.19	21.09	0.02	0.1080	0.329	53.3	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:21	16.82	0.01	0.0004	0.020	48.1	28.51	0.50	28.55	28.67	28.56	1.13	8.21	21.08	0.02	0.1048	0.324	53.2	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:22	16.93	0.01	0.0004	0.020	48.0	28.51	0.50	28.55	28.68	28.58	1.13	8.22	21.08	0.02	0.1087	0.330	53.1	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:23	17.28	0.01	0.0004	0.020	47.9	28.51	0.50	28.55	28.69	28.58	1.13	8.21	21.10	0.02	0.1091	0.330	53.0	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:24	16.95	0.01	0.0004	0.020	47.8	28.51	0.50	28.55	28.68	28.59	1.13	8.23	21.10	0.02	0.1075	0.328	52.9	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:25	16.66	0.01	0.0004	0.020	48.0	28.51	0.50	28.55	28.67	28.57	1.13	8.22	21.08	0.02	0.1115	0.334	52.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:26	16.94	0.01	0.0005	0.022	47.6	28.51	0.50	28.55	28.68	28.57	1.27	9.19	21.10	0.02	0.1105	0.332	52.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:27	17.63	0.01	0.0005	0.022	47.6	28.51	0.50	28.55	28.71	--	--	--	21.12	0.03	0.1096	0.331	52.5	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:28	17.46	0.01	0.0005	0.022	47.8	28.51	0.50	28.55	28.70	28.60	1.27	9.19	21.10	0.02	0.1146	0.339	52.3	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:29	17.69	0.01	0.0004	0.020	47.5	28.51	0.50	28.55	28.71	28.61	1.13	8.22	21.11	0.02	0.1146	0.339	52.2	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:30	17.11	0.01	0.0004	0.020	47.4	28.51	0.50	28.55	28.69	28.58	1.13	8.22	21.10	0.02	0.1146	0.339	52.1	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:31	16.57	0.01	0.0004	0.020	47.3	28.51	0.50	28.55	28.66	28.56	1.13	8.22	21.10	0.02	0.1174	0.343	51.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:32	17.72	0.01	0.0004	0.020	47.2	28.51	0.50	28.55	28.71	28.61	1.13	8.22	21.14	0.02	0.1157	0.340	51.6	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:33	16.58	0.01	0.0004	0.020	47.1	28.51	0.50	28.55	28.66	28.57	1.13	8.23	21.09	0.02	0.1194	0.346	51.5	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:34	16.13	0.01	0.0004	0.020	47.1	28.51	0.50	28.55	28.65	28.54	1.13	8.23	21.08	0.02	0.1198	0.346	51.2	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:35	17.06	0.01	0.0005	0.022	47.1	28.51	0.50	28.55	28.68	28.58	1.27	9.19	21.13	0.02	0.1208	0.348	51.1	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:36	16.98	0.01	0.0004	0.020	47.2	28.51	0.50	28.55	28.68	28.58	1.13	8.22	21.11	0.02	0.1225	0.350	51.0	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:37	17.11	0.01	0.0004	0.020	47.1	28.51	0.50	28.55	28.69	28.60	1.13	8.23	21.12	0.02	0.1190	0.345	50.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:38	16.73	0.01	0.0003	0.017	46.6	28.51	0.50	28.55	28.67	28.55	0.98	7.12	21.12	0.03	0.1195	0.346	50.8	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:39	16.75	0.01	0.0004	0.020	46.8	28.51	0.50	28.55	28.67	28.57	1.13	8.23	21.11	0.02	0.1235	0.351	50.5	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:40	17.47	0.01	0.0005	0.022	46.6	28.51	0.50	28.55	28.70	28.60	1.26	9.20	21.13	0.02	0.1232	0.351	50.4	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:41	17.03	0.01	0.0004	0.020	46.8	28.51	0.50	28.55	28.68	28.59	1.13	8.23	21.12	0.02	0.1232	0.351	50.3	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:42	17.01	0.01	0.0005	0.022	46.6	28.51	0.50	28.55	28.68	28.59	1.26	9.20	21.13	0.02	0.1239	0.352	50.4	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:43	17.23	0.01	0.0005	0.022	46.4	28.51	0.50	28.55	28.69	28.60	1.26	9.20	21.12	0.02	0.1220	0.349	50.3	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:44	17.79	0.01	0.0004	0.020	46.4	28.51	0.50	28.55	28.71	28.62	1.13	8.23	21.13	0.02	0.1254	0.354	50.4	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:45	17.42	0.01	0.0005	0.022	46.4	28.51	0.50	28.55	28.70	28.60	1.26	9.20	21.11	0.02	0.1260	0.355	50.1	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:46	16.93	0.01	0.0004	0.020	46.3	28.51	0.50	28.55	28.68	28.59	1.13	8.24	21.12	0.02	0.1257	0.355	49.9	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:47	16.58	0.01	0.0005	0.022	46.3	28.51	0.50	28.55	28.66	28.56	1.26	9.20	21.11	0.02	0.1225	0.350	49.8	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:48	15.56	0.01	0.0034	0.058	46.2	28.51	0.50	28.55	28.62	28.52	3.30	24.03	21.09	0.02	0.1270	0.356	49.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:49	15.53	0.01	0.0259	0.161	46.0	28.51	0.50	28.55	28.62	--	--	--	21.11	0.02	0.1269	0.356	49.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:50	16.84	0.01	0.0313	0.177	45.9	28.51	0.50	28.55	28.68	28.59	10.00	72.91	21.13	0.02	0.1310	0.362	49.5	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:51	16.58	0.01	0.0344	0.185	45.6	28.51	0.50	28.55	28.66	28.57	10.48	76.45	21.13	0.02	0.1267	0.356	49.5	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:52	16.86	0.01	0.0378	0.194	45.9	28.51	0.50	28.55	28.68	28.59	10.99	80.12	21.14	0.02	0.1618	0.402	49.3	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:53	16.52	0.01	0.0392	0.198	45.7	28.51	0.50	28.55	28.66	28.57	11.19	81.60	21.13	0.02	0.2818	0.531	49.3	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:54	16.98	0.01	0.0417	0.204	45.5	28.51	0.50	28.55	28.68	28.59	11.54	84.16	21.14	0.02	0.2941	0.542	49.3	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	2:55	13.13	0.01	0.0423	0.206	45.4	28.51	0.50	28.55	28.53	28.44	11.65	85.00	20.18	0.02	0.3121	0.559	49.1	28.51	0.30	28.53	28.81	--	--	--	
2/15/2023	2:56	4.96	-0.02	0.0426	0.206	45.8	28.51	0.50	28.55	28.20	28.11	11.76	85.77	17.62	0.02	0.3171	0.563	48.9	28.51	0.30	28.53	28.71	--	--	--	
2/15/2023	2:57	4.36	-0.02	0.0442	0.210	46.2	28.51	0.50	28.55	28.17	28.09	11.99	87.39	14.92	0.00	0.3180	0.564	48.6	28.51	0.30	28.53	28.60	--	--	--	
2/15/2023	2:58	4.23	-0.02	0.0431	0.208	47.0	28.51	0.50	28.55	28.17	28.07	11.85	86.18	14.52	0.00	0.3232	0.569	48.4	28.51	0.30	28.53	28.58	--	--	--	
2/15/2023	2:59	3.86	-0.03	0.0446	0.211	47.8	28.51	0.50	28.55	28.15	28.13	12.06	88.14	14.24	0.01	0.3272	0.572	48.5	28.51	0.30	28.53	28.57	--	--	--	
2/15/2023	3:00	3.77	-0.03	0.0450	0.212	49.4	28.51	0.50	28.55	28.15	28.13	12.13	88.39	14.06	0.00	0.3257	0.571	48.6	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	3:01	3.57	-0.03	0.0449	0.212	51.0	28.51	0.50	28.55	28.14	28.12	12.14	88.17	13.91	0.00	0.3345	0.578	48.4	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	3:02	3.35	-0.03	0.0449	0.212	52.8	28.51	0.50	28.55	28.13	28.11	12.16	88.03	13.82	0.00	0.3208	0.566	48.5	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	3:03	3.11	-0.03	0.0462	0.215	54.4	28.51	0.50	28.55	28.12	28.10	12.36	89.18	13.74	0.00	0.3312	0.575	48.4	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	3:04	3.13	-0.03	0.0458	0.214	56.3	28.51	0.50	28.55	28.12	28.10	12.33	88.62	13.67	0.00	0.3326	0.577	48.4	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	3:05	3.02	-0.03	0.0470	0.217	58.1	28.51	0.50	28.55	28.12	28.10	12.51	89.63	13.65	0.00	0.3333	0.577	48.2	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	3:06	2.93	-0.03	0.0469	0.217	59.6	28.51	0.50	28.55	28.11	28.09	12.51	89.41	13.61	0.00	0.3321	0.576	48.2	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:07	2.86	-0.03	0.0479	0.219	61.3	28.51	0.50	28.55	28.11	28.09	12.67	90.21	13.59	0.00	0.3309	0.575	48.2	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:08	2.55	-0.03	0.0477	0.218	63.1	28.51	0.50	28.55	28.10	28.08	12.67	89.89	13.56	-0.01	0.3323	0.576	48.1	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:09	2.95	-0.03	0.0488	0.221	64.9	28.51	0.50	28.55	28.11	28.09	12.83	90.73	13.55	0.00	0.3350	0.579	48.0	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:10	3.34	-0.03	0.0488	0.221	66.2	28.51	0.50	28.55	28.13	28.11	12.84	90.60	13.54	0.00	0.3362	0.580	48.1	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:11	2.01	-0.03	0.0507	0.225	67.6	28.51	0.50	28.55	28.08	--	--	--	13.53	0.00	0.3310	0.575	47.8	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:12	1.88	-0.03	0.0496	0.223	69.0	28.51	0.50	28.55	28.07	28.05	13.00	91.19	13.52	0.00	0.3317	0.576	47.8	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:13	1.75	-0.03	0.0503	0.224	70.6	28.51	0.50	28.55	28.07	28.05	13.11	91.70	13.52	0.00	0.3278	0.573	47.8	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:14	1.71	-0.03	0.0482	0.220	71.6	28.51	0.50	28.55	28.06	28.04	12.84	89.68	13.51	0.01	0.3310	0.575	47.6	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:15	1.71	-0.03	0.0487	0.221	72.3	28.51	0.50	28.55	28.06	28.04	12.92	90.09	13.49	0.00	0.3302	0.575	47.7	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:16	1.63	-0.03	0.0566	0.238	73.1	28.51	0.50	28.55	28.06	28.04	13.94	97.05	13.50	0.00	0.3356	0.579	47.9	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:17	1.62	-0.03	0.0543	0.233	74.0	28.51	0.50	28.55	28.06	28.04	13.66	94.95	13.50	0.00	0.3318	0.576	47.8	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:18	1.62	-0.03	0.0534	0.231	74.8	28.51	0.50	28.55	28.06	28.03	13.56	94.07	13.49	0.00	0.3304	0.575	47.5	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:19	1.60	-0.03	0.0520	0.228	75.0	28.51	0.50	28.55	28.06	28.03	13.39	92.78	13.50	0.00	0.3274	0.572	47.7	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:20	1.61	-0.03	0.0518	0.228	75.6	28.51	0.50	28.55	28.06	28.03	13.37	92.54	13.50	0.00	0.3491	0.591	47.7	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:21	1.57	-0.03	0.0523	0.229	75.7	28.51	0.50	28.55	28.06	28.02	13.43	92.97	13.53	0.00	0.3364	0.580	47.5	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:22	1.57	-0.03	0.0519	0.228	76.0	28.51	0.50	28.55	28.06	28.02	13.39	92.57	13.56	0.00	0.3365	0.580	47.3	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:23	1.69	-0.03	0.0531	0.230	76.2	28.51	0.50	28.55	28.06	28.02	13.54	93.59	13.39	0.00	0.3313	0.576	47.2	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:24	1.54	-0.03	0.0536	0.232	76.6	28.51	0.50	28.55	28.06	28.02	13.61	93.99	13.39	0.00	0.3346	0.578	47.4	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:25	1.52	-0.03	0.0548	0.234	76.5	28.51	0.50	28.55	28.06	28.02	13.76	95.04	13.46	0.00	0.3333	0.577	47.5	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:26	1.56	-0.03	0.0541	0.233	76.7	28.51	0.50	28.55	28.06	27.80	13.73	92.70	13.48	0.00	0.3374	0.581	47.4	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:27	1.56	-0.03	0.0534	0.231	76.7	28.51	0.50	28.55	28.06	27.74	13.66	91.62	13.50	0.00	0.3397	0.583	47.2	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:28	1.63	-0.03	0.0539	0.232	76.9	28.51	0.50	28.55	28.06	27.74	13.72	92.02	13.49	0.00	0.3334	0.577	47.1	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:29	1.73	-0.03	0.0547	0.234	76.9	28.51	0.50	28.55	28.06	27.74	13.82	92.69	13.51	0.01	0.3437	0.586	46.9	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:30	1.73	-0.03	0.0543	0.233	77.0	28.51	0.50	28.55	28.06	27.83	13.75	93.04	13.51	0.00	0.3439	0.586	46.9	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:31	1.75	-0.03	0.0536	0.232	76.9	28.51	0.50	28.55	28.07	27.89	13.65	92.92	13.50	0.00	0.3368	0.580	47.0	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:32	1.67	-0.03	0.0524	0.229	77.1	28.51	0.50	28.55	28.06	27.73	13.54	90.68	13.52	0.00	0.3424	0.585	47.0	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:33	1.66	-0.03	0.0506	0.225	77.9	28.51	0.50	28.55	28.06	--	--	--	13.50	0.00	0.3413	0.584	47.1	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:34	1.62	-0.03	0.0530	0.230	78.1	28.51	0.50	28.55	28.06	27.73	13.63	91.11	13.50	0.00	0.3352	0.579	47.1	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:35	1.55	-0.03	0.0517	0.227	78.2	28.51	0.50	28.55	28.06	27.79	13.45	90.42	13.49	0.00	0.3334	0.577	47.1	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:36	1.55	-0.03	0.0528	0.230	78.2	28.51	0.50	28.55	28.06	27.80	13.58	91.49	13.48	0.00	0.3345	0.578	47.2	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:37	1.55	-0.03	0.0521	0.228	78.6	28.51	0.50	28.55	28.06	27.79	13.50	90.74	13.48	0.00	0.3320	0.576	47.1	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:38	1.55	-0.03	0.0540	0.232	78.8	28.51	0.50	28.55	28.06	27.71	13.77	91.77	13.53	0.01	0.3359	0.580	47.1	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:39	1.54	-0.03	0.0529	0.230	79.1	28.51	0.50	28.55	28.06	27.82	13.60	91.67	13.57	0.01	0.3348	0.579	47.2	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:40	1.57	-0.03	0.0526	0.229	79.2	28.51	0.50	28.55	28.06	27.77	13.58	90.95	13.61	0.00	0.3331	0.577	47.2	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:41	1.56	-0.03	0.0537	0.232	79.4	28.51	0.50	28.55	28.06	27.76	13.73	91.81	13.60	0.00	0.3400	0.583	47.3	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:42	1.62	-0.03	0.0542	0.233	79.4	28.51	0.50	28.55	28.06	27.78	13.78	92.41	13.58	0.00	0.3318	0.576	47.3	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:43	1.63	-0.03	0.0532	0.231	79.5	28.51	0.50	28.55	28.06	27.74	13.67	91.23	13.55	0.00	0.3307	0.575	47.5	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:44	1.62	-0.03	0.0534	0.231	79.6	28.51	0.50	28.55	28.06	27.77	13.69	91.62	13.52	0.01	0.3379	0.581	47.6	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:45	1.62	-0.03	0.0520	0.228	79.8	28.51	0.50	28.55	28.06	27.77	13.51	90.41	13.50	0.01	0.3350	0.579	47.5	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:46	1.68	-0.03	0.0468	0.216	79.5	28.51	0.50	28.55	28.06	27.77	12.81	85.74	13.47	0.00	0.3329	0.577	47.7	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:47	1.74	-0.03	0.0472	0.217	79.6	28.51	0.50	28.55	28.06	27.76	12.87	86.03	13.47	0.00	0.3348	0.579	47.9	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:48	1.79	-0.03	0.0496	0.223	79.6	28.51	0.50	28.55	28.07	27.75	13.20	88.09	13.45	0.00	0.3305	0.575	47.8	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:49	1.81	-0.03	0.0518	0.228	79.3	28.51	0.50	28.55	28.07	27.72	13.49	89.85	13.44	0.01	0.3343	0.578	47.9	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:50	1.80	-0.03	0.0527	0.230	79.3	28.51	0.50	28.55	28.07	27.74	13.60	90.71	13.43	0.01	0.3182	0.564	48.1	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:51	1.82	-0.03	0.0528	0.230	79.4	28.51	0.50	28.55	28.07	27.76	13.61	90.98	13.43	0.00	0.3186	0.564	47.9	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:52	1.83	-0.03	0.0532	0.231	79.4	28.51	0.50	28.55	28.07	27.72	13.67	90.96	13.51	0.01	0.3231	0.568	47.9	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	3:53	1.78	-0.03	0.0532	0.231	79.4	28.51	0.50	28.55	28.07	27.76	13.66	91.35	13.81	0.01	0.3256	0.571	47.8	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	3:54	1.82	-0.03	0.0549	0.234	78.8	28.51	0.50	28.55	28.07	27.72	13.88	92.51	13.77	0.01	0.3334	0.577	47.8	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	3:55	1.81	-0.03	0.0546	0.234	78.7	28.51	0.50	28.55	28.07	--	--	--	13.63	0.00	0.3330	0.577	47.7	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	3:56	1.

Alliance SOURCE TESTING

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	-
	Status	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	
		Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	4:15	1.81	-0.03	0.0544	0.233	78.7	28.51	0.50	28.55	28.07	27.75	13.81	92.35	13.57	0.01	0.3464	0.589	46.9	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	4:16	1.75	-0.03	0.0526	0.229	78.6	28.51	0.50	28.55	28.07	27.72	13.58	90.59	13.59	0.01	0.3404	0.583	46.8	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:17	1.72	-0.03	0.0546	0.234	78.2	28.51	0.50	28.55	28.06	--	--	--	13.60	0.01	0.3378	0.581	46.9	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:18	1.71	-0.03	0.0538	0.232	78.5	28.51	0.50	28.55	28.06	27.74	13.73	91.81	13.60	0.01	0.3501	0.592	46.8	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:19	1.66	-0.03	0.0538	0.232	78.3	28.51	0.50	28.55	28.06	27.72	13.73	91.68	13.59	0.01	0.3385	0.582	46.7	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:20	1.64	-0.03	0.0551	0.235	78.2	28.51	0.50	28.55	28.06	27.73	13.89	92.89	13.59	0.01	0.3468	0.589	46.6	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:21	1.63	-0.03	0.0540	0.232	78.1	28.51	0.50	28.55	28.06	27.72	13.76	91.89	13.57	0.01	0.3459	0.588	46.5	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	4:22	1.63	-0.03	0.0537	0.232	78.1	28.51	0.50	28.55	28.06	27.72	13.72	91.63	13.56	0.01	0.3505	0.592	46.7	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	4:23	1.62	-0.03	0.0526	0.229	77.8	28.51	0.50	28.55	28.06	27.73	13.57	90.74	13.55	0.01	0.3464	0.589	46.6	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	4:24	1.62	-0.03	0.0516	0.227	78.2	28.51	0.50	28.55	28.06	27.72	13.45	89.81	13.54	0.01	0.3584	0.599	46.4	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	4:25	1.61	-0.03	0.0519	0.228	78.2	28.51	0.50	28.55	28.06	27.72	13.49	90.07	13.54	0.01	0.3455	0.588	46.3	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	4:26	1.61	-0.03	0.0523	0.229	78.0	28.51	0.50	28.55	28.06	27.73	13.54	90.50	13.55	0.01	0.3477	0.590	46.3	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	4:27	1.64	-0.03	0.0528	0.230	77.9	28.51	0.50	28.55	28.06	27.73	13.60	90.90	13.56	0.01	0.3497	0.591	46.1	28.51	0.30	28.53	28.54	--	--	--	
2/15/2023	4:28	1.62	-0.03	0.0527	0.230	77.8	28.51	0.50	28.55	28.06	27.73	13.58	90.88	13.57	0.02	0.3512	0.593	46.1	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:29	1.63	-0.03	0.0532	0.231	77.6	28.51	0.50	28.55	28.06	27.73	13.65	91.28	13.62	0.01	0.3497	0.591	46.0	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:30	1.63	-0.03	0.0541	0.233	77.6	28.51	0.50	28.55	28.06	27.73	13.76	92.06	13.68	0.01	0.3508	0.592	45.7	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:31	1.61	-0.03	0.0545	0.233	77.2	28.51	0.50	28.55	28.06	27.74	13.80	92.51	13.73	0.01	0.3556	0.596	45.8	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:32	1.62	-0.03	0.0534	0.231	76.7	28.51	0.50	28.55	28.06	27.74	13.66	91.61	13.74	0.01	0.3555	0.596	45.6	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:33	1.60	-0.03	0.0545	0.233	76.6	28.51	0.50	28.55	28.06	27.74	13.80	92.58	13.74	0.01	0.3543	0.595	45.5	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:34	1.61	-0.03	0.0531	0.230	76.3	28.51	0.50	28.55	28.06	27.74	13.61	91.42	13.73	0.02	0.3521	0.593	45.5	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:35	1.63	-0.03	0.0545	0.233	76.0	28.51	0.50	28.55	28.06	27.75	13.79	92.72	13.69	0.02	0.3473	0.589	45.4	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:36	1.66	-0.03	0.0510	0.226	75.7	28.51	0.50	28.55	28.06	27.75	13.33	89.70	13.68	0.02	0.3518	0.593	45.3	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:37	1.67	-0.03	0.0486	0.220	75.4	28.51	0.50	28.55	28.06	27.78	13.00	87.80	13.68	0.02	0.3605	0.600	45.3	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:38	1.70	-0.03	0.0523	0.229	75.2	28.51	0.50	28.55	28.06	27.76	13.49	90.91	13.66	0.02	0.3540	0.595	45.1	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:39	1.71	-0.03	0.0533	0.231	75.0	28.51	0.50	28.55	28.06	--	--	--	13.66	0.02	0.3553	0.596	45.2	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:40	1.69	-0.03	0.0541	0.233	75.1	28.51	0.50	28.55	28.06	27.76	13.72	92.49	13.66	0.01	0.3480	0.590	45.2	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:41	1.75	-0.03	0.0550	0.235	75.2	28.51	0.50	28.55	28.07	27.80	13.83	93.55	13.64	0.02	0.3422	0.585	45.4	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:42	1.82	-0.03	0.0534	0.231	75.0	28.51	0.50	28.55	28.07	27.76	13.63	91.89	13.67	0.01	0.3567	0.597	45.5	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:43	1.77	-0.03	0.0544	0.233	75.0	28.51	0.50	28.55	28.07	27.76	13.76	92.74	13.76	0.02	0.3645	0.604	45.5	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:44	1.75	-0.03	0.0534	0.231	75.1	28.51	0.50	28.55	28.07	27.76	13.63	91.87	13.86	0.01	0.3519	0.593	45.6	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	4:45	1.75	-0.03	0.0541	0.233	75.0	28.51	0.50	28.55	28.07	27.78	13.72	92.64	13.74	0.02	0.3540	0.595	45.7	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:46	1.76	-0.03	0.0540	0.232	75.5	28.51	0.50	28.55	28.07	27.76	13.71	92.33	13.67	0.01	0.3546	0.595	45.6	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:47	1.75	-0.03	0.0549	0.234	75.3	28.51	0.50	28.55	28.07	27.93	13.78	94.46	13.64	0.02	0.3592	0.599	45.7	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:48	1.74	-0.03	0.0535	0.231	75.9	28.51	0.50	28.55	28.06	27.96	13.61	93.44	13.64	0.01	0.3538	0.595	45.3	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:49	1.74	-0.03	0.0542	0.233	75.9	28.51	0.50	28.55	28.06	27.97	13.69	94.13	13.63	0.02	0.3545	0.595	45.2	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:50	1.78	-0.02	0.0540	0.232	75.9	28.51	0.50	28.55	28.07	27.98	13.66	94.03	13.65	0.02	0.3583	0.599	45.4	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:51	1.77	-0.03	0.0529	0.230	75.7	28.51	0.50	28.55	28.07	27.98	13.52	93.11	13.66	0.02	0.3548	0.596	45.2	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:52	1.79	-0.02	0.0532	0.231	75.8	28.51	0.50	28.55	28.07	27.98	13.56	93.36	13.67	0.02	0.3538	0.595	45.1	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:53	1.83	-0.02	0.0536	0.232	76.0	28.51	0.50	28.55	28.07	27.76	13.67	91.90	13.66	0.02	0.3541	0.595	45.1	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:54	1.73	-0.02	0.0532	0.231	75.6	28.51	0.50	28.55	28.07	27.76	13.61	91.63	13.66	0.02	0.3580	0.598	45.2	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:55	1.76	-0.03	0.0522	0.228	75.5	28.51	0.50	28.55	28.07	27.76	13.48	90.77	13.66	0.02	0.3594	0.599	45.2	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:56	1.79	-0.02	0.0529	0.230	75.4	28.51	0.50	28.55	28.07	27.76	13.57	91.40	13.65	0.02	0.3533	0.594	45.1	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:57	1.77	-0.02	0.0526	0.229	75.7	28.51	0.50	28.55	28.07	27.76	13.54	91.08	13.64	0.01	0.3566	0.597	45.2	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:58	1.77	-0.02	0.0531	0.230	75.5	28.51	0.50	28.55	28.07	27.82	13.58	92.02	13.66	0.02	0.3606	0.600	45.1	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	4:59	1.78	-0.02	0.0538	0.232	75.6	28.51	0.50	28.55	28.07	27.76	13.69	92.14	13.68	0.02	0.3531	0.594	45.0	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:00	1.79	-0.02	0.0565	0.238	75.4	28.51	0.50	28.55	28.07	27.76	14.03	94.45	13.70	0.02	0.3520	0.593	45.0	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:01	1.59	-0.02	0.0548	0.234	75.4	28.51	0.50	28.55	28.06	--	--	--	13.73	0.01	0.3534	0.594	44.8	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:02	1.58	-0.02	0.0543	0.233	75.2	28.51	0.50	28.55	28.06	27.82	13.73	93.18	13.74	0.02	0.3575	0.598	44.9	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:03	1.58	-0.02	0.0537	0.232	75.2	28.51	0.50	28.55	28.06	27.89	13.64	93.17	13.75	0.02	0.3599	0.600	44.9	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:04	1.64	-0.02	0.0529	0.230	75.2	28.51	0.50	28.55	28.06	27.76	13.57	91.43	13.74	0.02	0.3560	0.597	45.0	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:05	1.60	-0.02	0.0534	0.231	75.4	28.51	0.50	28.55	28.06	27.91	13.60	93.05	13.73	0.02	0.3603	0.600	45.1	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:06	1.60	-0.02	0.0561	0.237	75.4	28.51	0.50	28.55	28.06	27.75	13.98	94.14	13.69	0.02	0.3610	0.601	45.2	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:07	1.68	-0.02	0.0549	0.234	75.3	28.51	0.50	28.55	28.06	27.87	13.80	94.02	13.65	0.01	0.3599	0.600	45.2	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:08	1.60	-0.02	0.0550	0.235	75.2	28.51	0.50	28.55	28.06	27.75	13.84	93.24	13.66	0.02	0.3620	0.602	45.3	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:09	1.67	-0.02	0.0557	0.236	75.4	28.51	0.50	28.55	28.06	27.75	13.93	93.78	13.65	0.02	0.3603	0.600	44.9	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:10	1.74	-0.02	0.0552	0.235	75.7	28.51	0.50	28.55	28.07	27.96	13.82	94.90	13.65	0.02	0.3598	0.600	45.0	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:11	1.62	-0.02	0.0541	0.233	75.4	28.51	0.50	28.55	28.06	27.75	13.73	92.43	13.64	0.02	0.3569	0.597	45.0	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:12	1.66	-0.02	0.0550	0.235	75.4	28.51	0.50	28.55	28.06	27.86	13.81	94.02	13.64	0.02	0.3602	0.600	44.9	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:13	1.64	-0.02	0.0551	0.235	75.4	28.51	0.50	28.55	28.06	27.94	13.81	94.76	13.62	0.02	0.3619	0.602	45.0	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:14	1.65	-0.02	0.0544	0.233	75.3	28.51	0.50	28.55	28.06	27.76	13.76	92.71	13.62	0.02	0.3609	0.601	45.2	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:15	1.63	-0.02	0.0545	0.233	75.3	28.51	0.50	28.55	28.06	27.76	13.77	92.86	13.61	0.02	0.3559	0.597	45.1	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:16	1.63	-0.02	0.0541	0.233	75.4	28.51	0.50	28.55	28.06	27.95	13.68	93.96	13.63	0.02	0.3653	0.604	45.0	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:17	1.67	-0.02	0.0543	0.233	75.6	28.51	0.50	28.55	28.06	27.75	13.75	92.57	13.62	0.02	0.3604	0.600	45.0	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:18	1.61	-0.02	0.0546	0.234	75.4	28.51	0.50	28.55	28.06	27.75	13.79	92.85	13.63	0.02	0.3599	0.600	45.0	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:19	1.61	-0.02	0.0536	0.232	75.3	28.51	0.50	28.55	28.06	27.92	13.62	93.28	13.63	0.01	0.3657	0.605	45.2	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:20	1.63	-0.02	0.0540	0.232	75.7	28.51	0.50	28.55	28.06	27.91	13.68	93.52	13.64	0.02	0.3614	0.601	44.9	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:21	1.67	-0.02	0.0546	0.234	76.0	28.51	0.50	28.55	28.06	27.75	13.80	92.76	13.65	0.02	0.3576	0.598	45.1	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:22	1.77	-0.02	0.0545	0.233	75.6	28.51	0.50	28.55	28.07	27.76	13.78	92.73	13.64	0.01	0.3623	0.602	45.3	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:23	1.72	-0.02	0.0541	0.233	75.4	28.51	0.50	28.55	28.07	--	--	--	13.64	0.02	0.3597	0.600	45.2	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:24	1.76	-0.02	0.0547	0.234	75.6	28.51	0.50	28.55	28.07	27.90	13.77	94.02	13.63	0.02	0.3694	0.608	45.0	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:25	1.80	-0.02	0.0541	0.233	75.2	28.51	0.50	28.55	28.07	27.97	13.67	94.05	13.64	0.02	0.3701	0.608	45.0	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:26	1.80	-0.02	0.0534	0.231	75.2	28.51	0.50	28.55	28.07	27.76	13.63	91.85	13.65	0.01	0.3631	0.603	44.8	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:27	1.83	-0.02	0.0537	0.232	75.1	28.51	0.50	28.55	28.07	27.76	13.67	92.13	13.66	0.02	0.3626	0.602	44.7	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:28	1.79	-0.02	0.0545	0.233	74.8	28.51	0.50	28.55	28.07	27.77	13.77	92.86	13.67	0.02	0.3601	0.600	44.5	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:29	1.83	-0.02	0.0554	0.235	74.8	28.51	0.50	28.55	28.07	27.77	13.88	93.63	13.67	0.01	0.3612	0.601	44.7	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:30	1.87	-0.02	0.0544	0.233	74.5	28.51	0.50	28.55	28.07	27.77	13.75	92.83	13.68	0.02	0.3625	0.602	44.6	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:31	1.89	-0.02	0.0532	0.231	74.5	28.51	0.50	28.55	28.07	27.77	13.60	91.80	13.68	0.02	0.3669	0.606	44.6	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:32	1.89	-0.02	0.0522	0.228	74.3	28.51	0.50	28.55	28.07	27.77	13.46	90.96	13.68	0.02	0.3630	0.602	44.8	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:33	1.94	-0.02	0.0521	0.228	74.1	28.51	0.50	28.55	28.07	27.83	13.44	91.31	13.68	0.01	0.3671	0.606	44.9	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:34	1.98	-0.02	0.0522	0.228	74.0	28.51	0.50	28.55	28.08	27.82	13.45	91.30	13.67	0.02	0.3616	0.601	44.8	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:35	1.95	-0.02	0.0509	0.226	73.9	28.51	0.50	28.55	28.07	27.78	13.29	89.87	13.67	0.02	0.3611	0.601	44.7	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:36	1.97	-0.02	0.0524	0.229	73.9	28.51	0.50	28.55	28.08	27.78	13.48	91.19	13.67	0.02	0.3552	0.596	44.7	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:37	1.98	-0.02	0.0524	0.229	74.0	28.51	0.50	28.55	28.08	27.84	13.47	91.65	13.69	0.02	0.3582	0.598	44.7	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:38	1.94	-0.02	0.0537	0.232	73.7	28.51	0.50	28.55	28.07	27.83	13.63	92.73	13.74	0.01	0.3585	0.599	44.8	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:39	1.96	-0.02	0.0545	0.233	74.0	28.51	0.50	28.55	28.08	27.78	13.75	92.98	13.75	0.01	0.3558	0.596	44.6	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:40	1.93	-0.02	0.0534	0.231	73.6	28.51	0.50	28.55	28.07	27.80	13.60	92.25	13.77	0.02	0.3605	0.600	45.0	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:41	1.96	-0.02	0.0539	0.232	74.0	28.51	0.50	28.55	28.08	27.80	13.67	92.60	13.80	0.02	0.3641	0.603	44.7	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	5:42	1.94	-0.02	0.0542	0.233	73.6	28.51	0.50	28.55	28.07	27.80	13.70	92.94	13.81	0.02	0.3645	0.604	45.0	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	5:43	1.90	-0.02	0.0532	0.231	73.8	28.51	0.50	28.55	28.07	27.85	13.57	92.44	13.80	0.01	0.3594	0.599	44.9	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:44	1.87	-0.02	0.0532	0.231	73.9	28.51	0.50	28.55	28.07	--	--	--	13.78	0.01	0.3631	0.603	44.9	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:45	1.86	-0.02	0.0522	0.228	73.8	28.51	0.50	28.55	28.07	27.78	13.46	91.04	13.76	0.02	0.3664	0.605	44.7	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:46	1.92	-0.02	0.0527	0.230	73.4	28.51	0.50	28.55	28.07	27.83	13.50	91.87	13.75	0.02	0.3731	0.611	44.7	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:47	1.84	-0.02	0.0525	0.229	73.4	28.51	0.50	28.55	28.07	27.78	13.49	91.37	13.77	0.02	0.3688	0.607	44.4	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:48	1.79	-0.02	0.0517	0.227	73.3	28.51	0.50	28.55	28.07	27.78	13.39	90.69	13.77	0.02	0.3674	0.606	44.2	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:49	1.75	-0.02	0.0522	0.228	73.3	28.51	0.50	28.55	28.07	27.93	13.41	92.28	13.77	0.02	0.3639	0.603	44.0	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:50	1.77	-0.02	0.0512	0.226	73.0	28.51	0.50	28.55	28.07	27.78	13.32	90.29	13.76	0.02	0.3656	0.605	44.1	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:51	1.74	-0.02	0.0525	0.229	72.8	28.51	0.50	28.55	28.07	27.78	13.48	91.47	13.77	0.02	0.3663	0.605	44.1	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:52	1.73	-0.02	0.0526	0.229	72.8	28.51	0.50	28.55	28.07	27.79	13.49	91.58	13.79	0.01	0.3671	0.606	44.2	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:53	1.71	-0.02	0.0524	0.229	72.9	28.51	0.50	28.55	28.07	27.85	13.46	91.87	13.82	0.01	0.3632	0.603	44.1	28.51	0.30	28.53	28.55	--	--	--	
2/15/2023	5:54	1.66	-0.02	0.0531	0.230	72.9	28.51	0.

Alliance SOURCE TESTING

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	-
	Status	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	Valid
		Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	
2/15/2023	6:13	1.73	-0.02	0.0538	0.232	72.2	28.51	0.50	28.55	28.07	27.79	13.64	92.69	13.94	0.02	0.3734	0.611	43.7	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:14	1.63	-0.02	0.0533	0.231	72.3	28.51	0.50	28.55	28.06	27.83	13.57	92.64	13.93	0.01	0.3749	0.612	43.9	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:15	1.69	-0.02	0.0541	0.233	72.3	28.51	0.50	28.55	28.06	27.79	13.68	92.94	13.90	0.01	0.3731	0.611	43.7	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:16	1.68	-0.02	0.0534	0.231	72.3	28.51	0.50	28.55	28.06	27.87	13.57	92.98	13.89	0.01	0.3775	0.614	43.8	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:17	1.70	-0.02	0.0527	0.230	72.4	28.51	0.50	28.55	28.06	27.79	13.50	91.71	13.88	0.01	0.3745	0.612	43.7	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:18	1.72	-0.02	0.0533	0.231	72.1	28.51	0.50	28.55	28.07	27.88	13.55	92.96	13.87	0.01	0.3738	0.611	43.3	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:19	1.69	-0.02	0.0521	0.228	72.2	28.51	0.50	28.55	28.06	27.79	13.42	91.22	13.87	0.01	0.3785	0.615	43.5	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:20	1.81	-0.02	0.0519	0.228	72.5	28.51	0.50	28.55	28.07	27.90	13.37	91.83	13.86	0.01	0.3796	0.616	43.5	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:21	1.80	-0.02	0.0528	0.230	72.4	28.51	0.50	28.55	28.07	27.79	13.51	91.79	13.85	0.01	0.3720	0.610	43.5	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:22	1.86	-0.02	0.0526	0.229	72.5	28.51	0.50	28.55	28.07	27.85	13.47	92.06	13.83	0.02	0.3798	0.616	43.5	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:23	1.81	-0.02	0.0519	0.228	72.5	28.51	0.50	28.55	28.07	27.79	13.40	90.99	13.86	0.01	0.3783	0.615	43.3	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:24	1.84	-0.02	0.0540	0.232	72.2	28.51	0.50	28.55	28.07	27.84	13.65	93.25	13.88	0.01	0.3792	0.616	43.4	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:25	1.85	-0.02	0.0531	0.230	72.7	28.51	0.50	28.55	28.07	27.79	13.56	92.01	13.88	0.01	0.3771	0.614	43.3	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:26	1.90	-0.02	0.0527	0.230	72.9	28.51	0.50	28.55	28.07	27.82	13.50	91.86	13.92	0.01	0.3751	0.612	43.1	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:27	1.96	-0.02	0.0536	0.232	72.8	28.51	0.50	28.55	28.08	27.93	13.59	93.46	13.96	0.01	0.3792	0.616	43.3	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:28	1.95	-0.02	0.0541	0.233	72.8	28.51	0.50	28.55	28.07	--	--	--	13.99	0.01	0.3766	0.614	43.3	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:29	2.02	-0.02	0.0552	0.235	72.6	28.51	0.50	28.55	28.08	27.80	13.82	93.80	13.98	0.01	0.3796	0.616	43.4	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:30	1.88	-0.02	0.0554	0.235	72.5	28.51	0.50	28.55	28.07	27.93	13.81	95.07	13.98	0.01	0.3791	0.616	43.5	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:31	1.77	-0.02	0.0535	0.231	72.6	28.51	0.50	28.55	28.07	27.79	13.61	92.37	13.96	0.02	0.3824	0.618	43.4	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:32	1.86	-0.02	0.0540	0.232	72.3	28.51	0.50	28.55	28.07	27.86	13.65	93.34	13.94	0.01	0.3780	0.615	43.5	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:33	1.75	-0.02	0.0548	0.234	72.6	28.51	0.50	28.55	28.07	27.80	13.77	93.61	13.94	0.01	0.3729	0.611	43.2	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:34	1.80	-0.02	0.0544	0.233	72.4	28.51	0.50	28.55	28.07	27.79	13.72	93.18	13.91	0.01	0.3824	0.618	43.1	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:35	1.80	-0.02	0.0547	0.234	72.6	28.51	0.50	28.55	28.07	27.89	13.73	94.18	13.92	0.01	0.3836	0.619	43.1	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:36	1.76	-0.02	0.0542	0.233	72.6	28.51	0.50	28.55	28.07	27.79	13.69	92.98	13.92	0.01	0.3777	0.615	43.0	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:37	1.80	-0.02	0.0543	0.233	72.8	28.51	0.50	28.55	28.07	27.79	13.71	93.02	13.89	0.01	0.3861	0.621	43.2	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:38	1.85	-0.02	0.0547	0.234	73.0	28.51	0.50	28.55	28.07	27.82	13.75	93.60	13.91	0.01	0.3807	0.617	43.3	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:39	1.79	-0.02	0.0542	0.233	73.1	28.51	0.50	28.55	28.07	27.95	13.66	94.17	13.90	0.01	0.3789	0.616	43.4	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:40	1.81	-0.02	0.0060	0.077	73.0	28.51	0.50	28.55	28.07	27.97	4.54	31.39	13.88	0.01	0.3840	0.620	43.5	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:41	1.88	-0.02	0.0043	0.066	73.2	28.51	0.50	28.55	28.07	27.83	3.86	26.27	13.87	0.01	0.3822	0.618	43.5	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:42	1.78	-0.02	0.0031	0.056	73.5	28.51	0.50	28.55	28.07	27.78	3.28	22.20	13.88	0.01	0.3822	0.618	43.3	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:43	1.79	-0.02	0.0024	0.049	73.6	28.51	0.50	28.55	28.07	27.94	2.88	19.80	13.87	0.01	0.3706	0.609	43.5	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:44	1.69	-0.02	0.0011	0.033	73.3	28.51	0.50	28.55	28.06	27.88	1.95	13.35	13.87	0.01	0.2181	0.467	43.5	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:45	1.71	-0.02	0.0008	0.028	73.4	28.51	0.50	28.55	28.07	27.78	1.67	11.28	13.87	0.01	0.2114	0.460	43.6	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:46	1.68	-0.02	0.0001	0.010	73.2	28.51	0.50	28.55	28.06	27.83	0.59	4.01	13.97	0.01	0.2025	0.450	43.4	28.51	0.30	28.53	28.56	--	--	--	
2/15/2023	6:47	1.91	-0.02	0.0004	0.020	71.6	28.51	0.50	28.55	28.07	27.96	1.17	8.11	17.99	0.02	0.2030	0.451	43.4	28.51	0.30	28.53	28.72	--	--	--	
2/15/2023	6:48	1.64	-0.02	0.0004	0.020	69.4	28.51	0.50	28.55	28.06	27.81	1.17	8.03	19.04	0.03	0.1928	0.439	43.0	28.51	0.30	28.53	28.77	--	--	--	
2/15/2023	6:49	1.53	-0.02	0.0004	0.020	67.5	28.51	0.50	28.55	28.06	27.82	1.17	8.06	19.54	0.03	0.1911	0.437	42.6	28.51	0.30	28.53	28.79	--	--	--	
2/15/2023	6:50	1.65	-0.02	0.0009	0.030	65.8	28.51	0.50	28.55	28.06	--	--	--	19.90	0.02	0.1861	0.431	42.7	28.51	0.30	28.53	28.80	--	--	--	
2/15/2023	6:51	1.94	-0.02	0.0009	0.030	64.1	28.51	0.50	28.55	28.07	27.96	1.75	12.24	20.27	0.02	0.1849	0.430	42.6	28.51	0.30	28.53	28.81	--	--	--	
2/15/2023	6:52	2.76	-0.02	0.0009	0.030	62.8	28.51	0.50	28.55	28.11	27.91	1.74	12.17	20.60	0.03	0.1801	0.424	42.4	28.51	0.30	28.53	28.83	--	--	--	
2/15/2023	6:53	4.83	-0.02	0.0010	0.032	61.2	28.51	0.50	28.55	28.19	28.00	1.83	12.84	20.90	0.03	0.1835	0.428	42.6	28.51	0.30	28.53	28.84	--	--	--	
2/15/2023	6:54	7.20	-0.01	0.0010	0.032	59.7	28.51	0.50	28.55	28.29	28.16	1.83	12.91	21.10	0.03	0.1917	0.438	42.5	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	6:55	9.07	-0.01	0.0009	0.030	58.4	28.51	0.50	28.55	28.36	28.19	1.73	12.19	21.18	0.03	0.1932	0.440	42.5	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	6:56	11.25	0.00	0.0010	0.032	57.4	28.51	0.50	28.55	28.45	28.28	1.82	12.85	21.23	0.03	0.1925	0.439	42.2	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	6:57	6.72	-0.01	0.0010	0.032	56.5	28.51	0.50	28.55	28.27	28.15	1.82	12.95	20.97	0.03	0.1982	0.445	42.2	28.51	0.30	28.53	28.84	--	--	--	
2/15/2023	6:58	4.74	-0.02	0.0011	0.033	56.1	28.51	0.50	28.55	28.19	28.09	1.91	13.64	20.60	0.02	0.1934	0.440	42.3	28.51	0.30	28.53	28.83	--	--	--	
2/15/2023	6:59	3.79	-0.02	0.0010	0.032	55.5	28.51	0.50	28.55	28.15	28.06	1.82	13.02	20.62	0.03	0.1953	0.442	42.1	28.51	0.30	28.53	28.83	--	--	--	
2/15/2023	7:00	4.93	-0.02	0.0010	0.032	54.9	28.51	0.50	28.55	28.19	28.04	1.82	12.96	20.61	0.03	0.1997	0.447	42.3	28.51	0.30	28.53	28.83	--	--	--	
2/15/2023	7:01	7.59	0.00	0.0010	0.032	54.3	28.51	0.50	28.55	28.30	28.15	1.82	12.94	20.65	0.03	0.2000	0.447	42.3	28.51	0.30	28.53	28.83	--	--	--	
2/15/2023	7:02	9.45	0.03	0.0010	0.032	53.7	28.51	0.50	28.55	28.38	28.27	1.81	12.97	20.70	0.04	0.2006	0.448	42.2	28.51	0.30	28.53	28.83	--	--	--	
2/15/2023	7:03	10.81	0.07	0.0009	0.030	53.0	28.51	0.50	28.55	28.44	28.35	1.71	12.32	20.73	0.03	0.1973	0.444	42.1	28.51	0.30	28.53	28.83	--	--	--	
2/15/2023	7:04	12.14	0.10	0.0010	0.032	52.4	28.51	0.50	28.55	28.50	28.41	1.80	12.99	20.74	0.03	0.1986	0.446	42.1	28.51	0.30	28.53	28.83	--	--	--	
2/15/2023	7:05	13.22	0.12	0.0009	0.030	51.7	28.51	0.50	28.55	28.55	28.46	1.71	12.32	20.71	0.02	0.2004	0.448	42.0	28.51	0.30	28.53	28.83	--	--	--	
2/15/2023	7:06	14.20	0.13	0.0009	0.030	51.2	28.51	0.50	28.55	28.59	28.45	1.71	12.27	20.76	0.03	0.2030	0.451	42.0	28.51	0.30	28.53	28.84	--	--	--	
2/15/2023	7:07	14.98	0.14	0.0009	0.030	50.6	28.51	0.50	28.55	28.62	28.49	1.71	12.27	20.79	0.03	0.2063	0.454	41.9	28.51	0.30	28.53	28.84	--	--	--	
2/15/2023	7:08	15.73	0.15	0.0010	0.032	50.1	28.51	0.50	28.55	28.65	28.54	1.80	12.96	20.86	0.03	0.2040	0.452	41.9	28.51	0.30	28.53	28.84	--	--	--	
2/15/2023	7:09	16.41	0.15	0.0010	0.032	49.7	28.51	0.50	28.55	28.68	28.59	1.79	12.98	20.92	0.03	0.2006	0.448	42.0	28.51	0.30	28.53	28.84	--	--	--	
2/15/2023	7:10	17.01	0.14	0.0009	0.030	49.1	28.51	0.50	28.55	28.70	28.61	1.70	12.32	20.97	0.03	0.1944	0.441	41.9	28.51	0.30	28.53	28.84	--	--	--	
2/15/2023	7:11	17.53	0.13	0.0011	0.033	48.7	28.51	0.50	28.55	28.72	28.63	1.88	13.62	21.01	0.03	0.1978	0.445	41.9	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	7:12	17.97	0.13	0.0009	0.030	48.3	28.51	0.50	28.55	28.74	--	--	--	21.05	0.03	0.2019	0.449	41.9	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	7:13	17.57	0.12	0.0009	0.030	47.7	28.51	0.50	28.55	28.72	28.63	1.70	12.33	21.09	0.03	0.2049	0.453	42.0	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	7:14	18.27	0.13	0.0009	0.030	47.5	28.51	0.50	28.55	28.75	28.66	1.70	12.33	21.13	0.03	0.2018	0.449	41.8	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	7:15	18.39	0.14	0.0011	0.033	47.0	28.51	0.50	28.55	28.76	28.67	1.87	13.64	21.16	0.03	0.1997	0.447	41.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	7:16	18.45	0.15	0.0009	0.030	46.8	28.51	0.50	28.55	28.76	28.68	1.69	12.34	21.19	0.04	0.1988	0.446	41.6	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	7:17	18.49	0.16	0.0011	0.033	46.2	28.51	0.50	28.55	28.77	28.65	1.87	13.62	21.21	0.04	0.1998	0.447	41.6	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	7:18	18.47	0.17	0.0008	0.028	46.0	28.51	0.50	28.55	28.77	28.65	1.60	11.62	21.22	0.04	0.2066	0.455	41.5	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:19	18.53	0.18	0.0009	0.030	45.4	28.51	0.50	28.55	28.77	28.66	1.69	12.33	21.23	0.04	0.2040	0.452	41.5	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:20	18.50	0.18	0.0008	0.028	45.2	28.51	0.50	28.55	28.77	28.67	1.60	11.64	21.24	0.04	0.2106	0.459	41.3	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:21	18.57	0.20	0.0009	0.030	44.5	28.51	0.50	28.55	28.77	28.68	1.69	12.36	21.25	0.04	0.2072	0.455	41.2	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:22	18.57	0.20	0.0010	0.032	44.5	28.51	0.50	28.55	28.77	28.69	1.78	13.03	21.26	0.04	0.2055	0.453	41.1	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:23	18.60	0.21	0.0010	0.032	44.0	28.51	0.50	28.55	28.78	28.69	1.78	13.04	21.27	0.04	0.2043	0.452	41.2	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:24	18.60	0.21	0.0008	0.028	44.0	28.51	0.50	28.55	28.78	28.70	1.59	11.67	21.28	0.03	0.2060	0.454	41.2	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:25	18.73	0.22	0.0008	0.028	43.7	28.51	0.50	28.55	28.78	28.70	1.59	11.67	21.27	0.04	0.2055	0.453	41.2	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:26	18.79	0.22	0.0008	0.028	43.4	28.51	0.50	28.55	28.79	28.71	1.59	11.67	21.28	0.04	0.2044	0.452	41.1	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:27	18.80	0.22	0.0009	0.030	43.1	28.51	0.50	28.55	28.79	28.70	1.69	12.38	21.28	0.04	0.2041	0.452	41.3	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:28	18.86	0.23	0.0008	0.028	42.8	28.51	0.50	28.55	28.79	28.71	1.59	11.68	21.28	0.04	0.2044	0.452	41.3	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:29	18.85	0.23	0.0007	0.026	42.6	28.51	0.50	28.55	28.79	28.71	1.49	10.92	21.29	0.04	0.2067	0.455	41.4	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:30	18.88	0.24	0.0007	0.026	42.2	28.51	0.50	28.55	28.79	28.71	1.49	10.93	21.28	0.04	0.2025	0.450	41.5	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:31	18.86	0.24	0.0008	0.028	42.3	28.51	0.50	28.55	28.79	28.71	1.59	11.68	21.28	0.04	0.2046	0.452	41.4	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:32	18.85	0.24	0.0009	0.030	42.0	28.51	0.50	28.55	28.79	28.71	1.69	12.39	21.29	0.04	0.2030	0.451	41.7	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:33	18.92	0.25	0.0008	0.028	41.9	28.51	0.50	28.55	28.80	28.71	1.59	11.69	21.29	0.04	0.2018	0.449	41.8	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:34	18.89	0.25	0.0008	0.028	41.7	28.51	0.50	28.55	28.80	--	--	--	21.29	0.04	0.2037	0.451	41.9	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:35	18.94	0.25	0.0008	0.028	41.7	28.51	0.50	28.55	28.80	28.71	1.59	11.69	21.29	0.05	0.2028	0.450	41.9	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:36	18.94	0.26	0.0008	0.028	41.6	28.51	0.50	28.55	28.80	28.72	1.59	11.69	21.27	0.04	0.2036	0.451	41.8	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:37	19.00	0.26	0.0008	0.028	41.5	28.51	0.50	28.55	28.80	28.72	1.59	11.69	21.29	0.04	0.2061	0.454	41.7	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:38	19.01	0.27	0.0008	0.028	41.3	28.51	0.50	28.55	28.80	28.72	1.59	11.69	21.29	0.04	0.2065	0.454	41.6	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:39	19.03	0.27	0.0008	0.028	41.1	28.51	0.50	28.55	28.80	28.72	1.59	11.69	21.29	0.04	0.2051	0.453	41.4	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:40	19.02	0.27	0.0007	0.026	41.0	28.51	0.50	28.55	28.80	28.72	1.48	10.94	21.30	0.04	0.2045	0.452	41.5	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:41	19.03	0.27	0.0007	0.026	41.0	28.51	0.50	28.55	28.80	28.72	1.48	10.94	21.29	0.04	0.2054	0.453	41.4	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:42	19.02	0.27	0.0007	0.026	40.7	28.51	0.50	28.55	28.80	28.72	1.48	10.94	21.31	0.05	0.2031	0.451	41.3	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:43	19.07	0.27	0.0007	0.026	40.8	28.51	0.50	28.55	28.81	28.71	1.48	10.93	21.30	0.04	0.2051	0.453	41.4	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:44	19.07	0.27	0.0007	0.026	40.7	28.51	0.50	28.55	28.81	28.71	1.48	10.93	21.30	0.04	0.2055	0.453	41.3	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:45	19.07	0.27	0.0007	0.026	40.5	28.51	0.50	28.55	28.81	28.71	1.48	10.94	21.31	0.04	0.1996	0.447	41.3	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:46	19.09	0.27	0.0007	0.026	40.3	28.51	0.50	28.55	28.81	28.71	1.48	10.94	21.31	0.04	0.1986	0.446	41.4	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:47	19.11	0.27	0.0007	0.026	40.2	28.51	0.50	28.55	28.81	28.72	1.48	10.94	21.31	0.04	0.2018	0.449	41.3	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	7:48	19.11	0.28	0.0007	0.026	40.2	28.51	0.50	28.55	28.81	28.72	1.48	10.94	21.31	0.04	0.2004	0.448	41.4	28.51	0.30	28.53	28.86	28.80	28.80	25.10	185.15
2/15/2023	7:49	19.20	0.29	0.0006	0.024	40.3	28.51	0.50	28.55	28.81	28.73	1.37	10.13	21.31	0.05	0.1988	0.446	41.5	28.51	0.30	28.53	28.86	28.80	28.80	25.00	184.39
2/15/2023	7:50	19.15	0.29	0.0006	0.024	40.1	28.51	0.50	28.55	28.81	28.73	1.37	10.13	21.30	0.05	0.2025	0.450	41.6	28.51	0.30	28.53	28.86	28.80	28.80	25.24	186.09
2/15/2023	7:51	19.19	0.29	0.0006	0.024	40.3	28.51	0.50	28.55	28.81	28.73	1.37	10.13	21.31	0.04	0.2004	0.448	41.7	28.51	0.30	28.53	28.86	28.80	28.80	25.11

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	-
	Status	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	Valid
		Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	
2/15/2023	8:11	19.40	0.31	0.0004	0.020	41.4	28.51	0.50	28.55	28.83	28.73	1.12	8.26	21.32	0.04	0.1799	0.424	43.1	28.51	0.30	28.53	28.86	28.80	23.82	175.08	
2/15/2023	8:12	19.44	0.31	0.0004	0.020	41.6	28.51	0.50	28.55	28.83	28.74	1.12	8.26	21.32	0.04	0.1792	0.423	43.2	28.51	0.30	28.53	28.86	28.80	23.78	174.72	
2/15/2023	8:13	19.45	0.31	0.0004	0.020	41.9	28.51	0.50	28.55	28.83	28.73	1.12	8.25	21.32	0.05	0.1760	0.420	43.3	28.51	0.30	28.53	28.86	28.80	23.57	173.12	
2/15/2023	8:14	19.47	0.31	0.0004	0.020	42.1	28.51	0.50	28.55	28.83	28.73	1.12	8.25	21.33	0.05	0.1771	0.421	43.1	28.51	0.30	28.53	28.86	28.80	23.64	173.69	
2/15/2023	8:15	19.47	0.30	0.0005	0.022	42.1	28.51	0.50	28.55	28.83	28.73	1.26	9.22	21.33	0.05	0.1732	0.416	43.3	28.51	0.30	28.53	28.86	28.80	23.38	171.74	
2/15/2023	8:16	19.59	0.31	0.0004	0.020	42.2	28.51	0.50	28.55	28.83	28.73	1.12	8.25	21.33	0.05	0.1759	0.419	43.4	28.51	0.30	28.53	28.86	28.80	23.57	173.05	
2/15/2023	8:17	19.68	0.31	0.0005	0.022	42.2	28.51	0.50	28.55	28.84	--	--	--	21.32	0.04	0.1741	0.417	43.6	28.51	0.30	28.53	28.86	28.80	23.45	172.13	
2/15/2023	8:18	19.71	0.31	0.0004	0.020	42.7	28.51	0.50	28.55	28.84	28.74	1.12	8.24	21.32	0.05	0.1714	0.414	43.6	28.51	0.30	28.53	28.86	28.80	23.27	170.78	
2/15/2023	8:19	19.78	0.31	0.0004	0.020	42.8	28.51	0.50	28.55	28.84	28.74	1.12	8.24	21.33	0.05	0.1713	0.414	43.6	28.51	0.30	28.53	28.86	28.80	23.26	170.72	
2/15/2023	8:20	19.81	0.30	0.0004	0.020	43.2	28.51	0.50	28.55	28.84	28.74	1.12	8.23	21.33	0.04	0.1663	0.408	44.0	28.51	0.30	28.53	28.86	28.80	22.93	168.14	
2/15/2023	8:21	19.84	0.30	0.0006	0.024	43.4	28.51	0.50	28.55	28.84	28.74	1.38	10.08	21.33	0.05	0.1657	0.407	44.0	28.51	0.30	28.53	28.86	28.80	22.89	167.84	
2/15/2023	8:22	19.84	0.30	0.0004	0.020	43.5	28.51	0.50	28.55	28.84	28.74	1.12	8.23	21.32	0.04	0.1615	0.402	44.0	28.51	0.30	28.53	28.86	28.79	22.59	165.69	
2/15/2023	8:23	18.57	0.28	0.0005	0.022	43.5	28.51	0.50	28.55	28.79	28.69	1.26	9.21	21.33	0.04	0.1607	0.401	44.2	28.51	0.30	28.53	28.86	28.79	22.55	165.24	
2/15/2023	8:24	19.57	0.29	0.0004	0.020	43.6	28.51	0.50	28.55	28.83	28.73	1.13	8.23	21.33	0.05	0.1583	0.398	44.3	28.51	0.30	28.53	28.86	28.80	22.38	163.97	
2/15/2023	8:25	19.78	0.29	0.0005	0.022	43.9	28.51	0.50	28.55	28.84	28.74	1.26	9.20	21.33	0.04	0.1624	0.403	44.4	28.51	0.30	28.53	28.86	28.79	22.67	166.08	
2/15/2023	8:26	19.84	0.29	0.0005	0.022	44.2	28.51	0.50	28.55	28.84	28.74	1.26	9.20	21.33	0.04	0.1629	0.404	44.6	28.51	0.30	28.53	28.86	28.79	22.71	166.29	
2/15/2023	8:27	19.88	0.29	0.0004	0.020	44.3	28.51	0.50	28.55	28.84	28.73	1.13	8.22	21.34	0.04	0.1616	0.402	44.6	28.51	0.30	28.53	28.86	28.79	22.62	165.62	
2/15/2023	8:28	19.90	0.29	0.0006	0.024	44.3	28.51	0.50	28.55	28.84	28.73	1.38	10.07	21.34	0.05	0.1598	0.400	45.0	28.51	0.30	28.53	28.86	28.80	22.50	164.62	
2/15/2023	8:29	19.91	0.29	0.0007	0.026	44.6	28.51	0.50	28.55	28.84	28.73	1.49	10.87	21.33	0.05	0.1565	0.396	45.0	28.51	0.30	28.53	28.86	28.79	22.26	162.92	
2/15/2023	8:30	19.92	0.29	0.0005	0.022	44.5	28.51	0.50	28.55	28.84	28.73	1.26	9.19	21.33	0.05	0.1552	0.394	45.0	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	8:31	19.89	0.29	0.0005	0.022	44.8	28.51	0.50	28.55	28.84	28.73	1.26	9.19	21.32	0.04	0.1541	0.393	45.0	28.51	0.30	28.53	28.86	28.79	22.10	161.66	
2/15/2023	8:32	19.92	0.29	0.0006	0.024	44.8	28.51	0.50	28.55	28.84	28.74	1.38	10.06	21.33	0.05	0.1545	0.393	45.0	28.51	0.30	28.53	28.86	28.79	22.12	161.86	
2/15/2023	8:33	19.93	0.28	0.0004	0.020	45.1	28.51	0.50	28.55	28.84	28.73	1.13	8.21	21.33	0.04	0.1516	0.389	45.1	28.51	0.30	28.53	28.86	28.79	21.92	160.31	
2/15/2023	8:34	19.94	0.28	0.0004	0.020	44.8	28.51	0.50	28.55	28.84	28.74	1.13	8.22	21.33	0.04	0.1505	0.388	45.2	28.51	0.30	28.53	28.86	28.79	21.84	159.73	
2/15/2023	8:35	19.97	0.28	0.0005	0.022	45.1	28.51	0.50	28.55	28.84	28.74	1.26	9.18	21.34	0.04	0.1527	0.391	45.3	28.51	0.30	28.53	28.86	28.79	22.00	160.87	
2/15/2023	8:36	19.97	0.29	0.0005	0.022	45.1	28.51	0.50	28.55	28.85	28.74	1.26	9.19	21.34	0.04	0.1443	0.380	45.4	28.51	0.30	28.53	28.86	28.79	21.39	156.36	
2/15/2023	8:37	20.01	0.28	0.0013	0.036	45.2	28.51	0.50	28.55	28.85	28.74	2.03	14.81	21.34	0.04	0.1486	0.385	45.4	28.51	0.30	28.53	28.86	28.79	21.71	158.65	
2/15/2023	8:38	19.99	0.28	0.0006	0.024	45.5	28.51	0.50	28.55	28.84	28.74	1.38	10.06	21.34	0.04	0.1460	0.382	45.6	28.51	0.30	28.53	28.86	28.79	21.52	157.23	
2/15/2023	8:39	20.00	0.28	0.0006	0.024	45.3	28.51	0.50	28.55	28.84	--	--	--	21.34	0.04	0.1460	0.382	45.8	28.51	0.30	28.53	28.86	28.79	21.53	157.18	
2/15/2023	8:40	20.01	0.28	0.0005	0.022	45.9	28.51	0.50	28.55	28.85	28.74	1.26	9.18	21.35	0.04	0.1463	0.382	45.8	28.51	0.30	28.53	28.86	28.79	21.55	157.34	
2/15/2023	8:41	20.02	0.28	0.0004	0.020	45.8	28.51	0.50	28.55	28.85	28.74	1.13	8.21	21.34	0.04	0.1429	0.378	45.9	28.51	0.30	28.53	28.86	28.79	21.30	155.50	
2/15/2023	8:42	20.05	0.28	0.0005	0.022	46.1	28.51	0.50	28.55	28.85	28.74	1.26	9.18	21.33	0.04	0.1418	0.377	46.0	28.51	0.30	28.53	28.86	28.79	21.22	154.88	
2/15/2023	8:43	20.06	0.28	0.0006	0.024	45.8	28.51	0.50	28.55	28.85	28.74	1.38	10.05	21.33	0.04	0.1394	0.373	46.1	28.51	0.30	28.53	28.86	28.79	21.04	153.55	
2/15/2023	8:44	20.07	0.28	0.0006	0.024	46.0	28.51	0.50	28.55	28.85	28.74	1.38	10.05	21.34	0.04	0.1362	0.369	45.9	28.51	0.30	28.53	28.86	28.79	20.79	151.78	
2/15/2023	8:45	19.78	0.28	0.0006	0.024	46.2	28.51	0.50	28.55	28.84	28.73	1.38	10.05	21.33	0.04	0.1378	0.371	46.1	28.51	0.30	28.53	28.86	28.79	20.92	152.66	
2/15/2023	8:46	18.91	0.27	0.0005	0.022	46.4	28.51	0.50	28.55	28.80	28.69	1.26	9.18	21.34	0.04	0.1357	0.368	46.0	28.51	0.30	28.53	28.86	28.79	20.76	151.49	
2/15/2023	8:47	19.96	0.28	0.0005	0.022	46.4	28.51	0.50	28.55	28.84	28.74	1.26	9.17	21.34	0.04	0.1375	0.371	46.2	28.51	0.30	28.53	28.86	28.79	20.90	152.46	
2/15/2023	8:48	20.02	0.28	0.0004	0.020	46.5	28.51	0.50	28.55	28.85	28.74	1.13	8.20	21.33	0.04	0.1396	0.374	46.2	28.51	0.30	28.53	28.86	28.79	21.06	153.61	
2/15/2023	8:49	20.07	0.28	0.0004	0.020	46.7	28.51	0.50	28.55	28.85	28.73	1.13	8.19	21.34	0.04	0.1389	0.373	46.3	28.51	0.30	28.53	28.86	28.79	21.01	153.20	
2/15/2023	8:50	20.07	0.28		--	46.8	28.51	0.50	28.55	28.85	28.74	--	--	21.33	0.04	0.1392	0.373	46.3	28.51	0.30	28.53	28.86	28.79	21.03	153.37	
2/15/2023	8:51	20.07	0.28		--	47.0	28.51	0.50	28.55	28.85	28.74	--	--	21.34	0.04	0.1398	0.374	46.4	28.51	0.30	28.53	28.86	28.79	21.08	153.68	
2/15/2023	8:52	20.07	0.28		--	47.0	28.51	0.50	28.55	28.85	28.74	--	--	21.33	0.04		--	46.5	28.51	0.30	28.53	28.86	28.79	--	--	
2/15/2023	8:53	20.08	0.28		--	47.1	28.51	0.50	28.55	28.85	28.74	--	--	21.33	0.04		--	46.6	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	8:54	20.35	0.22		--	47.0	28.51	0.50	28.55	28.85	28.74	--	--	21.20	0.04		--	46.7	28.51	0.30	28.53	28.85	28.78	--	--	
2/15/2023	8:55	20.65	0.16		--	46.9	28.51	0.50	28.55	28.85	28.74	--	--	21.09	0.05		--	46.8	28.51	0.30	28.53	28.85	28.78	--	--	
2/15/2023	8:56	20.65	0.16		--	46.9	28.51	0.50	28.55	28.85	28.74	--	--	21.00	0.10		--	46.8	28.51	0.30	28.53	28.86	28.78	--	--	
2/15/2023	8:57	20.64	0.17		--	46.7	28.51	0.50	28.55	28.85	28.77	--	--	20.94	0.12		--	46.9	28.51	0.30	28.53	28.86	28.78	--	--	
2/15/2023	8:58	20.64	0.17		--	46.7	28.51	0.50	28.55	28.85	28.83	--	--	20.89	0.13	0.1308	0.362	46.8	28.51	0.30	28.53	28.86	28.78	20.40	148.62	
2/15/2023	8:59	20.65	0.17	0.0001	0.010	46.9	28.51	0.50	28.55	28.85	28.83	0.56	4.13	20.86	0.13	0.1366	0.370	46.8	28.51	0.30	28.53	28.86	28.78	20.84	151.87	
2/15/2023	9:00	20.65	0.17	0.0005	0.022	46.7	28.51	0.50	28.55	28.85	28.83	1.26	9.23	20.85	0.13	0.1304	0.361	46.9	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	9:01	20.64	0.18	0.0002	0.014	46.9	28.51	0.50	28.55	28.85	--	--	--	20.84	0.13	0.1308	0.362	47.1	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	9:02	20.64	0.18	0.0004	0.020	46.8	28.51	0.50	28.55	28.85	--	--	--	20.83	0.13	0.1342	0.366	47.1	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	9:03	20.64	0.18	0.0001	0.010	46.4	28.51	0.50	28.55	28.85	--	--	--	20.83	0.13	0.1288	0.359	47.0	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	9:04	20.63	0.19	0.0020	0.045	46.5	28.51	0.50	28.55	28.86	--	--	--	20.81	0.14	0.1350	0.367	47.1	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	9:05	20.63	0.19	0.0004	0.020	46.4	28.51	0.50	28.55	28.86	--	--	--	20.81	0.14	0.1309	0.362	47.3	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	9:06	20.63	0.19	0.0006	0.024	46.6	28.51	0.50	28.55	28.86	--	--	--	20.81	0.14	0.1260	0.355	47.3	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	9:07	20.63	0.19	0.0002	0.014	46.9	28.51	0.50	28.55	28.86	--	--	--	20.81	0.14	0.1228	0.350	47.3	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	9:08	20.62	0.20	0.0002	0.014	47.3	28.51	0.50	28.55	28.86	--	--	--	20.82	0.14	0.1255	0.354	47.5	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	9:09	20.62	0.20	0.0003	0.017	47.5	28.51	0.50	28.55	28.86	--	--	--	20.83	0.14	0.1257	0.355	47.8	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	9:10	20.62	0.21	0.0008	0.028	47.7	28.51	0.50	28.55	28.86	--	--	--	20.84	0.14	0.1231	0.351	47.7	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	9:11	20.63	0.20	0.0005	0.022	48.1	28.51	0.50	28.55	28.86	--	--	--	20.85	0.15	0.1251	0.354	47.7	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	9:12	20.65	0.19	0.0006	0.024	48.3	28.51	0.50	28.55	28.86	--	--	--	20.87	0.15	0.1225	0.350	48.0	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	9:13	20.66	0.18	0.0003	0.017	48.3	28.51	0.50	28.55	28.86	--	--	--	20.89	0.14	0.1211	0.348	47.9	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	9:14	19.50	0.23	0.0005	0.022	48.6	28.51	0.50	28.55	28.82	--	--	--	20.90	0.12	0.1247	0.353	47.8	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	9:15	20.30	0.27	0.0006	0.024	48.8	28.51	0.50	28.55	28.86	--	--	--	20.90	0.13	0.1189	0.345	47.9	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	9:16	20.30	0.27	0.0002	0.014	49.0	28.51	0.50	28.55	28.86	--	--	--	20.90	0.14	0.1190	0.345	48.0	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	9:17	20.31	0.26	0.0005	0.022	49.4	28.51	0.50	28.55	28.85	--	--	--	20.90	0.15	0.1187	0.345	48.0	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	9:18	20.32	0.26	0.0002	0.014	49.5	28.51	0.50	28.55	28.85	--	--	--	20.90	0.15	0.1176	0.343	48.2	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	9:19	20.33	0.26	0.0005	0.022	49.9	28.51	0.50	28.55	28.85	28.73	1.27	9.13	20.91	0.15	0.1197	0.346	48.1	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	9:20			0.0003	0.017	50.1	28.51	0.50	28.55	--	--	--	--			0.1170	0.342	48.5	28.51	0.30	28.53	--	--	--	--	
2/15/2023	9:21			0.0006	0.024	50.1	28.51	0.50	28.55	--	--	--	--			0.1178	0.343	48.5	28.51	0.30	28.53	--	--	--	--	
2/15/2023	9:22			0.0003	0.017	49.7	28.51	0.50	28.55	--	--	--	--			0.1192	0.345	48.8	28.51	0.30	28.53	--	--	--	--	
2/15/2023	9:23			0.0003	0.017	49.9	28.51	0.50	28.55	--	--	--	--			0.1204	0.347	48.8	28.51	0.30	28.53	--	--	--	--	
2/15/2023	9:24			0.0004	0.020	50.2	28.51	0.50	28.55	--	--	--	--			0.1154	0.340	48.8	28.51	0.30	28.53	--	--	--	--	
2/15/2023	9:25			0.0004	0.020	50.3	28.51	0.50	28.55	--	--	--	--			0.1148	0.339	49.0	28.51	0.30	28.53	--	--	--	--	
2/15/2023	9:26			0.0005	0.022	50.4	28.51	0.50	28.55	--	--	--	--			0.1093	0.331	48.7	28.51	0.30	28.53	--	--	--	--	
2/15/2023	9:27			0.0005	0.022	50.6	28.51	0.50	28.55	--	--	--	--			0.1115	0.334	49.0	28.51	0.30	28.53	--	--	--	--	
2/15/2023	9:28			0.0005	0.022	50.9	28.51	0.50	28.55	--	--	--	--			0.1119	0.335	49.0	28.51	0.30	28.53	--	--	--	--	
2/15/2023	9:29			0.0005	0.022	51.1	28.51	0.50	28.55	--	--	--	--			0.1110	0.333	49.0	28.51	0.30	28.53	--	--	--	--	
2/15/2023	9:30			0.0003	0.017	51.3	28.51	0.50	28.55	--	--	--	--			0.1104	0.332	49.3	28.51	0.30	28.53	--	--	--	--	
2/15/2023	9:31			0.0003	0.017	51.6	28.51	0.50	28.55	--	--	--	--			0.1061	0.326	49.0	28.51	0.30	28.53	--	--	--	--	
2/15/2023	9:32	20.42	0.25	0.0004	0.020	51.8	28.51	0.50	28.55	28.86	28.74	1.13	8.15	21.39	0.04	0.1087	0.330	49.0	28.51	0.30	28.53	28.86	28.80	18.63	135.33	
2/15/2023	9:33	20.43	0.25	0.0007	0.026	52.0	28.51	0.50	28.55	28.86	28.73	1.50	10.78	21.38	0.04	0.1114	0.334	49.3	28.51	0.30	28.53	28.86	28.80	18.86	136.96	
2/15/2023	9:34	20.44	0.24	0.0009	0.030	52.2	28.51	0.50	28.55	28.86	28.73	1.70	12.22	21.38	0.04	0.1076	0.328	49.2	28.51	0.30	28.53	28.86	28.80	18.54	134.62	
2/15/2023	9:35	20.45	0.24	0.0008	0.028	52.4	28.51	0.50	28.55	28.86	28.73	1.61	11.51	21.38	0.04	0.1061	0.326	49.4	28.51	0.30	28.53	28.86	28.80	18.41	133.66	
2/15/2023	9:36	20.45	0.24	0.0006	0.024	52.9	28.51	0.50	28.55	28.86	28.73	1.39	9.96	21.39	0.03	0.1048	0.324	49.5	28.51	0.30	28.53	28.86	28.80	18.30	132.82	
2/15/2023	9:37	20.46	0.24	0.0004	0.020	53.2	28.51	0.50	28.55	28.86	28.72	1.14	8.13	21.39	0.04	0.1054	0.325	49.5	28.51	0.30	28.53	28.86	28.80	18.35	133.19	
2/15/2023	9:38	20.46	0.24	0.0006	0.024	53.1	28.51	0.50	28.55	28.86	28.73	1.39	9.96	21.39	0.03	0.1065	0.326	49.6	28.51	0.30	28.53	28.86	28.80	18.45	133.86	
2/15/2023	9:39	20.46	0.24	0.0005	0.022	53.3	28.51	0.50	28.55	28.86	28.73	1.27	9.09	21.40	0.03	0.1067	0.327	49.7	28.51	0.30	28.53	28.86	28.80	18.47	133.98	
2/15/2023	9:40	19.25	0.23	0.0008	0.028	53.5	28.51	0.50	28.55	28.81	--	--	--	21.40	0.03	0.1067	0.327	49.8	28.51	0.30	28.53	28.86	28.80	18.47	133.97	
2/15/2023	9:41	19.93	0.23	0.0008	0.028	53.5	28.51	0.50	28.55	28.83	28.70	1.61	11.50	21.39	0.03	0.1064	0.326	49.9	28.51	0.30	28.53	28.86	28.80	18.45	133.77	
2/15/2023	9:42	20.35	0.23	0.0006	0.024	53.5	28.51	0.50	28.55	28.85	28.72	1.39	9.96	21.40	0.03	0.1043	0.323	49.9	28.51	0.30	28.53	28.86	28.80	18.26	132.44	
2/15/2023	9:43	20.42	0.23	0.0007	0.026	53.8	28.51	0.50	28.55	28.85	28.72	1.50	10.75	21.40	0.03	0.1041	0.323	50.0	28.51	0.30	28.53	28.86	28.80	18.25	132.30	
2/15/2023	9:44	20.45	0.22	0.0007	0.026	53.8	28.51	0.50	28.55	28.85	28.71	1.50	10.74	21.40	0.03	0.1041	0.323	50.1	28.51	0.30	28.53	28.86	28.80	18.25	132.29	
2/15/2023	9:45	20.46	0.22	0.0008	0.028	53.9	28.51	0.50	28.55	28.85	28.73	1.61	11.50	21.39	0.03	0.1054	0.325	50.0	28.51	0.30	28.53	28.86	28.80	18.36	133.12	
2/15/2023	9:46	20.47	0.22	0.0008	0.028	54.0	28.51	0.50	28.55	28.85	28.72	1.61	11.49	21.40	0.03	0.1064	0.326	50.3	28.51	0.30	28.53	28.86	28.80	18.45	133.72	
2/15/2023	9:47	20.48	0.21	0.0005	0.022	54.2	28.51	0.50	28.55	28.85	28.72	1.27	9.09	21.40	0.02	0.1031	0.321	50.3	28.51	0.30	28.53	28.86	28.80	18.16	131.62	
2/15/2023	9:48	20.48	0.21	0.0006	0.024	54.3	28.51	0.50	28.55	28.85	28.72	1.39	9.95	21.39	0.02	0.1024	0.320	50.4	28.51	0.30	28.53	28.86	28.80	18.11	131.15	
2/15/2023	9:49	20.48	0.21	0.0005	0.022	54.2	28.51	0.50	28.55	28.85	28.72	1.27	9.08	21.39	0.02	0.1033	0.321	51.3	28.51	0.30	28.53	28.86	28.80	18.20	131.62	
2/15/2023	9:50	20.48	0.21	0.0004	0.020	54.4	28.51	0.50	28.55	28.85	28.72	1.14	8.12	21.39	0.02	0.1021	0.320	50.6	28.51	0.30	28.53	28.86	28.80	18.08	130.94	
2/15/2023	9:51	20.48	0.21	0.0002	0.014	54.4	28.51	0.50	28.55	28.85	28.72	0.80	5.74	21.40	0.03	0.

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet % dry	CO_2 - Inlet % dry	Delta P in. W.C.	Sq Rt Delta P	Temperature (°F)	Barometric in. Hg	Stack Pressure in. W.C.	Stack Pressure in. Hg	Molecular Weight Md	Molecular Weight Mw	Velocity ft/sec	Flow Rate (DSCFM)	O_2 - Outlet % dry	CO_2 - Outlet % dry	Delta P in. W.C.	Sq Rt Delta P	Temperature (°F)	Barometric in. Hg	Stack Pressure in. W.C.	Stack Pressure in. Hg	Molecular Weight Md	Molecular Weight Mw	Velocity ft/sec	Flow Rate (DSCFM)	-
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	10:09	20.52	0.18	0.0010	0.032	57.2	28.51	0.50	28.55	28.85	28.71	1.80	12.80	21.41	0.02	0.0989	0.314	51.9	28.51	0.30	28.53	28.86	28.80	17.82	128.70	
2/15/2023	10:10	20.53	0.18	0.0006	0.024	57.3	28.51	0.50	28.55	28.85	28.71	1.40	9.92	21.41	0.01	0.0984	0.314	52.1	28.51	0.30	28.53	28.86	28.80	17.78	128.37	
2/15/2023	10:11	20.53	0.18	0.0007	0.026	57.2	28.51	0.50	28.55	28.85	28.71	1.51	10.71	21.41	0.02	0.1013	0.318	52.1	28.51	0.30	28.53	28.86	28.80	18.04	130.24	
2/15/2023	10:12	20.53	0.18	0.0006	0.024	57.3	28.51	0.50	28.55	28.85	28.71	1.40	9.91	21.40	0.02	0.0989	0.314	52.2	28.51	0.30	28.53	28.86	28.80	17.82	128.68	
2/15/2023	10:13	20.53	0.18	0.0008	0.028	57.3	28.51	0.50	28.55	28.85	28.71	1.61	11.45	21.40	0.02	0.0998	0.316	52.4	28.51	0.30	28.53	28.86	28.80	17.91	129.23	
2/15/2023	10:14	20.49	0.18	0.0009	0.030	57.4	28.51	0.50	28.55	28.85	28.70	1.71	12.14	21.39	0.02	0.1002	0.317	52.3	28.51	0.30	28.53	28.86	28.80	17.94	129.49	
2/15/2023	10:15	18.80	0.17	0.0006	0.024	57.4	28.51	0.50	28.55	28.78	28.64	1.40	9.93	21.40	0.02	0.0969	0.311	52.5	28.51	0.30	28.53	28.86	28.80	17.65	127.32	
2/15/2023	10:16	20.30	0.18	0.0007	0.026	57.4	28.51	0.50	28.55	28.84	28.70	1.51	10.71	21.40	0.01	0.0992	0.315	52.4	28.51	0.30	28.53	28.86	28.80	17.86	128.84	
2/15/2023	10:17	20.46	0.18	0.0006	0.024	57.5	28.51	0.50	28.55	28.85	28.71	1.40	9.91	21.40	0.02	0.0960	0.310	52.5	28.51	0.30	28.53	28.86	28.80	17.57	126.73	
2/15/2023	10:18	20.51	0.18	0.0004	0.020	57.4	28.51	0.50	28.55	28.85	28.69	1.14	8.08	21.40	0.02	0.0997	0.316	52.4	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	10:19	20.53	0.18	0.0004	0.020	57.2	28.51	0.50	28.55	28.85	28.71	1.14	8.10	21.39	0.01	0.0991	0.315	52.5	28.51	0.30	28.53	28.86	28.80	17.85	128.75	
2/15/2023	10:20	20.54	0.18	0.0005	0.022	57.4	28.51	0.50	28.55	28.85	28.71	1.28	9.05	21.40	0.01	0.0981	0.313	52.4	28.51	0.30	28.53	28.86	28.80	17.76	128.11	
2/15/2023	10:21	20.55	0.19	0.0005	0.022	57.4	28.51	0.50	28.55	28.85	28.72	1.28	9.05	21.40	0.02	0.0939	0.306	52.3	28.51	0.30	28.53	28.86	28.80	17.37	125.35	
2/15/2023	10:22	19.85	0.18	0.0006	0.024	57.3	28.51	0.50	28.55	28.82	28.68	1.40	9.92	21.40	0.01	0.0969	0.311	52.6	28.51	0.30	28.53	28.86	28.80	17.65	127.31	
2/15/2023	10:23	18.98	0.18	0.0006	0.024	57.5	28.51	0.50	28.55	28.79	28.65	1.40	9.92	21.39	0.01	0.0980	0.313	52.5	28.51	0.30	28.53	28.86	28.80	17.75	128.06	
2/15/2023	10:24	20.35	0.18	0.0004	0.020	57.5	28.51	0.50	28.55	28.84	--	--	--	21.39	0.01	0.0972	0.312	52.5	28.51	0.30	28.53	28.86	28.80	17.68	127.53	
2/15/2023	10:25	20.48	0.18	0.0005	0.022	57.5	28.51	0.50	28.55	28.85	28.71	1.28	9.05	21.40	0.01	0.0938	0.306	52.6	28.51	0.30	28.53	28.86	28.80	17.37	125.25	
2/15/2023	10:26	20.52	0.18	0.0001	0.010	57.6	28.51	0.50	28.55	28.85	28.69	0.57	4.04	21.39	0.01	0.0963	0.310	52.7	28.51	0.30	28.53	28.86	28.80	17.60	126.90	
2/15/2023	10:27	20.55	0.18	0.0005	0.022	57.6	28.51	0.50	28.55	28.85	28.71	1.28	9.05	21.39	0.01	0.0959	0.310	52.8	28.51	0.30	28.53	28.86	28.80	17.56	126.63	
2/15/2023	10:28	20.56	0.18	0.0008	0.028	57.7	28.51	0.50	28.55	28.85	28.71	1.61	11.45	21.40	0.01	0.0964	0.310	52.9	28.51	0.30	28.53	28.86	28.80	17.61	126.93	
2/15/2023	10:29	20.56	0.17	0.0009	0.030	57.9	28.51	0.50	28.55	28.85	28.71	1.71	12.14	21.40	0.01	0.0939	0.306	53.0	28.51	0.30	28.53	28.86	28.80	17.38	125.27	
2/15/2023	10:30	20.57	0.16	0.0008	0.028	57.9	28.51	0.50	28.55	28.85	28.71	1.61	11.44	21.39	0.01	0.0970	0.311	53.0	28.51	0.30	28.53	28.86	28.80	17.67	127.32	
2/15/2023	10:31	20.58	0.16	0.0006	0.024	58.0	28.51	0.50	28.55	28.85	28.71	1.40	9.91	21.39	0.01	0.0944	0.307	53.1	28.51	0.30	28.53	28.86	28.80	17.43	125.59	
2/15/2023	10:32	20.58	0.15	0.0000	0.000	58.1	28.51	0.50	28.55	28.85	28.70	0.00	0.00	21.38	0.01	0.0960	0.310	53.1	28.51	0.30	28.53	28.86	28.80	17.58	126.65	
2/15/2023	10:33	20.58	0.15	0.0008	0.028	58.1	28.51	0.50	28.55	28.85	28.70	1.61	11.44	21.38	0.01	0.0933	0.305	53.3	28.51	0.30	28.53	28.86	28.80	17.33	124.84	
2/15/2023	10:34	20.58	0.15	0.0001	0.010	58.1	28.51	0.50	28.55	28.85	28.70	0.57	4.04	21.38	0.01	0.0969	0.311	53.3	28.51	0.30	28.53	28.86	28.80	17.66	127.22	
2/15/2023	10:35	20.59	0.15	0.0000	0.000	58.1	28.51	0.50	28.55	28.85	28.71	0.00	0.00	21.38	0.01	0.0965	0.311	53.1	28.51	0.30	28.53	28.86	28.80	17.62	126.99	
2/15/2023	10:36	20.59	0.15	0.0008	0.028	58.2	28.51	0.50	28.55	28.85	28.71	1.61	11.44	21.38	0.01	0.0953	0.309	53.8	28.51	0.30	28.53	28.86	28.80	17.53	126.10	
2/15/2023	10:37	20.59	0.15	0.0007	0.026	58.2	28.51	0.50	28.55	28.85	28.71	1.51	10.70	21.37	0.01	0.0964	0.310	53.4	28.51	0.30	28.53	28.86	28.80	17.62	126.87	
2/15/2023	10:38	18.47	0.14	0.0004	0.020	58.2	28.51	0.50	28.55	28.76	28.62	1.14	8.10	21.38	0.01	0.0963	0.310	53.7	28.51	0.30	28.53	28.86	28.80	17.61	126.78	
2/15/2023	10:39	20.18	0.15	0.0005	0.022	58.3	28.51	0.50	28.55	28.83	28.69	1.28	9.05	21.37	0.01	0.0997	0.316	53.7	28.51	0.30	28.53	28.86	28.80	17.92	129.01	
2/15/2023	10:40	20.47	0.15	0.0005	0.022	58.3	28.51	0.50	28.55	28.84	28.70	1.28	9.05	21.38	0.01	0.0941	0.307	53.7	28.51	0.30	28.53	28.86	28.80	17.41	125.32	
2/15/2023	10:41	20.54	0.15	0.0005	0.022	58.6	28.51	0.50	28.55	28.85	28.67	1.28	9.02	21.38	0.01	0.0950	0.308	53.7	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	10:42	20.56	0.15	0.0008	0.028	58.8	28.51	0.50	28.55	28.85	28.71	1.62	11.44	21.38	0.01	0.0951	0.308	53.7	28.51	0.30	28.53	28.86	28.80	17.51	125.99	
2/15/2023	10:43	20.58	0.15	0.0011	0.033	58.8	28.51	0.50	28.55	28.85	28.71	1.89	13.41	21.38	0.01	0.0975	0.312	54.2	28.51	0.30	28.53	28.86	28.80	17.73	127.51	
2/15/2023	10:44	20.59	0.15	0.0005	0.022	58.8	28.51	0.50	28.55	28.85	28.71	1.28	9.04	21.39	0.00	0.0967	0.311	56.1	28.51	0.30	28.53	28.86	28.80	17.69	126.75	
2/15/2023	10:45	20.59	0.15	0.0004	0.020	59.0	28.51	0.50	28.55	28.85	--	--	--	21.39	0.01	0.0996	0.316	58.2	28.51	0.30	28.53	28.86	28.80	17.99	128.38	
2/15/2023	10:46	20.59	0.15	0.0007	0.026	59.4	28.51	0.50	28.55	28.85	28.71	1.51	10.69	21.38	0.01	0.0969	0.311	54.2	28.51	0.30	28.53	28.86	28.80	17.68	127.11	
2/15/2023	10:47	18.64	0.15	0.0000	0.000	59.4	28.51	0.50	28.55	28.77	28.63	0.00	0.00	21.37	0.01	0.0971	0.312	54.3	28.51	0.30	28.53	28.86	28.80	17.70	127.23	
2/15/2023	10:48	20.15	0.16	0.0000	0.000	59.7	28.51	0.50	28.55	28.83	28.69	0.00	0.00	21.37	0.01	0.0980	0.313	54.3	28.51	0.30	28.53	28.86	28.80	17.78	127.82	
2/15/2023	10:49	20.48	0.15	0.0011	0.033	59.7	28.51	0.50	28.55	28.84	28.70	1.90	13.39	21.37	0.00	0.0999	0.316	55.5	28.51	0.30	28.53	28.85	28.79	17.97	128.90	
2/15/2023	10:50	20.54	0.15	0.0006	0.024	59.8	28.51	0.50	28.55	28.85	28.70	1.40	9.89	21.37	0.00	0.0978	0.313	57.6	28.51	0.30	28.53	28.85	28.79	17.82	127.28	
2/15/2023	10:51	20.57	0.15	0.0008	0.028	59.9	28.51	0.50	28.55	28.85	28.70	1.62	11.41	21.37	0.01	0.0979	0.313	57.7	28.51	0.30	28.53	28.86	28.80	17.83	127.33	
2/15/2023	10:52	20.58	0.15	0.0007	0.026	60.1	28.51	0.50	28.55	28.85	28.70	1.51	10.68	21.37	0.01	0.0994	0.315	57.3	28.51	0.30	28.53	28.86	28.80	17.96	128.36	
2/15/2023	10:53	20.59	0.15	0.0003	0.017	60.0	28.51	0.50	28.55	28.85	28.70	0.99	6.99	21.38	0.00	0.0972	0.312	56.5	28.51	0.30	28.53	28.86	28.80	17.75	127.02	
2/15/2023	10:54	20.60	0.15	0.0002	0.014	60.1	28.51	0.50	28.55	28.85	28.70	0.81	5.71	21.37	0.00	0.0969	0.311	54.6	28.51	0.30	28.53	28.85	28.79	17.69	127.07	
2/15/2023	10:55	20.60	0.15	0.0003	0.017	60.0	28.51	0.50	28.55	28.85	28.70	0.99	6.99	21.37	0.01	0.0998	0.316	54.8	28.51	0.30	28.53	28.86	28.80	17.95	128.93	
2/15/2023	10:56	20.60	0.15	0.0005	0.022	60.0	28.51	0.50	28.55	28.85	28.70	1.28	9.03	21.36	0.01	0.0981	0.313	57.7	28.51	0.30	28.53	28.86	28.79	17.85	127.45	
2/15/2023	10:57	20.60	0.15	0.0006	0.024	59.9	28.51	0.50	28.55	28.85	28.70	1.40	9.89	21.36	0.01	0.0974	0.312	55.9	28.51	0.30	28.53	28.86	28.80	17.75	127.22	
2/15/2023	10:58	18.46	0.14	0.0005	0.022	60.0	28.51	0.50	28.55	28.76	28.62	1.28	9.04	21.36	0.01	0.0968	0.311	54.5	28.51	0.30	28.53	28.86	28.80	17.68	127.00	
2/15/2023	10:59	20.19	0.14	0.0005	0.022	60.2	28.51	0.50	28.55	28.83	28.69	1.28	9.03	21.36	0.01	0.0959	0.310	54.4	28.51	0.30	28.53	28.86	28.79	17.59	126.42	
2/15/2023	11:00	20.48	0.14	0.0005	0.022	59.9	28.51	0.50	28.55	28.84	28.70	1.28	9.03	21.36	0.01	0.0966	0.311	54.7	28.51	0.30	28.53	28.86	28.79	17.66	126.84	
2/15/2023	11:01	20.55	0.14	0.0003	0.017	59.9	28.51	0.50	28.55	28.84	28.67	0.99	6.98	21.37	0.00	0.0968	0.311	54.9	28.51	0.30	28.53	28.85	28.79	17.68	126.96	
2/15/2023	11:02	20.58	0.14	0.0000	0.000	59.9	28.51	0.50	28.55	28.85	28.71	0.00	0.00	21.37	0.01	0.0984	0.314	54.8	28.51	0.30	28.53	28.86	28.79	17.83	128.00	
2/15/2023	11:03	20.59	0.13	0.0001	0.010	60.2	28.51	0.50	28.55	28.84	28.70	0.57	4.04	21.37	0.00	0.0959	0.310	54.8	28.51	0.30	28.53	28.85	28.79	17.60	126.37	
2/15/2023	11:04	20.60	0.13	0.0002	0.014	60.1	28.51	0.50	28.55	28.84	28.70	0.81	5.71	21.37	0.00	0.0963	0.310	54.9	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	11:05	20.61	0.13	0.0002	0.014	59.9	28.51	0.50	28.55	28.85	28.70	0.81	5.71	21.38	0.01	0.0968	0.311	55.0	28.51	0.30	28.53	28.86	28.80	17.68	126.93	
2/15/2023	11:06	20.61	0.13	0.0000	0.000	60.1	28.51	0.50	28.55	28.85	28.70	0.00	0.00	21.37	0.01	0.0943	0.307	55.0	28.51	0.30	28.53	28.86	28.80	17.45	125.29	
2/15/2023	11:07	20.61	0.13	0.0010	0.032	60.2	28.51	0.50	28.55	28.85	--	--	--	21.37	0.00	0.0968	0.311	55.2	28.51	0.30	28.53	28.85	28.79	17.69	126.90	
2/15/2023	11:08	18.65	0.13	0.0005	0.022	60.3	28.51	0.50	28.55	28.77	28.62	1.28	9.03	21.36	0.01	0.0949	0.308	55.4	28.51	0.30	28.53	28.86	28.79	17.52	125.61	
2/15/2023	11:09	20.24	0.13	0.0002	0.014	60.4	28.51	0.50	28.55	28.83	28.68	0.81	5.71	21.37	0.01	0.0950	0.308	55.6	28.51	0.30	28.53	28.86	28.79	17.53	125.67	
2/15/2023	11:10	20.50	0.13	0.0003	0.017	60.4	28.51	0.50	28.55	28.84	28.69	0.99	6.99	21.37	0.01	0.0936	0.306	55.6	28.51	0.30	28.53	28.86	28.80	17.40	124.74	
2/15/2023	11:11	20.56	0.13	0.0001	0.010	60.5	28.51	0.50	28.55	28.84	28.69	0.57	4.03	21.37	0.01	0.0957	0.309	59.7	28.51	0.30	28.53	28.86	28.79	17.66	125.64	
2/15/2023	11:12	20.59	0.12	0.0004	0.020	60.7	28.51	0.50	28.55	28.84	28.69	1.14	8.06	21.38	0.00	0.0967	0.311	58.0	28.51	0.30	28.53	28.86	28.79	17.73	126.51	
2/15/2023	11:13	20.60	0.13	0.0001	0.010	60.9	28.51	0.50	28.55	28.84	28.70	0.57	4.03	21.38	0.01	0.0923	0.304	55.8	28.51	0.30	28.53	28.86	28.80	17.28	123.86	
2/15/2023	11:14	20.60	0.12	0.0007	0.026	61.2	28.51	0.50	28.55	28.84	28.69	1.52	10.66	21.39	0.01	0.0991	0.315	55.9	28.51	0.30	28.53	28.86	28.80	17.91	128.32	
2/15/2023	11:15	20.61	0.12	0.0010	0.032	61.3	28.51	0.50	28.55	28.84	28.69	1.81	12.74	21.39	0.01	0.1032	0.321	56.0	28.51	0.30	28.53	28.86	28.79	18.28	130.92	
2/15/2023	11:16	20.61	0.12	0.0005	0.022	61.3	28.51	0.50	28.55	28.84	28.69	1.28	9.01	21.38	0.01	0.0931	0.305	56.2	28.51	0.30	28.53	28.86	28.80	17.36	124.35	
2/15/2023	11:17	20.16	0.11	0.0004	0.020	61.8	28.51	0.50	28.55	28.82	28.67	1.15	8.06	21.37	0.01	0.0939	0.306	56.0	28.51	0.30	28.53	28.86	28.79	17.43	124.89	
2/15/2023	11:18	18.73	0.11	0.0007	0.026	62.0	28.51	0.50	28.55	28.77	28.61	1.52	10.67	21.37	0.00	0.0901	0.300	56.2	28.51	0.30	28.53	28.85	28.79	17.08	122.31	
2/15/2023	11:19	20.40	0.12	0.0008	0.028	61.8	28.51	0.50	28.55	28.84	28.68	1.62	11.39	21.37	0.01	0.0953	0.309	56.4	28.51	0.30	28.53	28.86	28.79	17.57	125.76	
2/15/2023	11:20	20.53	0.12	0.0006	0.024	61.8	28.51	0.50	28.55	28.84	28.68	1.40	9.86	21.38	0.01	0.0909	0.301	56.7	28.51	0.30	28.53	28.86	28.80	17.16	122.80	
2/15/2023	11:21	20.57	0.12	0.0006	0.024	62.2	28.51	0.50	28.55	28.84	28.66	1.40	9.84	21.38	0.01	0.0913	0.302	56.7	28.51	0.30	28.53	28.86	28.79	17.20	123.07	
2/15/2023	11:22	20.58	0.12	0.0000	0.000	62.2	28.51	0.50	28.55	28.84	28.69	0.00	0.00	21.38	0.01	0.0912	0.302	56.9	28.51	0.30	28.53	28.86	28.79	17.20	122.97	
2/15/2023	11:23	20.59	0.11	0.0006	0.024	62.2	28.51	0.50	28.55	28.84	28.69	1.40	9.86	21.39	0.00	0.0902	0.300	57.1	28.51	0.30	28.53	28.86	28.79	17.11	122.24	
2/15/2023	11:24	20.60	0.11	0.0007	0.026	62.5	28.51	0.50	28.55	28.84	28.69	1.52	10.65	21.37	0.01	0.0908	0.301	59.4	28.51	0.30	28.53	28.86	28.79	17.20	122.38	
2/15/2023	11:25	20.61	0.11	0.0009	0.030	62.6	28.51	0.50	28.55	28.84	28.68	1.72	12.07	21.37	0.01	0.0894	0.299	60.6	28.51	0.30	28.53	28.86	28.79	17.09	121.30	
2/15/2023	11:26	19.10	0.11	0.0007	0.026	63.0	28.51	0.50	28.55	28.78	28.62	1.52	10.65	21.37	0.01	0.0904	0.301	58.2	28.51	0.30	28.53	28.86	28.79	17.14	122.26	
2/15/2023	11:27	19.82	0.11	0.0002	0.014	63.0	28.51	0.50	28.55	28.81	28.65	0.81	5.69	21.36	0.01	0.0883	0.297	57.3	28.51	0.30	28.53	28.86	28.79	16.93	120.93	
2/15/2023	11:28	20.48	0.11	0.0004	0.020	63.3	28.51	0.50	28.55	28.84	28.67	1.15	8.04	21.36	0.01	0.0901	0.300	57.5	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	11:29	20.55	0.11	0.0004	0.020	63.2	28.51	0.50	28.55	28.84	--	--	--	21.37	0.01	0.0874	0.296	57.6	28.51	0.30	28.53	28.86	28.79	16.85	120.28	
2/15/2023	11:30	20.58	0.11	0.0002	0.014	63.2	28.51	0.50	28.55	28.84	28.64	0.81	5.67	21.36	0.01	0.0882	0.297	57.8	28.51	0.30	28.53	28.86	28.79	16.93	120.81	
2/15/2023	11:31	20.60	0.11	0.0006	0.024	63.4	28.51	0.50	28.55	28.84	28.68	1.41	9.84	21.38	0.01	0.0911	0.302	57.8	28.51	0.30	28.53	28.86	28.79	17.20	122.79	
2/15/2023	11:32	20.60	0.11	0.0004	0.020	63.7	28.51	0.50	28.55	28.84	28.68	1.15	8.04	21.37	0.01	0.0895	0.299	57.9	28.51	0.30	28.53	28.86	28.79	17.05	121.68	
2/15/2023	11:33	20.31	0.11	0.0004	0.020	63.8	28.51	0.50	28.55	28.83	28.67	1.15	8.04	21.37	0.01	0.0858	0.293	58.1	28.51	0.30	28.53	28.86	28.79	16.70	119.12	
2/15/2023	11:34	18.80	0.10	0.0006	0.024	63.8	28.51	0.50	28.55	28.77	28.60	1.41	9.85	21.37	0.01	0.0873	0.295	58.3	28.51	0.30	28.53	28.86	28.79	16.85	120.14	
2/15/2023	11:35	20.39	0.11	0.0007	0.026	64.1	28.51	0.50	28.55	28.83	28.66	1.52	10.62	21.36	0.01	0.0863	0.294	58.5	28.51	0.30	28.53	28.86	28.79	16.75	119.43	
2/15/2023	11:36	20.53	0.10	0.0008	0.028	64.3	28.51	0.50	28.55	28.84	28.67	1.63	11.35	21.36	0.01	0.0894	0.299	61.5	28.51	0.30	28.53	28.86	28.79	17.10	121.21	
2/15/2023	11:37	20.58	0.10	0.0005	0.022	64.3	28.51	0.50	28.55	28.84	28.64	1.29	8.95	21.37	0.01	0.0856	0.293	62.4	28.51	0.30	28.53	28.86	28.79	16.75	118.50	
2/15/2023	11:38	20.59	0.10	0.0005	0.022	64.6	28.51	0.50	28.55	28.84	28.67	1.29	8.97	21.37	0.01	0.0913	0.302	62.9	28.51	0.30	28.53	28.86	28.79	17.31	122.32	
2/15/2023	11:39	20.60	0.10	0.0005	0.022	64.7	28.51	0.50	28.55	28.84	28.67	1.29	8.97	21.37	0.01	0.0846	0.291	59.2	28.51	0.30	28.53	28.86	28.79	16.60	118.15	
2/15/2023	11:40	20.23	0.10	0.0007	0.026	64.8	28.51	0.50	28.55	28.83	28.66	1.52	10.61	21.37	0.01	0.0836	0.289	58.8	28.51	0.30	28.53	28.86	28.79	16.50	117.49	
2/15/2023	11:41	18.82	0.10	0.0002	0.014	64.9	28.51	0.50	28.55	28.77	28.60	0.81	5.68	21.37	0.01	0.0856	0.293	59.0	28.51	0.30	28.53	28.86	28.79	16.69	118.87	
2/15/2023	11:42	20.40	0.10	0.0003	0.017	64.9	28.51	0.50	28.55	28.83	28.66	1.00	6.95	21.36	0.01	0.0842	0.290	59.1	28.51	0.30	28.53	28.86	28.79	16.56	117.88	
2/15/2023	11:43	20.54	0.10	0.0006	0.024	65.0	28.51	0.50

Alliance SOURCE TESTING

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	-
	Status	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	
		Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	12:07	19.85	0.09	0.0002	0.014	66.6	28.51	0.50	28.55	28.81	28.64	0.81	5.66	21.41	0.01	0.0720	0.268	61.6	28.51	0.30	28.53	28.86	28.79	15.35	108.73	
2/15/2023	12:08	19.19	0.09	0.0004	0.020	66.7	28.51	0.50	28.55	28.78	28.61	1.15	8.01	21.40	0.01	0.0722	0.269	61.8	28.51	0.30	28.53	28.86	28.79	15.37	108.86	
2/15/2023	12:09	20.47	0.09	0.0005	0.022	66.7	28.51	0.50	28.55	28.83	28.66	1.29	8.95	21.40	0.01	0.0739	0.272	61.8	28.51	0.30	28.53	28.86	28.79	15.55	110.14	
2/15/2023	12:10	20.57	0.09	0.0011	0.033	66.6	28.51	0.50	28.55	28.84	28.65	1.91	13.26	21.40	0.01	0.0755	0.275	61.7	28.51	0.30	28.53	28.86	28.79	15.72	111.34	
2/15/2023	12:11	20.61	0.09	0.0004	0.020	66.5	28.51	0.50	28.55	28.84	28.65	1.15	8.00	21.40	0.01	0.0790	0.281	61.8	28.51	0.30	28.53	28.86	28.79	16.08	113.89	
2/15/2023	12:12	20.63	0.09	0.0016	0.040	66.8	28.51	0.50	28.55	28.84	28.67	2.30	16.01	21.40	0.02	0.0787	0.281	61.7	28.51	0.30	28.53	28.86	28.79	16.05	113.66	
2/15/2023	12:13	20.61	0.09	0.0008	0.028	66.7	28.51	0.50	28.55	28.84	--	--	--	21.40	0.01	0.0856	0.293	62.0	28.51	0.30	28.53	28.86	28.79	16.74	118.50	
2/15/2023	12:14	19.03	0.09	0.0006	0.024	66.9	28.51	0.50	28.55	28.78	28.60	1.41	9.81	21.40	0.01	0.0874	0.296	61.9	28.51	0.30	28.53	28.86	--	--	--	
2/15/2023	12:15	16.43	0.09	0.0003	0.017	67.0	28.51	0.50	28.55	28.67	28.49	1.00	6.95	21.38	0.01	0.0795	0.282	61.9	28.51	0.30	28.53	28.86	28.79	16.13	114.22	
2/15/2023	12:16	14.24	0.09	0.0006	0.024	67.0	28.51	0.50	28.55	28.58	28.41	1.42	9.84	21.37	0.02	0.0766	0.277	62.0	28.51	0.30	28.53	28.86	28.79	15.84	112.10	
2/15/2023	12:17	14.80	0.09	0.0006	0.024	67.2	28.51	0.50	28.55	28.61	28.43	1.42	9.83	21.39	0.01	0.0775	0.278	62.0	28.51	0.30	28.53	28.86	28.79	15.93	112.77	
2/15/2023	12:18	18.61	0.09	0.0005	0.022	67.0	28.51	0.50	28.55	28.76	28.55	1.29	8.94	21.40	0.02	0.0793	0.282	62.1	28.51	0.30	28.53	28.86	28.79	16.12	114.05	
2/15/2023	12:19	19.13	0.09	0.0002	0.014	67.0	28.51	0.50	28.55	28.78	28.59	0.82	5.66	21.40	0.01	0.0773	0.278	62.4	28.51	0.30	28.53	28.86	28.79	15.92	112.57	
2/15/2023	12:20	18.97	0.09	0.0004	0.020	67.0	28.51	0.50	28.55	28.77	28.68	1.15	8.06	21.40	0.01	0.0821	0.287	62.3	28.51	0.30	28.53	28.86	28.79	16.40	116.03	
2/15/2023	12:21	18.69	0.09	0.0008	0.028	67.1	28.51	0.50	28.55	28.76	28.53	1.63	11.28	21.40	0.01	0.0781	0.279	62.3	28.51	0.30	28.53	28.86	28.79	16.00	113.18	
2/15/2023	12:22	18.52	0.09	0.0000	0.000	67.1	28.51	0.50	28.55	28.76	28.56	0.00	0.00	21.38	0.02	0.0806	0.284	62.4	28.51	0.30	28.53	28.86	28.79	16.25	114.96	
2/15/2023	12:23	18.64	0.09	0.0001	0.010	67.2	28.51	0.50	28.55	28.76	28.58	0.58	4.00	21.36	0.01	0.0770	0.277	62.4	28.51	0.30	28.53	28.86	28.79	15.89	112.36	
2/15/2023	12:24	18.87	0.09	0.0003	0.017	67.3	28.51	0.50	28.55	28.77	28.59	1.00	6.93	21.33	0.01	0.0762	0.276	62.2	28.51	0.30	28.53	28.85	28.79	15.80	111.78	
2/15/2023	12:25	18.90	0.09	0.0002	0.014	67.3	28.51	0.50	28.55	28.77	28.59	0.82	5.66	21.31	0.01	0.0766	0.277	62.4	28.51	0.30	28.53	28.85	28.78	15.85	112.05	
2/15/2023	12:26	18.92	0.08	0.0000	0.000	67.0	28.51	0.50	28.55	28.77	28.59	0.00	0.00	21.29	0.01	0.0741	0.272	62.6	28.51	0.30	28.53	28.85	28.79	15.59	110.21	
2/15/2023	12:27	18.93	0.09	0.0000	0.000	67.2	28.51	0.50	28.55	28.77	28.59	0.00	0.00	21.30	0.01	0.0758	0.275	62.6	28.51	0.30	28.53	28.85	28.79	15.77	111.46	
2/15/2023	12:28	18.93	0.08	0.0000	0.000	67.2	28.51	0.50	28.55	28.77	28.59	0.00	0.00	21.31	0.01	0.0699	0.264	62.5	28.51	0.30	28.53	28.85	28.78	15.14	107.02	
2/15/2023	12:29	18.95	0.08	0.0000	0.000	67.3	28.51	0.50	28.55	28.77	28.59	0.00	0.00	21.31	0.00	0.0710	0.266	62.5	28.51	0.30	28.53	28.85	28.79	15.26	107.89	
2/15/2023	12:30	18.95	0.08	0.0003	0.017	67.2	28.51	0.50	28.55	28.77	28.59	1.00	6.93	21.31	0.01	0.0700	0.265	62.7	28.51	0.30	28.53	28.85	28.79	15.15	107.10	
2/15/2023	12:31	18.96	0.09	0.0000	0.000	67.2	28.51	0.50	28.55	28.77	28.59	0.00	0.00	21.31	0.01	0.0735	0.271	62.8	28.51	0.30	28.53	28.85	28.79	15.53	109.74	
2/15/2023	12:32	18.96	0.08	0.0000	0.000	67.3	28.51	0.50	28.55	28.77	28.59	0.00	0.00	21.30	0.00	0.0686	0.262	63.0	28.51	0.30	28.53	28.85	28.78	15.00	105.99	
2/15/2023	12:33	18.97	0.09	0.0004	0.020	67.3	28.51	0.50	28.55	28.77	28.59	1.15	8.00	21.31	0.00	0.0672	0.259	63.2	28.51	0.30	28.53	28.85	28.78	14.85	104.89	
2/15/2023	12:34	18.98	0.08	0.0002	0.014	67.7	28.51	0.50	28.55	28.77	28.59	0.82	5.66	21.30	0.00	0.0662	0.257	63.2	28.51	0.30	28.53	28.85	28.78	14.74	104.10	
2/15/2023	12:35	18.99	0.09	0.0005	0.022	67.7	28.51	0.50	28.55	28.77	--	--	--	21.30	0.01	0.0649	0.255	63.4	28.51	0.30	28.53	28.85	28.79	14.60	103.05	
2/15/2023	12:36	19.00	0.09	0.0009	0.030	67.7	28.51	0.50	28.55	28.77	28.58	1.73	11.99	21.30	0.01	0.0642	0.253	63.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	12:37	19.00	0.08	0.0000	0.000	68.0	28.51	0.50	28.55	28.77	28.58	0.00	0.00	21.30	0.01	0.0662	0.257	63.8	28.51	0.30	28.53	28.85	28.79	14.75	104.04	
2/15/2023	12:38	19.02	0.09	0.0001	0.010	68.0	28.51	0.50	28.55	28.78	28.58	0.58	4.00	21.30	0.01	0.0624	0.250	64.1	28.51	0.30	28.53	28.85	28.79	14.32	100.98	
2/15/2023	12:39	19.38	0.08	0.0004	0.020	68.4	28.51	0.50	28.55	28.79	28.59	1.16	7.99	21.32	0.00	0.0577	0.240	63.9	28.51	0.30	28.53	28.85	28.78	13.77	97.11	
2/15/2023	12:40	20.40	0.07	0.0001	0.010	68.2	28.51	0.50	28.55	28.83	28.63	0.58	3.99	21.38	0.00	0.0605	0.246	64.1	28.51	0.30	28.53	28.86	28.79	14.10	99.42	
2/15/2023	12:41	20.57	0.07	0.0006	0.024	68.4	28.51	0.50	28.55	28.83	28.64	1.41	9.77	21.38	0.00	0.0595	0.244	64.1	28.51	0.30	28.53	28.86	28.79	13.99	98.61	
2/15/2023	12:42	20.61	0.07	0.0004	0.020	68.2	28.51	0.50	28.55	28.84	28.64	1.15	7.98	21.37	0.00	0.0587	0.242	64.2	28.51	0.30	28.53	28.85	28.79	13.90	97.91	
2/15/2023	12:43	20.64	0.07	0.0005	0.022	68.2	28.51	0.50	28.55	28.84	28.64	1.29	8.92	21.38	0.00	0.0588	0.242	64.3	28.51	0.30	28.53	28.86	28.79	13.91	98.01	
2/15/2023	12:44	20.65	0.07	0.0009	0.030	68.2	28.51	0.50	28.55	28.84	28.64	1.73	11.97	21.38	0.00	0.0593	0.244	64.3	28.51	0.30	28.53	28.86	28.79	13.97	98.42	
2/15/2023	12:45	20.62	0.07	0.0010	0.032	68.2	28.51	0.50	28.55	28.84	28.64	1.82	12.62	21.38	0.00	0.0566	0.238	64.4	28.51	0.30	28.53	28.86	28.79	13.65	96.13	
2/15/2023	12:46	19.69	0.08	0.0004	0.020	68.4	28.51	0.50	28.55	28.80	28.61	1.15	7.98	21.35	0.00	0.0573	0.239	64.3	28.51	0.30	28.53	28.85	28.78	13.73	96.73	
2/15/2023	12:47	20.46	0.07	0.0005	0.022	68.2	28.51	0.50	28.55	28.83	28.63	1.29	8.92	21.37	0.00	0.0588	0.242	64.3	28.51	0.30	28.53	28.85	28.78	13.91	97.97	
2/15/2023	12:48	20.61	0.07	0.0000	0.000	68.1	28.51	0.50	28.55	28.84	28.64	0.00	0.00	21.37	0.00	0.0583	0.241	64.5	28.51	0.30	28.53	28.85	28.78	13.85	97.55	
2/15/2023	12:49	20.65	0.07	0.0001	0.010	68.0	28.51	0.50	28.55	28.84	28.64	0.58	3.99	21.37	-0.01	0.0551	0.235	64.3	28.51	0.30	28.53	28.85	28.78	13.46	94.85	
2/15/2023	12:50	20.59	0.07	0.0000	0.000	68.0	28.51	0.50	28.55	28.83	28.64	0.00	0.00	21.37	0.00	0.0596	0.244	64.3	28.51	0.30	28.53	28.85	28.78	14.00	98.65	
2/15/2023	12:51	18.23	0.08	0.0002	0.014	67.7	28.51	0.50	28.55	28.74	28.55	0.82	5.66	21.32	0.00	0.0548	0.234	64.3	28.51	0.30	28.53	28.85	28.78	13.43	94.60	
2/15/2023	12:52	18.63	0.07	0.0002	0.014	67.5	28.51	0.50	28.55	28.76	28.57	0.82	5.66	21.35	0.00	0.0568	0.238	64.3	28.51	0.30	28.53	28.85	28.79	13.67	96.32	
2/15/2023	12:53	13.58	0.08	0.0006	0.024	67.5	28.51	0.50	28.55	28.56	28.37	1.42	9.83	21.31	0.00	0.0639	0.253	64.4	28.51	0.30	28.53	28.85	28.78	14.50	102.16	
2/15/2023	12:54	10.33	0.09	0.0000	0.000	67.5	28.51	0.50	28.55	28.43	28.22	0.00	0.00	21.30	0.00	0.0556	0.236	64.4	28.51	0.30	28.53	28.85	28.78	13.53	95.27	
2/15/2023	12:55	9.48	0.10	0.0006	0.024	67.6	28.51	0.50	28.55	28.40	28.21	1.42	9.85	21.29	-0.01	0.0605	0.246	64.5	28.51	0.30	28.53	28.85	28.78	14.11	99.37	
2/15/2023	12:56	10.97	0.10	0.0007	0.026	67.6	28.51	0.50	28.55	28.45	28.23	1.54	10.60	21.31	0.00	0.0653	0.256	64.5	28.51	0.30	28.53	28.85	28.78	14.66	103.24	
2/15/2023	12:57	9.26	0.10	0.0004	0.020	67.8	28.51	0.50	28.55	28.39	--	--	--	21.29	-0.01	0.0600	0.245	64.5	28.51	0.30	28.53	28.85	28.78	14.05	98.97	
2/15/2023	12:58	9.26	0.10	0.0009	0.030	67.7	28.51	0.50	28.55	28.39	28.14	1.75	12.01	21.29	-0.01	0.0614	0.248	64.5	28.51	0.30	28.53	28.85	28.78	14.22	100.12	
2/15/2023	12:59	12.03	0.10	0.0019	0.044	67.9	28.51	0.50	28.55	28.50	28.27	2.53	17.44	21.32	0.00	0.0642	0.253	64.6	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	13:00	11.43	0.10	0.0673	0.259	67.9	28.51	0.50	28.55	28.47	28.45	15.01	105.58	21.32	-0.01	0.0670	0.259	64.7	28.51	0.30	28.53	28.85	28.78	14.85	104.57	
2/15/2023	13:01	9.57	0.11	0.0558	0.236	68.0	28.51	0.50	28.55	28.40	28.15	13.75	94.52	21.27	0.00	0.0663	0.257	64.8	28.51	0.30	28.53	28.85	28.78	14.78	104.01	
2/15/2023	13:02	16.46	0.11	0.0000	0.000	68.2	28.51	0.50	28.55	28.68	28.42	0.00	0.00	21.28	-0.01	0.2093	0.457	65.0	28.51	0.30	28.53	28.85	28.78	26.26	184.74	
2/15/2023	13:03	17.42	0.07	0.0001	0.010	68.8	28.51	0.50	28.55	28.71	28.45	0.58	3.97	20.45	0.00	0.1383	0.372	65.1	28.51	0.30	28.53	28.82	28.75	21.36	150.25	
2/15/2023	13:04	13.00	0.12	0.0001	0.010	71.5	28.51	0.50	28.55	28.54	28.26	0.58	3.97	19.63	-0.01	0.0657	0.256	65.2	28.51	0.30	28.53	28.78	28.70	14.74	103.50	
2/15/2023	13:05	11.63	0.16	0.0004	0.020	73.0	28.51	0.50	28.55	28.49	28.34	1.17	8.02	20.52	-0.02	0.0664	0.258	65.1	28.51	0.30	28.53	28.82	28.74	14.80	104.01	
2/15/2023	13:06	15.78	0.11	0.0006	0.024	71.3	28.51	0.50	28.55	28.65	28.39	1.42	9.72	21.32	-0.01	0.0689	0.262	65.3	28.51	0.30	28.53	28.85	28.78	15.07	105.94	
2/15/2023	13:07	17.14	0.10	0.0007	0.026	70.7	28.51	0.50	28.55	28.70	28.60	1.53	10.63	21.34	-0.01	0.0697	0.264	65.6	28.51	0.30	28.53	28.85	28.78	15.16	106.55	
2/15/2023	13:08	17.92	0.10	0.0002	0.014	70.2	28.51	0.50	28.55	28.73	28.71	0.82	5.72	21.35	-0.01	0.0719	0.268	65.5	28.51	0.30	28.53	28.85	28.78	15.40	108.25	
2/15/2023	13:09	18.27	0.09	0.0007	0.026	70.0	28.51	0.50	28.55	28.75	28.72	1.53	10.70	21.35	-0.01	0.0738	0.272	65.7	28.51	0.30	28.53	28.85	28.79	15.60	109.66	
2/15/2023	13:10	18.50	0.09	0.0005	0.022	69.8	28.51	0.50	28.55	28.75	28.48	1.30	8.87	21.36	0.00	0.0780	0.279	65.6	28.51	0.30	28.53	28.85	28.79	16.04	112.74	
2/15/2023	13:11	18.70	0.08	0.0006	0.024	70.0	28.51	0.50	28.55	28.76	28.68	1.41	9.86	21.36	-0.01	0.0781	0.279	65.7	28.51	0.30	28.53	28.85	28.79	16.05	112.80	
2/15/2023	13:12	18.90	0.07	0.0006	0.024	69.9	28.51	0.50	28.55	28.77	28.59	1.42	9.78	21.36	0.00	0.0767	0.277	65.8	28.51	0.30	28.53	28.85	28.79	15.91	111.78	
2/15/2023	13:13	19.06	0.07	0.0004	0.020	69.8	28.51	0.50	28.55	28.77	28.64	1.16	8.01	21.36	-0.01	0.0768	0.277	66.2	28.51	0.30	28.53	28.85	28.78	15.92	111.80	
2/15/2023	13:14	19.16	0.06	0.0004	0.020	69.9	28.51	0.50	28.55	28.78	28.65	1.16	8.01	21.36	-0.01	0.0765	0.277	65.9	28.51	0.30	28.53	28.85	28.78	15.89	111.61	
2/15/2023	13:15	19.25	0.05	0.0006	0.024	69.8	28.51	0.50	28.55	28.78	28.68	1.41	9.84	21.36	0.00	0.0783	0.280	65.8	28.51	0.30	28.53	28.85	28.79	16.07	112.92	
2/15/2023	13:16	19.34	0.05	0.0005	0.022	69.9	28.51	0.50	28.55	28.78	28.67	1.29	8.97	21.35	-0.01	0.0771	0.278	66.4	28.51	0.30	28.53	28.85	28.78	15.96	112.00	
2/15/2023	13:17	19.43	0.04	0.0006	0.024	69.7	28.51	0.50	28.55	28.78	28.65	1.42	9.81	21.35	0.00	0.0788	0.281	65.8	28.51	0.30	28.53	28.85	28.79	16.12	113.29	
2/15/2023	13:18	19.49	0.04	0.0007	0.026	69.4	28.51	0.50	28.55	28.79	28.64	1.53	10.59	21.35	-0.01	0.0781	0.279	65.8	28.51	0.30	28.53	28.85	28.78	16.05	112.78	
2/15/2023	13:19	19.58	0.04	0.0000	0.000	69.6	28.51	0.50	28.55	28.79	--	--	--	21.34	0.00	0.0734	0.271	65.6	28.51	0.30	28.53	28.85	28.78	15.56	109.33	
2/15/2023	13:20	19.65	0.04	0.0005	0.022	69.5	28.51	0.50	28.55	28.79	28.64	1.29	8.95	21.35	0.00	0.0723	0.269	65.7	28.51	0.30	28.53	28.85	28.78	15.44	108.50	
2/15/2023	13:21	19.72	0.04	0.0003	0.017	69.5	28.51	0.50	28.55	28.80	28.64	1.00	6.93	21.34	0.00	0.0729	0.270	65.5	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	13:22	19.76	0.04	0.0004	0.020	69.2	28.51	0.50	28.55	28.80	28.62	1.16	7.99	21.34	0.00	0.0694	0.263	65.7	28.51	0.30	28.53	28.85	28.78	15.13	106.31	
2/15/2023	13:23	19.79	0.04	0.0005	0.022	69.3	28.51	0.50	28.55	28.80	28.63	1.29	8.93	21.34	-0.01	0.0737	0.271	65.5	28.51	0.30	28.53	28.85	28.78	15.59	109.58	
2/15/2023	13:24	19.81	0.04	0.0004	0.020	69.2	28.51	0.50	28.55	28.80	28.62	1.16	7.99	21.33	-0.01	0.0690	0.263	65.5	28.51	0.30	28.53	28.85	28.78	15.09	106.02	
2/15/2023	13:25	19.46	0.05	0.0002	0.014	69.0	28.51	0.50	28.55	28.79	28.60	0.82	5.65	21.31	0.00	0.0683	0.261	65.7	28.51	0.30	28.53	28.85	28.78	15.01	105.49	
2/15/2023	13:26	19.41	0.05	0.0001	0.010	68.9	28.51	0.50	28.55	28.78	28.60	0.58	3.99	21.33	0.00	0.0667	0.258	65.6	28.51	0.30	28.53	28.85	28.78	14.83	104.24	
2/15/2023	13:27	19.61	0.05	0.0003	0.017	68.8	28.51	0.50	28.55	28.79	28.61	1.00	6.92	21.33	-0.01	0.0654	0.256	65.7	28.51	0.30	28.53	28.85	28.78	14.69	103.21	
2/15/2023	13:28	19.70	0.05	0.0000	0.000	68.9	28.51	0.50	28.55	28.80	28.61	0.00	0.00	21.33	0.00	0.0680	0.261	65.7	28.51	0.30	28.53	28.85	28.78	14.98	105.24	
2/15/2023	13:29	19.76	0.05	0.0004	0.020	68.9	28.51	0.50	28.55	28.80	28.64	1.15	8.00	21.33	0.00	0.0657	0.256	65.7	28.51	0.30	28.53	28.85	28.78	14.72	103.44	
2/15/2023	13:30	19.15	0.06	0.0003	0.017	68.8	28.51	0.50	28.55	28.78	28.60	1.00	6.93	21.29	0.00	0.0651	0.255	65.9	28.51	0.30	28.53	28.85	28.78	14.66	102.95	
2/15/2023	13:31	19.40	0.06	0.0002	0.014	69.0	28.51	0.50	28.55	28.79	28.60	0.82	5.65	21.31	0.00	0.0633	0.252	65.9	28.51	0.30	28.53	28.85	28.78	14.45	101.52	
2/15/2023	13:32	19.27	0.06	0.0000	0.000	68.9	28.51	0.50	28.55	28.78	28.60	0.00	0.00	21.30	0.00	0.0603	0.246	66.0	28.51	0.30	28.53	28.85	28.78	14.11	99.08	
2/15/2023	13:33	19.02	0.06	0.0004	0.020	68.9	28.51	0.50	28.55	28.77	28.57	1.16	7.98	21.30	0.00	0.0618	0.249	66.3	28.51	0.30	28.53	28.85	28.78	14.29	100.27	
2/15/2023	13:34	19.03	0.06	0.0005	0.022	68.9	28.51	0.50	28.55	28.77	28.61	1.29	8.95	21.31	0.00	0.0635	0.252	66.3	28.51	0.30	28.53	28.85	28.78	14.48	101.64	
2/15/2023	13:35	18.30	0.07	0.0003	0.017	69.0	28.51	0.50	28.55	28.74	28.57	1.00	6.92	21.28	0.00	0.0711	0.267	66.3	28.51	0.30	28.53	28.85	28.78	15.32	107.56	
2/15/2023	13:36	16.73	0.08	0.0000	0.000	69.0	28.51	0.50	28.55	28.68	28.55	0.00	0.00	21.27	0.00	0.0641	0.253	66.5	28.51	0.30	28.53	28.85	28.78	14.55	102.11	
2/15/2023	13:37	13.01	0.08	0.0002	0.014	69.1	28.51	0.50	28.55	28.53	28.39	0.82	5.69	21.25	0.00	0.0603	0.246	66.5	28.51	0.30	28.53	28.85	28.78	14.12	99.03	
2/15/2023	13:38	12.23	0.08	0.0004	0.020	69.3	28.51	0.50	28.55	28.50	28.37	1.16	8.05	21.25	0.00	0.0615	0.248	66.4	28.51	0.30	28.53	28.85	28.78	14.25	100.01	
2/15/2023	13:39	12.67	0.09	0.0000	0.000	69.1	28.51	0.50	28.55	28.52	28.35	0.00	0.00	21.25	0.01	0.0627	0.250	66.6	28.51	0.30	28.53	28.85	28.78	14.40	100.95	
2/15/2023	13:40	13.17	0.09	0.0005	0.022	69.3	28.51	0.50	28.55	28.54	28.34	1.30	8.95	21.26	0.00	0.0681	0.261	66.5	28.51	0.30	28.53	28.85	28.78	15.00	105.23	
2/15/2023	13

Alliance SOURCE TESTING

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet O_2 - Inlet % dry	Inlet CO_2 - Inlet % dry	Inlet Delta P in. W.C.	Inlet Sq Rt Delta P	Inlet Temperature (°F)	Inlet Barometric in. Hg	Inlet Stack Pressure in. W.C.	Inlet Stack Pressure in. Hg	Inlet Molecular Weight Md	Inlet Molecular Weight Mw	Inlet Velocity ft/sec	Inlet Flow Rate (DSCFM)	Outlet O_2 - Outlet % dry	Outlet CO_2 - Outlet % dry	Outlet Delta P in. W.C.	Outlet Sq Rt Delta P	Outlet Temperature (°F)	Outlet Barometric in. Hg	Outlet Stack Pressure in. W.C.	Outlet Stack Pressure in. Hg	Outlet Molecular Weight Md	Outlet Molecular Weight Mw	Outlet Velocity ft/sec	Outlet Flow Rate (DSCFM)	Point in Process -
	Unit	%	%	in. W.C.		°F	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	%	%	in. W.C.		°F	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	-
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	14:05	16.96	0.04	0.0004	0.020	68.9	28.51	0.50	28.55	28.68	28.52	1.16	8.01	21.25	0.01	0.0566	0.238	67.3	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	14:06	18.30	0.04	0.0004	0.020	68.7	28.51	0.50	28.55	28.74	28.53	1.16	7.98	21.31	0.01	0.0576	0.240	67.4	28.51	0.30	28.53	28.85	28.78	13.81	96.68	
2/15/2023	14:07	15.52	0.04	0.0000	0.000	68.8	28.51	0.50	28.55	28.63	28.41	0.00	0.00	21.24	0.01	0.0584	0.242	67.6	28.51	0.30	28.53	28.85	28.78	13.91	97.35	
2/15/2023	14:08	12.28	0.06	0.0003	0.017	68.9	28.51	0.50	28.55	28.50	28.30	1.01	6.94	21.22	0.00	0.0603	0.246	67.5	28.51	0.30	28.53	28.85	28.78	14.13	98.91	
2/15/2023	14:09	15.99	0.05	0.0002	0.014	68.8	28.51	0.50	28.55	28.65	28.47	0.82	5.67	21.24	0.00	0.0603	0.246	67.5	28.51	0.30	28.53	28.85	28.78	14.13	98.91	
2/15/2023	14:10	17.33	0.04	0.0006	0.024	68.7	28.51	0.50	28.55	28.70	28.46	1.42	9.76	21.22	0.01	0.0582	0.241	67.7	28.51	0.30	28.53	28.85	28.78	13.89	97.14	
2/15/2023	14:11	18.64	0.04	0.0003	0.017	69.0	28.51	0.50	28.55	28.75	28.49	1.00	6.88	21.23	0.01	0.0589	0.243	67.3	28.51	0.30	28.53	28.85	28.77	13.96	97.75	
2/15/2023	14:12	19.04	0.04	0.0002	0.014	68.8	28.51	0.50	28.55	28.77	28.50	0.82	5.62	21.28	0.01	0.0601	0.245	67.3	28.51	0.30	28.53	28.85	28.78	14.10	98.75	
2/15/2023	14:13	18.81	0.04	0.0002	0.014	68.7	28.51	0.50	28.55	28.76	28.60	0.82	5.66	21.26	0.00	0.0590	0.243	67.3	28.51	0.30	28.53	28.85	28.78	13.97	97.85	
2/15/2023	14:14	18.82	0.04	0.0004	0.020	68.5	28.51	0.50	28.55	28.76	28.53	1.16	7.97	21.25	0.01	0.0614	0.248	67.4	28.51	0.30	28.53	28.85	28.78	14.26	99.80	
2/15/2023	14:15	18.92	0.04	0.0003	0.017	68.6	28.51	0.50	28.55	28.76	28.54	1.00	6.90	21.26	0.00	0.0565	0.238	67.3	28.51	0.30	28.53	28.85	28.77	13.68	95.74	
2/15/2023	14:16	18.98	0.04	0.0001	0.010	68.4	28.51	0.50	28.55	28.77	28.55	0.58	3.99	21.27	0.00	0.0561	0.237	67.3	28.51	0.30	28.53	28.85	28.78	13.63	95.42	
2/15/2023	14:17	19.01	0.04	0.0000	0.000	68.3	28.51	0.50	28.55	28.77	28.56	0.00	0.00	21.27	0.01	0.0585	0.242	67.3	28.51	0.30	28.53	28.85	28.78	13.91	97.44	
2/15/2023	14:18	19.01	0.04	0.0000	0.000	68.3	28.51	0.50	28.55	28.77	28.56	0.00	0.00	21.26	0.00	0.0577	0.240	67.3	28.51	0.30	28.53	28.85	28.78	13.82	96.76	
2/15/2023	14:19	19.02	0.04	0.0003	0.017	68.1	28.51	0.50	28.55	28.77	28.57	1.00	6.92	21.26	0.00	0.0594	0.244	67.4	28.51	0.30	28.53	28.85	28.78	14.02	98.18	
2/15/2023	14:20	19.01	0.04	0.0003	0.017	68.1	28.51	0.50	28.55	28.77	28.58	1.00	6.92	21.25	0.01	0.0573	0.239	67.4	28.51	0.30	28.53	28.85	28.78	13.77	96.42	
2/15/2023	14:21	19.02	0.04	0.0005	0.022	68.0	28.51	0.50	28.55	28.77	28.59	1.29	8.94	21.25	0.00	0.0571	0.239	67.4	28.51	0.30	28.53	28.85	28.78	13.75	96.26	
2/15/2023	14:22	19.10	0.05	0.0001	0.010	68.0	28.51	0.50	28.55	28.77	28.60	0.58	4.00	21.25	0.01	0.0593	0.244	67.5	28.51	0.30	28.53	28.85	28.78	14.01	98.07	
2/15/2023	14:23	19.02	0.04	0.0003	0.017	68.0	28.51	0.50	28.55	28.77	28.60	1.00	6.93	21.23	0.01	0.0593	0.244	67.5	28.51	0.30	28.53	28.85	28.78	14.01	98.09	
2/15/2023	14:24	19.09	0.05	0.0002	0.014	68.2	28.51	0.50	28.55	28.77	--	--	--	21.24	0.00	0.0569	0.239	67.7	28.51	0.30	28.53	28.85	28.78	13.73	96.06	
2/15/2023	14:25	19.07	0.05	0.0008	0.028	68.3	28.51	0.50	28.55	28.77	28.61	1.63	11.33	21.24	0.00	0.0533	0.231	67.9	28.51	0.30	28.53	28.85	28.78	13.29	92.95	
2/15/2023	14:26	19.57	0.06	0.0006	0.024	68.0	28.51	0.50	28.55	28.79	28.64	1.41	9.82	21.27	0.01	0.0564	0.237	68.1	28.51	0.30	28.53	28.85	28.78	13.67	95.60	
2/15/2023	14:27	19.87	0.06	0.0004	0.020	68.3	28.51	0.50	28.55	28.80	28.66	1.15	8.02	21.31	0.01	0.0552	0.235	67.9	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	14:28	19.97	0.06	0.0004	0.020	68.3	28.51	0.50	28.55	28.81	28.67	1.15	8.02	21.31	0.01	0.0534	0.231	67.9	28.51	0.30	28.53	28.85	28.78	13.30	93.04	
2/15/2023	14:29	19.98	0.07	0.0009	0.030	68.4	28.51	0.50	28.55	28.81	28.68	1.73	12.03	21.31	0.01	0.0531	0.230	68.1	28.51	0.30	28.53	28.85	28.78	13.27	92.76	
2/15/2023	14:30	19.98	0.07	0.0007	0.026	68.3	28.51	0.50	28.55	28.81	28.65	1.53	10.59	21.30	0.01	0.0547	0.234	68.0	28.51	0.30	28.53	28.85	28.78	13.46	94.16	
2/15/2023	14:31	20.27	0.07	0.0003	0.017	68.0	28.51	0.50	28.55	28.82	28.65	1.00	6.93	21.30	0.01	0.0528	0.230	68.1	28.51	0.30	28.53	28.85	28.78	13.23	92.50	
2/15/2023	14:32	20.03	0.07	0.0002	0.014	68.0	28.51	0.50	28.55	28.81	28.63	0.82	5.65	21.30	0.01	0.0532	0.231	68.0	28.51	0.30	28.53	28.85	28.78	13.28	92.85	
2/15/2023	14:33	19.90	0.07	0.0004	0.020	68.1	28.51	0.50	28.55	28.81	28.62	1.15	7.99	21.30	0.01	0.0547	0.234	67.8	28.51	0.30	28.53	28.85	28.78	13.46	94.17	
2/15/2023	14:34	20.17	0.07	0.0001	0.010	68.0	28.51	0.50	28.55	28.82	28.63	0.58	3.99	21.30	0.01	0.0513	0.226	67.8	28.51	0.30	28.53	28.85	28.78	13.04	91.20	
2/15/2023	14:35	20.10	0.07	0.0007	0.026	67.9	28.51	0.50	28.55	28.82	28.63	1.53	10.57	21.30	0.02	0.0564	0.237	67.9	28.51	0.30	28.53	28.86	28.78	13.67	95.62	
2/15/2023	14:36	20.24	0.07	0.0005	0.022	67.9	28.51	0.50	28.55	28.82	28.62	1.29	8.92	21.29	0.01	0.0532	0.231	68.0	28.51	0.30	28.53	28.85	28.78	13.28	92.86	
2/15/2023	14:37	20.23	0.07	0.0009	0.030	67.6	28.51	0.50	28.55	28.82	28.63	1.73	11.99	21.28	0.01	0.0513	0.226	68.0	28.51	0.30	28.53	28.85	28.78	13.04	91.18	
2/15/2023	14:38	17.83	0.08	0.0005	0.022	67.9	28.51	0.50	28.55	28.73	28.54	1.29	8.95	21.25	0.01	0.0571	0.239	67.9	28.51	0.30	28.53	28.85	28.78	13.76	96.20	
2/15/2023	14:39	15.85	0.08	0.0005	0.022	67.5	28.51	0.50	28.55	28.65	28.46	1.29	8.96	21.24	0.01	0.0521	0.228	68.1	28.51	0.30	28.53	28.85	28.78	13.14	91.87	
2/15/2023	14:40	14.96	0.09	0.0005	0.022	67.7	28.51	0.50	28.55	28.61	28.43	1.29	8.97	21.23	0.01	0.0522	0.228	68.2	28.51	0.30	28.53	28.85	28.78	13.15	91.96	
2/15/2023	14:41	16.00	0.09	0.0005	0.022	67.9	28.51	0.50	28.55	28.65	28.40	1.30	8.91	21.25	0.01	0.0496	0.223	68.1	28.51	0.30	28.53	28.85	28.78	12.82	89.64	
2/15/2023	14:42	14.63	0.09	0.0005	0.022	67.7	28.51	0.50	28.55	28.60	28.46	1.29	9.00	21.23	0.01	0.0507	0.225	68.2	28.51	0.30	28.53	28.85	28.78	12.97	90.61	
2/15/2023	14:43	14.29	0.10	0.0005	0.022	67.9	28.51	0.50	28.55	28.59	28.45	1.29	9.00	21.23	0.00	0.0509	0.226	68.2	28.51	0.30	28.53	28.85	28.77	12.99	90.80	
2/15/2023	14:44	16.66	0.09	0.0008	0.028	67.7	28.51	0.50	28.55	28.68	28.53	1.63	11.36	21.27	0.01	0.0538	0.232	68.1	28.51	0.30	28.53	28.85	28.78	13.35	93.36	
2/15/2023	14:45	14.01	0.10	0.0002	0.014	67.9	28.51	0.50	28.55	28.58	28.39	0.82	5.67	21.23	0.01	0.0493	0.222	68.1	28.51	0.30	28.53	28.85	28.78	12.78	89.38	
2/15/2023	14:46	14.27	0.10	0.0002	0.014	67.8	28.51	0.50	28.55	28.59	--	--	--	21.24	0.01	0.0485	0.220	68.1	28.51	0.30	28.53	28.85	28.78	12.68	88.64	
2/15/2023	14:47	17.07	0.09	0.0006	0.024	67.9	28.51	0.50	28.55	28.70	28.56	1.42	9.84	21.27	0.01	0.0491	0.222	68.1	28.51	0.30	28.53	28.85	28.78	12.76	89.19	
2/15/2023	14:48	17.85	0.09	0.0005	0.022	67.8	28.51	0.50	28.55	28.73	28.56	1.29	8.96	21.28	0.01	0.0472	0.217	68.0	28.51	0.30	28.53	28.85	28.78	12.51	87.45	
2/15/2023	14:49	18.47	0.09	0.0001	0.010	67.6	28.51	0.50	28.55	28.75	28.58	0.58	4.00	21.28	0.01	0.0464	0.215	68.3	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	14:50	18.36	0.09	0.0001	0.010	67.9	28.51	0.50	28.55	28.75	28.62	0.58	4.02	21.28	0.01	0.0483	0.220	68.3	28.51	0.30	28.53	28.85	28.78	12.66	88.44	
2/15/2023	14:51	18.97	0.09	0.0007	0.026	67.6	28.51	0.50	28.55	28.77	28.63	1.53	10.61	21.28	0.01	0.0498	0.223	68.7	28.51	0.30	28.53	28.85	28.78	12.86	89.77	
2/15/2023	14:52	19.48	0.09	0.0003	0.017	67.7	28.51	0.50	28.55	28.79	28.60	1.00	6.92	21.29	0.01	0.0486	0.220	68.2	28.51	0.30	28.53	28.85	28.78	12.69	88.73	
2/15/2023	14:53	19.79	0.09	0.0003	0.017	67.5	28.51	0.50	28.55	28.81	28.62	1.00	6.92	21.29	0.01	0.0499	0.223	68.3	28.51	0.30	28.53	28.85	28.78	12.86	89.91	
2/15/2023	14:54	19.37	0.09	0.0004	0.020	67.5	28.51	0.50	28.55	28.79	28.60	1.15	7.99	21.29	0.01	0.0483	0.220	68.0	28.51	0.30	28.53	28.85	28.78	12.65	88.47	
2/15/2023	14:55	19.75	0.09	0.0006	0.024	67.5	28.51	0.50	28.55	28.80	28.61	1.41	9.79	21.30	0.01	0.0454	0.213	68.0	28.51	0.30	28.53	28.85	28.78	12.27	85.78	
2/15/2023	14:56	20.16	0.08	0.0004	0.020	67.4	28.51	0.50	28.55	28.82	28.63	1.15	7.99	21.29	0.01	0.0492	0.222	68.0	28.51	0.30	28.53	28.85	28.78	12.77	89.29	
2/15/2023	14:57	19.65	0.08	0.0005	0.022	67.4	28.51	0.50	28.55	28.80	28.60	1.29	8.93	21.29	0.01	0.0484	0.220	68.1	28.51	0.30	28.53	28.85	28.78	12.67	88.56	
2/15/2023	14:58	19.77	0.08	0.0004	0.020	67.5	28.51	0.50	28.55	28.80	28.60	1.15	7.99	21.30	0.00	0.0453	0.213	68.0	28.51	0.30	28.53	28.85	28.78	12.25	85.69	
2/15/2023	14:59	19.68	0.07	0.0004	0.020	67.4	28.51	0.50	28.55	28.80	28.61	1.15	8.00	21.30	0.01	0.0496	0.223	68.0	28.51	0.30	28.53	28.85	28.78	12.82	89.67	
2/15/2023	15:00	19.76	0.07	0.0005	0.022	67.4	28.51	0.50	28.55	28.80	28.61	1.29	8.93	21.30	0.01	0.0475	0.218	68.0	28.51	0.30	28.53	28.85	28.78	12.55	87.75	
2/15/2023	15:01	19.88	0.07	0.0002	0.014	67.3	28.51	0.50	28.55	28.81	28.61	0.82	5.65	21.30	0.01	0.0476	0.218	68.0	28.51	0.30	28.53	28.85	28.78	12.56	87.84	
2/15/2023	15:02	19.83	0.07	0.0005	0.022	67.5	28.51	0.50	28.55	28.80	28.61	1.29	8.93	21.30	0.00	0.0487	0.221	67.7	28.51	0.30	28.53	28.85	28.78	12.70	88.87	
2/15/2023	15:03	19.93	0.07	0.0005	0.022	67.4	28.51	0.50	28.55	28.81	28.62	1.29	8.94	21.30	0.00	0.0442	0.210	69.4	28.51	0.30	28.53	28.85	28.78	12.12	84.54	
2/15/2023	15:04	19.90	0.06	0.0004	0.020	67.3	28.51	0.50	28.55	28.81	28.61	1.15	7.99	21.30	0.01	0.0471	0.217	67.7	28.51	0.30	28.53	28.85	28.78	12.49	87.40	
2/15/2023	15:05	20.05	0.06	0.0004	0.020	67.3	28.51	0.50	28.55	28.81	28.62	1.15	7.99	21.30	0.01	0.0447	0.211	67.9	28.51	0.30	28.53	28.85	28.78	12.17	85.13	
2/15/2023	15:06	19.92	0.06	0.0004	0.020	67.3	28.51	0.50	28.55	28.81	28.61	1.15	7.99	21.31	0.01	0.0435	0.209	67.7	28.51	0.30	28.53	28.85	28.78	12.00	83.99	
2/15/2023	15:07	20.08	0.06	0.0006	0.024	67.2	28.51	0.50	28.55	28.81	28.62	1.41	9.79	21.30	0.01	0.0435	0.209	67.8	28.51	0.30	28.53	28.85	28.78	12.00	83.98	
2/15/2023	15:08	20.24	0.05	0.0009	0.030	67.3	28.51	0.50	28.55	28.82	--	--	--	21.31	0.01	0.0426	0.206	67.7	28.51	0.30	28.53	28.85	28.78	11.88	83.12	
2/15/2023	15:09	20.48	0.05	0.0005	0.022	67.2	28.51	0.50	28.55	28.83	28.64	1.29	8.94	21.30	0.01	0.0445	0.211	67.7	28.51	0.30	28.53	28.85	28.78	12.14	84.96	
2/15/2023	15:10	20.42	0.05	0.0007	0.026	67.0	28.51	0.50	28.55	28.82	28.63	1.53	10.57	21.30	0.01	0.0417	0.204	67.5	28.51	0.30	28.53	28.85	28.78	11.75	82.25	
2/15/2023	15:11	20.31	0.05	0.0007	0.026	67.0	28.51	0.50	28.55	28.82	28.63	1.53	10.58	21.31	0.01	0.0428	0.207	67.6	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	15:12	20.40	0.04	0.0007	0.026	67.1	28.51	0.50	28.55	28.82	28.63	1.53	10.58	21.30	0.01	0.0424	0.206	67.5	28.51	0.30	28.53	28.85	28.78	11.85	82.94	
2/15/2023	15:13	20.53	0.04	0.0007	0.026	67.2	28.51	0.50	28.55	28.83	28.64	1.53	10.57	21.30	0.01	0.0414	0.203	67.4	28.51	0.30	28.53	28.85	28.78	11.71	81.96	
2/15/2023	15:14	20.30	0.04	0.0006	0.024	67.2	28.51	0.50	28.55	28.82	28.63	1.41	9.79	21.30	0.01	0.0423	0.206	67.3	28.51	0.30	28.53	28.85	28.78	11.83	82.85	
2/15/2023	15:15	20.28	0.04	0.0007	0.026	66.9	28.51	0.50	28.55	28.82	28.63	1.52	10.58	21.29	0.01	0.0429	0.207	67.5	28.51	0.30	28.53	28.85	28.78	11.92	83.42	
2/15/2023	15:16	20.55	0.04	0.0007	0.026	67.0	28.51	0.50	28.55	28.83	28.64	1.52	10.58	21.29	0.01	0.0433	0.208	67.5	28.51	0.30	28.53	28.85	28.78	11.97	83.81	
2/15/2023	15:17	20.54	0.03	0.0005	0.022	67.0	28.51	0.50	28.55	28.83	28.64	1.29	8.94	21.30	0.01	0.0420	0.205	67.4	28.51	0.30	28.53	28.85	28.78	11.79	82.55	
2/15/2023	15:18	20.52	0.03	0.0004	0.020	67.0	28.51	0.50	28.55	28.83	28.64	1.15	8.00	21.29	0.01	0.0419	0.205	67.4	28.51	0.30	28.53	28.85	28.78	11.78	82.46	
2/15/2023	15:19	20.63	0.03	0.0003	0.017	66.9	28.51	0.50	28.55	28.83	28.64	1.00	6.92	21.30	0.01	0.0410	0.202	67.3	28.51	0.30	28.53	28.85	28.78	11.65	81.58	
2/15/2023	15:20	20.58	0.03	0.0005	0.022	67.0	28.51	0.50	28.55	28.83	28.64	1.29	8.94	21.29	0.01	0.0444	0.211	67.2	28.51	0.30	28.53	28.85	28.78	12.12	84.90	
2/15/2023	15:21	20.45	0.03	0.0005	0.022	66.9	28.51	0.50	28.55	28.82	28.64	1.29	8.94	21.29	0.00	0.0426	0.206	67.5	28.51	0.30	28.53	28.85	28.78	11.88	83.14	
2/15/2023	15:22	20.60	0.03	0.0007	0.026	67.0	28.51	0.50	28.55	28.83	28.65	1.52	10.58	21.29	0.01	0.0419	0.205	67.4	28.51	0.30	28.53	28.85	28.78	11.78	82.46	
2/15/2023	15:23	20.51	0.03	0.0006	0.024	66.9	28.51	0.50	28.55	28.83	28.64	1.41	9.80	21.29	0.01	0.0424	0.206	67.4	28.51	0.30	28.53	28.85	28.78	11.85	82.96	
2/15/2023	15:24	20.32	0.02	0.0004	0.020	66.8	28.51	0.50	28.55	28.82	28.64	1.15	8.00	21.29	0.02	0.0454	0.213	67.4	28.51	0.30	28.53	28.85	28.78	12.26	85.83	
2/15/2023	15:25	20.47	0.02	0.0006	0.024	67.0	28.51	0.50	28.55	28.82	28.64	1.41	9.80	21.29	0.01	0.0426	0.206	67.2	28.51	0.30	28.53	28.85	28.78	11.87	83.16	
2/15/2023	15:26	20.44	0.02	0.0006	0.024	66.8	28.51	0.50	28.55	28.82	28.64	1.41	9.80	21.29	0.01	0.0431	0.208	67.2	28.51	0.30	28.53	28.85	28.78	11.94	83.65	
2/15/2023	15:27	20.35	0.02	0.0005	0.022	66.8	28.51	0.50	28.55	28.82	28.64	1.29	8.95	21.29	0.01	0.0422	0.205	67.2	28.51	0.30	28.53	28.85	28.78	11.82	82.77	
2/15/2023	15:28	20.40	0.02	0.0004	0.020	67.0	28.51	0.50	28.55	28.82	28.64	1.15	8.00	21.29	0.02	0.0440	0.210	67.1	28.51	0.30	28.53	28.85	28.78	12.06	84.52	
2/15/2023	15:29	20.60	0.02	0.0005	0.022	66.8	28.51	0.50	28.55	28.83	28.65	1.29	8.95	21.29	0.01	0.0425	0.206	67.2	28.51	0.30	28.53	28.85	28.78	11.86	83.06	
2/15/2023	15:30	20.55	0.02	0.0006	0.024	66.6	28.51	0.50	28.55	28.83	--	--	--	21.28	0.02	0.0419	0.205	67.2	28.51	0.30	28.53	28.85	28.78	11.77	82.48	
2/15/2023	15:31	20.30	0.02	0.0004	0.020	67.0	28.51	0.50	28.55	28.82	28.64	1.15	8.00	21.28	0.01	0.0414	0.203	67.1	28.51	0.30	28.53	28.85	28.78	11.70	81.99	
2/15/2023	15:32	20.42	0.02	0.0003	0.017	66.8	28.51	0.50	28.55	28.82	28.64	1.00	6.93	21.29	0.01	0.0413	0.203	67.2	28.51	0.30	28.53	28.85	28.78	11.69	81.89	
2/15/2023	15:33	20.48	0.02	0.0005	0.022	67.0	28.51	0.50	28.55	28.82	28.65	1.29	8.95	21.28	0.01	0.0432	0.208	67.1	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	15:34	20.36	0.02	0.0006	0.024	66.9	28.51	0.50	28.55	28.82	28.65	1.41	9.81	21.28	0.01	0.0422	0.205	67.2	28.51	0.30	28.53	28.85	28.78	11.82	82.78	
2/15/2023	15:35	20.24	0.02	0.0004	0.020	67.0	28.51	0.50	28.55	28.81	28.64	1.15	8.01	21.28	0.01	0.0426	0.206	67.2	28.51	0.30	28.53	28.85	28.78	11.87	83.17	
2/15/2023	15:36	20.41	0.02	0.0005	0.022	67.0	28.51	0.50	28.55	28.82	28.65	1.29	8.95	21.28	0.01	0.0413	0.203	67.3	28.51	0.30	28.53	28.85	28.78	11.69	81.88	
2/15/2023	15:37	20.54	0.02	0.0005	0.022	66.9	28.51	0.50	28.55	28.82	28.65	1.29	8.95	21.28	0.02	0.0419	0.205	67.3	28.51	0.30	28.53	28.85	28.78	11.78	82.47	
2/15/2023	15:38	20.40	0.02	0.0

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	O2 - Inlet	CO2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Inlet Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O2 - Outlet	CO2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Outlet Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	Point in Process
	Unit	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	-
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	16:03	20.60	0.01	0.0005	0.022	66.0	28.51	0.50	28.55	28.83	28.66	1.29	8.97	21.26	0.01	0.0411	0.203	71.1	28.51	0.30	28.53	28.85	28.78	11.70	81.39	
2/15/2023	16:04	20.46	0.01	0.0005	0.022	66.0	28.51	0.50	28.55	28.82	28.66	1.29	8.97	21.26	0.01	0.0400	0.200	68.1	28.51	0.30	28.53	28.85	28.78	11.51	80.52	
2/15/2023	16:05	20.43	0.01	0.0006	0.024	66.1	28.51	0.50	28.55	28.82	28.66	1.41	9.82	21.27	0.02	0.0402	0.200	67.1	28.51	0.30	28.53	28.85	28.78	11.53	80.79	
2/15/2023	16:06	20.49	0.01	0.0005	0.022	66.1	28.51	0.50	28.55	28.82	28.66	1.29	8.96	21.26	0.02	0.0411	0.203	67.3	28.51	0.30	28.53	28.85	28.78	11.66	81.68	
2/15/2023	16:07	20.62	0.01	0.0005	0.022	66.0	28.51	0.50	28.55	28.83	28.66	1.29	8.96	21.26	0.02	0.0380	0.195	67.3	28.51	0.30	28.53	28.85	28.78	11.21	78.54	
2/15/2023	16:08	20.67	0.01	0.0005	0.022	65.9	28.51	0.50	28.55	28.83	28.67	1.29	8.96	21.26	0.02	0.0446	0.211	67.2	28.51	0.30	28.53	28.85	28.78	12.15	85.10	
2/15/2023	16:09	20.56	0.01	0.0005	0.022	65.9	28.51	0.50	28.55	28.82	28.66	1.29	8.97	21.26	0.02	0.0436	0.209	67.1	28.51	0.30	28.53	28.85	28.78	12.01	84.14	
2/15/2023	16:10	20.61	0.01	0.0005	0.022	65.8	28.51	0.50	28.55	28.83	28.66	1.29	8.97	21.26	0.02	0.0418	0.204	67.2	28.51	0.30	28.53	28.85	28.78	11.76	82.38	
2/15/2023	16:11	20.54	0.01	0.0005	0.022	65.8	28.51	0.50	28.55	28.82	28.66	1.29	8.97	21.25	0.02	0.0406	0.201	67.0	28.51	0.30	28.53	28.85	28.78	11.59	81.21	
2/15/2023	16:12	20.68	0.01	0.0005	0.022	65.8	28.51	0.50	28.55	28.83	28.67	1.29	8.97	21.25	0.02	0.0430	0.207	67.2	28.51	0.30	28.53	28.85	28.78	11.93	83.56	
2/15/2023	16:13	20.71	0.01	0.0005	0.022	65.9	28.51	0.50	28.55	28.83	28.67	1.29	8.97	21.25	0.02	0.0436	0.209	67.0	28.51	0.30	28.53	28.85	28.78	12.01	84.16	
2/15/2023	16:14	20.68	0.01	0.0005	0.022	65.8	28.51	0.50	28.55	28.83	--	--	--	21.25	0.02	0.0443	0.210	67.1	28.51	0.30	28.53	28.85	28.78	12.11	84.81	
2/15/2023	16:15	20.56	0.01	0.0006	0.024	65.8	28.51	0.50	28.55	28.82	28.66	1.41	9.82	21.26	0.02	0.0452	0.213	67.1	28.51	0.30	28.53	28.85	28.78	12.23	85.68	
2/15/2023	16:16	20.54	0.00	0.0005	0.022	65.6	28.51	0.50	28.55	28.82	28.66	1.29	8.97	21.25	0.01	0.0423	0.206	67.1	28.51	0.30	28.53	28.85	28.78	11.83	82.89	
2/15/2023	16:17	20.63	0.00	0.0004	0.020	65.5	28.51	0.50	28.55	28.83	28.67	1.15	8.02	21.25	0.02	0.0430	0.207	67.2	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	16:18	20.60	0.01	0.0005	0.022	65.6	28.51	0.50	28.55	28.83	28.67	1.29	8.97	21.25	0.02	0.0446	0.211	67.0	28.51	0.30	28.53	28.85	28.78	12.15	85.12	
2/15/2023	16:19	20.57	0.01	0.0006	0.024	65.5	28.51	0.50	28.55	28.82	28.66	1.41	9.83	21.25	0.02	0.0438	0.209	67.0	28.51	0.30	28.53	28.85	28.78	12.04	84.35	
2/15/2023	16:20	20.35	0.00	0.0004	0.020	65.3	28.51	0.50	28.55	28.81	28.66	1.15	8.03	21.25	0.02	0.0433	0.208	66.9	28.51	0.30	28.53	28.85	28.78	11.97	83.87	
2/15/2023	16:21	20.60	0.01	0.0003	0.017	65.2	28.51	0.50	28.55	28.83	28.67	1.00	6.95	21.25	0.02	0.0462	0.215	66.8	28.51	0.30	28.53	28.85	28.78	12.36	86.64	
2/15/2023	16:22	20.63	0.01	0.0005	0.022	65.1	28.51	0.50	28.55	28.83	28.67	1.29	8.98	21.25	0.02	0.0436	0.209	66.9	28.51	0.30	28.53	28.85	28.78	12.01	84.16	
2/15/2023	16:23	20.52	0.01	0.0006	0.024	64.9	28.51	0.50	28.55	28.82	28.66	1.41	9.84	21.25	0.02	0.0468	0.216	67.2	28.51	0.30	28.53	28.85	28.78	12.44	87.16	
2/15/2023	16:24	20.54	0.01	0.0005	0.022	64.7	28.51	0.50	28.55	28.82	28.66	1.29	8.98	21.24	0.02	0.0443	0.210	67.1	28.51	0.30	28.53	28.85	28.78	12.11	84.81	
2/15/2023	16:25	20.57	0.00	0.0005	0.022	64.6	28.51	0.50	28.55	28.82	28.67	1.29	8.98	21.25	0.02	0.0438	0.209	67.2	28.51	0.30	28.53	28.85	28.78	12.04	84.33	
2/15/2023	16:26	20.68	0.00	0.0005	0.022	64.3	28.51	0.50	28.55	28.83	28.67	1.28	8.98	21.24	0.02	0.0432	0.208	67.1	28.51	0.30	28.53	28.85	28.78	11.95	83.76	
2/15/2023	16:27	20.62	0.00	0.0006	0.024	64.4	28.51	0.50	28.55	28.82	28.67	1.41	9.84	21.25	0.02	0.0449	0.212	67.1	28.51	0.30	28.53	28.85	28.78	12.19	85.39	
2/15/2023	16:28	20.53	0.00	0.0005	0.022	64.1	28.51	0.50	28.55	28.82	28.67	1.28	8.99	21.24	0.02	0.0436	0.209	66.7	28.51	0.30	28.53	28.85	28.78	12.01	84.18	
2/15/2023	16:29	20.65	0.00	0.0006	0.024	64.1	28.51	0.50	28.55	28.83	28.67	1.41	9.84	21.24	0.02	0.0432	0.208	66.5	28.51	0.30	28.53	28.85	28.78	11.95	83.80	
2/15/2023	16:30	20.66	0.00	0.0005	0.022	63.7	28.51	0.50	28.55	28.83	28.67	1.28	8.99	21.25	0.02	0.0463	0.215	66.7	28.51	0.30	28.53	28.85	28.78	12.37	86.74	
2/15/2023	16:31	20.70	0.01	0.0004	0.020	63.9	28.51	0.50	28.55	28.83	28.68	1.15	8.04	21.24	0.02	0.0448	0.212	66.7	28.51	0.30	28.53	28.85	28.78	12.17	85.33	
2/15/2023	16:32	20.69	0.01	0.0006	0.024	63.6	28.51	0.50	28.55	28.83	28.67	1.41	9.85	21.24	0.02	0.0438	0.209	66.7	28.51	0.30	28.53	28.85	28.78	12.03	84.37	
2/15/2023	16:33	20.68	0.01	0.0005	0.022	63.6	28.51	0.50	28.55	28.83	28.67	1.28	8.99	21.24	0.02	0.0444	0.211	66.9	28.51	0.30	28.53	28.85	28.78	12.12	84.93	
2/15/2023	16:34	20.66	0.01	0.0005	0.022	63.2	28.51	0.50	28.55	28.83	28.67	1.28	8.99	21.24	0.02	0.0450	0.212	67.1	28.51	0.30	28.53	28.85	28.78	12.20	85.48	
2/15/2023	16:35	20.70	0.01	0.0005	0.022	63.3	28.51	0.50	28.55	28.83	28.68	1.28	8.99	21.23	0.01	0.0450	0.212	67.1	28.51	0.30	28.53	28.85	28.78	12.20	85.49	
2/15/2023	16:36	20.70	0.01	0.0004	0.020	63.1	28.51	0.50	28.55	28.83	--	--	--	21.24	0.02	0.0446	0.211	67.0	28.51	0.30	28.53	28.85	28.78	12.15	85.11	
2/15/2023	16:37	20.67	0.01	0.0005	0.022	63.1	28.51	0.50	28.55	28.83	28.68	1.28	9.00	21.24	0.02	0.0443	0.210	66.8	28.51	0.30	28.53	28.85	28.78	12.10	84.84	
2/15/2023	16:38	20.66	0.01	0.0004	0.020	62.9	28.51	0.50	28.55	28.83	28.68	1.15	8.05	21.23	0.01	0.0445	0.211	66.9	28.51	0.30	28.53	28.85	28.78	12.13	85.03	
2/15/2023	16:39	20.69	0.01	0.0004	0.020	62.9	28.51	0.50	28.55	28.83	28.67	1.15	8.05	21.24	0.01	0.0463	0.215	66.8	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	16:40	20.70	0.01	0.0004	0.020	62.8	28.51	0.50	28.55	28.83	28.68	1.15	8.05	21.24	0.02	0.0457	0.214	66.7	28.51	0.30	28.53	28.85	28.78	12.29	86.18	
2/15/2023	16:41	20.72	0.01	0.0005	0.022	62.8	28.51	0.50	28.55	28.83	28.68	1.28	9.00	21.23	0.02	0.0444	0.211	66.8	28.51	0.30	28.53	28.85	28.78	12.12	84.94	
2/15/2023	16:42	20.72	0.01	0.0003	0.017	62.7	28.51	0.50	28.55	28.83	28.68	0.99	6.97	21.23	0.01	0.0472	0.217	66.5	28.51	0.30	28.53	28.85	28.78	12.49	87.60	
2/15/2023	16:43	20.73	0.01	0.0005	0.022	62.5	28.51	0.50	28.55	28.83	28.68	1.28	9.00	21.23	0.01	0.0473	0.217	66.6	28.51	0.30	28.53	28.85	28.78	12.50	87.68	
2/15/2023	16:44	20.73	0.01	0.0005	0.022	62.5	28.51	0.50	28.55	28.83	28.68	1.28	9.00	21.23	0.01	0.0456	0.214	66.5	28.51	0.30	28.53	28.85	28.78	12.28	86.10	
2/15/2023	16:45	20.72	0.01	0.0004	0.020	62.5	28.51	0.50	28.55	28.83	28.68	1.15	8.05	21.22	0.01	0.0479	0.219	66.5	28.51	0.30	28.53	28.85	28.78	12.58	88.25	
2/15/2023	16:46	20.73	0.01	0.0005	0.022	62.5	28.51	0.50	28.55	28.83	28.68	1.28	9.00	21.23	0.01	0.0449	0.212	66.5	28.51	0.30	28.53	28.85	28.78	12.18	85.44	
2/15/2023	16:47	20.73	0.01	0.0005	0.022	62.4	28.51	0.50	28.55	28.83	28.68	1.28	9.00	21.23	0.01	0.0458	0.214	66.4	28.51	0.30	28.53	28.85	28.78	12.30	86.29	
2/15/2023	16:48	20.72	0.01	0.0003	0.017	62.5	28.51	0.50	28.55	28.83	28.68	0.99	6.97	21.23	0.01	0.0452	0.213	66.5	28.51	0.30	28.53	28.85	28.78	12.22	85.73	
2/15/2023	16:49	20.72	0.01	0.0003	0.017	62.5	28.51	0.50	28.55	28.83	28.68	0.99	6.97	21.23	0.01	0.0453	0.213	66.4	28.51	0.30	28.53	28.85	28.78	12.23	85.82	
2/15/2023	16:50	20.60	0.00	0.0003	0.017	62.3	28.51	0.50	28.55	28.82	28.67	0.99	6.97	21.22	0.01	0.0473	0.217	66.3	28.51	0.30	28.53	28.85	28.78	12.50	87.71	
2/15/2023	16:51	20.58	0.01	0.0002	0.014	62.3	28.51	0.50	28.55	28.82	28.68	0.81	5.70	21.22	0.01	0.0508	0.225	66.4	28.51	0.30	28.53	28.85	28.78	12.96	90.88	
2/15/2023	16:52	20.53	0.01	0.0003	0.017	62.3	28.51	0.50	28.55	28.82	28.67	0.99	6.98	21.21	0.01	0.0484	0.220	66.2	28.51	0.30	28.53	28.85	28.78	12.64	88.74	
2/15/2023	16:53	20.17	0.01	0.0003	0.017	62.4	28.51	0.50	28.55	28.81	28.66	1.28	9.01	21.21	0.01	0.0464	0.215	66.2	28.51	0.30	28.53	28.85	28.78	12.38	86.88	
2/15/2023	16:54	20.28	0.01	0.0003	0.017	62.3	28.51	0.50	28.55	28.81	28.66	0.99	6.98	21.22	0.01	0.0472	0.217	66.1	28.51	0.30	28.53	28.85	28.78	12.48	87.63	
2/15/2023	16:55	19.52	0.01	0.0003	0.017	62.1	28.51	0.50	28.55	28.78	28.63	0.99	6.98	21.20	0.01	0.0492	0.222	66.2	28.51	0.30	28.53	28.85	28.78	12.75	89.47	
2/15/2023	16:56	19.58	0.01	0.0005	0.022	62.0	28.51	0.50	28.55	28.78	28.64	1.28	9.02	21.20	0.01	0.0484	0.220	69.0	28.51	0.30	28.53	28.85	28.78	12.68	88.51	
2/15/2023	16:57	19.95	0.01	0.0003	0.017	61.9	28.51	0.50	28.55	28.80	28.66	0.99	6.98	21.21	0.01	0.0480	0.219	69.0	28.51	0.30	28.53	28.85	28.78	12.62	88.13	
2/15/2023	16:58	19.87	0.01	0.0002	0.014	62.0	28.51	0.50	28.55	28.80	--	--	--	21.21	0.01	0.0477	0.218	66.3	28.51	0.30	28.53	28.85	28.78	12.55	88.09	
2/15/2023	16:59	19.51	0.01	0.0004	0.020	61.7	28.51	0.50	28.55	28.78	28.63	1.15	8.06	21.21	0.01	0.0454	0.213	66.1	28.51	0.30	28.53	28.85	28.78	12.24	85.95	
2/15/2023	17:00	18.97	0.01	0.0004	0.020	61.6	28.51	0.50	28.55	28.76	28.61	1.15	8.07	21.19	0.01	0.0481	0.219	66.4	28.51	0.30	28.53	28.85	28.78	12.61	88.44	
2/15/2023	17:01	19.33	0.01	0.0002	0.014	61.7	28.51	0.50	28.55	28.77	28.63	0.81	5.71	21.20	0.01	0.0489	0.221	65.9	28.51	0.30	28.53	28.85	28.78	12.70	89.22	
2/15/2023	17:02	19.67	0.01	0.0004	0.020	61.5	28.51	0.50	28.55	28.79	28.63	1.15	8.06	21.20	0.01	0.0476	0.218	66.0	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	17:03	19.44	0.01	0.0003	0.017	61.5	28.51	0.50	28.55	28.78	28.62	0.99	6.98	21.20	0.01	0.0515	0.227	65.9	28.51	0.30	28.53	28.85	28.78	13.04	91.56	
2/15/2023	17:04	19.29	0.01	0.0004	0.020	61.4	28.51	0.50	28.55	28.77	28.62	1.15	8.07	21.21	0.01	0.0487	0.221	66.0	28.51	0.30	28.53	28.85	28.78	12.68	89.03	
2/15/2023	17:05	18.44	0.01	0.0004	0.020	61.1	28.51	0.50	28.55	28.74	28.59	1.15	8.07	21.19	0.01	0.0463	0.215	65.9	28.51	0.30	28.53	28.85	28.78	12.36	86.82	
2/15/2023	17:06	19.20	0.01	0.0004	0.020	61.1	28.51	0.50	28.55	28.77	28.62	1.15	8.07	21.20	0.01	0.0511	0.226	65.7	28.51	0.30	28.53	28.85	28.78	12.99	91.22	
2/15/2023	17:07	19.32	0.01	0.0004	0.020	61.0	28.51	0.50	28.55	28.77	28.63	1.15	8.07	21.20	0.01	0.0499	0.223	65.7	28.51	0.30	28.53	28.85	28.78	12.83	90.14	
2/15/2023	17:08	19.00	0.01	0.0003	0.017	61.1	28.51	0.50	28.55	28.76	28.59	0.99	6.98	21.20	0.01	0.0466	0.216	65.8	28.51	0.30	28.53	28.85	28.78	12.40	87.10	
2/15/2023	17:09	19.28	0.01	0.0004	0.020	61.1	28.51	0.50	28.55	28.77	28.62	1.15	8.07	21.21	0.00	0.0507	0.225	65.6	28.51	0.30	28.53	28.85	28.78	12.93	90.87	
2/15/2023	17:10	18.34	0.01	0.0003	0.017	61.0	28.51	0.50	28.55	28.74	28.59	0.99	7.00	21.19	0.00	0.0496	0.223	65.6	28.51	0.30	28.53	28.85	28.78	12.79	89.88	
2/15/2023	17:11	18.49	0.01	0.0004	0.020	60.8	28.51	0.50	28.55	28.74	28.59	1.15	8.08	21.20	0.01	0.0526	0.229	65.6	28.51	0.30	28.53	28.85	28.78	13.17	92.55	
2/15/2023	17:12	18.88	0.01	0.0003	0.017	60.8	28.51	0.50	28.55	28.76	28.61	0.99	6.99	21.20	0.01	0.0491	0.222	65.5	28.51	0.30	28.53	28.85	28.78	12.73	89.43	
2/15/2023	17:13	18.82	0.01	0.0003	0.017	60.6	28.51	0.50	28.55	28.75	28.59	0.99	6.98	21.20	0.01	0.0589	0.243	65.7	28.51	0.30	28.53	28.85	28.78	13.94	97.93	
2/15/2023	17:14	18.82	0.01	0.0004	0.020	60.6	28.51	0.50	28.55	28.75	28.61	1.15	8.08	21.20	0.00	0.0518	0.228	65.6	28.51	0.30	28.53	28.85	28.77	13.07	91.84	
2/15/2023	17:15	17.53	0.01	0.0003	0.017	60.8	28.51	0.50	28.55	28.70	28.56	0.99	7.00	21.19	0.00	0.0536	0.232	65.5	28.51	0.30	28.53	28.85	28.77	13.30	93.43	
2/15/2023	17:16	18.05	0.01	0.0004	0.020	60.5	28.51	0.50	28.55	28.72	28.57	1.15	8.08	21.20	0.01	0.0534	0.231	65.5	28.51	0.30	28.53	28.85	28.78	13.27	93.25	
2/15/2023	17:17	18.46	0.01	0.0004	0.020	60.6	28.51	0.50	28.55	28.74	28.59	1.15	8.08	21.20	0.01	0.0533	0.231	65.4	28.51	0.30	28.53	28.85	28.78	13.26	93.18	
2/15/2023	17:18	17.83	0.01	0.0003	0.017	60.3	28.51	0.50	28.55	28.71	28.54	0.99	6.99	21.19	0.01	0.0498	0.223	65.2	28.51	0.30	28.53	28.85	28.78	12.81	90.09	
2/15/2023	17:19	18.38	0.01	0.0004	0.020	60.2	28.51	0.50	28.55	28.74	28.59	1.15	8.09	21.20	0.00	0.0531	0.230	64.9	28.51	0.30	28.53	28.85	28.78	13.23	93.05	
2/15/2023	17:20	18.09	0.01	0.0004	0.020	60.1	28.51	0.50	28.55	28.73	--	--	--	21.20	0.00	0.0533	0.231	64.9	28.51	0.30	28.53	28.85	28.78	13.25	93.23	
2/15/2023	17:21	17.48	0.01	0.0004	0.020	60.1	28.51	0.50	28.55	28.70	28.56	1.15	8.09	21.19	0.00	0.0524	0.229	64.8	28.51	0.30	28.53	28.85	28.77	13.14	92.45	
2/15/2023	17:22	18.41	0.01	0.0003	0.017	60.0	28.51	0.50	28.55	28.74	28.60	0.99	7.00	21.21	0.00	0.0542	0.233	64.6	28.51	0.30	28.53	28.85	28.78	13.36	94.04	
2/15/2023	17:23	19.00	0.01	0.0003	0.017	59.8	28.51	0.50	28.55	28.76	28.62	0.99	7.00	21.20	0.00	0.0552	0.235	64.5	28.51	0.30	28.53	28.85	28.77	13.48	94.91	
2/15/2023	17:24	19.02	0.01	0.0003	0.017	59.8	28.51	0.50	28.55	28.76	28.59	0.99	6.99	21.20	0.00	0.0546	0.234	64.3	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	17:25	18.96	0.01	0.0003	0.017	59.7	28.51	0.50	28.55	28.76	28.60	0.99	7.00	21.20	0.00	0.0569	0.239	64.2	28.51	0.30	28.53	28.85	28.78	13.68	96.39	
2/15/2023	17:26	18.40	0.01	0.0004	0.020	59.6	28.51	0.50	28.55	28.74	28.60	1.15	8.09	21.19	0.00	0.0545	0.233	64.2	28.51	0.30	28.53	28.85	28.78	13.39	94.34	
2/15/2023	17:27	17.91	0.01	0.0004	0.020	59.6	28.51	0.50	28.55	28.72	28.58	1.15	8.09	21.20	0.00	0.0541	0.233	64.1	28.51	0.30	28.53	28.85	28.78	13.34	94.00	
2/15/2023	17:28	18.46	0.01	0.0003	0.017	59.4	28.51	0.50	28.55	28.74	28.60	0.99	7.01	21.20	0.00	0.0564	0.237	63.9	28.51	0.30	28.53	28.85	28.78	13.62	95.99	
2/15/2023	17:29	18.36	0.01	0.0004	0.020	59.4	28.51	0.50	28.55	28.74	28.60	1.15	8.09	21.19	0.00	0.0559	0.236	63.8	28.51	0.30	28.53	28.85	28.78	13.56	95.58	
2/15/2023	17:30	17.97	0.01	0.0004	0.020	59.2	28.51	0.50	28.55	28.72	28.55	1.15	8.08	21.19	0.00	0.0571	0.239	63.7	28.51	0.30	28.53	28.85	28.77	13.70	96.61	
2/15/2023	17:31	18.34	0.01	0.0005	0.022	59.2	28.51	0.50	28.55	28.74	28.59	1.28	9.05	21.19	0.01	0.0576	0.240	63.9	28.51	0.30	28.53	28.85	28.78	13.76	97.01	
2/15/2023	17:32	17.72	0.01	0.0004	0.020	59.0	28.51	0.50	28.55	28.71	28.57	1.15	8.10	21.18	0.00	0.0566	0.238	63.8	28.51	0.30	28.53	28.85	28.77	13.64	96.18	
2/15/2023	17:33	17.88	0.01	0.0005	0.022	58.9	28.51	0.50	28.55	28.72	28.58	1.28	9.06	21.19	0.00	0.0573	0.239	63.8	28.51	0.30	28.53	28.85	28.78	13.73	96.78	
2/15/2023	17:34	18.09	0.01	0.0004	0.020	58.9	28.51	0.50	28.55	28.73	28.58	1.15	8.10	21.20	0.00	0.0574	0.240	63.8	28.51	0.30	28.53	28.85	28.78	13.74	96.86	
2/15/2023	17:35	18.14	0.01	0.0004	0.020	58.7	28.51	0.50	28.55	28.73	28.57	1.14	8.09	21.20	0.00	0.0574	0.240	63.6	28.51	0.30	28.53	28.85	28.78	13.73	96.88	
2/15/2023	17:36	18.51	0.01	0.0003	0.017	58.9	28.51	0.50	28.55	28.74	28.61	0.99	7.02	21.20	0.01	0.0577	0.240	63.3	28.51	0.30	28.53	28.85	28.78	13.77	97.15	
2/15/2023	17:37	18.67	0.01	0.0006	0.024	58.5	28.51	0.50

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet % dry	CO_2 - Inlet % dry	Delta P in. W.C.	Sq Rt Delta P	Temperature (°F)	Barometric in. Hg	Stack Pressure in. W.C.	Stack Pressure in. Hg	Molecular Weight Md	Molecular Weight Mw	Velocity ft/sec	Flow Rate (DSCFM)	O_2 - Outlet % dry	CO_2 - Outlet % dry	Delta P in. W.C.	Sq Rt Delta P	Temperature (°F)	Barometric in. Hg	Stack Pressure in. W.C.	Stack Pressure in. Hg	Molecular Weight Md	Molecular Weight Mw	Velocity ft/sec	Flow Rate (DSCFM)	-
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	18:01	17.91	0.01	0.0005	0.022	55.9	28.51	0.50	28.55	28.72	28.59	1.28	9.09	21.20	0.01	0.0709	0.266	60.4	28.51	0.30	28.53	28.85	28.78	15.22	108.00	
2/15/2023	18:02	18.28	0.01	0.0004	0.020	55.9	28.51	0.50	28.55	28.73	28.58	1.14	8.12	21.20	0.01	0.0714	0.267	60.2	28.51	0.30	28.53	28.85	28.78	15.27	108.40	
2/15/2023	18:03	17.76	0.01	0.0004	0.020	55.9	28.51	0.50	28.55	28.71	28.59	1.14	8.14	21.20	0.01	0.0702	0.265	60.2	28.51	0.30	28.53	28.85	28.78	15.14	107.49	
2/15/2023	18:04	18.19	0.01	0.0005	0.022	55.8	28.51	0.50	28.55	28.73	--	--	--	21.19	0.01	0.0714	0.267	60.0	28.51	0.30	28.53	28.85	28.78	15.26	108.42	
2/15/2023	18:05	18.40	0.01	0.0005	0.022	55.6	28.51	0.50	28.55	28.74	28.62	1.28	9.10	21.19	0.01	0.0724	0.269	59.9	28.51	0.30	28.53	28.85	28.78	15.37	109.19	
2/15/2023	18:06	17.06	0.01	0.0004	0.020	55.6	28.51	0.50	28.55	28.68	28.55	1.14	8.14	21.18	0.01	0.0735	0.271	59.7	28.51	0.30	28.53	28.85	28.78	15.48	110.04	
2/15/2023	18:07	18.36	0.01	0.0003	0.017	55.4	28.51	0.50	28.55	28.74	28.62	0.99	7.05	21.20	0.01	0.0744	0.273	59.6	28.51	0.30	28.53	28.85	28.78	15.58	110.72	
2/15/2023	18:08	18.29	0.01	0.0004	0.020	55.2	28.51	0.50	28.55	28.73	28.60	1.14	8.14	21.19	0.01	0.0733	0.271	59.7	28.51	0.30	28.53	28.85	28.78	15.46	109.89	
2/15/2023	18:09	18.39	0.01	0.0004	0.020	55.3	28.51	0.50	28.55	28.74	28.59	1.14	8.12	21.19	0.01	0.0757	0.275	59.6	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	18:10	18.44	0.01	0.0004	0.020	55.2	28.51	0.50	28.55	28.74	28.60	1.14	8.13	21.19	0.01	0.0732	0.271	59.5	28.51	0.30	28.53	28.85	28.78	15.45	109.84	
2/15/2023	18:11	18.79	0.01	0.0004	0.020	55.1	28.51	0.50	28.55	28.75	28.63	1.14	8.14	21.20	0.01	0.0741	0.272	59.7	28.51	0.30	28.53	28.85	28.78	15.55	110.49	
2/15/2023	18:12	17.97	0.01	0.0003	0.017	55.0	28.51	0.50	28.55	28.72	28.59	0.99	7.05	21.18	0.01	0.0733	0.271	59.4	28.51	0.30	28.53	28.85	28.78	15.46	109.91	
2/15/2023	18:13	18.10	0.01	0.0003	0.017	54.9	28.51	0.50	28.55	28.73	28.60	0.99	7.05	21.19	0.01	0.0729	0.270	59.3	28.51	0.30	28.53	28.85	28.78	15.42	109.62	
2/15/2023	18:14	18.68	0.01	0.0003	0.017	54.8	28.51	0.50	28.55	28.75	28.62	0.99	7.05	21.19	0.01	0.0727	0.270	59.3	28.51	0.30	28.53	28.85	28.78	15.39	109.46	
2/15/2023	18:15	18.52	0.01	0.0003	0.017	54.9	28.51	0.50	28.55	28.74	28.61	0.99	7.04	21.19	0.02	0.0742	0.272	59.1	28.51	0.30	28.53	28.85	28.78	15.55	110.62	
2/15/2023	18:16	18.54	0.01	0.0002	0.014	54.6	28.51	0.50	28.55	28.74	28.61	0.81	5.75	21.19	0.02	0.0764	0.276	59.1	28.51	0.30	28.53	28.85	28.78	15.78	112.24	
2/15/2023	18:17	18.51	0.01	0.0003	0.017	54.6	28.51	0.50	28.55	28.74	28.61	0.99	7.05	21.19	0.01	0.0805	0.284	58.9	28.51	0.30	28.53	28.85	28.78	16.19	115.24	
2/15/2023	18:18	18.89	0.01	0.0003	0.017	54.4	28.51	0.50	28.55	28.76	28.63	0.99	7.05	21.19	0.02	0.0764	0.276	58.8	28.51	0.30	28.53	28.85	28.78	15.77	112.28	
2/15/2023	18:19	17.95	0.01	0.0003	0.017	54.4	28.51	0.50	28.55	28.72	28.59	0.99	7.05	21.18	0.02	0.0757	0.275	58.9	28.51	0.30	28.53	28.85	28.78	15.70	111.75	
2/15/2023	18:20	18.31	0.01	0.0004	0.020	54.3	28.51	0.50	28.55	28.73	28.61	1.14	8.15	21.19	0.01	0.0748	0.273	58.6	28.51	0.30	28.53	28.85	28.78	15.60	111.12	
2/15/2023	18:21	18.88	0.01	0.0004	0.020	54.1	28.51	0.50	28.55	28.76	28.61	1.14	8.13	21.19	0.01	0.0764	0.276	58.7	28.51	0.30	28.53	28.85	28.78	15.77	112.29	
2/15/2023	18:22	18.57	0.01	0.0003	0.017	54.2	28.51	0.50	28.55	28.74	28.59	0.99	7.04	21.19	0.01	0.0773	0.278	58.6	28.51	0.30	28.53	28.85	28.78	15.86	112.97	
2/15/2023	18:23	19.08	0.01	0.0003	0.017	54.1	28.51	0.50	28.55	28.76	28.62	0.99	7.04	21.20	0.01	0.0771	0.278	58.3	28.51	0.30	28.53	28.85	28.78	15.84	112.86	
2/15/2023	18:24	19.17	0.01	0.0004	0.020	54.0	28.51	0.50	28.55	28.77	28.64	1.14	8.14	21.18	0.02	0.0781	0.279	58.4	28.51	0.30	28.53	28.85	28.78	15.94	113.58	
2/15/2023	18:25	18.87	0.01	0.0004	0.020	53.8	28.51	0.50	28.55	28.76	28.63	1.14	8.14	21.19	0.01	0.0772	0.278	58.3	28.51	0.30	28.53	28.85	28.78	15.85	112.93	
2/15/2023	18:26	18.05	0.01	0.0003	0.017	53.7	28.51	0.50	28.55	28.72	--	--	--	21.18	0.01	0.0766	0.277	58.1	28.51	0.30	28.53	28.85	28.78	15.78	112.51	
2/15/2023	18:27	18.59	0.01	0.0003	0.017	53.7	28.51	0.50	28.55	28.75	28.62	0.99	7.06	21.19	0.01	0.0814	0.285	58.3	28.51	0.30	28.53	28.85	28.78	16.27	115.96	
2/15/2023	18:28	19.15	0.01	0.0003	0.017	53.7	28.51	0.50	28.55	28.77	28.64	0.99	7.05	21.20	0.02	0.0774	0.278	58.2	28.51	0.30	28.53	28.85	28.78	15.87	113.09	
2/15/2023	18:29	18.85	0.01	0.0003	0.017	53.6	28.51	0.50	28.55	28.76	28.61	0.99	7.04	21.19	0.01	0.0787	0.281	58.0	28.51	0.30	28.53	28.85	28.78	16.00	114.07	
2/15/2023	18:30	19.16	0.01	0.0003	0.017	53.4	28.51	0.50	28.55	28.77	28.64	0.99	7.05	21.19	0.01	0.0778	0.279	58.0	28.51	0.30	28.53	28.85	28.78	15.90	113.41	
2/15/2023	18:31	18.98	0.01	0.0004	0.020	53.6	28.51	0.50	28.55	28.76	28.62	1.14	8.14	21.19	0.01	0.0784	0.280	57.9	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	18:32	18.85	0.01	0.0004	0.020	53.2	28.51	0.50	28.55	28.76	28.63	1.14	8.15	21.19	0.01	0.0791	0.281	57.8	28.51	0.30	28.53	28.85	28.78	16.03	114.37	
2/15/2023	18:33	18.01	0.01	0.0003	0.017	53.4	28.51	0.50	28.55	28.72	28.59	0.99	7.06	21.17	0.02	0.0780	0.279	57.6	28.51	0.30	28.53	28.85	28.78	15.92	113.59	
2/15/2023	18:34	18.53	0.01	0.0004	0.020	53.3	28.51	0.50	28.55	28.74	28.61	1.14	8.15	21.19	0.01	0.0806	0.284	57.6	28.51	0.30	28.53	28.85	28.78	16.18	115.48	
2/15/2023	18:35	18.27	0.01	0.0004	0.020	53.0	28.51	0.50	28.55	28.73	28.61	1.14	8.15	21.18	0.01	0.0797	0.282	57.6	28.51	0.30	28.53	28.85	28.78	16.09	114.83	
2/15/2023	18:36	18.72	0.01	0.0003	0.017	53.0	28.51	0.50	28.55	28.75	28.60	0.99	7.05	21.18	0.01	0.0811	0.285	57.6	28.51	0.30	28.53	28.85	28.78	16.23	115.84	
2/15/2023	18:37	19.44	0.01	0.0004	0.020	53.0	28.51	0.50	28.55	28.78	28.65	1.14	8.14	21.18	0.01	0.0796	0.282	57.2	28.51	0.30	28.53	28.85	28.78	16.07	114.81	
2/15/2023	18:38	18.95	0.01	0.0003	0.017	52.9	28.51	0.50	28.55	28.76	28.63	0.98	7.06	21.18	0.01	0.0822	0.287	57.4	28.51	0.30	28.53	28.85	28.78	16.34	116.64	
2/15/2023	18:39	18.94	0.01	0.0003	0.017	52.8	28.51	0.50	28.55	28.76	28.62	0.99	7.05	21.18	0.01	0.0819	0.286	57.0	28.51	0.30	28.53	28.85	28.78	16.30	116.47	
2/15/2023	18:40	17.73	0.01	0.0002	0.014	52.7	28.51	0.50	28.55	28.71	28.59	0.80	5.77	21.17	0.01	0.0838	0.289	57.1	28.51	0.30	28.53	28.85	28.78	16.49	117.81	
2/15/2023	18:41	18.39	0.01	0.0003	0.017	52.7	28.51	0.50	28.55	28.74	28.61	0.99	7.06	21.18	0.01	0.0814	0.285	57.1	28.51	0.30	28.53	28.85	28.78	16.25	116.11	
2/15/2023	18:42	18.20	0.01	0.0003	0.017	52.7	28.51	0.50	28.55	28.73	28.60	0.99	7.06	21.17	0.01	0.0829	0.288	57.0	28.51	0.30	28.53	28.85	28.78	16.40	117.18	
2/15/2023	18:43	18.41	0.01	0.0004	0.020	52.6	28.51	0.50	28.55	28.74	28.59	1.14	8.14	21.18	0.01	0.0822	0.287	57.1	28.51	0.30	28.53	28.85	28.78	16.33	116.67	
2/15/2023	18:44	18.17	0.01	0.0003	0.017	52.6	28.51	0.50	28.55	28.73	28.60	0.99	7.06	21.18	0.01	0.0791	0.281	57.1	28.51	0.30	28.53	28.85	28.78	16.02	114.45	
2/15/2023	18:45	18.65	0.01	0.0003	0.017	52.6	28.51	0.50	28.55	28.75	28.62	0.98	7.06	21.18	0.01	0.0772	0.278	57.1	28.51	0.30	28.53	28.85	28.78	15.83	113.06	
2/15/2023	18:46	18.67	0.01	0.0003	0.017	52.5	28.51	0.50	28.55	28.75	28.62	0.98	7.06	21.18	0.01	0.0778	0.279	57.2	28.51	0.30	28.53	28.85	28.78	15.89	113.49	
2/15/2023	18:47	17.65	0.01	0.0002	0.014	52.7	28.51	0.50	28.55	28.71	--	--	--	21.17	0.01	0.0766	0.277	57.1	28.51	0.30	28.53	28.85	28.78	15.77	112.62	
2/15/2023	18:48	17.89	0.01	0.0003	0.017	52.5	28.51	0.50	28.55	28.72	28.59	0.99	7.06	21.17	0.01	0.0781	0.279	57.4	28.51	0.30	28.53	28.85	28.78	15.93	113.68	
2/15/2023	18:49	18.21	0.01	0.0005	0.022	52.5	28.51	0.50	28.55	28.73	28.60	1.27	9.12	21.18	0.01	0.0781	0.279	57.3	28.51	0.30	28.53	28.85	28.78	15.92	113.70	
2/15/2023	18:50	18.32	0.01	0.0002	0.014	52.7	28.51	0.50	28.55	28.73	28.61	0.80	5.77	21.17	0.01	0.0786	0.280	57.4	28.51	0.30	28.53	28.85	28.78	15.98	114.05	
2/15/2023	18:51	18.29	0.01	0.0004	0.020	52.6	28.51	0.50	28.55	28.73	28.59	1.14	8.14	21.17	0.01	0.0793	0.282	57.5	28.51	0.30	28.53	28.85	28.78	16.05	114.54	
2/15/2023	18:52	18.06	0.00	0.0004	0.020	52.5	28.51	0.50	28.55	28.72	28.59	1.14	8.16	21.17	0.01	0.0757	0.275	57.7	28.51	0.30	28.53	28.85	28.78	15.68	111.88	
2/15/2023	18:53	18.03	0.00	0.0003	0.017	52.8	28.51	0.50	28.55	28.72	28.59	0.99	7.06	21.17	0.01	0.0773	0.278	57.5	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	18:54	17.82	0.01	0.0002	0.014	52.6	28.51	0.50	28.55	28.71	28.58	0.80	5.77	21.17	0.01	0.0766	0.277	57.7	28.51	0.30	28.53	28.85	28.78	15.78	112.55	
2/15/2023	18:55	17.90	0.01	0.0003	0.017	52.5	28.51	0.50	28.55	28.72	28.58	0.99	7.06	21.17	0.01	0.0728	0.270	57.8	28.51	0.30	28.53	28.85	28.78	15.38	109.71	
2/15/2023	18:56	18.48	0.01	0.0003	0.017	52.6	28.51	0.50	28.55	28.74	28.60	0.99	7.06	21.17	0.01	0.0772	0.278	57.9	28.51	0.30	28.53	28.85	28.78	15.84	112.97	
2/15/2023	18:57	18.57	0.01	0.0004	0.020	52.6	28.51	0.50	28.55	28.74	28.61	1.14	8.15	21.18	0.01	0.0744	0.273	57.8	28.51	0.30	28.53	28.85	28.78	15.55	110.90	
2/15/2023	18:58	18.65	0.00	0.0002	0.014	52.6	28.51	0.50	28.55	28.75	28.60	0.80	5.76	21.18	0.01	0.0777	0.279	58.0	28.51	0.30	28.53	28.85	28.78	15.89	113.32	
2/15/2023	18:59	18.43	0.00	0.0004	0.020	52.6	28.51	0.50	28.55	28.74	28.60	1.14	8.15	21.18	0.01	0.0780	0.279	58.0	28.51	0.30	28.53	28.85	28.78	15.93	113.53	
2/15/2023	19:00	18.93	0.00	0.0002	0.014	52.5	28.51	0.50	28.55	28.76	28.62	0.80	5.76	21.18	0.01	0.0758	0.275	57.9	28.51	0.30	28.53	28.85	28.78	15.70	111.93	
2/15/2023	19:01	18.97	0.00	0.0002	0.014	52.6	28.51	0.50	28.55	28.76	28.62	0.80	5.76	21.18	0.01	0.0730	0.270	57.7	28.51	0.30	28.53	28.85	28.78	15.40	109.87	
2/15/2023	19:02	19.26	0.00	0.0002	0.014	52.5	28.51	0.50	28.55	28.77	28.63	0.80	5.76	21.19	0.01	0.0742	0.272	57.8	28.51	0.30	28.53	28.85	28.78	15.53	110.75	
2/15/2023	19:03	17.95	0.00	0.0003	0.017	52.5	28.51	0.50	28.55	28.72	28.58	0.99	7.06	21.17	0.01	0.0730	0.270	57.8	28.51	0.30	28.53	28.85	28.78	15.40	109.86	
2/15/2023	19:04	18.88	0.00	0.0003	0.017	52.4	28.51	0.50	28.55	28.76	28.62	0.98	7.06	21.19	0.01	0.0780	0.279	58.0	28.51	0.30	28.53	28.85	28.78	15.92	113.54	
2/15/2023	19:05	18.71	0.00	0.0004	0.020	52.6	28.51	0.50	28.55	28.75	28.62	1.14	8.15	21.18	0.00	0.0740	0.272	57.9	28.51	0.30	28.53	28.85	28.78	15.51	110.61	
2/15/2023	19:06	18.25	0.00	0.0004	0.020	52.6	28.51	0.50	28.55	28.73	28.58	1.14	8.15	21.18	0.01	0.0772	0.278	58.0	28.51	0.30	28.53	28.85	28.78	15.84	112.96	
2/15/2023	19:07	18.88	0.00	0.0002	0.014	52.3	28.51	0.50	28.55	28.76	28.62	0.80	5.76	21.18	0.01	0.0747	0.273	58.0	28.51	0.30	28.53	28.85	28.78	15.58	111.11	
2/15/2023	19:08	18.87	0.00	0.0003	0.017	52.4	28.51	0.50	28.55	28.75	28.62	0.98	7.06	21.18	0.01	0.0740	0.272	57.9	28.51	0.30	28.53	28.85	28.78	15.51	110.60	
2/15/2023	19:09	18.90	0.00	0.0003	0.017	52.4	28.51	0.50	28.55	28.76	--	--	--	21.19	0.01	0.0752	0.274	58.0	28.51	0.30	28.53	28.85	28.78	15.64	111.48	
2/15/2023	19:10	18.09	0.00	0.0003	0.017	52.3	28.51	0.50	28.55	28.72	28.58	0.99	7.06	21.17	0.00	0.0753	0.274	58.1	28.51	0.30	28.53	28.85	28.77	15.65	111.55	
2/15/2023	19:11	18.43	0.00	0.0002	0.014	52.5	28.51	0.50	28.55	28.74	28.60	0.80	5.76	21.18	0.00	0.0766	0.277	57.8	28.51	0.30	28.53	28.85	28.77	15.78	112.53	
2/15/2023	19:12	18.54	0.00	0.0004	0.020	52.5	28.51	0.50	28.55	28.74	28.61	1.14	8.15	21.19	0.01	0.0760	0.276	57.9	28.51	0.30	28.53	28.85	28.78	15.72	112.09	
2/15/2023	19:13	18.68	0.00	0.0003	0.017	52.5	28.51	0.50	28.55	28.75	28.61	0.98	7.06	21.19	0.01	0.0749	0.274	57.8	28.51	0.30	28.53	28.85	28.78	15.60	111.27	
2/15/2023	19:14	19.05	0.00	0.0004	0.020	52.5	28.51	0.50	28.55	28.76	28.62	1.14	8.14	21.19	0.00	0.0770	0.277	57.8	28.51	0.30	28.53	28.85	28.78	15.82	112.84	
2/15/2023	19:15	19.09	0.00	0.0004	0.020	52.6	28.51	0.50	28.55	28.76	28.63	1.14	8.15	21.19	0.01	0.0783	0.280	57.9	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	19:16	18.96	0.00	0.0004	0.020	52.4	28.51	0.50	28.55	28.76	28.63	1.14	8.15	21.19	0.00	0.0778	0.279	57.8	28.51	0.30	28.53	28.85	28.78	15.90	113.41	
2/15/2023	19:17	19.04	0.00	0.0004	0.020	52.5	28.51	0.50	28.55	28.76	28.63	1.14	8.15	21.19	0.00	0.0750	0.274	57.8	28.51	0.30	28.53	28.85	28.78	15.61	111.35	
2/15/2023	19:18	18.09	0.00	0.0002	0.014	52.3	28.51	0.50	28.55	28.72	28.59	0.80	5.77	21.18	0.00	0.0817	0.286	57.8	28.51	0.30	28.53	28.85	28.78	16.30	116.23	
2/15/2023	19:19	18.77	0.00	0.0002	0.014	52.5	28.51	0.50	28.55	28.75	28.62	0.80	5.76	21.19	0.00	0.0755	0.275	57.6	28.51	0.30	28.53	28.85	28.78	15.66	111.75	
2/15/2023	19:20	18.61	0.00	0.0002	0.014	52.3	28.51	0.50	28.55	28.74	28.61	0.80	5.77	21.19	0.00	0.0761	0.276	57.7	28.51	0.30	28.53	28.85	28.78	15.72	112.19	
2/15/2023	19:21	18.50	0.00	0.0003	0.017	52.5	28.51	0.50	28.55	28.74	28.59	0.99	7.05	21.19	0.00	0.0763	0.276	57.5	28.51	0.30	28.53	28.85	28.78	15.74	112.36	
2/15/2023	19:22	18.38	0.00	0.0003	0.017	52.3	28.51	0.50	28.55	28.74	28.60	0.98	7.06	21.19	0.01	0.0755	0.275	58.2	28.51	0.30	28.53	28.85	28.78	15.67	111.69	
2/15/2023	19:23	18.43	0.00	0.0004	0.020	52.4	28.51	0.50	28.55	28.74	28.60	1.14	8.15	21.19	0.00	0.0754	0.275	57.9	28.51	0.30	28.53	28.85	28.78	15.66	111.65	
2/15/2023	19:24	18.56	0.00	0.0002	0.014	52.3	28.51	0.50	28.55	28.74	28.61	0.80	5.76	21.19	0.00	0.0746	0.273	57.5	28.51	0.30	28.53	28.85	28.78	15.57	111.10	
2/15/2023	19:25	18.96	0.00	0.0004	0.020	52.2	28.51	0.50	28.55	28.76	28.62	1.14	8.15	21.19	0.00	0.0764	0.276	57.7	28.51	0.30	28.53	28.85	28.78	15.76	112.41	
2/15/2023	19:26	17.66	0.00	0.0003	0.017	52.3	28.51	0.50	28.55	28.71	28.57	0.99	7.07	21.18	0.00	0.0759	0.275	57.7	28.51	0.30	28.53	28.85	28.78	15.70	112.05	
2/15/2023	19:27	18.29	0.00	0.0003	0.017	52.4	28.51	0.50	28.55	28.73	28.60	0.99	7.06	21.19	0.00	0.0768	0.277	57.5	28.51	0.30	28.53	28.85	28.78	15.79	112.73	
2/15/2023	19:28	18.19	0.00	0.0002	0.014	52.3	28.51	0.50	28.55	28.73	28.60	0.80	5.77	21.19	0.00	0.0769	0.277	58.6	28.51	0.30	28.53	28.85	28.78	15.82	112.69	
2/15/2023	19:29	17.96	0.00	0.0003	0.017	52.3	28.51	0.50	28.55	28.72	28.57	0.99	7.06	21.19	0.00	0.0794	0.282	57.6	28.51	0.30	28.53	28.85	28.78	16.06	114.62	
2/15/2023	19:30	18.74	0.00	0.0003	0.017	52.1	28.51	0.50	28.55	28.75	28.62	0.98	7.06	21.20	0.00	0.0772	0.278	57.5	28.51	0.30	28.53	28.85	28.78	15.83	113.03	
2/15/2023	19:31	19.03	0.00	0.0004	0.020	52.1	28.51	0.50	28.55	28.76	--	--	--	21.20	0.00	0.0795	0.282	57.6	28.51	0.30	28.53	28.85	28.78	16.07	114.69	
2/15/2023	19:32	18.93	0.00	0.0003	0.017	52.2	28.51	0.50	28.55	28.76	28.62	0.98	7.06	21.19	0.00	0.0826	0.287	57.6	28.51	0.30	28.53	28.85	28.78	16.38	116.92	
2/15/2023	19:33	19.09	0.00	0.0002	0.014	52.0	28.51	0.50	28.55	28.76	28.62	0.80	5.76	21.20	0.00	0.0808	0.284	57.6	28.51	0.30	28.53	28.85	28.78	16.20	115.63	
2/15/2023	19:34	17.94	0.00	0.0002	0.014	52.2	28.51	0.50	28.55	28.72	28.58	0.80	5.77	21.18	0.00	0.0805	0.284	57.5	28.51	0.30	28.53	28.85	28.78	16.17	115.43	
2/15/2023	19:35	18.52	0.00	0.0003	0.017	52.0	28.51	0.50	28.55

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet % dry	CO_2 - Inlet % dry	Delta P in. W.C.	Sq Rt Delta P	Temperature (°F)	Barometric in. Hg	Stack Pressure in. W.C.	Stack Pressure in. Hg	Molecular Weight Md	Molecular Weight Mw	Velocity ft/sec	Flow Rate (DSCFM)	O_2 - Outlet % dry	CO_2 - Outlet % dry	Delta P in. W.C.	Sq Rt Delta P	Temperature (°F)	Barometric in. Hg	Stack Pressure in. W.C.	Stack Pressure in. Hg	Molecular Weight Md	Molecular Weight Mw	Velocity ft/sec	Flow Rate (DSCFM)	-
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	19:59	19.02	0.00	0.0003	0.017	51.2	28.51	0.50	28.55	28.76	28.63	0.98	7.07	21.19	0.00	0.0869	0.295	56.2	28.51	0.30	28.53	28.85	28.78	16.78	120.08	
2/15/2023	20:00	18.63	0.00	0.0003	0.017	51.0	28.51	0.50	28.55	28.75	28.61	0.98	7.07	21.19	0.01	0.0821	0.287	56.4	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	20:01	18.81	0.00	0.0003	0.017	51.0	28.51	0.50	28.55	28.75	28.61	0.98	7.07	21.18	0.01	0.0849	0.291	56.1	28.51	0.30	28.53	28.85	28.78	16.58	118.71	
2/15/2023	20:02	18.78	0.00	0.0004	0.020	51.0	28.51	0.50	28.55	28.75	28.62	1.14	8.16	21.19	0.00	0.0845	0.291	56.2	28.51	0.30	28.53	28.85	28.78	16.55	118.41	
2/15/2023	20:03	18.63	0.00	0.0003	0.017	51.0	28.51	0.50	28.55	28.75	28.61	0.98	7.07	21.19	0.01	0.0834	0.289	56.3	28.51	0.30	28.53	28.85	28.78	16.44	117.63	
2/15/2023	20:04	18.67	0.00	0.0003	0.017	50.9	28.51	0.50	28.55	28.75	28.62	0.98	7.07	21.19	0.00	0.0827	0.288	56.2	28.51	0.30	28.53	28.85	28.78	16.37	117.15	
2/15/2023	20:05	17.88	0.00	0.0004	0.020	51.0	28.51	0.50	28.55	28.72	28.58	1.14	8.17	21.18	0.01	0.0850	0.292	56.1	28.51	0.30	28.53	28.85	28.78	16.59	118.78	
2/15/2023	20:06	18.02	0.00	0.0003	0.017	51.0	28.51	0.50	28.55	28.72	28.59	0.98	7.07	21.19	0.01	0.0838	0.289	56.1	28.51	0.30	28.53	28.85	28.78	16.47	117.94	
2/15/2023	20:07	18.43	0.00	0.0003	0.017	50.9	28.51	0.50	28.55	28.74	28.61	0.98	7.07	21.19	0.00	0.0839	0.290	56.1	28.51	0.30	28.53	28.85	28.78	16.49	118.01	
2/15/2023	20:08	18.22	0.00	0.0007	0.026	50.7	28.51	0.50	28.55	28.73	28.59	1.50	10.80	21.18	0.01	0.0798	0.282	56.2	28.51	0.30	28.53	28.85	28.78	16.08	115.08	
2/15/2023	20:09	18.73	0.00	0.0004	0.020	50.7	28.51	0.50	28.55	28.75	28.61	1.14	8.16	21.18	0.01	0.0817	0.286	56.2	28.51	0.30	28.53	28.85	28.78	16.27	116.44	
2/15/2023	20:10	19.02	0.00	0.0003	0.017	50.7	28.51	0.50	28.55	28.76	28.63	0.98	7.07	21.19	0.01	0.0831	0.288	56.3	28.51	0.30	28.53	28.85	28.78	16.41	117.42	
2/15/2023	20:11	19.24	0.00	0.0003	0.017	50.8	28.51	0.50	28.55	28.77	28.64	0.98	7.07	21.19	0.01	0.0829	0.288	58.1	28.51	0.30	28.53	28.85	28.78	16.42	117.08	
2/15/2023	20:12	19.03	0.00	0.0003	0.017	50.7	28.51	0.50	28.55	28.76	28.63	0.98	7.07	21.19	0.00	0.0841	0.290	58.0	28.51	0.30	28.53	28.85	28.78	16.54	117.93	
2/15/2023	20:13	18.31	0.00	0.0003	0.017	50.8	28.51	0.50	28.55	28.73	28.60	0.98	7.08	21.19	0.01	0.0848	0.291	56.3	28.51	0.30	28.53	28.85	28.78	16.58	118.62	
2/15/2023	20:14	18.41	0.00	0.0004	0.020	50.6	28.51	0.50	28.55	28.74	28.61	1.14	8.17	21.19	0.00	0.0840	0.290	56.1	28.51	0.30	28.53	28.85	28.78	16.49	118.09	
2/15/2023	20:15	18.19	0.00	0.0003	0.017	50.5	28.51	0.50	28.55	28.73	--	--	--	21.19	0.01	0.0853	0.292	56.1	28.51	0.30	28.53	28.85	28.78	16.62	118.99	
2/15/2023	20:16	18.93	0.00	0.0004	0.020	50.4	28.51	0.50	28.55	28.76	28.63	1.13	8.17	21.19	0.01	0.0855	0.292	55.9	28.51	0.30	28.53	28.85	28.78	16.64	119.16	
2/15/2023	20:17	18.66	0.00	0.0003	0.017	50.6	28.51	0.50	28.55	28.75	28.61	0.98	7.07	21.19	0.01	0.0852	0.292	56.0	28.51	0.30	28.53	28.85	28.78	16.61	118.94	
2/15/2023	20:18	18.84	0.00	0.0003	0.017	50.5	28.51	0.50	28.55	28.75	28.62	0.98	7.07	21.19	0.01	0.0886	0.298	55.9	28.51	0.30	28.53	28.85	28.78	16.94	121.30	
2/15/2023	20:19	19.01	0.00	0.0002	0.014	50.5	28.51	0.50	28.55	28.76	28.63	0.80	5.77	21.19	0.01	0.0891	0.298	55.7	28.51	0.30	28.53	28.85	28.78	16.98	121.67	
2/15/2023	20:20	18.91	0.00	0.0004	0.020	50.3	28.51	0.50	28.55	28.76	28.63	1.13	8.17	21.19	0.01	0.0897	0.299	55.5	28.51	0.30	28.53	28.85	28.78	17.03	122.10	
2/15/2023	20:21	18.50	0.00	0.0004	0.020	50.4	28.51	0.50	28.55	28.74	28.61	1.13	8.17	21.19	0.01	0.0858	0.293	55.5	28.51	0.30	28.53	28.85	28.78	16.66	119.41	
2/15/2023	20:22	17.97	0.00	0.0003	0.017	50.3	28.51	0.50	28.55	28.72	28.59	0.98	7.08	21.18	0.01	0.0866	0.294	55.4	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	20:23	18.35	0.00	0.0003	0.017	50.2	28.51	0.50	28.55	28.73	28.61	0.98	7.08	21.18	0.01	0.0880	0.297	55.5	28.51	0.30	28.53	28.85	28.78	16.87	120.94	
2/15/2023	20:24	18.50	0.00	0.0004	0.020	50.1	28.51	0.50	28.55	28.74	28.61	1.13	8.18	21.19	0.02	0.0891	0.298	56.3	28.51	0.30	28.53	28.85	28.78	16.99	121.59	
2/15/2023	20:25	18.53	0.00	0.0002	0.014	50.1	28.51	0.50	28.55	28.74	28.61	0.80	5.78	21.18	0.02	0.0886	0.298	55.4	28.51	0.30	28.53	28.85	28.78	16.93	121.35	
2/15/2023	20:26	18.68	0.00	0.0003	0.017	50.3	28.51	0.50	28.55	28.75	28.62	0.98	7.08	21.18	0.01	0.0891	0.298	55.5	28.51	0.30	28.53	28.85	28.78	16.98	121.70	
2/15/2023	20:27	18.59	0.00	0.0002	0.014	49.8	28.51	0.50	28.55	28.74	28.62	0.80	5.78	21.18	0.01	0.0877	0.296	58.8	28.51	0.30	28.53	28.85	28.78	16.90	120.34	
2/15/2023	20:28	18.87	0.00	0.0003	0.017	49.6	28.51	0.50	28.55	28.75	28.62	0.98	7.08	21.18	0.01	0.0891	0.298	58.7	28.51	0.30	28.53	28.85	28.78	17.03	121.31	
2/15/2023	20:29	18.93	0.00	0.0004	0.020	49.4	28.51	0.50	28.55	28.76	28.63	1.13	8.18	21.18	0.01	0.0891	0.298	58.9	28.51	0.30	28.53	28.85	28.78	17.03	121.29	
2/15/2023	20:30	17.83	0.00	0.0003	0.017	49.6	28.51	0.50	28.55	28.71	28.58	0.98	7.09	21.17	0.01	0.0878	0.296	57.0	28.51	0.30	28.53	28.85	28.78	16.88	120.62	
2/15/2023	20:31	18.42	0.00	0.0003	0.017	49.9	28.51	0.50	28.55	28.74	28.61	0.98	7.08	21.18	0.01	0.0891	0.298	54.9	28.51	0.30	28.53	28.85	28.78	16.97	121.76	
2/15/2023	20:32	18.14	0.00	0.0003	0.017	49.7	28.51	0.50	28.55	28.73	28.60	0.98	7.09	21.17	0.01	0.0916	0.303	54.9	28.51	0.30	28.53	28.85	28.78	17.20	123.45	
2/15/2023	20:33	18.14	0.00	0.0003	0.017	49.7	28.51	0.50	28.55	28.73	28.59	0.98	7.08	21.18	0.01	0.0898	0.300	54.8	28.51	0.30	28.53	28.85	28.78	17.03	122.25	
2/15/2023	20:34	18.81	0.00	0.0003	0.017	49.6	28.51	0.50	28.55	28.75	28.62	0.98	7.08	21.18	0.01	0.0920	0.303	54.9	28.51	0.30	28.53	28.85	28.78	17.24	123.73	
2/15/2023	20:35	18.70	0.00	0.0003	0.017	49.6	28.51	0.50	28.55	28.75	28.62	0.98	7.08	21.18	0.01	0.0880	0.297	54.7	28.51	0.30	28.53	28.85	28.78	16.86	121.04	
2/15/2023	20:36	18.78	0.00	0.0003	0.017	49.6	28.51	0.50	28.55	28.75	28.62	0.98	7.08	21.18	0.01	0.0899	0.300	54.6	28.51	0.30	28.53	28.85	28.78	17.04	122.34	
2/15/2023	20:37	19.01	0.00	0.0003	0.017	49.6	28.51	0.50	28.55	28.76	--	--	--	21.17	0.01	0.0898	0.300	54.6	28.51	0.30	28.53	28.85	28.78	17.03	122.27	
2/15/2023	20:38	17.76	0.00	0.0002	0.014	49.7	28.51	0.50	28.55	28.71	28.58	0.80	5.79	21.17	0.01	0.0927	0.304	54.5	28.51	0.30	28.53	28.85	28.78	17.30	124.24	
2/15/2023	20:39	18.56	0.00	0.0004	0.020	49.6	28.51	0.50	28.55	28.74	28.61	1.13	8.18	21.17	0.01	0.0902	0.300	54.6	28.51	0.30	28.53	28.85	28.78	17.07	122.55	
2/15/2023	20:40	18.58	0.00	0.0003	0.017	49.5	28.51	0.50	28.55	28.74	28.62	0.98	7.08	21.17	0.01	0.0902	0.300	54.6	28.51	0.30	28.53	28.85	28.78	17.07	122.55	
2/15/2023	20:41	18.35	0.00	0.0002	0.014	49.5	28.51	0.50	28.55	28.73	28.60	0.80	5.78	21.17	0.01	0.0916	0.303	54.4	28.51	0.30	28.53	28.85	28.78	17.20	123.52	
2/15/2023	20:42	18.58	0.00	0.0002	0.014	49.4	28.51	0.50	28.55	28.74	28.61	0.80	5.78	21.17	0.01	0.0896	0.299	54.7	28.51	0.30	28.53	28.85	28.78	17.01	122.13	
2/15/2023	20:43	18.92	0.00	0.0003	0.017	49.4	28.51	0.50	28.55	28.76	28.63	0.98	7.08	21.18	0.01	0.0926	0.304	54.5	28.51	0.30	28.53	28.85	28.78	17.29	124.18	
2/15/2023	20:44	18.61	0.00	0.0002	0.014	49.4	28.51	0.50	28.55	28.74	28.62	0.80	5.78	21.17	0.01	0.0941	0.307	54.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	20:45	18.67	0.00	0.0003	0.017	49.3	28.51	0.50	28.55	28.75	28.62	0.98	7.08	21.18	0.01	0.0946	0.308	54.5	28.51	0.30	28.53	28.85	28.78	17.48	125.50	
2/15/2023	20:46	18.14	0.00	0.0002	0.014	49.3	28.51	0.50	28.55	28.73	28.60	0.80	5.79	21.17	0.01	0.0945	0.307	54.2	28.51	0.30	28.53	28.85	28.78	17.46	125.48	
2/15/2023	20:47	18.27	0.00	0.0002	0.014	49.3	28.51	0.50	28.55	28.73	28.60	0.80	5.79	21.17	0.01	0.0950	0.308	54.2	28.51	0.30	28.53	28.85	28.78	17.51	125.82	
2/15/2023	20:48	18.66	0.00	0.0003	0.017	49.2	28.51	0.50	28.55	28.75	28.62	0.98	7.09	21.18	0.01	0.0932	0.305	54.3	28.51	0.30	28.53	28.85	28.78	17.34	124.61	
2/15/2023	20:49	18.94	0.00	0.0003	0.017	49.0	28.51	0.50	28.55	28.76	28.63	0.98	7.09	21.18	0.01	0.0926	0.304	54.0	28.51	0.30	28.53	28.85	28.78	17.28	124.23	
2/15/2023	20:50	18.92	0.00	0.0004	0.020	49.2	28.51	0.50	28.55	28.76	28.63	1.13	8.18	21.18	0.01	0.0954	0.309	53.9	28.51	0.30	28.53	28.85	28.78	17.54	126.11	
2/15/2023	20:51	18.80	0.00	0.0004	0.020	49.1	28.51	0.50	28.55	28.75	28.63	1.13	8.18	21.18	0.01	0.0960	0.310	53.8	28.51	0.30	28.53	28.85	28.78	17.59	126.53	
2/15/2023	20:52	18.85	0.00	0.0003	0.017	49.0	28.51	0.50	28.55	28.75	28.63	0.98	7.09	21.18	0.01	0.0945	0.307	53.8	28.51	0.30	28.53	28.85	28.78	17.46	125.53	
2/15/2023	20:53	18.62	-0.01	0.0003	0.017	48.9	28.51	0.50	28.55	28.74	28.62	0.98	7.09	21.17	0.01	0.0972	0.312	53.9	28.51	0.30	28.53	28.85	28.78	17.70	127.31	
2/15/2023	20:54	18.74	0.00	0.0002	0.014	49.0	28.51	0.50	28.55	28.75	28.62	0.80	5.79	21.18	0.01	0.0938	0.306	53.6	28.51	0.30	28.53	28.85	28.78	17.39	125.09	
2/15/2023	20:55	17.97	0.00	0.0002	0.014	49.0	28.51	0.50	28.55	28.72	28.59	0.80	5.79	21.17	0.01	0.0945	0.307	53.9	28.51	0.30	28.53	28.85	28.78	17.46	125.52	
2/15/2023	20:56	18.12	0.00	0.0003	0.017	48.9	28.51	0.50	28.55	28.72	28.60	0.98	7.09	21.18	0.01	0.0933	0.305	54.0	28.51	0.30	28.53	28.85	28.78	17.35	124.71	
2/15/2023	20:57	18.36	0.00	0.0002	0.014	48.9	28.51	0.50	28.55	28.73	28.61	0.80	5.79	21.18	0.01	0.0941	0.307	53.9	28.51	0.30	28.53	28.85	28.78	17.42	125.26	
2/15/2023	20:58	18.58	0.00	0.0004	0.020	48.8	28.51	0.50	28.55	28.74	28.62	1.13	8.19	21.17	0.01	0.0952	0.309	53.9	28.51	0.30	28.53	28.85	28.78	17.52	125.98	
2/15/2023	20:59	18.84	0.00	0.0003	0.017	48.7	28.51	0.50	28.55	28.75	--	--	--	21.18	0.01	0.0956	0.309	53.8	28.51	0.30	28.53	28.85	28.78	17.56	126.26	
2/15/2023	21:00	18.94	0.00	0.0002	0.014	48.5	28.51	0.50	28.55	28.76	28.63	0.80	5.79	21.17	0.01	0.0960	0.310	53.9	28.51	0.30	28.53	28.85	28.78	17.60	126.52	
2/15/2023	21:01	18.63	-0.01	0.0003	0.017	48.7	28.51	0.50	28.55	28.74	28.62	0.98	7.09	21.17	0.01	0.0930	0.305	53.8	28.51	0.30	28.53	28.85	28.78	17.32	124.53	
2/15/2023	21:02	18.52	0.00	0.0003	0.017	48.7	28.51	0.50	28.55	28.74	28.61	0.98	7.09	21.17	0.01	0.0954	0.309	53.5	28.51	0.30	28.53	28.85	28.78	17.53	126.16	
2/15/2023	21:03	18.31	-0.01	0.0003	0.017	48.6	28.51	0.50	28.55	28.73	28.60	0.98	7.09	21.17	0.01	0.0963	0.310	53.5	28.51	0.30	28.53	28.85	28.78	17.62	126.76	
2/15/2023	21:04	17.91	-0.01	0.0004	0.020	48.5	28.51	0.50	28.55	28.71	28.59	1.13	8.19	21.17	0.01	0.0969	0.311	53.5	28.51	0.30	28.53	28.85	28.78	17.67	127.15	
2/15/2023	21:05	18.52	0.00	0.0003	0.017	48.6	28.51	0.50	28.55	28.74	28.61	0.98	7.09	21.18	0.01	0.0982	0.313	53.4	28.51	0.30	28.53	28.85	28.78	17.79	128.01	
2/15/2023	21:06	18.56	0.00	0.0003	0.017	48.3	28.51	0.50	28.55	28.74	28.62	0.98	7.09	21.17	0.01	0.0976	0.312	53.4	28.51	0.30	28.53	28.85	28.78	17.73	127.63	
2/15/2023	21:07	19.07	0.00	0.0003	0.017	48.4	28.51	0.50	28.55	28.76	28.64	0.98	7.09	21.18	0.01	0.0968	0.311	53.4	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	21:08	19.19	0.00	0.0004	0.020	48.5	28.51	0.50	28.55	28.77	28.64	1.13	8.19	21.17	0.01	0.0958	0.310	53.4	28.51	0.30	28.53	28.85	28.78	17.57	126.45	
2/15/2023	21:09	18.87	0.00	0.0004	0.020	48.4	28.51	0.50	28.55	28.75	28.63	1.13	8.19	21.16	0.01	0.0969	0.311	53.3	28.51	0.30	28.53	28.85	28.78	17.67	127.18	
2/15/2023	21:10	19.15	0.00	0.0004	0.020	48.4	28.51	0.50	28.55	28.77	28.64	1.13	8.19	21.17	0.01	0.1069	0.327	53.1	28.51	0.30	28.53	28.85	28.78	18.55	133.61	
2/15/2023	21:11	18.84	0.00	0.0003	0.017	48.4	28.51	0.50	28.55	28.75	28.63	0.98	7.09	21.17	0.01	0.0973	0.312	53.3	28.51	0.30	28.53	28.85	28.78	17.70	127.45	
2/15/2023	21:12	18.23	-0.01	0.0003	0.017	48.3	28.51	0.50	28.55	28.73	28.60	0.98	7.10	21.16	0.01	0.0940	0.307	53.2	28.51	0.30	28.53	28.85	28.78	17.40	125.29	
2/15/2023	21:13	19.82	0.00	0.0004	0.020	48.3	28.51	0.50	28.55	28.79	28.67	1.13	8.18	21.18	0.01	0.0972	0.312	53.2	28.51	0.30	28.53	28.85	28.78	17.69	127.40	
2/15/2023	21:14	20.46	0.00	0.0004	0.020	48.1	28.51	0.50	28.55	28.82	28.69	1.13	8.18	21.18	0.01	0.0940	0.307	53.2	28.51	0.30	28.53	28.85	28.78	17.40	125.28	
2/15/2023	21:15	20.62	0.00	0.0003	0.017	48.2	28.51	0.50	28.55	28.82	28.70	0.98	7.09	21.18	0.01	0.0952	0.309	53.1	28.51	0.30	28.53	28.85	28.78	17.51	126.09	
2/15/2023	21:16	20.66	0.00	0.0004	0.020	47.9	28.51	0.50	28.55	28.83	28.71	1.13	8.19	21.18	0.00	0.0944	0.307	53.2	28.51	0.30	28.53	28.85	28.78	17.44	125.54	
2/15/2023	21:17	20.69	0.00	0.0004	0.020	48.0	28.51	0.50	28.55	28.83	28.72	1.13	8.19	21.18	0.00	0.0958	0.310	53.3	28.51	0.30	28.53	28.85	28.78	17.57	126.46	
2/15/2023	21:18	20.69	0.00	0.0004	0.020	48.0	28.51	0.50	28.55	28.83	28.72	1.13	8.19	21.18	0.00	0.0927	0.304	53.4	28.51	0.30	28.53	28.85	28.78	17.28	124.39	
2/15/2023	21:19	20.70	0.00	0.0006	0.024	48.1	28.51	0.50	28.55	28.83	28.72	1.38	10.04	21.18	0.00	0.0947	0.308	53.4	28.51	0.30	28.53	28.85	28.78	17.47	125.72	
2/15/2023	21:20	20.69	0.00	0.0004	0.020	48.1	28.51	0.50	28.55	28.83	28.72	1.13	8.19	21.17	0.01	0.0963	0.310	53.4	28.51	0.30	28.53	28.85	28.78	17.62	126.77	
2/15/2023	21:21	20.67	0.00	0.0003	0.017	48.0	28.51	0.50	28.55	28.83	--	--	--	21.17	0.00	0.0935	0.306	53.4	28.51	0.30	28.53	28.85	28.78	17.36	124.92	
2/15/2023	21:22	20.70	0.00	0.0003	0.017	48.1	28.51	0.50	28.55	28.83	28.72	0.98	7.10	21.18	0.00	0.0933	0.305	53.4	28.51	0.30	28.53	28.85	28.78	17.34	124.80	
2/15/2023	21:23	20.70	0.00	0.0004	0.020	47.7	28.51	0.50	28.55	28.83	28.72	1.13	8.20	21.17	0.00	0.0959	0.310	53.2	28.51	0.30	28.53	28.85	28.78	17.57	126.55	
2/15/2023	21:24	20.71	0.00	0.0004	0.020	47.9	28.51	0.50	28.55	28.83	28.72	1.13	8.20	21.18	0.01	0.0949	0.308	53.1	28.51	0.30	28.53	28.85	28.78	17.48	125.90	
2/15/2023	21:25	20.71	0.00	0.0004	0.020	47.8	28.51	0.50	28.55	28.83	28.73	1.13	8.20	21.18	0.00	0.0938	0.306	53.1	28.51	0.30	28.53	28.85	28.78	17.38	125.17	
2/15/2023	21:26	20.71	0.00	0.0004	0.020	47.8	28.51	0.50	28.55	28.83	28.72	1.13	8.20	21.18	0.00	0.0968	0.311	52.9	28.51	0.30	28.53	28.85	28.78	17.65	127.17	
2/15/2023	21:27	20.71	0.00	0.0004	0.020	47.9	28.51	0.50	28.55	28.83	28.72	1.13	8.20	21.18	0.00	0.0951	0.308	53.0	28.51	0.30	28.53	28.85	28.78	17.50	126.04	
2/15/2023	21:28	20.71	0.00	0.0004	0.020	47.9	28.51	0.50	28.55	28.83	28.72	1.13	8.20	21.18	0.00	0.0949	0.308	53.0	28.51	0.30	28.53	28.85	28.78	17.48	125.91	
2/15/2023	21:29	20.69	0.00	0.0004	0.020	47.8	28.51	0.50	28.55	28.83	28.72	1.13	8.20	21.17	0.00	0.0970	0.311	52.9	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	21:30	20.70	0.00	0.0005	0.022	47.9	28.51	0.50	28.55	28.83	28.72	1.26	9.16	21.18	0.00	0.0945	0.307	52.9	28.51	0.30	28.53	28.85	28.78	17.44	125.66	
2/15/2023	21:31	20.71	0.00	0.0005	0.022	47.7	28.51	0.50	28.55	28.83	28.72	1.26	9.16	21.18	0.00	0.0954	0.309	52.8	28.51	0.30	28.53	28.85	28.78	17.52	126.27	
2/15/2023	21:32	20.71	0.00	0.0003	0.017	47.9	28.51	0.50	28.55	28.83	28.72	0.98	7.10	21.18	0.00	0.0948	0.308	52.9	28.51	0.30	28.53	28.85	28.78	17.47	125.86	
2/15/2023	21:33	20.71	0.00	0.0003	0.017	47.7	28.51	0.50	28.55

Alliance SOURCE TESTING

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Inlet Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Outlet Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	Point in Process
	Unit	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	-
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	21:57	20.71	0.00	0.0005	0.022	47.4	28.51	0.50	28.55	28.83	28.72	1.26	9.17	21.19	0.01	0.0980	0.313	52.5	28.51	0.30	28.53	28.85	28.78	17.75	128.01	
2/15/2023	21:58	20.72	0.00	0.0005	0.022	47.4	28.51	0.50	28.55	28.83	28.72	1.26	9.17	21.19	0.01	0.0965	0.311	52.5	28.51	0.30	28.53	28.85	28.78	17.62	127.02	
2/15/2023	21:59	20.71	0.00	0.0004	0.020	47.3	28.51	0.50	28.55	28.83	28.73	1.13	8.20	21.18	0.00	0.0963	0.310	52.6	28.51	0.30	28.53	28.85	28.78	17.60	126.89	
2/15/2023	22:00	20.72	0.00	0.0005	0.022	47.3	28.51	0.50	28.55	28.83	28.73	1.26	9.17	21.19	0.00	0.0949	0.308	52.6	28.51	0.30	28.53	28.85	28.78	17.47	125.97	
2/15/2023	22:01	20.72	0.00	0.0004	0.020	47.4	28.51	0.50	28.55	28.83	28.72	1.13	8.20	21.18	0.00	0.0966	0.311	52.5	28.51	0.30	28.53	28.85	28.78	17.63	127.10	
2/15/2023	22:02	20.67	0.00	0.0006	0.024	47.3	28.51	0.50	28.55	28.83	28.72	1.38	10.04	21.19	0.00	0.0934	0.306	52.6	28.51	0.30	28.53	28.85	28.78	17.33	124.96	
2/15/2023	22:03	20.06	0.00	0.0005	0.022	47.6	28.51	0.50	28.55	28.80	28.70	1.26	9.17	21.19	0.00	0.0941	0.307	52.6	28.51	0.30	28.53	28.85	28.78	17.40	125.43	
2/15/2023	22:04	19.88	0.01	0.0005	0.022	47.3	28.51	0.50	28.55	28.80	28.69	1.26	9.17	21.19	0.00	0.0945	0.307	52.6	28.51	0.30	28.53	28.85	28.78	17.44	125.69	
2/15/2023	22:05	19.92	0.01	0.0006	0.024	47.4	28.51	0.50	28.55	28.80	--	--	--	21.19	0.01	0.0948	0.308	52.6	28.51	0.30	28.53	28.85	28.78	17.46	125.89	
2/15/2023	22:06	19.85	0.01	0.0004	0.020	47.5	28.51	0.50	28.55	28.80	28.69	1.13	8.20	21.19	0.01	0.0933	0.305	52.6	28.51	0.30	28.53	28.85	28.78	17.32	124.88	
2/15/2023	22:07	19.85	0.01	0.0005	0.022	47.4	28.51	0.50	28.55	28.80	28.69	1.26	9.17	21.19	0.01	0.0932	0.305	52.8	28.51	0.30	28.53	28.85	28.78	17.32	124.80	
2/15/2023	22:08	19.84	0.01	0.0006	0.024	47.4	28.51	0.50	28.55	28.80	28.68	1.38	10.04	21.19	0.01	0.0938	0.306	52.7	28.51	0.30	28.53	28.85	28.78	17.37	125.21	
2/15/2023	22:09	19.80	0.01	0.0005	0.022	47.5	28.51	0.50	28.55	28.79	28.68	1.26	9.17	21.20	0.01	0.0955	0.309	52.7	28.51	0.30	28.53	28.85	28.78	17.53	126.35	
2/15/2023	22:10	19.71	0.01	0.0005	0.022	47.5	28.51	0.50	28.55	28.79	28.67	1.26	9.17	21.20	0.01	0.0938	0.306	52.9	28.51	0.30	28.53	28.85	28.78	17.37	125.19	
2/15/2023	22:11	19.74	0.01	0.0004	0.020	47.5	28.51	0.50	28.55	28.79	28.67	1.13	8.20	21.20	0.00	0.0926	0.304	52.7	28.51	0.30	28.53	28.85	28.78	17.26	124.41	
2/15/2023	22:12	19.73	0.01	0.0005	0.022	47.4	28.51	0.50	28.55	28.79	28.67	1.26	9.16	21.19	0.01	0.0935	0.306	52.9	28.51	0.30	28.53	28.85	28.78	17.35	124.99	
2/15/2023	22:13	19.62	0.01	0.0004	0.020	47.5	28.51	0.50	28.55	28.79	28.67	1.13	8.20	21.18	0.01	0.0926	0.304	52.8	28.51	0.30	28.53	28.85	28.78	17.26	124.39	
2/15/2023	22:14	19.72	0.01	0.0004	0.020	47.5	28.51	0.50	28.55	28.79	28.67	1.13	8.19	21.19	0.01	0.0936	0.306	52.9	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	22:15	19.57	0.01	0.0004	0.020	47.6	28.51	0.50	28.55	28.78	28.66	1.13	8.19	21.19	0.01	0.0948	0.308	52.9	28.51	0.30	28.53	28.85	28.78	17.47	125.85	
2/15/2023	22:16	19.65	0.01	0.0006	0.024	47.5	28.51	0.50	28.55	28.79	28.67	1.38	10.04	21.19	0.01	0.0929	0.305	52.9	28.51	0.30	28.53	28.85	28.78	17.29	124.58	
2/15/2023	22:17	19.67	0.01	0.0004	0.020	47.6	28.51	0.50	28.55	28.79	28.67	1.13	8.20	21.19	0.01	0.0906	0.301	52.8	28.51	0.30	28.53	28.85	28.78	17.07	123.05	
2/15/2023	22:18	19.59	0.01	0.0002	0.014	47.8	28.51	0.50	28.55	28.79	28.67	0.80	5.79	21.18	0.01	0.0942	0.307	53.1	28.51	0.30	28.53	28.85	28.78	17.42	125.43	
2/15/2023	22:19	19.73	0.01	0.0002	0.014	47.8	28.51	0.50	28.55	28.79	28.67	0.80	5.79	21.18	0.00	0.0946	0.308	53.0	28.51	0.30	28.53	28.85	28.78	17.45	125.71	
2/15/2023	22:20	19.68	0.01	0.0002	0.014	47.6	28.51	0.50	28.55	28.79	28.67	0.80	5.79	21.19	0.01	0.0947	0.308	53.2	28.51	0.30	28.53	28.85	28.78	17.46	125.74	
2/15/2023	22:21	19.66	0.01	0.0002	0.014	47.7	28.51	0.50	28.55	28.79	28.67	0.80	5.79	21.19	0.01	0.0971	0.312	53.1	28.51	0.30	28.53	28.85	28.78	17.68	127.35	
2/15/2023	22:22	19.69	0.01	0.0003	0.017	47.5	28.51	0.50	28.55	28.79	28.67	0.98	7.10	21.18	0.01	0.0956	0.309	53.2	28.51	0.30	28.53	28.85	28.78	17.55	126.34	
2/15/2023	22:23	19.88	0.01	0.0003	0.017	47.7	28.51	0.50	28.55	28.80	28.68	0.98	7.09	21.18	0.01	0.0994	0.315	53.3	28.51	0.30	28.53	28.85	28.78	17.89	128.80	
2/15/2023	22:24	19.84	0.01	0.0005	0.022	47.5	28.51	0.50	28.55	28.80	28.67	1.26	9.16	21.19	0.01	0.0952	0.309	53.0	28.51	0.30	28.53	28.85	28.78	17.51	126.09	
2/15/2023	22:25	20.36	0.01	0.0004	0.020	47.6	28.51	0.50	28.55	28.82	28.69	1.13	8.19	21.19	0.01	0.0992	0.315	53.1	28.51	0.30	28.53	28.85	28.78	17.87	128.69	
2/15/2023	22:26	20.61	0.00	0.0004	0.020	47.5	28.51	0.50	28.55	28.82	28.70	1.13	8.19	21.18	0.01	0.0993	0.315	53.1	28.51	0.30	28.53	28.85	28.78	17.88	128.76	
2/15/2023	22:27	20.67	0.00	0.0003	0.017	47.5	28.51	0.50	28.55	28.83	--	--	--	21.17	0.01	0.1021	0.320	52.8	28.51	0.30	28.53	28.85	28.78	18.13	130.60	
2/15/2023	22:28	20.69	0.00	0.0003	0.017	47.3	28.51	0.50	28.55	28.83	28.71	0.98	7.09	21.18	0.02	0.0996	0.316	52.9	28.51	0.30	28.53	28.85	28.78	17.90	128.97	
2/15/2023	22:29	20.70	0.00	0.0004	0.020	47.3	28.51	0.50	28.55	28.83	28.72	1.13	8.20	21.17	0.02	0.0994	0.315	52.7	28.51	0.30	28.53	28.85	28.78	17.88	128.87	
2/15/2023	22:30	20.43	0.00	0.0004	0.020	47.2	28.51	0.50	28.55	28.82	28.71	1.13	8.20	21.17	0.02	0.1018	0.319	52.4	28.51	0.30	28.53	28.85	28.78	18.09	130.44	
2/15/2023	22:31	20.58	0.00	0.0003	0.017	47.1	28.51	0.50	28.55	28.82	28.71	0.98	7.10	21.17	0.02	0.1013	0.318	52.2	28.51	0.30	28.53	28.85	28.78	18.04	130.15	
2/15/2023	22:32	20.66	0.00	0.0003	0.017	47.0	28.51	0.50	28.55	28.83	28.72	0.98	7.10	21.17	0.01	0.1013	0.318	52.2	28.51	0.30	28.53	28.85	28.78	18.04	130.15	
2/15/2023	22:33	20.69	0.00	0.0003	0.017	46.9	28.51	0.50	28.55	28.83	28.72	0.98	7.10	21.17	0.02	0.1025	0.320	52.1	28.51	0.30	28.53	28.85	28.78	18.15	130.93	
2/15/2023	22:34	20.69	0.00	0.0007	0.026	46.9	28.51	0.50	28.55	28.83	28.72	1.49	10.85	21.17	0.01	0.0999	0.316	51.9	28.51	0.30	28.53	28.85	28.78	17.92	129.28	
2/15/2023	22:35	20.69	0.00	0.0003	0.017	46.9	28.51	0.50	28.55	28.83	28.72	0.98	7.10	21.16	0.01	0.1031	0.321	51.8	28.51	0.30	28.53	28.85	28.78	18.20	131.35	
2/15/2023	22:36	20.70	0.00	0.0003	0.017	46.9	28.51	0.50	28.55	28.83	28.72	0.98	7.10	21.17	0.02	0.1037	0.322	51.7	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	22:37	20.70	0.00	0.0002	0.014	46.8	28.51	0.50	28.55	28.83	28.72	0.80	5.80	21.17	0.01	0.1047	0.324	51.7	28.51	0.30	28.53	28.85	28.78	18.34	132.37	
2/15/2023	22:38	20.69	0.00	0.0003	0.017	46.6	28.51	0.50	28.55	28.83	28.72	0.98	7.11	21.18	0.02	0.1060	0.326	51.7	28.51	0.30	28.53	28.85	28.78	18.45	133.19	
2/15/2023	22:39	20.70	0.00	0.0003	0.017	46.6	28.51	0.50	28.55	28.83	28.72	0.98	7.11	21.17	0.01	0.1051	0.324	51.6	28.51	0.30	28.53	28.85	28.78	18.37	132.64	
2/15/2023	22:40	20.41	0.00	0.0003	0.017	46.6	28.51	0.50	28.55	28.82	28.71	0.98	7.11	21.17	0.02	0.1040	0.322	51.6	28.51	0.30	28.53	28.85	28.78	18.27	131.95	
2/15/2023	22:41	20.46	0.00	0.0002	0.014	46.5	28.51	0.50	28.55	28.82	28.71	0.80	5.80	21.17	0.01	0.1020	0.319	51.5	28.51	0.30	28.53	28.85	28.78	18.10	130.68	
2/15/2023	22:42	20.57	0.00	0.0004	0.020	46.7	28.51	0.50	28.55	28.82	28.72	1.13	8.20	21.17	0.01	0.1023	0.320	51.5	28.51	0.30	28.53	28.85	28.78	18.12	130.87	
2/15/2023	22:43	20.60	0.00	0.0003	0.017	46.5	28.51	0.50	28.55	28.82	28.72	0.98	7.11	21.17	0.02	0.1006	0.317	51.4	28.51	0.30	28.53	28.85	28.78	17.97	129.78	
2/15/2023	22:44	20.63	0.00	0.0003	0.017	46.4	28.51	0.50	28.55	28.83	28.72	0.98	7.11	21.17	0.01	0.1024	0.320	51.4	28.51	0.30	28.53	28.85	28.78	18.13	130.95	
2/15/2023	22:45	20.58	0.00	0.0003	0.017	46.5	28.51	0.50	28.55	28.82	28.72	0.98	7.11	21.16	0.02	0.1029	0.321	51.4	28.51	0.30	28.53	28.85	28.78	18.17	131.26	
2/15/2023	22:46	20.53	0.00	0.0003	0.017	46.4	28.51	0.50	28.55	28.82	28.72	0.98	7.11	21.16	0.02	0.1017	0.319	51.4	28.51	0.30	28.53	28.85	28.78	18.07	130.50	
2/15/2023	22:47	20.53	0.00	0.0003	0.017	46.5	28.51	0.50	28.55	28.82	28.72	0.98	7.11	21.15	0.01	0.1027	0.320	51.3	28.51	0.30	28.53	28.85	28.78	18.15	131.15	
2/15/2023	22:48	20.52	0.00	0.0003	0.017	46.4	28.51	0.50	28.55	28.82	28.72	0.98	7.11	21.15	0.01	0.1005	0.317	51.5	28.51	0.30	28.53	28.85	28.78	17.96	129.71	
2/15/2023	22:49	20.53	0.00	0.0003	0.017	46.3	28.51	0.50	28.55	28.82	--	--	--	21.16	0.01	0.0992	0.315	51.5	28.51	0.30	28.53	28.85	28.78	17.85	128.86	
2/15/2023	22:50	20.54	0.00	0.0003	0.017	46.2	28.51	0.50	28.55	28.82	28.72	0.98	7.11	21.16	0.01	0.0975	0.312	51.5	28.51	0.30	28.53	28.85	28.78	17.69	127.76	
2/15/2023	22:51	20.55	0.00	0.0003	0.017	46.3	28.51	0.50	28.55	28.82	28.72	0.98	7.11	21.17	0.01	0.0969	0.311	51.5	28.51	0.30	28.53	28.85	28.78	17.64	127.36	
2/15/2023	22:52	20.54	0.00	0.0004	0.020	46.3	28.51	0.50	28.55	28.82	28.72	1.13	8.21	21.16	0.01	0.0985	0.314	51.6	28.51	0.30	28.53	28.85	28.78	17.79	128.39	
2/15/2023	22:53	19.87	0.00	0.0003	0.017	46.3	28.51	0.50	28.55	28.79	28.69	0.98	7.11	21.16	0.01	0.0997	0.316	51.5	28.51	0.30	28.53	28.85	28.78	17.89	129.19	
2/15/2023	22:54	20.31	0.00	0.0004	0.020	46.3	28.51	0.50	28.55	28.81	28.71	1.13	8.21	21.17	0.02	0.0985	0.314	51.6	28.51	0.30	28.53	28.85	28.78	17.78	128.40	
2/15/2023	22:55	20.39	0.00	0.0003	0.017	46.4	28.51	0.50	28.55	28.82	28.71	0.98	7.11	21.17	0.01	0.0988	0.314	51.6	28.51	0.30	28.53	28.85	28.78	17.81	128.59	
2/15/2023	22:56	20.39	0.00	0.0003	0.017	46.2	28.51	0.50	28.55	28.82	28.70	0.98	7.11	21.16	0.01	0.1003	0.317	51.8	28.51	0.30	28.53	28.85	28.78	17.95	129.54	
2/15/2023	22:57	20.24	0.00	0.0004	0.020	46.2	28.51	0.50	28.55	28.81	28.71	1.13	8.21	21.16	0.01	0.0969	0.311	51.8	28.51	0.30	28.53	28.85	28.78	17.64	127.31	
2/15/2023	22:58	20.18	0.00	0.0004	0.020	46.4	28.51	0.50	28.55	28.81	28.70	1.13	8.21	21.16	0.01	0.1018	0.319	51.6	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	22:59	20.20	0.00	0.0003	0.017	46.4	28.51	0.50	28.55	28.81	28.70	0.98	7.11	21.16	0.01	0.1006	0.317	51.7	28.51	0.30	28.53	28.85	28.78	17.97	129.75	
2/15/2023	23:00	20.21	0.00	0.0004	0.020	46.3	28.51	0.50	28.55	28.81	28.70	1.13	8.21	21.15	0.02	0.1004	0.317	51.8	28.51	0.30	28.53	28.85	28.78	17.96	129.60	
2/15/2023	23:01	20.25	0.00	0.0003	0.017	46.4	28.51	0.50	28.55	28.81	28.71	0.98	7.11	21.16	0.01	0.1005	0.317	51.8	28.51	0.30	28.53	28.85	28.78	17.97	129.67	
2/15/2023	23:02	19.79	0.00	0.0003	0.017	46.4	28.51	0.50	28.55	28.79	28.69	0.98	7.11	21.15	0.01	0.1007	0.317	51.8	28.51	0.30	28.53	28.85	28.78	17.99	129.80	
2/15/2023	23:03	19.60	0.00	0.0004	0.020	46.4	28.51	0.50	28.55	28.78	28.68	1.13	8.21	21.15	0.01	0.0990	0.315	51.7	28.51	0.30	28.53	28.85	28.78	17.83	128.71	
2/15/2023	23:04	19.95	0.00	0.0004	0.020	46.5	28.51	0.50	28.55	28.80	28.69	1.13	8.21	21.16	0.01	0.1005	0.317	51.7	28.51	0.30	28.53	28.85	28.78	17.97	129.68	
2/15/2023	23:05	20.04	0.00	0.0004	0.020	46.4	28.51	0.50	28.55	28.80	28.69	1.13	8.21	21.16	0.01	0.0992	0.315	51.7	28.51	0.30	28.53	28.85	28.78	17.85	128.84	
2/15/2023	23:06	20.00	0.00	0.0003	0.017	46.5	28.51	0.50	28.55	28.80	28.69	0.98	7.11	21.15	0.01	0.1014	0.318	51.7	28.51	0.30	28.53	28.85	28.78	18.05	130.26	
2/15/2023	23:07	19.96	0.00	0.0003	0.017	46.6	28.51	0.50	28.55	28.80	28.70	0.98	7.11	21.16	0.01	0.1052	0.324	51.7	28.51	0.30	28.53	28.85	28.78	18.38	132.68	
2/15/2023	23:08	19.97	0.00	0.0003	0.017	46.4	28.51	0.50	28.55	28.80	28.70	0.98	7.11	21.15	0.01	0.1045	0.323	51.6	28.51	0.30	28.53	28.85	28.78	18.32	132.25	
2/15/2023	23:09	19.55	0.00	0.0003	0.017	46.5	28.51	0.50	28.55	28.78	28.68	0.98	7.11	21.16	0.01	0.1050	0.324	51.6	28.51	0.30	28.53	28.85	28.78	18.36	132.56	
2/15/2023	23:10	19.15	0.00	0.0004	0.020	46.6	28.51	0.50	28.55	28.77	28.66	1.13	8.22	21.15	0.01	0.1021	0.320	51.5	28.51	0.30	28.53	28.85	28.78	18.11	130.73	
2/15/2023	23:11	19.65	0.00	0.0004	0.020	46.4	28.51	0.50	28.55	28.79	--	--	--	21.16	0.01	0.1023	0.320	51.5	28.51	0.30	28.53	28.85	28.78	18.12	130.86	
2/15/2023	23:12	19.76	0.00	0.0004	0.020	46.4	28.51	0.50	28.55	28.79	28.69	1.13	8.22	21.16	0.01	0.1035	0.322	51.4	28.51	0.30	28.53	28.85	28.78	18.23	131.64	
2/15/2023	23:13	19.74	0.00	0.0004	0.020	46.3	28.51	0.50	28.55	28.79	28.67	1.13	8.21	21.16	0.01	0.1014	0.318	51.3	28.51	0.30	28.53	28.85	28.78	18.04	130.31	
2/15/2023	23:14	19.71	0.00	0.0003	0.017	46.3	28.51	0.50	28.55	28.79	28.68	0.98	7.11	21.16	0.01	0.1021	0.320	51.3	28.51	0.30	28.53	28.85	28.78	18.10	130.75	
2/15/2023	23:15	19.74	0.00	0.0003	0.017	46.4	28.51	0.50	28.55	28.79	28.69	0.98	7.12	21.16	0.01	0.1057	0.325	51.1	28.51	0.30	28.53	28.85	28.78	18.41	133.07	
2/15/2023	23:16	19.79	0.00	0.0004	0.020	46.2	28.51	0.50	28.55	28.79	28.69	1.13	8.22	21.17	0.01	0.1064	0.326	51.1	28.51	0.30	28.53	28.85	28.78	18.47	133.50	
2/15/2023	23:17	19.87	0.00	0.0003	0.017	46.3	28.51	0.50	28.55	28.79	28.70	0.98	7.12	21.17	0.01	0.1060	0.326	51.1	28.51	0.30	28.53	28.85	28.78	18.44	133.25	
2/15/2023	23:18	19.89	0.00	0.0003	0.017	46.3	28.51	0.50	28.55	28.80	28.70	0.98	7.12	21.17	0.01	0.1080	0.329	51.0	28.51	0.30	28.53	28.85	28.78	18.61	134.52	
2/15/2023	23:19	19.93	0.00	0.0005	0.022	46.2	28.51	0.50	28.55	28.80	28.70	1.26	9.19	21.17	0.01	0.1071	0.327	50.8	28.51	0.30	28.53	28.85	28.78	18.53	133.98	
2/15/2023	23:20	19.38	0.00	0.0005	0.022	46.3	28.51	0.50	28.55	28.78	28.68	1.26	9.19	21.17	0.01	0.1087	0.330	50.9	28.51	0.30	28.53	28.85	28.78	18.67	134.97	
2/15/2023	23:21	19.17	0.00	0.0005	0.022	46.4	28.51	0.50	28.55	28.77	28.67	1.26	9.19	21.16	0.01	0.1083	0.329	50.9	28.51	0.30	28.53	28.85	--	--	--	
2/15/2023	23:22	19.54	0.00	0.0004	0.020	46.3	28.51	0.50	28.55	28.78	28.68	1.13	8.22	21.17	0.00	0.1087	0.330	50.6	28.51	0.30	28.53	28.85	28.78	18.66	135.02	
2/15/2023	23:23	19.66	0.00	0.0004	0.020	46.3	28.51	0.50	28.55	28.79	28.69	1.13	8.22	21.17	0.01	0.1061	0.326	50.4	28.51	0.30	28.53	28.85	28.78	18.44	133.42	
2/15/2023	23:24	19.65	0.00	0.0004	0.020	46.2	28.51	0.50	28.55	28.79	28.67	1.13	8.21	21.17	0.01	0.1081	0.329	50.3	28.51	0.30	28.53	28.85	28.78	18.61	134.69	
2/15/2023	23:25	19.60	0.00	0.0004	0.020	46.4	28.51	0.50	28.55	28.78	28.68	1.13	8.21	21.17	0.00	0.1045	0.323	50.2	28.51	0.30	28.53	28.85	28.78	18.29	132.44	
2/15/2023	23:26	19.67	0.00	0.0006	0.024	46.4	28.51	0.50	28.55	28.79	28.68	1.38	10.06	21.17	0.00	0.1084	0.329	49.9	28.51	0.30	28.53	28.85	28.78	18.63	134.92	
2/15/2023	23:27	19.73	0.00	0.0005	0.022	46.4	28.51	0.50	28.55	28.79	28.68	1.26	9.18	21.18	0.00	0.1092	0.330	49.8	28.51	0.30	28.53	28.85	28.78	18.69	135.42	
2/15/2023	23:28	19.75	0.00	0.0005	0.022	46.6	28.51	0.50	28.55	28.79	28.69	1.26	9.18	21.18	0.00	0.1101	0.332	49.6	28.51	0.30	28.53	28.85	28.78	18.77	136.02	
2/15/2023	23:29	19.82	0.00	0.0004	0.020	46.6	28.51	0.50	28.55	28.79	28.69	1.13	8.21	21.19	0.01	0.1106	0.333	49.5	28.51	0.30	28.53	28.85	28.78	18.81	136.32	
2/15/2023	23:30	19.87	0.00	0.0004	0.020	46.5	28.51	0.50	28.55	28.79	28.69	1.13	8.21	21.19	0.00	0.1133	0.337	49.3	28.51	0.30	28.53	28.85	28.77	19.03	138.00	
2/15/2023	23:31	19.93	0.00	0.0

Alliance SOURCE TESTING

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet % dry	CO_2 - Inlet % dry	Delta P in. W.C.	Sq Rt Delta P	Temperature (°F)	Barometric in. Hg	Stack Pressure in. W.C.	Stack Pressure in. Hg	Molecular Weight Md	Molecular Weight Mw	Velocity ft/sec	Flow Rate (DSCFM)	O_2 - Outlet % dry	CO_2 - Outlet % dry	Delta P in. W.C.	Sq Rt Delta P	Temperature (°F)	Barometric in. Hg	Stack Pressure in. W.C.	Stack Pressure in. Hg	Molecular Weight Md	Molecular Weight Mw	Velocity ft/sec	Flow Rate (DSCFM)	-
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/15/2023	23:55	18.94	-0.01	0.0002	0.014	50.6	28.51	0.50	28.55	28.76	--	--	--	21.17	0.00	0.1194	0.346	43.6	28.51	0.30	28.53	28.85	28.78	19.43	142.51	
2/15/2023	23:56	18.98	-0.01	0.0002	0.014	50.7	28.51	0.50	28.55	28.76	28.63	0.80	5.77	21.18	0.01	0.1244	0.353	43.2	28.51	0.30	28.53	28.85	28.78	19.82	145.51	
2/15/2023	23:57	18.86	-0.02	0.0003	0.017	50.7	28.51	0.50	28.55	28.75	28.62	0.98	7.07	21.18	0.00	0.1204	0.347	42.9	28.51	0.30	28.53	28.85	28.78	19.50	143.19	
2/15/2023	23:58	19.00	-0.01	0.0003	0.017	50.3	28.51	0.50	28.55	28.76	28.64	0.98	7.08	21.18	0.01	0.1229	0.351	43.3	28.51	0.30	28.53	28.85	28.78	19.70	144.63	
2/15/2023	23:59	18.53	-0.01	0.0003	0.017	49.8	28.51	0.50	28.55	28.74	28.62	0.98	7.09	21.18	0.01	0.1184	0.344	43.1	28.51	0.30	28.53	28.85	28.78	19.34	141.97	
2/16/2023	0:00	17.64	-0.01	0.0004	0.020	49.7	28.71	0.50	28.75	28.70	28.58	1.13	8.22	21.17	0.01	0.1176	0.343	42.2	28.71	0.30	28.73	28.85	28.78	19.19	142.11	
2/16/2023	0:01	17.25	-0.01	0.0003	0.017	49.8	28.71	0.50	28.75	28.69	28.57	0.98	7.12	21.16	0.00	0.1203	0.347	42.8	28.71	0.30	28.73	28.85	28.78	19.42	143.66	
2/16/2023	0:02	17.70	-0.01	0.0002	0.014	49.7	28.71	0.50	28.75	28.71	28.59	0.80	5.81	21.16	0.00	0.1165	0.341	42.8	28.71	0.30	28.73	28.85	28.78	19.11	141.37	
2/16/2023	0:03	18.23	-0.01	0.0003	0.017	49.9	28.71	0.50	28.75	28.73	28.60	0.98	7.11	21.16	0.00	0.1172	0.342	42.6	28.71	0.30	28.73	28.85	28.78	19.16	141.84	
2/16/2023	0:04	18.66	-0.01	0.0003	0.017	49.5	28.71	0.50	28.75	28.74	28.63	0.98	7.11	21.16	0.01	0.1191	0.345	42.6	28.71	0.30	28.73	28.85	28.78	19.31	142.97	
2/16/2023	0:05	18.87	-0.01	0.0000	0.000	49.2	28.71	0.50	28.75	28.75	28.63	0.00	0.00	21.16	0.01	0.1156	0.340	42.5	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	0:06	18.98	-0.01	0.0003	0.017	49.4	28.71	0.50	28.75	28.76	28.64	0.98	7.11	21.17	0.00	0.1176	0.343	42.4	28.71	0.30	28.73	28.85	28.78	19.19	142.10	
2/16/2023	0:07	19.11	-0.01	0.0003	0.017	49.5	28.71	0.50	28.75	28.76	28.64	0.98	7.11	21.16	0.00	0.1184	0.344	42.6	28.71	0.30	28.73	28.85	28.78	19.26	142.55	
2/16/2023	0:08	19.05	-0.01	0.0004	0.020	49.4	28.71	0.50	28.75	28.76	28.65	1.13	8.22	21.16	0.00	0.1158	0.340	42.7	28.71	0.30	28.73	28.85	28.78	19.05	140.97	
2/16/2023	0:09	18.96	-0.02	0.0004	0.020	49.0	28.71	0.50	28.75	28.76	28.64	1.13	8.22	21.15	0.01	0.1179	0.343	42.6	28.71	0.30	28.73	28.85	28.78	19.22	142.26	
2/16/2023	0:10	19.09	-0.01	0.0003	0.017	49.6	28.71	0.50	28.75	28.76	28.65	0.98	7.12	21.16	0.00	0.1179	0.343	41.9	28.71	0.30	28.73	28.85	28.78	19.20	142.35	
2/16/2023	0:11	18.59	-0.01	0.0001	0.010	48.6	28.71	0.50	28.75	28.74	28.63	0.56	4.11	21.15	0.00	0.1143	0.338	42.3	28.71	0.30	28.73	28.85	28.78	18.92	140.10	
2/16/2023	0:12	17.79	-0.01	0.0003	0.017	49.4	28.71	0.50	28.75	28.71	28.60	0.98	7.12	21.15	0.01	0.1136	0.337	42.1	28.71	0.30	28.73	28.85	28.78	18.85	139.70	
2/16/2023	0:13	17.51	-0.01	0.0004	0.020	49.6	28.71	0.50	28.75	28.70	28.59	1.13	8.23	21.15	0.01	0.1165	0.341	42.2	28.71	0.30	28.73	28.85	28.78	19.09	141.46	
2/16/2023	0:14	17.58	-0.01	0.0002	0.014	49.3	28.71	0.50	28.75	28.70	28.60	0.80	5.82	21.15	0.01	0.1171	0.342	43.0	28.71	0.30	28.73	28.85	28.78	19.16	141.71	
2/16/2023	0:15	18.06	-0.01	0.0003	0.017	49.5	28.71	0.50	28.75	28.72	28.61	0.98	7.12	21.15	0.01	0.1137	0.337	42.7	28.71	0.30	28.73	28.85	28.78	18.87	139.68	
2/16/2023	0:16	18.63	-0.01	0.0003	0.017	49.0	28.71	0.50	28.75	28.74	28.64	0.98	7.12	21.15	0.01	0.1181	0.344	42.9	28.71	0.30	28.73	28.85	28.78	19.24	142.33	
2/16/2023	0:17	18.88	-0.01	0.0003	0.017	49.2	28.71	0.50	28.75	28.75	--	--	--	21.15	0.01	0.1204	0.347	42.8	28.71	0.30	28.73	28.85	28.78	19.42	143.73	
2/16/2023	0:18	18.97	-0.01	0.0003	0.017	49.5	28.71	0.50	28.75	28.76	28.65	0.98	7.12	21.14	0.00	0.1182	0.344	42.8	28.71	0.30	28.73	28.85	28.78	19.25	142.42	
2/16/2023	0:19	18.93	-0.02	0.0003	0.017	49.5	28.71	0.50	28.75	28.75	28.64	0.98	7.12	21.13	0.01	0.1198	0.346	42.8	28.71	0.30	28.73	28.85	28.78	19.37	143.38	
2/16/2023	0:20	19.15	-0.01	0.0002	0.014	49.5	28.71	0.50	28.75	28.76	28.65	0.80	5.81	21.13	0.01	0.1185	0.344	42.9	28.71	0.30	28.73	28.85	28.78	19.27	142.57	
2/16/2023	0:21	18.99	-0.02	0.0003	0.017	49.3	28.71	0.50	28.75	28.76	28.66	0.98	7.12	21.12	0.01	0.1223	0.350	42.7	28.71	0.30	28.73	28.85	28.78	19.58	144.87	
2/16/2023	0:22	18.90	-0.02	0.0003	0.017	49.3	28.71	0.50	28.75	28.75	28.65	0.98	7.12	21.13	0.01	0.1223	0.350	42.6	28.71	0.30	28.73	28.85	28.78	19.57	144.88	
2/16/2023	0:23	18.09	-0.01	0.0002	0.014	49.2	28.71	0.50	28.75	28.72	28.62	0.80	5.82	21.13	0.01	0.1162	0.341	42.8	28.71	0.30	28.73	28.85	28.78	19.08	141.20	
2/16/2023	0:24	17.73	-0.01	0.0003	0.017	49.6	28.71	0.50	28.75	28.71	28.61	0.98	7.13	21.13	0.00	0.1164	0.341	42.5	28.71	0.30	28.73	28.85	28.78	19.09	141.37	
2/16/2023	0:25	17.71	-0.01	0.0002	0.014	50.1	28.71	0.50	28.75	28.71	28.61	0.80	5.82	21.14	0.01	0.1209	0.348	42.2	28.71	0.30	28.73	28.85	28.78	19.45	144.11	
2/16/2023	0:26	17.66	-0.01	0.0002	0.014	49.7	28.71	0.50	28.75	28.70	28.60	0.80	5.82	21.13	0.01	0.1188	0.345	43.0	28.71	0.30	28.73	28.85	28.78	19.30	142.74	
2/16/2023	0:27	18.28	-0.01	0.0002	0.014	49.3	28.71	0.50	28.75	28.73	28.62	0.80	5.82	21.13	0.01	0.1117	0.334	42.8	28.71	0.30	28.73	28.85	28.78	18.71	138.43	
2/16/2023	0:28	18.73	-0.01	0.0002	0.014	50.5	28.71	0.50	28.75	28.75	28.64	0.80	5.81	21.14	0.01	0.1181	0.344	42.3	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	0:29	18.95	-0.01	0.0004	0.020	49.3	28.71	0.50	28.75	28.76	28.65	1.13	8.22	21.14	0.01	0.1236	0.352	43.0	28.71	0.30	28.73	28.85	28.78	19.68	145.58	
2/16/2023	0:30	19.04	-0.01	0.0003	0.017	49.5	28.71	0.50	28.75	28.76	28.65	0.98	7.12	21.14	0.01	0.1184	0.344	43.0	28.71	0.30	28.73	28.85	28.78	19.27	142.49	
2/16/2023	0:31	18.95	-0.01	0.0004	0.020	49.3	28.71	0.50	28.75	28.76	28.65	1.13	8.22	21.14	0.01	0.1156	0.340	43.1	28.71	0.30	28.73	28.85	28.78	19.04	140.78	
2/16/2023	0:32	18.97	-0.02	0.0003	0.017	50.3	28.71	0.50	28.75	28.76	28.66	0.98	7.12	21.13	0.01	0.1170	0.342	42.7	28.71	0.30	28.73	28.85	28.78	19.15	141.69	
2/16/2023	0:33	18.99	-0.02	0.0002	0.014	49.9	28.71	0.50	28.75	28.76	28.66	0.80	5.81	21.12	0.01	0.1160	0.341	42.9	28.71	0.30	28.73	28.85	28.78	19.07	141.05	
2/16/2023	0:34	19.15	-0.01	0.0003	0.017	49.8	28.71	0.50	28.75	28.76	28.66	0.98	7.12	21.14	0.01	0.1124	0.335	43.0	28.71	0.30	28.73	28.85	28.78	18.77	138.83	
2/16/2023	0:35	18.92	-0.01	0.0002	0.014	49.8	28.71	0.50	28.75	28.76	28.66	0.80	5.81	21.14	0.01	0.1147	0.339	42.9	28.71	0.30	28.73	28.85	28.78	18.96	140.26	
2/16/2023	0:36	18.18	-0.01	0.0003	0.017	49.8	28.71	0.50	28.75	28.73	28.63	0.98	7.12	21.14	0.01	0.1143	0.338	43.2	28.71	0.30	28.73	28.85	28.78	18.93	139.97	
2/16/2023	0:37	17.80	-0.01	0.0005	0.022	50.2	28.71	0.50	28.75	28.71	28.61	1.26	9.20	21.14	0.01	0.1123	0.335	43.0	28.71	0.30	28.73	28.85	28.78	18.76	138.76	
2/16/2023	0:38	17.38	-0.01	0.0002	0.014	50.8	28.71	0.50	28.75	28.69	28.59	0.80	5.81	21.14	0.01	0.1145	0.338	43.3	28.71	0.30	28.73	28.85	28.78	18.95	140.07	
2/16/2023	0:39	17.47	-0.01	0.0002	0.014	50.9	28.71	0.50	28.75	28.70	--	--	--	21.13	0.01	0.1137	0.337	43.3	28.71	0.30	28.73	28.85	28.78	18.89	139.59	
2/16/2023	0:40	18.15	-0.01	0.0000	0.000	51.0	28.71	0.50	28.75	28.72	28.62	0.00	0.00	21.13	0.01	0.1177	0.343	43.1	28.71	0.30	28.73	28.85	28.78	19.21	142.06	
2/16/2023	0:41	18.45	-0.01	0.0001	0.010	51.5	28.71	0.50	28.75	28.74	28.63	0.57	4.10	21.11	0.02	0.1148	0.339	43.3	28.71	0.30	28.73	28.85	28.78	18.98	140.25	
2/16/2023	0:42	18.83	-0.01	0.0003	0.017	50.3	28.71	0.50	28.75	28.75	28.65	0.98	7.12	21.11	0.02	0.1123	0.335	42.6	28.71	0.30	28.73	28.85	28.78	18.76	138.81	
2/16/2023	0:43	18.96	-0.01	0.0006	0.024	49.5	28.71	0.50	28.75	28.76	28.65	1.38	10.07	21.12	0.02	0.1122	0.335	42.9	28.71	0.30	28.73	28.85	28.78	18.75	138.71	
2/16/2023	0:44	19.13	-0.01	0.0004	0.020	49.9	28.71	0.50	28.75	28.76	28.66	1.13	8.22	21.13	0.02	0.1123	0.335	42.6	28.71	0.30	28.73	28.85	28.78	18.76	138.81	
2/16/2023	0:45	18.94	-0.01	0.0002	0.014	49.8	28.71	0.50	28.75	28.76	28.65	0.80	5.81	21.13	0.01	0.1132	0.336	42.7	28.71	0.30	28.73	28.85	28.78	18.83	139.36	
2/16/2023	0:46	18.97	-0.01	0.0003	0.017	49.5	28.71	0.50	28.75	28.76	28.66	0.98	7.12	21.12	0.01	0.1154	0.340	43.4	28.71	0.30	28.73	28.85	28.78	19.03	140.60	
2/16/2023	0:47	19.02	-0.01	0.0003	0.017	49.7	28.71	0.50	28.75	28.76	28.66	0.98	7.12	21.12	0.02	0.1135	0.337	42.6	28.71	0.30	28.73	28.85	28.78	18.86	139.56	
2/16/2023	0:48	18.43	-0.01	0.0002	0.014	49.6	28.71	0.50	28.75	28.74	28.64	0.80	5.82	21.11	0.01	0.1082	0.329	42.3	28.71	0.30	28.73	28.85	28.78	18.41	136.30	
2/16/2023	0:49	17.97	-0.01	0.0004	0.020	49.7	28.71	0.50	28.75	28.72	28.62	1.13	8.23	21.12	0.01	0.1102	0.332	42.3	28.71	0.30	28.73	28.85	28.78	18.57	137.56	
2/16/2023	0:50	17.42	-0.01	0.0001	0.010	49.7	28.71	0.50	28.75	28.70	28.60	0.57	4.12	21.11	0.02	0.1110	0.333	42.8	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	0:51	17.26	-0.01	0.0008	0.028	49.4	28.71	0.50	28.75	28.69	28.59	1.60	11.65	21.11	0.01	0.1111	0.333	43.3	28.71	0.30	28.73	28.85	28.78	18.67	137.97	
2/16/2023	0:52	19.02	0.00	0.0002	0.014	48.9	28.71	0.50	28.75	28.76	28.66	0.80	5.82	21.11	0.01	0.1128	0.336	43.5	28.71	0.30	28.73	28.85	28.78	18.81	139.01	
2/16/2023	0:53	19.84	0.00	0.0003	0.017	49.7	28.71	0.50	28.75	28.79	28.69	0.98	7.11	21.10	0.02	0.1099	0.332	43.1	28.71	0.30	28.73	28.85	28.78	18.56	137.25	
2/16/2023	0:54	20.06	0.00	0.0002	0.014	50.4	28.71	0.50	28.75	28.80	28.70	0.80	5.80	21.09	0.01	0.1138	0.337	43.0	28.71	0.30	28.73	28.85	28.78	18.89	139.69	
2/16/2023	0:55	20.20	0.00	0.0002	0.014	50.7	28.71	0.50	28.75	28.81	28.70	0.80	5.80	21.08	0.02	0.1096	0.331	42.9	28.71	0.30	28.73	28.85	28.78	18.53	137.10	
2/16/2023	0:56	20.28	0.00	0.0002	0.014	50.0	28.71	0.50	28.75	28.81	28.72	0.80	5.81	21.07	0.01	0.1101	0.332	42.9	28.71	0.30	28.73	28.84	28.77	18.58	137.41	
2/16/2023	0:57	20.35	0.00	0.0002	0.014	50.2	28.71	0.50	28.75	28.81	28.72	0.80	5.81	21.09	0.01	0.1145	0.338	43.1	28.71	0.30	28.73	28.85	28.78	18.95	140.10	
2/16/2023	0:58	19.35	0.00	0.0003	0.017	50.4	28.71	0.50	28.75	28.77	28.68	0.98	7.12	21.08	0.02	0.1122	0.335	42.6	28.71	0.30	28.73	28.85	28.78	18.75	138.75	
2/16/2023	0:59	20.10	0.00	0.0003	0.017	49.3	28.71	0.50	28.75	28.80	28.71	0.98	7.12	21.10	0.02	0.1117	0.334	42.9	28.71	0.30	28.73	28.85	28.78	18.71	138.40	
2/16/2023	1:00	20.34	0.00	0.0003	0.017	49.3	28.71	0.50	28.75	28.81	28.72	0.98	7.12	21.11	0.01	0.1113	0.334	43.2	28.71	0.30	28.73	28.85	28.78	18.68	138.10	
2/16/2023	1:01	20.41	0.00	0.0002	0.014	49.2	28.71	0.50	28.75	28.82	--	--	--	21.12	0.02	0.1108	0.333	43.2	28.71	0.30	28.73	28.85	28.78	18.64	137.81	
2/16/2023	1:02	20.47	0.00	0.0002	0.014	49.3	28.71	0.50	28.75	28.82	28.72	0.80	5.81	21.12	0.01	0.1100	0.332	43.1	28.71	0.30	28.73	28.85	28.78	18.57	137.31	
2/16/2023	1:03	20.49	0.00	0.0008	0.028	49.3	28.71	0.50	28.75	28.82	28.72	1.59	11.62	21.12	0.01	0.1083	0.329	43.2	28.71	0.30	28.73	28.85	28.78	18.43	136.24	
2/16/2023	1:04	20.51	0.00	0.0003	0.017	49.7	28.71	0.50	28.75	28.82	28.72	0.98	7.11	21.12	0.02	0.1121	0.335	43.5	28.71	0.30	28.73	28.85	28.78	18.76	138.55	
2/16/2023	1:05	20.52	0.00	0.0003	0.017	49.1	28.71	0.50	28.75	28.82	28.72	0.98	7.12	21.12	0.01	0.1137	0.337	43.4	28.71	0.30	28.73	28.85	28.77	18.89	139.56	
2/16/2023	1:06	20.52	0.00	0.0003	0.017	49.1	28.71	0.50	28.75	28.82	28.72	0.98	7.12	21.12	0.01	0.1132	0.336	44.0	28.71	0.30	28.73	28.85	28.78	18.86	139.16	
2/16/2023	1:07	18.77	-0.01	0.0002	0.014	49.2	28.71	0.50	28.75	28.75	28.65	0.80	5.82	21.10	0.01	0.1123	0.335	43.7	28.71	0.30	28.73	28.85	28.77	18.78	138.64	
2/16/2023	1:08	17.58	-0.01	0.0002	0.014	49.3	28.71	0.50	28.75	28.70	28.60	0.80	5.82	21.09	0.01	0.1101	0.332	43.8	28.71	0.30	28.73	28.85	28.77	18.59	137.27	
2/16/2023	1:09	17.44	-0.01	0.0002	0.014	49.0	28.71	0.50	28.75	28.70	28.60	0.80	5.82	21.10	0.01	0.1127	0.336	43.8	28.71	0.30	28.73	28.85	28.77	18.81	138.88	
2/16/2023	1:10	17.57	-0.01	0.0009	0.030	49.2	28.71	0.50	28.75	28.70	28.59	1.70	12.34	21.09	0.02	0.1084	0.329	43.9	28.71	0.30	28.73	28.85	28.77	18.45	136.19	
2/16/2023	1:11	18.08	-0.01	0.0003	0.017	49.4	28.71	0.50	28.75	28.72	28.61	0.98	7.12	21.10	0.01	0.1087	0.330	44.1	28.71	0.30	28.73	28.85	28.77	18.48	136.35	
2/16/2023	1:12	18.94	-0.01	0.0002	0.014	49.4	28.71	0.50	28.75	28.76	28.65	0.80	5.81	21.12	0.02	0.1090	0.330	44.1	28.71	0.30	28.73	28.85	28.78	18.51	136.52	
2/16/2023	1:13	18.48	-0.01	0.0003	0.017	49.2	28.71	0.50	28.75	28.74	28.63	0.98	7.12	21.12	0.01	0.1093	0.331	44.4	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	1:14	17.83	-0.01	0.0003	0.017	50.0	28.71	0.50	28.75	28.71	28.60	0.98	7.12	21.11	0.01	0.1216	0.349	44.1	28.71	0.30	28.73	28.85	28.77	19.55	144.20	
2/16/2023	1:15	17.31	-0.01	0.0002	0.014	49.8	28.71	0.50	28.75	28.69	28.58	0.80	5.81	21.11	0.01	0.1141	0.338	44.3	28.71	0.30	28.73	28.85	28.77	18.94	139.66	
2/16/2023	1:16	17.39	-0.01	0.0004	0.020	49.5	28.71	0.50	28.75	28.69	28.58	1.13	8.23	21.09	0.01	0.1153	0.340	44.2	28.71	0.30	28.73	28.85	28.77	19.04	140.40	
2/16/2023	1:17	18.58	-0.02	0.0003	0.017	49.9	28.71	0.50	28.75	28.74	28.63	0.98	7.12	21.08	0.01	0.1124	0.335	43.8	28.71	0.30	28.73	28.84	28.77	18.79	138.68	
2/16/2023	1:18	19.10	-0.02	0.0004	0.020	50.2	28.71	0.50	28.75	28.76	28.65	1.13	8.21	21.08	0.01	0.1111	0.333	44.0	28.71	0.30	28.73	28.84	28.77	18.68	137.85	
2/16/2023	1:19	19.06	-0.02	0.0003	0.017	50.2	28.71	0.50	28.75	28.76	28.65	0.98	7.11	21.08	0.01	0.1153	0.340	43.7	28.71	0.30	28.73	28.84	28.77	19.03	140.47	
2/16/2023	1:20	19.07	-0.02	0.0003	0.017	51.5	28.71	0.50	28.75	28.76	28.66	0.98	7.11	21.09	0.01	0.1109	0.333	43.0	28.71	0.30	28.73	28.85	28.77	18.65	137.87	
2/16/2023	1:21	19.06	-0.02	0.0002	0.014	50.9	28.71	0.50	28.75	28.76	28.67	0.80	5.81	21.08	0.01	0.1144	0.338	43.4	28.71	0.30	28.73	28.84	28.77	18.95	139.97	
2/16/2023	1:22	18.35	-0.02	0.0002	0.014	51.5	28.71	0.50	28.75	28.73	28.64	0.80	5.81	21.10	0.01	0.1128	0.336	43.3	28.71	0.30	28.73	28.85	28.77	18.81	139.01	
2/16/2023	1:23	17.26	-0.01	0.0002	0.014	50.9	28.71	0.50	28.75	28.69	--	--	--	21.08	0.01	0.1131	0.336	43.5	28.71	0.30	28.73	28.84	28.77	18.84	139.17	
2/16/2023	1:24	18.65	-0.02	0.0003	0.017	50.2	28.71	0.50	28.75	28.74	28.65	0.98	7.12	21.09	0.01	0.1107	0.333	43.8	28.71	0.30	28.73	28.85	28.77	18.65	137.63	
2/16/2023	1:25	18.98	-0.02	0.0001	0.010	50.2	28.71	0.50	28.75	28.76	28.67	0.56	4.11	21.09	0.01	0.1106	0.333	43.6	28.71	0.30	28.73	28.85	28.77	18.63	137.61	
2/16/2023	1:26	19.03	-0.02	0.0001	0.010	49.6	28.71	0.50	28.75	28.76	28.63	0.56	4.10	21.09	0.01	0.1133	0.337	44.1	28.71	0.30	28.73	28.85	28.77	18.87	139.21	
2/16/2023	1:27	19.04	-0.02	0.0001	0.010	49.5	28.71	0.50	28.75	28.76	28.66	0.56	4.11	21.08	0.01	0.1141	0.338	43.6	28.71	0.30	28.73	28.84	28.77	18.93	139.77	
2/16/2023	1:28	19.05	-0.02	0.0003	0.017	50.0	28.71	0.50	28.75	28.76	28.67	0.98	7.13	21.08	0.02	0.1135	0.337	43.8	28.71	0.30	28.73	28.85	28.77	18.88	139.36	
2/16/2023	1:29	19.06	-0.02	0.0002	0.014	49.8	28.71

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet % dry	CO_2 - Inlet % dry	Delta P in. W.C.	Sq Rt Delta P	Temperature (°F)	Barometric in. Hg	Stack Pressure in. W.C.	Stack Pressure in. Hg	Molecular Weight Md	Molecular Weight Mw	Velocity ft/sec	Flow Rate (DSCFM)	O_2 - Outlet % dry	CO_2 - Outlet % dry	Delta P in. W.C.	Sq Rt Delta P	Temperature (°F)	Barometric in. Hg	Stack Pressure in. W.C.	Stack Pressure in. Hg	Molecular Weight Md	Molecular Weight Mw	Velocity ft/sec	Flow Rate (DSCFM)	-
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/16/2023	1:53	19.02	-0.02	0.0001	0.010	50.7	28.71	0.50	28.75	28.76	28.67	0.57	4.11	21.08	-0.01	0.1116	0.334	45.0	28.71	0.30	28.73	28.84	28.77	18.75	138.03	
2/16/2023	1:54	19.02	-0.02	0.0002	0.014	51.0	28.71	0.50	28.75	28.76	28.67	0.80	5.81	21.08	0.01	0.1127	0.336	44.8	28.71	0.30	28.73	28.84	28.77	18.83	138.73	
2/16/2023	1:55	18.99	-0.02	0.0002	0.014	50.7	28.71	0.50	28.75	28.76	28.67	0.80	5.81	21.06	0.00	0.1118	0.334	45.1	28.71	0.30	28.73	28.84	28.77	18.76	138.14	
2/16/2023	1:56	18.07	-0.02	0.0003	0.017	49.9	28.71	0.50	28.75	28.72	28.63	0.98	7.13	21.08	0.00	0.1123	0.335	45.6	28.71	0.30	28.73	28.84	28.77	18.81	138.38	
2/16/2023	1:57	17.19	-0.02	0.0003	0.017	50.1	28.71	0.50	28.75	28.68	28.60	0.98	7.13	21.07	0.00	0.1111	0.333	45.1	28.71	0.30	28.73	28.84	28.77	18.70	137.70	
2/16/2023	1:58	18.54	-0.02	0.0002	0.014	50.1	28.71	0.50	28.75	28.74	28.65	0.80	5.82	21.07	0.00	0.1133	0.337	45.3	28.71	0.30	28.73	28.84	--	--	--	
2/16/2023	1:59	18.91	-0.02	0.0002	0.014	50.1	28.71	0.50	28.75	28.75	28.66	0.80	5.81	21.08	0.00	0.1118	0.334	44.9	28.71	0.30	28.73	28.84	28.77	18.76	138.17	
2/16/2023	2:00	18.95	-0.02	0.0002	0.014	49.9	28.71	0.50	28.75	28.75	28.67	0.80	5.82	21.07	0.00	0.1102	0.332	45.1	28.71	0.30	28.73	28.84	28.77	18.63	137.15	
2/16/2023	2:01	18.98	-0.02	0.0002	0.014	49.7	28.71	0.50	28.75	28.76	28.66	0.80	5.81	21.08	0.00	0.1128	0.336	45.4	28.71	0.30	28.73	28.84	28.77	18.85	138.71	
2/16/2023	2:02	18.99	-0.02	0.0002	0.014	50.1	28.71	0.50	28.75	28.76	28.67	0.80	5.82	21.08	0.00	0.1125	0.335	45.2	28.71	0.30	28.73	28.84	28.77	18.82	138.56	
2/16/2023	2:03	18.99	-0.02	0.0001	0.010	50.7	28.71	0.50	28.75	28.76	28.67	0.57	4.11	21.08	0.01	0.1162	0.341	45.3	28.71	0.30	28.73	28.84	28.77	19.13	140.81	
2/16/2023	2:04	18.99	-0.02	0.0001	0.010	50.4	28.71	0.50	28.75	28.76	28.67	0.56	4.11	21.09	0.00	0.1157	0.340	44.8	28.71	0.30	28.73	28.84	28.77	19.08	140.57	
2/16/2023	2:05	18.99	-0.02	0.0001	0.010	50.7	28.71	0.50	28.75	28.76	28.67	0.57	4.11	21.09	0.00	0.1145	0.338	44.8	28.71	0.30	28.73	28.84	28.77	18.98	139.85	
2/16/2023	2:06	18.99	-0.02	0.0002	0.014	50.4	28.71	0.50	28.75	28.76	28.67	0.80	5.82	21.09	0.00	0.1110	0.333	44.9	28.71	0.30	28.73	28.84	28.77	18.69	137.68	
2/16/2023	2:07	18.97	-0.02	0.0002	0.014	49.3	28.71	0.50	28.75	28.76	--	--	--	21.08	0.00	0.1140	0.338	45.5	28.71	0.30	28.73	28.84	28.77	18.95	139.45	
2/16/2023	2:08	17.23	-0.02	0.0001	0.010	48.6	28.71	0.50	28.75	28.69	28.60	0.56	4.13	21.08	0.00	0.1160	0.341	45.3	28.71	0.30	28.73	28.84	28.77	19.12	140.70	
2/16/2023	2:09	17.63	-0.02	0.0002	0.014	49.0	28.71	0.50	28.75	28.70	28.62	0.80	5.83	21.08	0.01	0.1178	0.343	45.0	28.71	0.30	28.73	28.84	28.77	19.26	141.82	
2/16/2023	2:10	18.74	-0.02	0.0002	0.014	48.6	28.71	0.50	28.75	28.75	28.66	0.80	5.83	21.08	0.01	0.1147	0.339	45.0	28.71	0.30	28.73	28.84	28.77	19.00	139.95	
2/16/2023	2:11	18.92	-0.02	0.0010	0.032	49.0	28.71	0.50	28.75	28.75	28.67	1.78	13.02	21.09	0.00	0.1169	0.342	45.1	28.71	0.30	28.73	28.84	28.77	19.19	141.28	
2/16/2023	2:12	18.96	-0.02	0.0002	0.014	48.7	28.71	0.50	28.75	28.76	28.67	0.80	5.83	21.09	0.00	0.1128	0.336	45.1	28.71	0.30	28.73	28.84	28.77	18.85	138.77	
2/16/2023	2:13	18.96	-0.02	0.0001	0.010	48.7	28.71	0.50	28.75	28.76	28.66	0.56	4.12	21.09	0.00	0.1141	0.338	45.1	28.71	0.30	28.73	28.84	28.77	18.95	139.57	
2/16/2023	2:14	18.98	-0.02	0.0002	0.014	48.4	28.71	0.50	28.75	28.76	28.67	0.80	5.83	21.10	0.01	0.1160	0.341	45.4	28.71	0.30	28.73	28.85	28.77	19.12	140.69	
2/16/2023	2:15	18.97	-0.02	0.0002	0.014	49.0	28.71	0.50	28.75	28.76	28.67	0.80	5.82	21.10	0.01	0.1146	0.339	45.2	28.71	0.30	28.73	28.85	28.77	19.00	139.85	
2/16/2023	2:16	18.98	-0.02	0.0002	0.014	48.4	28.71	0.50	28.75	28.76	28.67	0.80	5.83	21.10	0.00	0.1144	0.338	45.3	28.71	0.30	28.73	28.84	28.77	18.98	139.73	
2/16/2023	2:17	18.98	-0.02	0.0002	0.014	48.3	28.71	0.50	28.75	28.76	28.67	0.80	5.83	21.11	0.00	0.1123	0.335	45.5	28.71	0.30	28.73	28.84	28.77	18.81	138.41	
2/16/2023	2:18	19.14	-0.02	0.0002	0.014	48.6	28.71	0.50	28.75	28.76	28.68	0.80	5.83	21.10	0.00	0.1117	0.334	45.1	28.71	0.30	28.73	28.84	28.77	18.75	138.09	
2/16/2023	2:19	20.12	-0.01	0.0003	0.017	48.4	28.71	0.50	28.75	28.80	28.72	0.98	7.13	21.14	0.01	0.1147	0.339	45.3	28.71	0.30	28.73	28.85	28.78	19.01	139.91	
2/16/2023	2:20	20.45	0.00	0.0001	0.010	47.9	28.71	0.50	28.75	28.82	28.73	0.56	4.12	21.14	0.00	0.1131	0.336	45.5	28.71	0.30	28.73	28.85	28.77	18.88	138.90	
2/16/2023	2:21	20.58	0.00	0.0002	0.014	48.6	28.71	0.50	28.75	28.82	28.74	0.80	5.82	21.14	0.01	0.1126	0.336	45.1	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	2:22	20.63	0.00	0.0002	0.014	48.6	28.71	0.50	28.75	28.83	28.74	0.80	5.83	21.14	0.00	0.1140	0.338	45.5	28.71	0.30	28.73	28.85	28.77	18.95	139.45	
2/16/2023	2:23	20.66	0.00	0.0003	0.017	48.5	28.71	0.50	28.75	28.83	28.73	0.98	7.13	21.15	0.00	0.1118	0.334	45.5	28.71	0.30	28.73	28.85	28.78	18.77	138.10	
2/16/2023	2:24	20.68	0.00	0.0002	0.014	49.0	28.71	0.50	28.75	28.83	28.73	0.80	5.81	21.14	0.01	0.1136	0.337	45.4	28.71	0.30	28.73	28.85	28.78	18.92	139.22	
2/16/2023	2:25	20.69	0.00	0.0003	0.017	48.9	28.71	0.50	28.75	28.83	28.73	0.98	7.12	21.14	0.00	0.1142	0.338	45.4	28.71	0.30	28.73	28.85	28.77	18.97	139.59	
2/16/2023	2:26	20.68	0.00	0.0001	0.010	48.4	28.71	0.50	28.75	28.83	28.73	0.56	4.11	21.14	0.00	0.1139	0.337	45.4	28.71	0.30	28.73	28.85	28.77	18.94	139.41	
2/16/2023	2:27	20.69	0.00	0.0003	0.017	47.7	28.71	0.50	28.75	28.83	28.73	0.97	7.13	21.14	0.00	0.1155	0.340	45.4	28.71	0.30	28.73	28.85	28.77	19.08	140.38	
2/16/2023	2:28	20.68	0.00	0.0001	0.010	47.3	28.71	0.50	28.75	28.83	28.73	0.56	4.12	21.13	0.01	0.1124	0.335	45.9	28.71	0.30	28.73	28.85	28.78	18.83	138.41	
2/16/2023	2:29	19.98	-0.01	0.0003	0.017	48.0	28.71	0.50	28.75	28.80	--	--	--	21.12	0.01	0.1128	0.336	45.4	28.71	0.30	28.73	28.85	28.78	18.85	138.74	
2/16/2023	2:30	20.06	0.00	0.0002	0.014	47.2	28.71	0.50	28.75	28.80	28.70	0.80	5.83	21.13	0.01	0.1120	0.335	45.9	28.71	0.30	28.73	28.85	28.78	18.79	138.18	
2/16/2023	2:31	20.42	0.00	0.0001	0.010	47.5	28.71	0.50	28.75	28.82	28.72	0.56	4.12	21.13	0.00	0.1113	0.334	45.7	28.71	0.30	28.73	28.85	28.77	18.73	137.77	
2/16/2023	2:32	20.55	0.00	0.0001	0.010	47.4	28.71	0.50	28.75	28.82	28.72	0.56	4.12	21.14	0.01	0.1143	0.338	45.9	28.71	0.30	28.73	28.85	28.78	18.99	139.57	
2/16/2023	2:33	20.61	0.00	0.0002	0.014	46.9	28.71	0.50	28.75	28.82	28.72	0.80	5.82	21.14	0.01	0.1150	0.339	45.9	28.71	0.30	28.73	28.85	28.78	19.04	140.00	
2/16/2023	2:34	20.63	0.00	0.0003	0.017	47.6	28.71	0.50	28.75	28.83	28.73	0.97	7.13	21.15	0.01	0.1127	0.336	45.4	28.71	0.30	28.73	28.85	28.78	18.84	138.66	
2/16/2023	2:35	20.56	0.00	0.0001	0.010	47.4	28.71	0.50	28.75	28.82	28.72	0.56	4.12	21.15	0.01	0.1153	0.340	45.7	28.71	0.30	28.73	28.85	28.78	19.06	140.21	
2/16/2023	2:36	20.52	0.00	0.0002	0.014	47.0	28.71	0.50	28.75	28.82	28.72	0.80	5.82	21.15	0.01	0.1150	0.339	45.8	28.71	0.30	28.73	28.85	28.78	19.04	140.02	
2/16/2023	2:37	20.51	0.00	0.0002	0.014	47.1	28.71	0.50	28.75	28.82	28.72	0.80	5.82	21.16	0.01	0.1108	0.333	45.7	28.71	0.30	28.73	28.85	28.78	18.69	137.45	
2/16/2023	2:38	20.52	0.00	0.0002	0.014	48.1	28.71	0.50	28.75	28.82	28.72	0.80	5.82	21.15	0.01	0.1149	0.339	44.2	28.71	0.30	28.73	28.85	28.78	19.00	140.18	
2/16/2023	2:39	20.51	0.00	0.0002	0.014	48.8	28.71	0.50	28.75	28.82	28.72	0.80	5.81	21.16	0.01	0.1105	0.332	43.9	28.71	0.30	28.73	28.85	28.78	18.63	137.51	
2/16/2023	2:40	19.31	-0.01	0.0000	0.000	48.5	28.71	0.50	28.75	28.77	28.67	0.00	0.00	21.14	0.00	0.1132	0.336	44.3	28.71	0.30	28.73	28.85	28.78	18.86	139.14	
2/16/2023	2:41	20.00	0.00	0.0002	0.014	48.5	28.71	0.50	28.75	28.80	28.70	0.80	5.82	21.16	0.01	0.1125	0.335	44.3	28.71	0.30	28.73	28.85	28.78	18.80	138.70	
2/16/2023	2:42	20.20	0.00	0.0003	0.017	48.1	28.71	0.50	28.75	28.81	28.71	0.98	7.13	21.16	0.01	0.1151	0.339	44.4	28.71	0.30	28.73	28.85	28.78	19.02	140.28	
2/16/2023	2:43	20.28	0.00	0.0001	0.010	47.8	28.71	0.50	28.75	28.81	28.70	0.56	4.11	21.16	0.01	0.1115	0.334	44.5	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	2:44	20.16	0.00	0.0003	0.017	47.7	28.71	0.50	28.75	28.81	28.71	0.98	7.13	21.16	0.01	0.1130	0.336	44.4	28.71	0.30	28.73	28.85	28.78	18.85	138.99	
2/16/2023	2:45	20.08	0.00	0.0003	0.017	47.4	28.71	0.50	28.75	28.80	28.70	0.98	7.13	21.16	0.01	0.1162	0.341	44.7	28.71	0.30	28.73	28.85	28.78	19.12	140.91	
2/16/2023	2:46	20.09	0.00	0.0002	0.014	47.3	28.71	0.50	28.75	28.80	28.70	0.80	5.82	21.16	0.01	0.1162	0.341	44.9	28.71	0.30	28.73	28.85	28.78	19.12	140.88	
2/16/2023	2:47	18.68	-0.01	0.0003	0.017	47.8	28.71	0.50	28.75	28.75	28.65	0.98	7.14	21.15	0.01	0.1156	0.340	44.6	28.71	0.30	28.73	28.85	28.78	19.07	140.55	
2/16/2023	2:48	17.49	-0.01	0.0002	0.014	48.0	28.71	0.50	28.75	28.70	28.60	0.80	5.83	21.15	0.00	0.1128	0.336	44.6	28.71	0.30	28.73	28.85	28.78	18.84	138.85	
2/16/2023	2:49	17.47	0.00	0.0004	0.020	47.4	28.71	0.50	28.75	28.70	28.60	1.13	8.25	21.14	0.01	0.1185	0.344	45.1	28.71	0.30	28.73	28.85	28.78	19.31	142.24	
2/16/2023	2:50	16.18	-0.01	0.0002	0.014	47.5	28.71	0.50	28.75	28.65	28.53	0.80	5.83	21.14	0.01	0.1164	0.341	44.8	28.71	0.30	28.73	28.85	28.78	19.14	141.01	
2/16/2023	2:51	16.52	0.00	0.0003	0.017	47.1	28.71	0.50	28.75	28.66	--	--	--	21.15	0.01	0.1179	0.343	45.3	28.71	0.30	28.73	28.85	28.78	19.27	141.85	
2/16/2023	2:52	16.85	0.00	0.0003	0.017	47.9	28.71	0.50	28.75	28.67	28.56	0.98	7.14	21.15	0.01	0.1169	0.342	44.5	28.71	0.30	28.73	28.85	28.78	19.17	141.36	
2/16/2023	2:53	17.01	-0.01	0.0002	0.014	48.2	28.71	0.50	28.75	28.68	28.57	0.80	5.83	21.15	0.01	0.1174	0.343	44.6	28.71	0.30	28.73	28.85	28.78	19.21	141.66	
2/16/2023	2:54	17.75	0.00	0.0003	0.017	47.9	28.71	0.50	28.75	28.71	28.59	0.98	7.13	21.16	0.01	0.1119	0.335	44.6	28.71	0.30	28.73	28.85	28.78	18.76	138.29	
2/16/2023	2:55	18.03	0.00	0.0002	0.014	47.9	28.71	0.50	28.75	28.72	28.62	0.80	5.83	21.16	0.02	0.1144	0.338	44.6	28.71	0.30	28.73	28.85	28.78	18.97	139.83	
2/16/2023	2:56	18.06	0.00	0.0003	0.017	48.0	28.71	0.50	28.75	28.72	28.62	0.98	7.13	21.16	0.01	0.1183	0.344	44.3	28.71	0.30	28.73	28.85	28.78	19.28	142.25	
2/16/2023	2:57	17.99	0.00	0.0003	0.017	47.1	28.71	0.50	28.75	28.72	28.61	0.98	7.14	21.16	0.01	0.1183	0.344	44.8	28.71	0.30	28.73	28.85	28.78	19.29	142.17	
2/16/2023	2:58	17.47	-0.01	0.0003	0.017	46.8	28.71	0.50	28.75	28.70	28.59	0.98	7.15	21.16	0.01	0.1167	0.342	44.7	28.71	0.30	28.73	28.85	28.78	19.16	141.22	
2/16/2023	2:59	17.50	-0.01	0.0003	0.017	47.1	28.71	0.50	28.75	28.70	28.59	0.98	7.14	21.16	0.02	0.1157	0.340	44.4	28.71	0.30	28.73	28.85	28.78	19.07	140.66	
2/16/2023	3:00	17.82	-0.01	0.0003	0.017	46.2	28.71	0.50	28.75	28.71	28.61	0.98	7.15	21.16	0.01	0.1239	0.352	44.7	28.71	0.30	28.73	28.85	28.78	19.74	145.51	
2/16/2023	3:01	18.46	-0.01	0.0003	0.017	46.7	28.71	0.50	28.75	28.74	28.63	0.98	7.14	21.15	0.02	0.1203	0.347	44.4	28.71	0.30	28.73	28.85	28.78	19.45	143.43	
2/16/2023	3:02	19.24	-0.01	0.0003	0.017	46.7	28.71	0.50	28.75	28.77	28.66	0.98	7.14	21.16	0.01	0.1175	0.343	44.4	28.71	0.30	28.73	28.85	28.78	19.22	141.77	
2/16/2023	3:03	19.18	-0.01	0.0003	0.017	46.4	28.71	0.50	28.75	28.77	28.66	0.97	7.14	21.16	0.02	0.1262	0.355	44.4	28.71	0.30	28.73	28.85	28.78	19.92	146.91	
2/16/2023	3:04	19.13	-0.01	0.0002	0.014	46.1	28.71	0.50	28.75	28.76	28.65	0.80	5.83	21.16	0.02	0.1183	0.344	44.5	28.71	0.30	28.73	28.85	28.78	19.29	142.22	
2/16/2023	3:05	17.15	-0.01	0.0003	0.017	46.3	28.71	0.50	28.75	28.68	28.58	0.98	7.15	21.13	0.02	0.1194	0.346	44.4	28.71	0.30	28.73	28.85	28.78	19.37	142.89	
2/16/2023	3:06	18.90	-0.01	0.0003	0.017	46.0	28.71	0.50	28.75	28.75	28.65	0.97	7.15	21.15	0.01	0.1200	0.346	44.6	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	3:07	20.13	0.00	0.0002	0.014	46.0	28.71	0.50	28.75	28.81	28.70	0.80	5.83	21.17	0.01	0.1177	0.343	44.5	28.71	0.30	28.73	28.85	28.78	19.24	141.86	
2/16/2023	3:08	20.32	0.00	0.0002	0.014	45.6	28.71	0.50	28.75	28.81	28.70	0.79	5.83	21.17	0.01	0.1209	0.348	44.6	28.71	0.30	28.73	28.85	28.78	19.50	143.77	
2/16/2023	3:09	20.55	0.00	0.0002	0.014	45.6	28.71	0.50	28.75	28.82	28.72	0.79	5.83	21.17	0.01	0.1211	0.348	44.8	28.71	0.30	28.73	28.85	28.78	19.52	143.86	
2/16/2023	3:10	20.58	0.00	0.0003	0.017	45.6	28.71	0.50	28.75	28.82	28.74	0.97	7.15	21.16	0.01	0.1173	0.342	44.6	28.71	0.30	28.73	28.85	28.78	19.21	141.62	
2/16/2023	3:11	19.92	0.00	0.0002	0.014	45.5	28.71	0.50	28.75	28.80	28.71	0.79	5.84	21.16	0.02	0.1210	0.348	44.6	28.71	0.30	28.73	28.85	28.78	19.51	143.83	
2/16/2023	3:12	20.24	0.00	0.0003	0.017	45.4	28.71	0.50	28.75	28.81	28.72	0.97	7.15	21.17	0.02	0.1221	0.349	44.8	28.71	0.30	28.73	28.85	28.78	19.60	144.46	
2/16/2023	3:13	20.50	0.00	0.0002	0.014	45.2	28.71	0.50	28.75	28.82	--	--	--	21.16	0.01	0.1222	0.350	44.6	28.71	0.30	28.73	28.85	28.78	19.60	144.54	
2/16/2023	3:14	20.61	0.00	0.0001	0.010	45.3	28.71	0.50	28.75	28.82	28.73	0.56	4.13	21.17	0.02	0.1240	0.352	44.7	28.71	0.30	28.73	28.85	28.78	19.75	145.59	
2/16/2023	3:15	20.65	0.00	0.0003	0.017	45.3	28.71	0.50	28.75	28.83	28.73	0.97	7.15	21.16	0.01	0.1255	0.354	44.5	28.71	0.30	28.73	28.85	28.78	19.86	146.49	
2/16/2023	3:16	20.67	0.00	0.0002	0.014	45.3	28.71	0.50	28.75	28.83	28.73	0.79	5.84	21.16	0.02	0.1218	0.349	44.6	28.71	0.30	28.73	28.85	28.78	19.57	144.31	
2/16/2023	3:17	20.68	0.00	0.0003	0.017	45.5	28.71	0.50	28.75	28.83	28.73	0.97	7.15	21.16	0.02	0.1248	0.353	44.4	28.71	0.30	28.73	28.85	28.78	19.81	146.11	
2/16/2023	3:18	20.69	0.00	0.0003	0.017	45.5	28.71	0.50	28.75	28.83	28.74	0.97	7.15	21.17	0.02	0.1250	0.354	44.3	28.71	0.30	28.73	28.85	28.78	19.82	146.24	
2/16/2023	3:19	20.71	0.00	0.0001	0.010	45.2	28.71	0.50	28.75	28.83	28.74	0.56	4.13	21.17	0.02	0.1208	0.348	44.3	28.71	0.30	28.73	28.85	28.78	19.48	143.76	
2/16/2023	3:20	20.72	0.00	0.0003	0.017	45.1	28.71	0.50	28.75	28.83	28.74	0.97	7.15	21.16	0.01	0.1255	0.354	44.6	28.71	0.30	28.73	28.85	28.78	19.86	146.50	
2/16/2023	3:21	20.63	0.00	0.0002	0.014	45.1	28.71	0.50	28.75	28.83	28.73	0.79	5.84	21.17	0.02	0.1228	0.350	44.3	28.71	0.30	28.73	28.85	28.78	19.64	144.95	
2/16/2023	3:22	20.60	0.00	0.0002	0.014	44.5	28.71	0.50	28.75	28.82	28.73	0.79	5.84	21.17	0.02	0.1231	0.351	44.6	28.71	0.30	28.73	28.85	28.78	19.67	145.09	
2/16/2023	3:23	20.63	0.00	0.0003	0.017	44.5	28.71	0.50	28.75	28.83	28.73	0.97	7.15	21.17	0.01	0.1277	0.357	44.5	28.71	0.30	28.73	28.85	28.78	20.04	147.79	
2/16/2023	3:24	20.61	0.00	0.0004	0.020	44.5	28.71	0.50	28.75	28.82	28.73	1.12	8.26	21.17	0.02	0.1263	0.355	44.5	28.71	0.30	28.73	28.85	28.78	19.93	146.98	
2/16/2023	3:25	20.65	0.00	0.0002	0.014	44.5	28.71	0.50	28.75	28.83	28.73	0.79	5.84	21.17	0.02	0.1235	0.351	44.5	28.71	0.30	28.73	28.85	28.79	19.70	145.35	
2/16/2023	3:26	20.67	0.00	0.0003	0.017	44.4	28.71	0.50	28.75	28.83	28.74	0.97	7.16	21.17	0.01	0.1231	0.351	44.5	28.71	0.30	28.73	28.85	28.78	19.67	145.11	
2/16/2023	3:27	20.65	0.00	0.0001	0.010	44.3	28.71	0.50

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	-
	Status	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	Valid
		Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	
2/16/2023	3:51	20.35	0.00	0.0001	0.010	42.8	28.71	0.50	28.75	28.81	28.72	0.56	4.14	21.17	0.01	0.1275	0.357	44.6	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	3:52	20.38	0.00	0.0003	0.017	42.9	28.71	0.50	28.75	28.82	28.72	0.97	7.17	21.18	0.01	0.1270	0.356	44.6	28.71	0.30	28.73	28.85	28.79	19.98	147.39	
2/16/2023	3:53	20.43	0.00	0.0002	0.014	42.8	28.71	0.50	28.75	28.82	28.73	0.79	5.85	21.18	0.01	0.1283	0.358	44.5	28.71	0.30	28.73	28.85	28.79	20.08	148.16	
2/16/2023	3:54	20.56	0.00	0.0003	0.017	42.8	28.71	0.50	28.75	28.82	28.73	0.97	7.17	21.18	0.01	0.1287	0.359	44.4	28.71	0.30	28.73	28.85	28.79	20.11	148.41	
2/16/2023	3:55	20.52	0.00	0.0001	0.010	42.7	28.71	0.50	28.75	28.82	28.73	0.56	4.14	21.18	0.02	0.1278	0.357	44.3	28.71	0.30	28.73	28.85	28.79	20.04	147.89	
2/16/2023	3:56	20.15	0.00	0.0003	0.017	42.5	28.71	0.50	28.75	28.81	28.72	0.97	7.17	21.18	0.01	0.1311	0.362	44.2	28.71	0.30	28.73	28.85	28.79	20.29	149.82	
2/16/2023	3:57	19.91	0.00	0.0005	0.022	42.2	28.71	0.50	28.75	28.80	--	--	--	21.19	0.01	0.1323	0.364	44.3	28.71	0.30	28.73	28.85	28.79	20.39	150.48	
2/16/2023	3:58	20.21	0.00	0.0003	0.017	42.3	28.71	0.50	28.75	28.81	28.72	0.97	7.17	21.19	0.01	0.1288	0.359	44.1	28.71	0.30	28.73	28.85	28.79	20.11	148.52	
2/16/2023	3:59	20.18	0.00	0.0003	0.017	42.5	28.71	0.50	28.75	28.81	28.72	0.97	7.17	21.18	0.01	0.1340	0.366	44.3	28.71	0.30	28.73	28.85	28.79	20.52	151.46	
2/16/2023	4:00	20.33	0.00	0.0002	0.014	42.4	28.71	0.50	28.75	28.81	28.71	0.79	5.85	21.19	0.00	0.1335	0.365	44.0	28.71	0.30	28.73	28.85	28.79	20.48	151.23	
2/16/2023	4:01	20.39	0.00	0.0002	0.014	42.3	28.71	0.50	28.75	28.82	28.73	0.79	5.86	21.18	0.01	0.1354	0.368	43.9	28.71	0.30	28.73	28.85	28.79	20.62	152.31	
2/16/2023	4:02	20.41	0.00	0.0004	0.020	42.3	28.71	0.50	28.75	28.82	28.73	1.12	8.28	21.19	0.01	0.1412	0.376	43.9	28.71	0.30	28.73	28.85	28.79	21.06	155.54	
2/16/2023	4:03	19.67	0.00	0.0004	0.020	42.3	28.71	0.50	28.75	28.79	28.70	1.12	8.29	21.18	0.01	0.1403	0.375	43.9	28.71	0.30	28.73	28.85	28.79	20.99	155.05	
2/16/2023	4:04	19.48	0.00	0.0004	0.020	42.2	28.71	0.50	28.75	28.78	28.69	1.12	8.29	21.18	0.01	0.1394	0.373	43.8	28.71	0.30	28.73	28.85	28.79	20.92	154.58	
2/16/2023	4:05	19.75	0.00	0.0004	0.020	42.1	28.71	0.50	28.75	28.79	28.70	1.12	8.29	21.18	0.01	0.1367	0.370	43.7	28.71	0.30	28.73	28.85	28.79	20.71	153.08	
2/16/2023	4:06	19.82	0.00	0.0003	0.017	42.2	28.71	0.50	28.75	28.79	28.71	0.97	7.18	21.18	0.00	0.1371	0.370	43.5	28.71	0.30	28.73	28.85	28.79	20.74	153.35	
2/16/2023	4:07	20.17	0.00	0.0003	0.017	42.2	28.71	0.50	28.75	28.81	28.71	0.97	7.17	21.19	0.00	0.1362	0.369	43.3	28.71	0.30	28.73	28.85	28.79	20.67	152.88	
2/16/2023	4:08	19.97	0.00	0.0002	0.014	42.0	28.71	0.50	28.75	28.80	28.72	0.79	5.86	21.18	0.00	0.1407	0.375	43.3	28.71	0.30	28.73	28.85	28.79	21.00	155.39	
2/16/2023	4:09	20.08	0.00	0.0003	0.017	41.7	28.71	0.50	28.75	28.80	28.72	0.97	7.18	21.19	0.01	0.1416	0.376	43.4	28.71	0.30	28.73	28.85	28.79	21.07	155.86	
2/16/2023	4:10	20.25	0.00	0.0003	0.017	41.7	28.71	0.50	28.75	28.81	28.73	0.97	7.18	21.19	0.01	0.1450	0.381	43.1	28.71	0.30	28.73	28.85	28.79	21.32	157.77	
2/16/2023	4:11	20.18	0.00	0.0003	0.017	41.4	28.71	0.50	28.75	28.81	28.73	0.97	7.18	21.19	0.00	0.1445	0.380	43.1	28.71	0.30	28.73	28.85	28.79	21.28	157.50	
2/16/2023	4:12	20.27	0.00	0.0003	0.017	41.7	28.71	0.50	28.75	28.81	28.73	0.97	7.18	21.18	0.01	0.1428	0.378	43.1	28.71	0.30	28.73	28.85	28.79	21.16	156.57	
2/16/2023	4:13	20.36	0.00	0.0003	0.017	41.5	28.71	0.50	28.75	28.81	28.73	0.97	7.18	21.18	0.00	0.1436	0.379	42.9	28.71	0.30	28.73	28.85	28.79	21.21	157.05	
2/16/2023	4:14	20.38	0.00	0.0003	0.017	41.5	28.71	0.50	28.75	28.82	28.73	0.97	7.18	21.19	0.01	0.1450	0.381	42.9	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	4:15	20.39	0.00	0.0003	0.017	41.5	28.71	0.50	28.75	28.82	28.73	0.97	7.18	21.18	0.00	0.1437	0.379	42.7	28.71	0.30	28.73	28.85	28.79	21.22	157.13	
2/16/2023	4:16	20.18	0.00	0.0002	0.014	41.3	28.71	0.50	28.75	28.81	28.72	0.79	5.87	21.18	0.00	0.1450	0.381	42.6	28.71	0.30	28.73	28.85	28.79	21.31	157.87	
2/16/2023	4:17	19.87	0.00	0.0004	0.020	41.3	28.71	0.50	28.75	28.79	28.71	1.12	8.30	21.18	0.00	0.1450	0.381	42.5	28.71	0.30	28.73	28.85	28.79	21.31	157.89	
2/16/2023	4:18	20.20	0.00	0.0002	0.014	41.2	28.71	0.50	28.75	28.81	28.73	0.79	5.87	21.19	0.00	0.1457	0.382	42.5	28.71	0.30	28.73	28.85	28.79	21.36	158.27	
2/16/2023	4:19	20.38	0.00	0.0002	0.014	41.1	28.71	0.50	28.75	28.82	--	--	--	21.19	0.00	0.1446	0.380	42.4	28.71	0.30	28.73	28.85	28.79	21.27	157.68	
2/16/2023	4:20	20.16	0.00	0.0003	0.017	41.0	28.71	0.50	28.75	28.81	28.72	0.97	7.18	21.20	0.01	0.1461	0.382	42.3	28.71	0.30	28.73	28.85	28.79	21.38	158.51	
2/16/2023	4:21	20.10	0.00	0.0004	0.020	40.7	28.71	0.50	28.75	28.80	28.73	1.12	8.30	21.19	0.01	0.1484	0.385	42.2	28.71	0.30	28.73	28.85	28.79	21.55	159.78	
2/16/2023	4:22	20.01	0.00	0.0003	0.017	40.7	28.71	0.50	28.75	28.80	28.72	0.97	7.19	21.19	0.01	0.1479	0.385	42.2	28.71	0.30	28.73	28.85	28.79	21.51	159.52	
2/16/2023	4:23	20.13	0.00	0.0002	0.014	40.8	28.71	0.50	28.75	28.81	28.72	0.79	5.87	21.19	0.00	0.1516	0.389	42.0	28.71	0.30	28.73	28.85	28.79	21.78	161.53	
2/16/2023	4:24	20.39	0.00	0.0003	0.017	40.6	28.71	0.50	28.75	28.82	28.74	0.97	7.19	21.19	0.00	0.1494	0.387	41.9	28.71	0.30	28.73	28.85	28.79	21.61	160.37	
2/16/2023	4:25	19.21	0.00	0.0003	0.017	40.7	28.71	0.50	28.75	28.77	28.69	0.97	7.19	21.19	0.00	0.1512	0.389	42.0	28.71	0.30	28.73	28.85	28.79	21.74	161.33	
2/16/2023	4:26	20.02	0.00	0.0005	0.022	40.8	28.71	0.50	28.75	28.80	28.72	1.25	9.28	21.20	0.01	0.1519	0.390	41.9	28.71	0.30	28.73	28.85	28.79	21.79	161.71	
2/16/2023	4:27	20.30	0.00	0.0010	0.032	40.8	28.71	0.50	28.75	28.81	28.73	1.77	13.12	21.20	0.01	0.1509	0.388	41.9	28.71	0.30	28.73	28.85	28.79	21.72	161.17	
2/16/2023	4:28	19.99	0.00	0.0001	0.010	40.7	28.71	0.50	28.75	28.80	28.71	0.56	4.15	21.20	0.01	0.1538	0.392	41.8	28.71	0.30	28.73	28.85	28.79	21.93	162.73	
2/16/2023	4:29	20.12	0.00	0.0002	0.014	40.4	28.71	0.50	28.75	28.80	28.72	0.79	5.87	21.20	0.01	0.1549	0.394	41.8	28.71	0.30	28.73	28.85	28.79	22.01	163.30	
2/16/2023	4:30	19.75	0.00	0.0002	0.014	40.3	28.71	0.50	28.75	28.79	28.71	0.79	5.87	21.20	0.00	0.1531	0.391	41.8	28.71	0.30	28.73	28.85	28.79	21.88	162.36	
2/16/2023	4:31	20.00	0.00	0.0002	0.014	40.4	28.71	0.50	28.75	28.80	28.72	0.79	5.87	21.21	0.01	0.1567	0.396	41.7	28.71	0.30	28.73	28.85	28.79	22.13	164.28	
2/16/2023	4:32	20.05	0.00	0.0002	0.014	40.2	28.71	0.50	28.75	28.80	28.72	0.79	5.87	21.21	0.00	0.1546	0.393	41.7	28.71	0.30	28.73	28.85	28.79	21.98	163.18	
2/16/2023	4:33	20.01	0.00	0.0002	0.014	40.2	28.71	0.50	28.75	28.80	28.72	0.79	5.87	21.20	0.00	0.1582	0.398	41.7	28.71	0.30	28.73	28.85	28.79	22.24	165.08	
2/16/2023	4:34	20.33	0.00	0.0003	0.017	40.8	28.71	0.50	28.75	28.81	28.73	0.97	7.19	21.21	0.01	0.1495	0.387	42.5	28.71	0.30	28.73	28.85	28.79	21.63	160.34	
2/16/2023	4:35	19.21	0.00	0.0002	0.014	40.3	28.71	0.50	28.75	28.77	28.69	0.79	5.88	21.20	0.01	0.1523	0.390	41.3	28.71	0.30	28.73	28.85	28.79	21.81	162.02	
2/16/2023	4:36	19.72	0.00	0.0004	0.020	40.2	28.71	0.50	28.75	28.79	28.71	1.12	8.31	21.22	0.01	0.1539	0.392	41.3	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	4:37	19.76	0.00	0.0002	0.014	40.0	28.71	0.50	28.75	28.79	28.71	0.79	5.88	21.22	0.01	0.1501	0.387	41.4	28.71	0.30	28.73	28.85	28.79	21.65	160.83	
2/16/2023	4:38	19.89	0.00	0.0002	0.014	40.1	28.71	0.50	28.75	28.80	28.71	0.79	5.87	21.23	0.01	0.1544	0.393	41.4	28.71	0.30	28.73	28.85	28.79	21.96	163.12	
2/16/2023	4:39	20.19	0.00	0.0002	0.014	40.0	28.71	0.50	28.75	28.81	28.73	0.79	5.88	21.23	0.01	0.1467	0.383	41.4	28.71	0.30	28.73	28.85	28.79	21.41	159.00	
2/16/2023	4:40	19.80	0.00	0.0002	0.014	40.3	28.71	0.50	28.75	28.79	28.72	0.79	5.88	21.23	0.00	0.1522	0.390	41.2	28.71	0.30	28.73	28.85	28.79	21.80	161.98	
2/16/2023	4:41	19.95	0.00	0.0003	0.017	40.0	28.71	0.50	28.75	28.80	--	--	--	21.23	0.00	0.1520	0.390	41.6	28.71	0.30	28.73	28.85	28.79	21.79	161.82	
2/16/2023	4:42	19.76	0.00	0.0003	0.017	40.0	28.71	0.50	28.75	28.79	28.71	0.97	7.20	21.22	0.01	0.1537	0.392	41.4	28.71	0.30	28.73	28.85	28.79	21.91	162.75	
2/16/2023	4:43	19.72	0.00	0.0002	0.014	40.0	28.71	0.50	28.75	28.79	28.71	0.79	5.88	21.23	0.01	0.1583	0.398	41.4	28.71	0.30	28.73	28.85	28.79	22.23	165.17	
2/16/2023	4:44	19.87	0.00	0.0001	0.010	40.0	28.71	0.50	28.75	28.79	28.72	0.56	4.16	21.23	0.01	0.1572	0.396	41.4	28.71	0.30	28.73	28.85	28.80	22.16	164.60	
2/16/2023	4:45	18.70	0.00	0.0002	0.014	40.7	28.71	0.50	28.75	28.75	28.67	0.79	5.88	21.22	0.01	0.1544	0.393	43.1	28.71	0.30	28.73	28.85	28.79	22.00	162.85	
2/16/2023	4:46	19.29	0.00	0.0003	0.017	39.6	28.71	0.50	28.75	28.77	28.70	0.97	7.21	21.22	0.01	0.1591	0.399	41.5	28.71	0.30	28.73	28.85	28.79	22.29	165.57	
2/16/2023	4:47	19.60	0.00	0.0002	0.014	39.6	28.71	0.50	28.75	28.78	28.71	0.79	5.88	21.23	0.00	0.1562	0.395	41.5	28.71	0.30	28.73	28.85	28.79	22.09	164.07	
2/16/2023	4:48	19.33	0.00	0.0001	0.010	39.7	28.71	0.50	28.75	28.77	28.68	0.56	4.15	21.22	0.01	0.1558	0.395	41.3	28.71	0.30	28.73	28.85	28.80	22.06	163.89	
2/16/2023	4:49	19.44	0.00	0.0003	0.017	39.7	28.71	0.50	28.75	28.78	28.69	0.97	7.20	21.21	0.01	0.1490	0.386	41.5	28.71	0.30	28.73	28.85	28.79	21.58	160.23	
2/16/2023	4:50	19.35	0.00	0.0001	0.010	39.5	28.71	0.50	28.75	28.77	28.69	0.56	4.16	21.22	0.01	0.1577	0.397	41.4	28.71	0.30	28.73	28.85	28.79	22.19	164.86	
2/16/2023	4:51	19.41	0.00	0.0002	0.014	39.4	28.71	0.50	28.75	28.78	28.69	0.79	5.88	21.23	0.01	0.1622	0.403	41.4	28.71	0.30	28.73	28.85	28.80	22.51	167.20	
2/16/2023	4:52	19.70	0.00	0.0002	0.014	39.4	28.71	0.50	28.75	28.79	28.71	0.79	5.88	21.22	0.01	0.1618	0.402	41.3	28.71	0.30	28.73	28.85	28.79	22.48	167.01	
2/16/2023	4:53	19.55	0.00	0.0002	0.014	39.3	28.71	0.50	28.75	28.78	28.70	0.79	5.88	21.23	0.01	0.1558	0.395	41.2	28.71	0.30	28.73	28.85	28.80	22.06	163.89	
2/16/2023	4:54	19.90	0.00	0.0002	0.014	39.1	28.71	0.50	28.75	28.80	28.71	0.79	5.88	21.23	0.01	0.1579	0.397	41.2	28.71	0.30	28.73	28.85	28.80	22.20	165.01	
2/16/2023	4:55	18.81	0.00	0.0002	0.014	39.2	28.71	0.50	28.75	28.75	28.68	0.79	5.89	21.22	0.01	0.1539	0.392	41.3	28.71	0.30	28.73	28.85	28.80	21.92	162.89	
2/16/2023	4:56	19.17	0.00	0.0001	0.010	39.2	28.71	0.50	28.75	28.77	28.69	0.56	4.16	21.23	0.01	0.1639	0.405	41.2	28.71	0.30	28.73	28.85	28.80	22.62	168.10	
2/16/2023	4:57	19.56	0.00	0.0003	0.017	39.4	28.71	0.50	28.75	28.78	28.71	0.97	7.21	21.23	0.01	0.1612	0.401	41.2	28.71	0.30	28.73	28.85	28.80	22.43	166.71	
2/16/2023	4:58	19.74	0.00	0.0001	0.010	39.1	28.71	0.50	28.75	28.79	28.70	0.56	4.16	21.23	0.01	0.1636	0.404	41.2	28.71	0.30	28.73	28.85	28.80	22.60	167.96	
2/16/2023	4:59	19.71	0.00	0.0003	0.017	39.0	28.71	0.50	28.75	28.79	28.70	0.97	7.20	21.23	0.01	0.1652	0.406	41.1	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	5:00	19.51	0.00	0.0001	0.010	39.0	28.71	0.50	28.75	28.78	28.70	0.56	4.16	21.23	0.00	0.1648	0.406	41.2	28.71	0.30	28.73	28.85	28.79	22.68	168.57	
2/16/2023	5:01	19.63	0.00	0.0000	0.000	39.0	28.71	0.50	28.75	28.79	28.71	0.00	0.00	21.24	0.01	0.1616	0.402	41.1	28.71	0.30	28.73	28.85	28.80	22.46	166.95	
2/16/2023	5:02	19.37	0.00	0.0001	0.010	39.0	28.71	0.50	28.75	28.77	28.70	0.56	4.16	21.24	0.01	0.1654	0.407	40.9	28.71	0.30	28.73	28.85	28.80	22.72	168.92	
2/16/2023	5:03	19.69	0.00	0.0002	0.014	38.8	28.71	0.50	28.75	28.79	--	--	--	21.24	0.01	0.1588	0.398	41.0	28.71	0.30	28.73	28.85	28.80	22.26	165.52	
2/16/2023	5:04	19.67	0.00	0.0004	0.020	38.9	28.71	0.50	28.75	28.79	28.71	1.12	8.32	21.23	0.02	0.1759	0.419	40.8	28.71	0.30	28.73	28.85	28.80	23.42	174.23	
2/16/2023	5:05	19.98	0.00	0.0003	0.017	38.8	28.71	0.50	28.75	28.80	28.72	0.97	7.20	21.24	0.01	0.1672	0.409	40.7	28.71	0.30	28.73	28.85	28.80	22.84	169.88	
2/16/2023	5:06	19.64	0.00	0.0001	0.010	38.7	28.71	0.50	28.75	28.79	28.71	0.56	4.16	21.23	0.01	0.1618	0.402	40.7	28.71	0.30	28.73	28.85	28.80	22.46	167.12	
2/16/2023	5:07	18.49	0.00	0.0002	0.014	38.7	28.71	0.50	28.75	28.74	28.66	0.79	5.89	21.23	0.01	0.1621	0.403	40.8	28.71	0.30	28.73	28.85	28.80	22.49	167.26	
2/16/2023	5:08	19.31	0.00	0.0001	0.010	38.7	28.71	0.50	28.75	28.77	28.70	0.56	4.16	21.24	0.01	0.1605	0.401	40.7	28.71	0.30	28.73	28.85	28.80	22.37	166.45	
2/16/2023	5:09	19.45	0.00	0.0002	0.014	38.6	28.71	0.50	28.75	28.78	28.70	0.79	5.89	21.24	0.01	0.1686	0.411	40.9	28.71	0.30	28.73	28.85	28.80	22.93	170.56	
2/16/2023	5:10	19.38	0.00	0.0003	0.017	38.6	28.71	0.50	28.75	28.78	28.69	0.97	7.21	21.24	0.01	0.1677	0.410	40.8	28.71	0.30	28.73	28.85	28.80	22.87	170.12	
2/16/2023	5:11	19.12	0.00	0.0003	0.017	38.6	28.71	0.50	28.75	28.76	28.68	0.97	7.21	21.24	0.01	0.1654	0.407	40.8	28.71	0.30	28.73	28.85	28.80	22.71	168.96	
2/16/2023	5:12	19.51	0.00	0.0002	0.014	38.5	28.71	0.50	28.75	28.78	28.70	0.79	5.89	21.25	0.01	0.1610	0.401	40.7	28.71	0.30	28.73	28.85	28.80	22.41	166.70	
2/16/2023	5:13	19.56	0.00	0.0002	0.014	38.5	28.71	0.50	28.75	28.78	28.70	0.79	5.89	21.25	0.01	0.1745	0.418	40.9	28.71	0.30	28.73	28.85	28.80	23.33	173.54	
2/16/2023	5:14	19.56	0.00	0.0002	0.014	38.5	28.71	0.50	28.75	28.78	28.70	0.79	5.89	21.25	0.02	0.1684	0.410	40.7	28.71	0.30	28.73	28.85	28.80	22.92	170.50	
2/16/2023	5:15	19.66	0.00	0.0001	0.010	38.4	28.71	0.50	28.75	28.79	28.71	0.56	4.16	21.25	0.02	0.1731	0.416	40.7	28.71	0.30	28.73	28.85	28.80	23.23	172.87	
2/16/2023	5:16	18.75	0.00	0.0000	0.000	38.5	28.71	0.50	28.75	28.75	28.67	0.00	0.00	21.24	0.01	0.1664	0.408	40.5	28.71	0.30	28.73	28.85	28.80	22.78	169.54	
2/16/2023	5:17	18.72	0.00	0.0002	0.014	38.5	28.71	0.50	28.75	28.75	28.67	0.79	5.89	21.25	0.02	0.1687	0.411	40.6	28.71	0.30	28.73	28.85	28.80	22.93	170.68	
2/16/2023	5:18	18.99	0.00	0.0003	0.017	38.5	28.71	0.50	28.75	28.76	28.68	0.97	7.21	21.25	0.01	0.1690	0.411	40.4	28.71	0.30	28.73	28.85	28.80	22.95	170.86	
2/16/2023	5:19	19.13	0.00	0.0003	0.017	38.2	28.71	0.50	28.75	28.77	28.68	0.97	7.21	21.25	0.02	0.1707	0.413	40.3	28.71	0.30	28.73	28.85	28.80	23.06	171.74	
2/16/2023	5:20	19.13	0.00	0.0002	0.014	38.4	28.71	0.50	28.75	28.77	28.68	0.79	5.89	21.25	0.02	0.1739	0.417	40.2	28.71	0.30	28.73	28.85	28.80	23.27	173.36	
2/16/2023	5:21	19.42	0.00	0.0002	0.014	38.3	28.71	0.50	28.75	28.78	28.70	0.79	5.89	21.25	0.02	0.1674	0.409	40.3	28.71	0.30	28.73	28.85	28.80	22.84	170.07	
2/16/2023	5:22	19.33	0.00	0.0002	0.014	38.2	28.71	0.50	28.75	28.77	28.69	0.79	5.89	21.25	0.02	0.1686	0.411	40.1	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	5:23	19.37	0.00	0.0002	0.014	38.1	28.71	0.50	28.75	28.77	28.70	0.79	5.89	21.25	0.02	0.1668	0.408	40.2	28.71	0.30	28.73	28.85	28.80	22.80	169.77	
2/16/2023	5:24	19.57	0.00	0.0002	0.014	37.9	28.71	0.50	28.75	28.78	28.70	0.79	5.89	21.25	0.02	0.1651	0.406	40.2	28.71	0.30	28.73	28.85	28.80	22.68	168.92	
2/16/2023	5:25	19.61	0.00	0.0002

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet O_2 - Inlet % dry	Inlet CO_2 - Inlet % dry	Inlet Delta P in. W.C.	Inlet Sq Rt Delta P	Inlet Temperature (°F)	Inlet Barometric in. Hg	Inlet Stack Pressure in. W.C.	Inlet Stack Pressure in. Hg	Inlet Molecular Weight Md	Inlet Molecular Weight Mw	Inlet Velocity ft/sec	Inlet Flow Rate (DSCFM)	Outlet O_2 - Outlet % dry	Outlet CO_2 - Outlet % dry	Outlet Delta P in. W.C.	Outlet Sq Rt Delta P	Outlet Temperature (°F)	Outlet Barometric in. Hg	Outlet Stack Pressure in. W.C.	Outlet Stack Pressure in. Hg	Outlet Molecular Weight Md	Outlet Molecular Weight Mw	Outlet Velocity ft/sec	Outlet Flow Rate (DSCFM)	Point in Process -
	Unit	%	%			°F	in. Hg	in. W.C.	in. Hg			ft/sec	DSCFM	%	%			°F	in. Hg	in. W.C.	in. Hg			ft/sec	DSCFM	
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/16/2023	5:49	18.58	0.00	0.0002	0.014	37.3	28.71	0.50	28.75	28.74	28.67	0.79	5.90	21.26	0.02	0.1745	0.418	39.9	28.71	0.30	28.73	28.85	28.80	23.31	173.71	
2/16/2023	5:50	18.99	0.00	0.0004	0.020	37.4	28.71	0.50	28.75	28.76	28.68	1.12	8.34	21.26	0.02	0.1733	0.416	39.8	28.71	0.30	28.73	28.85	28.80	23.22	173.14	
2/16/2023	5:51	18.97	0.00	0.0002	0.014	37.2	28.71	0.50	28.75	28.76	28.68	0.79	5.90	21.27	0.02	0.1792	0.423	39.7	28.71	0.30	28.73	28.85	28.80	23.61	176.08	
2/16/2023	5:52	19.08	0.00	0.0002	0.014	37.2	28.71	0.50	28.75	28.76	28.68	0.79	5.90	21.27	0.02	0.1814	0.426	39.6	28.71	0.30	28.73	28.85	28.80	23.76	177.16	
2/16/2023	5:53	19.05	0.00	0.0002	0.014	37.3	28.71	0.50	28.75	28.76	28.68	0.79	5.90	21.27	0.02	0.1779	0.422	39.6	28.71	0.30	28.73	28.85	28.80	23.53	175.45	
2/16/2023	5:54	18.92	0.00	0.0003	0.017	37.8	28.71	0.50	28.75	28.76	28.68	0.97	7.22	21.27	0.02	0.1778	0.422	40.7	28.71	0.30	28.73	28.85	28.80	23.54	175.21	
2/16/2023	5:55	18.85	0.00	0.0003	0.017	37.6	28.71	0.50	28.75	28.75	28.68	0.97	7.22	21.27	0.02	0.1742	0.417	40.3	28.71	0.30	28.73	28.85	28.80	23.30	173.49	
2/16/2023	5:56	18.73	0.00	0.0002	0.014	37.3	28.71	0.50	28.75	28.75	28.67	0.79	5.90	21.27	0.02	0.1760	0.420	39.6	28.71	0.30	28.73	28.85	28.80	23.40	174.51	
2/16/2023	5:57	17.82	0.00	0.0002	0.014	37.2	28.71	0.50	28.75	28.71	28.64	0.79	5.90	21.26	0.02	0.1779	0.422	39.6	28.71	0.30	28.73	28.85	28.80	23.53	175.44	
2/16/2023	5:58	17.72	0.00	0.0004	0.020	37.2	28.71	0.50	28.75	28.71	28.63	1.12	8.35	21.27	0.01	0.1761	0.420	39.6	28.71	0.30	28.73	28.85	28.80	23.41	174.56	
2/16/2023	5:59	18.36	0.00	0.0000	0.000	37.2	28.71	0.50	28.75	28.73	28.66	0.00	0.00	21.27	0.01	0.1776	0.421	39.6	28.71	0.30	28.73	28.85	28.80	23.51	175.30	
2/16/2023	6:00	18.58	0.00	0.0002	0.014	37.0	28.71	0.50	28.75	28.74	28.66	0.79	5.90	21.26	0.02	0.1796	0.424	39.5	28.71	0.30	28.73	28.85	28.80	23.64	176.30	
2/16/2023	6:01	18.48	0.00	0.0001	0.010	37.1	28.71	0.50	28.75	28.74	28.66	0.56	4.17	21.27	0.02	0.1757	0.419	39.5	28.71	0.30	28.73	28.85	28.80	23.38	174.38	
2/16/2023	6:02	18.42	0.00	0.0003	0.017	37.0	28.71	0.50	28.75	28.74	28.66	0.97	7.23	21.27	0.02	0.1796	0.424	39.6	28.71	0.30	28.73	28.85	28.80	23.64	176.29	
2/16/2023	6:03	18.83	0.00	0.0000	0.000	37.1	28.71	0.50	28.75	28.75	28.68	0.00	0.00	21.26	0.02	0.1772	0.421	39.5	28.71	0.30	28.73	28.85	28.80	23.48	175.14	
2/16/2023	6:04	18.61	0.00	0.0001	0.010	37.1	28.71	0.50	28.75	28.74	28.67	0.56	4.17	21.26	0.01	0.1819	0.426	39.6	28.71	0.30	28.73	28.85	28.80	23.79	177.42	
2/16/2023	6:05	19.31	0.00	0.0002	0.014	36.8	28.71	0.50	28.75	28.77	28.70	0.79	5.90	21.27	0.01	0.1890	0.435	39.6	28.71	0.30	28.73	28.85	28.80	24.25	180.85	
2/16/2023	6:06	19.70	0.00	0.0002	0.014	37.0	28.71	0.50	28.75	28.79	28.71	0.79	5.90	21.26	0.02	0.1739	0.417	39.6	28.71	0.30	28.73	28.85	28.80	23.26	173.47	
2/16/2023	6:07	19.35	0.00	0.0002	0.014	36.8	28.71	0.50	28.75	28.77	28.70	0.79	5.90	21.27	0.01	0.1798	0.424	39.5	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	6:08	17.65	0.00	0.0003	0.017	37.0	28.71	0.50	28.75	28.71	28.63	0.97	7.23	21.26	0.01	0.1797	0.424	39.4	28.71	0.30	28.73	28.85	28.80	23.64	176.37	
2/16/2023	6:09	18.91	0.00	0.0003	0.017	36.9	28.71	0.50	28.75	28.76	--	--	--	21.27	0.01	0.1774	0.421	39.6	28.71	0.30	28.73	28.85	28.80	23.49	175.21	
2/16/2023	6:10	18.72	0.00	0.0001	0.010	36.9	28.71	0.50	28.75	28.75	28.67	0.56	4.17	21.26	0.02	0.1782	0.422	39.5	28.71	0.30	28.73	28.85	28.80	23.54	175.62	
2/16/2023	6:11	19.24	0.00	0.0002	0.014	37.0	28.71	0.50	28.75	28.77	28.69	0.79	5.90	21.27	0.02	0.1813	0.426	39.5	28.71	0.30	28.73	28.85	28.80	23.75	177.14	
2/16/2023	6:12	18.69	0.00	0.0002	0.014	36.9	28.71	0.50	28.75	28.75	28.67	0.79	5.90	21.27	0.02	0.1786	0.423	39.5	28.71	0.30	28.73	28.85	28.80	23.57	175.81	
2/16/2023	6:13	18.71	0.00	0.0002	0.014	36.9	28.71	0.50	28.75	28.75	28.67	0.79	5.90	21.27	0.01	0.1802	0.424	39.5	28.71	0.30	28.73	28.85	28.80	23.68	176.61	
2/16/2023	6:14	18.77	0.00	0.0002	0.014	36.9	28.71	0.50	28.75	28.75	28.67	0.79	5.90	21.27	0.01	0.1796	0.424	39.5	28.71	0.30	28.73	28.85	28.80	23.64	176.31	
2/16/2023	6:15	18.64	0.00	0.0002	0.014	36.8	28.71	0.50	28.75	28.75	28.67	0.79	5.90	21.27	0.02	0.1808	0.425	39.5	28.71	0.30	28.73	28.85	28.80	23.72	176.89	
2/16/2023	6:16	19.04	0.00	0.0003	0.017	36.8	28.71	0.50	28.75	28.76	28.69	0.97	7.23	21.27	0.01	0.1812	0.426	39.5	28.71	0.30	28.73	28.85	28.80	23.74	177.10	
2/16/2023	6:17	17.86	0.00	0.0003	0.017	36.8	28.71	0.50	28.75	28.71	28.64	0.97	7.23	21.27	0.01	0.1860	0.431	39.4	28.71	0.30	28.73	28.85	28.80	24.05	179.44	
2/16/2023	6:18	18.53	0.00	0.0001	0.010	37.0	28.71	0.50	28.75	28.74	28.66	0.56	4.17	21.27	0.02	0.1782	0.422	39.4	28.71	0.30	28.73	28.85	28.80	23.54	175.64	
2/16/2023	6:19	18.81	0.00	0.0002	0.014	37.0	28.71	0.50	28.75	28.75	28.68	0.79	5.90	21.27	0.02	0.1859	0.431	39.5	28.71	0.30	28.73	28.85	28.80	24.05	179.37	
2/16/2023	6:20	18.02	0.00	0.0003	0.017	37.5	28.71	0.50	28.75	28.72	28.64	0.97	7.22	21.27	0.01	0.1842	0.429	40.7	28.71	0.30	28.73	28.85	28.80	23.97	178.35	
2/16/2023	6:21	18.81	0.00	0.0003	0.017	36.9	28.71	0.50	28.75	28.75	28.67	0.97	7.22	21.27	0.01	0.1778	0.422	39.9	28.71	0.30	28.73	28.85	28.80	23.53	175.36	
2/16/2023	6:22	18.31	0.00	0.0004	0.020	36.9	28.71	0.50	28.75	28.73	28.65	1.12	8.34	21.27	0.01	0.1825	0.427	39.4	28.71	0.30	28.73	28.85	28.80	23.82	177.75	
2/16/2023	6:23	18.31	0.00	0.0002	0.014	36.8	28.71	0.50	28.75	28.73	28.66	0.79	5.90	21.27	0.01	0.1842	0.429	39.5	28.71	0.30	28.73	28.85	28.80	23.94	178.56	
2/16/2023	6:24	19.00	0.00	0.0001	0.010	36.8	28.71	0.50	28.75	28.76	28.68	0.56	4.17	21.28	0.01	0.1897	0.436	39.4	28.71	0.30	28.73	28.85	28.80	24.29	181.22	
2/16/2023	6:25	18.98	0.00	0.0003	0.017	36.7	28.71	0.50	28.75	28.76	28.68	0.97	7.22	21.28	0.02	0.1799	0.424	39.4	28.71	0.30	28.73	28.85	28.80	23.65	176.47	
2/16/2023	6:26	18.62	0.00	0.0002	0.014	36.9	28.71	0.50	28.75	28.74	28.67	0.79	5.90	21.28	0.01	0.1861	0.431	39.5	28.71	0.30	28.73	28.85	28.80	24.06	179.48	
2/16/2023	6:27	19.12	0.00	0.0002	0.014	36.7	28.71	0.50	28.75	28.76	28.69	0.79	5.90	21.28	0.01	0.1801	0.424	39.4	28.71	0.30	28.73	28.85	28.80	23.67	176.59	
2/16/2023	6:28	19.21	0.00	0.0001	0.010	36.7	28.71	0.50	28.75	28.77	28.69	0.56	4.17	21.29	0.01	0.1812	0.426	39.5	28.71	0.30	28.73	28.85	28.80	23.74	177.10	
2/16/2023	6:29	17.88	0.00	0.0004	0.020	36.6	28.71	0.50	28.75	28.72	28.64	1.12	8.35	21.28	0.01	0.1828	0.428	39.2	28.71	0.30	28.73	28.85	28.80	23.84	177.94	
2/16/2023	6:30	18.41	0.00	0.0004	0.020	36.7	28.71	0.50	28.75	28.74	28.66	1.11	8.35	21.28	0.01	0.1833	0.428	39.3	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	6:31	18.81	0.00	0.0002	0.014	36.6	28.71	0.50	28.75	28.75	--	--	--	21.28	0.01	0.1889	0.435	39.3	28.71	0.30	28.73	28.85	28.80	24.24	180.88	
2/16/2023	6:32	18.04	0.00	0.0003	0.017	36.5	28.71	0.50	28.75	28.72	28.65	0.97	7.23	21.28	0.01	0.1881	0.434	39.3	28.71	0.30	28.73	28.85	28.80	24.18	180.49	
2/16/2023	6:33	18.84	0.00	0.0003	0.017	36.6	28.71	0.50	28.75	28.75	28.68	0.97	7.23	21.28	0.01	0.1900	0.436	39.3	28.71	0.30	28.73	28.85	28.80	24.31	181.39	
2/16/2023	6:34	18.48	0.00	0.0001	0.010	36.6	28.71	0.50	28.75	28.74	28.66	0.56	4.17	21.28	0.01	0.1923	0.439	39.2	28.71	0.30	28.73	28.85	28.80	24.45	182.50	
2/16/2023	6:35	18.75	0.00	0.0003	0.017	36.5	28.71	0.50	28.75	28.75	28.67	0.97	7.23	21.28	0.01	0.1885	0.434	39.2	28.71	0.30	28.73	28.85	28.80	24.21	180.71	
2/16/2023	6:36	18.68	0.00	0.0001	0.010	36.5	28.71	0.50	28.75	28.75	28.67	0.56	4.17	21.29	0.01	0.1941	0.441	39.1	28.71	0.30	28.73	28.85	28.80	24.56	183.39	
2/16/2023	6:37	18.78	0.00	0.0002	0.014	36.3	28.71	0.50	28.75	28.75	28.68	0.79	5.90	21.29	0.01	0.1972	0.444	39.0	28.71	0.30	28.73	28.85	28.80	24.75	184.88	
2/16/2023	6:38	17.88	0.00	0.0004	0.020	36.4	28.71	0.50	28.75	28.72	28.64	1.11	8.35	21.28	0.01	0.1955	0.442	38.8	28.71	0.30	28.73	28.85	28.80	24.64	184.10	
2/16/2023	6:39	18.73	0.00	0.0003	0.017	36.3	28.71	0.50	28.75	28.75	28.67	0.96	7.23	21.28	0.01	0.1871	0.433	38.8	28.71	0.30	28.73	28.85	28.80	24.11	180.11	
2/16/2023	6:40	19.10	0.00	0.0001	0.010	36.4	28.71	0.50	28.75	28.76	28.69	0.56	4.17	21.29	0.01	0.1869	0.432	38.8	28.71	0.30	28.73	28.85	28.80	24.09	180.01	
2/16/2023	6:41	19.06	0.00	0.0003	0.017	36.3	28.71	0.50	28.75	28.76	28.68	0.96	7.23	21.28	0.01	0.1944	0.441	38.7	28.71	0.30	28.73	28.85	28.80	24.57	183.60	
2/16/2023	6:42	19.06	0.00	0.0003	0.017	36.3	28.71	0.50	28.75	28.76	28.69	0.96	7.23	21.29	0.01	0.1873	0.433	38.7	28.71	0.30	28.73	28.85	28.80	24.12	180.21	
2/16/2023	6:43	19.22	0.00	0.0002	0.014	36.2	28.71	0.50	28.75	28.77	28.69	0.79	5.90	21.29	0.01	0.1906	0.437	38.7	28.71	0.30	28.73	28.85	28.80	24.33	181.81	
2/16/2023	6:44	19.09	0.00	0.0001	0.010	36.4	28.71	0.50	28.75	28.76	28.69	0.56	4.17	21.29	0.01	0.1954	0.442	38.8	28.71	0.30	28.73	28.85	28.80	24.64	184.07	
2/16/2023	6:45	19.13	0.00	0.0003	0.017	36.4	28.71	0.50	28.75	28.77	28.69	0.96	7.23	21.29	0.01	0.1866	0.432	38.9	28.71	0.30	28.73	28.85	28.80	24.08	179.85	
2/16/2023	6:46	17.66	0.00	0.0003	0.017	36.3	28.71	0.50	28.75	28.71	28.63	0.97	7.24	21.28	0.01	0.1912	0.437	38.7	28.71	0.30	28.73	28.85	28.80	24.37	182.09	
2/16/2023	6:47	18.50	0.00	0.0003	0.017	36.3	28.71	0.50	28.75	28.74	28.66	0.96	7.23	21.29	0.02	0.1909	0.437	38.7	28.71	0.30	28.73	28.85	28.80	24.35	181.93	
2/16/2023	6:48	19.07	0.00	0.0002	0.014	36.3	28.71	0.50	28.75	28.76	28.69	0.79	5.90	21.30	0.01	0.1996	0.447	38.7	28.71	0.30	28.73	28.85	28.80	24.90	186.03	
2/16/2023	6:49	19.31	0.00	0.0000	0.000	36.1	28.71	0.50	28.75	28.77	28.70	0.00	0.00	21.29	0.01	0.1969	0.444	38.6	28.71	0.30	28.73	28.85	28.80	24.73	184.80	
2/16/2023	6:50	18.68	0.00	0.0004	0.020	36.1	28.71	0.50	28.75	28.75	28.67	1.11	8.35	21.29	0.01	0.1924	0.439	38.5	28.71	0.30	28.73	28.85	28.80	24.44	182.69	
2/16/2023	6:51	19.23	0.00	0.0003	0.017	36.1	28.71	0.50	28.75	28.77	28.70	0.96	7.23	21.29	0.01	0.1914	0.437	38.5	28.71	0.30	28.73	28.85	28.80	24.38	182.22	
2/16/2023	6:52	18.44	0.00	0.0004	0.020	36.2	28.71	0.50	28.75	28.74	--	--	--	21.28	0.01	0.2006	0.448	38.5	28.71	0.30	28.73	28.85	28.80	24.95	186.55	
2/16/2023	6:53	18.82	0.00	0.0002	0.014	36.1	28.71	0.50	28.75	28.75	28.68	0.79	5.91	21.29	0.01	0.1928	0.439	38.6	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	6:54	19.29	0.00	0.0002	0.014	35.9	28.71	0.50	28.75	28.77	28.70	0.79	5.90	21.29	0.01	0.1913	0.437	38.5	28.71	0.30	28.73	28.85	28.80	24.37	182.18	
2/16/2023	6:55	18.26	0.01	0.0003	0.017	35.9	28.71	0.50	28.75	28.73	28.66	0.96	7.24	21.30	0.01	0.1914	0.437	38.4	28.71	0.30	28.73	28.85	28.80	24.37	182.24	
2/16/2023	6:56	18.72	0.01	0.0001	0.010	36.1	28.71	0.50	28.75	28.75	28.68	0.56	4.18	21.30	0.01	0.1996	0.447	38.4	28.71	0.30	28.73	28.85	28.80	24.89	186.09	
2/16/2023	6:57	18.51	0.01	0.0003	0.017	36.0	28.71	0.50	28.75	28.74	28.67	0.96	7.23	21.29	0.01	0.1940	0.440	38.4	28.71	0.30	28.73	28.85	28.80	24.54	183.47	
2/16/2023	6:58	18.51	0.01	0.0003	0.017	35.8	28.71	0.50	28.75	28.74	28.67	0.96	7.24	21.29	0.01	0.1966	0.443	38.6	28.71	0.30	28.73	28.85	28.80	24.71	184.67	
2/16/2023	6:59	19.22	0.01	0.0003	0.017	35.9	28.71	0.50	28.75	28.77	28.69	0.96	7.23	21.29	0.01	0.2003	0.448	38.4	28.71	0.30	28.73	28.85	28.80	24.93	186.42	
2/16/2023	7:00	19.04	0.01	0.0003	0.017	36.0	28.71	0.50	28.75	28.76	28.69	0.96	7.23	21.29	0.01	0.1985	0.446	38.3	28.71	0.30	28.73	28.85	28.80	24.82	185.60	
2/16/2023	7:01	18.93	0.01	0.0002	0.014	36.0	28.71	0.50	28.75	28.76	28.69	0.79	5.91	21.29	0.01	0.1959	0.443	38.3	28.71	0.30	28.73	28.85	28.80	24.65	184.40	
2/16/2023	7:02	19.14	0.01	0.0003	0.017	35.9	28.71	0.50	28.75	28.77	28.69	0.96	7.23	21.30	0.01	0.1974	0.444	38.2	28.71	0.30	28.73	28.85	28.80	24.75	185.11	
2/16/2023	7:03	18.72	0.01	0.0002	0.014	35.8	28.71	0.50	28.75	28.75	28.68	0.79	5.91	21.29	0.01	0.1951	0.442	38.2	28.71	0.30	28.73	28.85	28.80	24.60	184.04	
2/16/2023	7:04	17.90	0.01	0.0002	0.014	35.9	28.71	0.50	28.75	28.72	28.65	0.79	5.91	21.30	0.00	0.1964	0.443	38.2	28.71	0.30	28.73	28.85	28.80	24.68	184.66	
2/16/2023	7:05	18.06	0.01	0.0002	0.014	35.7	28.71	0.50	28.75	28.72	28.65	0.79	5.91	21.29	0.01	0.1990	0.446	38.1	28.71	0.30	28.73	28.85	28.80	24.84	185.88	
2/16/2023	7:06	18.04	0.00	0.0003	0.017	35.6	28.71	0.50	28.75	28.72	28.65	0.96	7.24	21.29	0.01	0.2004	0.448	38.3	28.71	0.30	28.73	28.85	28.80	24.94	186.50	
2/16/2023	7:07	18.61	0.00	0.0001	0.010	35.7	28.71	0.50	28.75	28.74	28.67	0.56	4.18	21.29	0.01	0.1912	0.437	38.2	28.71	0.30	28.73	28.85	28.80	24.36	182.19	
2/16/2023	7:08	18.58	0.00	0.0003	0.017	35.8	28.71	0.50	28.75	28.74	28.67	0.96	7.24	21.30	0.01	0.1960	0.443	38.3	28.71	0.30	28.73	28.85	28.80	24.66	184.45	
2/16/2023	7:09	19.10	0.00	0.0003	0.017	35.6	28.71	0.50	28.75	28.76	28.69	0.96	7.23	21.29	0.01	0.1959	0.443	38.1	28.71	0.30	28.73	28.85	28.80	24.65	184.42	
2/16/2023	7:10	18.61	0.00	0.0002	0.014	35.7	28.71	0.50	28.75	28.74	28.67	0.79	5.91	21.30	0.01	0.2018	0.449	38.1	28.71	0.30	28.73	28.85	28.80	25.02	187.18	
2/16/2023	7:11	18.27	0.00	0.0002	0.014	35.7	28.71	0.50	28.75	28.73	28.66	0.79	5.91	21.29	0.01	0.2051	0.453	38.2	28.71	0.30	28.73	28.85	28.80	25.23	188.69	
2/16/2023	7:12	18.89	0.00	0.0002	0.014	35.6	28.71	0.50	28.75	28.76	28.68	0.79	5.91	21.29	0.01	0.1999	0.447	38.0	28.71	0.30	28.73	28.85	28.80	24.90	186.33	
2/16/2023	7:13	17.43	0.00	0.0002	0.014	35.6	28.71	0.50	28.75	28.70	28.62	0.79	5.91	21.28	0.01	0.1959	0.443	38.1	28.71	0.30	28.73	28.85	28.80	24.65	184.44	
2/16/2023	7:14	18.25	0.00	0.0003	0.017	35.7	28.71	0.50	28.75	28.73	--	--	--	21.30	0.01	0.1997	0.447	38.2	28.71	0.30	28.73	28.85	28.80	24.89	186.21	
2/16/2023	7:15	18.69	0.00	0.0003	0.017	35.6	28.71	0.50	28.75	28.75	28.67	0.96	7.24	21.30	0.01	0.1976	0.445	38.1	28.71	0.30	28.73	28.85	28.80	24.76	185.23	
2/16/2023	7:16	19.11	0.00	0.0003	0.017	35.5	28.71	0.50	28.75	28.76	28.69	0.96	7.24	21.31	0.01	0.2009	0.448	38.3	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	7:17	18.94	0.00	0.0004	0.020	35.9	28.71	0.50	28.75	28.76	28.68	1.11	8.35	21.31	0.01	0.1947	0.441	39.0	28.71	0.30	28.73	28.85	28.80	24.60	183.70	
2/16/2023	7:18	18.98	0.00	0.0001	0.010	35.8	28.71	0.50	28.75	28.76	28.68	0.56	4.18	21.32	0.01	0.1985	0.446	39.1	28.71	0.30	28.73	28.85	28.80	24.84	185.46	
2/16/2023	7:19	19.05	0.00	0.0003	0.017	35.7	28.71	0.50	28.75	28.76	28.69	0.96	7.23	21.31	0.01	0.1965	0.443	38.9	28.71	0.30	28.73	28.85	28.80	24.71	184.56	
2/16/2023	7:20	18.78	0.00	0.0003	0.017	35.5	28.71	0.50	28.75	28.75	28.68	0.96	7.24	21.31	0.01	0.2011	0.448	38.3	28.71	0.30	28.73	28.85	28.80	24.98	186.81	
2/16/2023	7:21	18.69	0.00	0.0002	0.014	35.4	28.71	0.50	28.75	28.75	28.67	0.79	5.91	21.30	0.01	0.1973	0.444	38.1	28.71	0.30	28.73	28.85	28.80	24.74	185.08	
2/16/2023	7:22	17.57	0.00	0.0003	0.017	35.3	28.71	0.50	28.75

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	-
	Status	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	
		Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/16/2023	7:47	19.29	0.00	0.0002	0.014	35.4	28.71	0.50	28.75	28.77	28.70	0.79	5.91	21.32	0.02	0.1931	0.439	38.5	28.71	0.30	28.73	28.86	28.81	24.48	183.02	
2/16/2023	7:48	17.58	0.00	0.0002	0.014	35.3	28.71	0.50	28.75	28.70	28.63	0.79	5.91	21.32	0.02	0.1927	0.439	38.6	28.71	0.30	28.73	28.86	28.81	24.46	182.81	
2/16/2023	7:49	18.79	0.00	0.0001	0.010	35.6	28.71	0.50	28.75	28.75	28.68	0.56	4.18	21.32	0.02	0.2010	0.448	38.7	28.71	0.30	28.73	28.86	28.81	24.98	186.68	
2/16/2023	7:50	18.31	0.00	0.0001	0.010	35.6	28.71	0.50	28.75	28.73	28.66	0.56	4.18	21.31	0.02	0.1952	0.442	38.7	28.71	0.30	28.73	28.86	28.81	24.62	183.98	
2/16/2023	7:51	18.52	0.00	0.0001	0.010	35.5	28.71	0.50	28.75	28.74	28.67	0.56	4.18	21.31	0.02	0.1948	0.441	38.5	28.71	0.30	28.73	28.86	28.81	24.59	183.82	
2/16/2023	7:52	18.69	0.00	0.0003	0.017	35.5	28.71	0.50	28.75	28.75	28.67	0.96	7.24	21.32	0.02	0.2007	0.448	38.5	28.71	0.30	28.73	28.86	28.81	24.96	186.59	
2/16/2023	7:53	18.65	0.00	0.0002	0.014	35.5	28.71	0.50	28.75	28.75	28.67	0.79	5.91	21.31	0.01	0.1975	0.444	38.4	28.71	0.30	28.73	28.85	28.80	24.76	185.12	
2/16/2023	7:54	18.81	0.00	0.0001	0.010	35.4	28.71	0.50	28.75	28.75	28.68	0.56	4.18	21.30	0.02	0.2001	0.447	38.4	28.71	0.30	28.73	28.86	28.81	24.92	186.34	
2/16/2023	7:55	18.44	0.00	0.0003	0.017	35.4	28.71	0.50	28.75	28.74	28.66	0.96	7.24	21.31	0.02	0.2037	0.451	38.3	28.71	0.30	28.73	28.86	28.81	25.14	188.01	
2/16/2023	7:56	17.57	0.00	0.0002	0.014	35.4	28.71	0.50	28.75	28.70	28.63	0.79	5.91	21.31	0.02	0.1954	0.442	38.4	28.71	0.30	28.73	28.86	28.81	24.62	184.14	
2/16/2023	7:57	18.43	0.00	0.0003	0.017	35.5	28.71	0.50	28.75	28.74	28.66	0.96	7.24	21.31	0.02	0.1996	0.447	38.3	28.71	0.30	28.73	28.86	28.81	24.89	186.12	
2/16/2023	7:58	18.59	0.00	0.0003	0.017	35.3	28.71	0.50	28.75	28.74	--	--	--	21.31	0.02	0.1997	0.447	38.3	28.71	0.30	28.73	28.86	28.81	24.89	186.17	
2/16/2023	7:59	18.89	0.00	0.0003	0.017	35.4	28.71	0.50	28.75	28.76	28.68	0.96	7.24	21.31	0.02	0.1941	0.441	38.2	28.71	0.30	28.73	28.86	28.81	24.54	183.55	
2/16/2023	8:00	18.44	0.00	0.0003	0.017	35.5	28.71	0.50	28.75	28.74	28.66	0.96	7.24	21.31	0.02	0.1968	0.444	38.3	28.71	0.30	28.73	28.86	28.81	24.71	184.82	
2/16/2023	8:01	19.09	0.00	0.0001	0.010	35.4	28.71	0.50	28.75	28.76	28.69	0.56	4.18	21.32	0.02	0.1941	0.441	38.2	28.71	0.30	28.73	28.86	28.81	24.54	183.56	
2/16/2023	8:02	18.92	0.00	0.0001	0.010	35.3	28.71	0.50	28.75	28.76	28.68	0.56	4.18	21.32	0.02	0.1960	0.443	38.3	28.71	0.30	28.73	28.86	--	--	--	
2/16/2023	8:03	19.21	0.00	0.0003	0.017	35.4	28.71	0.50	28.75	28.77	28.69	0.96	7.24	21.32	0.02	0.2003	0.448	38.2	28.71	0.30	28.73	28.86	28.81	24.93	186.48	
2/16/2023	8:04	19.36	0.00	0.0006	0.024	35.3	28.71	0.50	28.75	28.77	28.70	1.36	10.23	21.32	0.02	0.2080	0.456	38.3	28.71	0.30	28.73	28.86	28.81	25.40	190.00	
2/16/2023	8:05	19.46	0.00	0.0003	0.017	35.3	28.71	0.50	28.75	28.78	28.70	0.96	7.24	21.32	0.02	0.1963	0.443	38.4	28.71	0.30	28.73	28.86	28.81	24.68	184.57	
2/16/2023	8:06	19.50	0.00	0.0001	0.010	35.3	28.71	0.50	28.75	28.78	28.71	0.56	4.18	21.32	0.02	0.1980	0.445	38.3	28.71	0.30	28.73	28.86	28.81	24.78	185.38	
2/16/2023	8:07	18.18	0.00	0.0001	0.010	35.4	28.71	0.50	28.75	28.73	28.65	0.56	4.18	21.32	0.02	0.1947	0.441	38.1	28.71	0.30	28.73	28.86	28.81	24.57	183.86	
2/16/2023	8:08	18.86	0.00	0.0002	0.014	35.4	28.71	0.50	28.75	28.75	28.68	0.79	5.91	21.33	0.02	0.1988	0.446	38.1	28.71	0.30	28.73	28.86	28.81	24.83	185.79	
2/16/2023	8:09	18.99	0.00	0.0003	0.017	35.3	28.71	0.50	28.75	28.76	28.69	0.96	7.24	21.34	0.02	0.1925	0.439	38.3	28.71	0.30	28.73	28.86	28.81	24.44	182.79	
2/16/2023	8:10	18.92	0.00	0.0004	0.020	35.3	28.71	0.50	28.75	28.76	28.68	1.11	8.36	21.33	0.02	0.1948	0.441	38.3	28.71	0.30	28.73	28.86	28.81	24.58	183.88	
2/16/2023	8:11	19.12	0.00	0.0001	0.010	35.4	28.71	0.50	28.75	28.76	28.69	0.56	4.18	21.33	0.02	0.1964	0.443	38.3	28.71	0.30	28.73	28.86	28.81	24.68	184.64	
2/16/2023	8:12	18.99	0.00	0.0001	0.010	35.4	28.71	0.50	28.75	28.76	28.69	0.56	4.18	21.33	0.02	0.1991	0.446	38.4	28.71	0.30	28.73	28.86	28.81	24.86	185.87	
2/16/2023	8:13	18.67	0.00	0.0003	0.017	35.3	28.71	0.50	28.75	28.75	28.67	0.96	7.24	21.33	0.02	0.1945	0.441	38.6	28.71	0.30	28.73	28.86	28.81	24.57	183.67	
2/16/2023	8:14	18.05	0.00	0.0003	0.017	35.2	28.71	0.50	28.75	28.72	28.65	0.96	7.24	21.32	0.02	0.1971	0.444	38.5	28.71	0.30	28.73	28.86	28.81	24.74	184.90	
2/16/2023	8:15	18.52	0.00	0.0003	0.017	35.2	28.71	0.50	28.75	28.74	28.67	0.96	7.24	21.33	0.02	0.1958	0.442	38.4	28.71	0.30	28.73	28.86	28.80	24.65	184.29	
2/16/2023	8:16	18.88	0.01	0.0002	0.014	35.2	28.71	0.50	28.75	28.76	28.68	0.79	5.91	21.33	0.02	0.1931	0.439	38.6	28.71	0.30	28.73	28.86	28.80	24.49	182.96	
2/16/2023	8:17	18.86	0.01	0.0003	0.017	35.3	28.71	0.50	28.75	28.76	28.68	0.96	7.24	21.33	0.02	0.1967	0.444	38.5	28.71	0.30	28.73	28.86	28.80	24.71	184.69	
2/16/2023	8:18	18.82	0.01	0.0002	0.014	35.4	28.71	0.50	28.75	28.75	28.68	0.79	5.91	21.34	0.02	0.1923	0.439	38.5	28.71	0.30	28.73	28.86	28.81	24.43	182.61	
2/16/2023	8:19	18.90	0.01	0.0001	0.010	35.5	28.71	0.50	28.75	28.76	28.68	0.56	4.18	21.34	0.02	0.1956	0.442	38.5	28.71	0.30	28.73	28.86	28.81	24.64	184.19	
2/16/2023	8:20	18.99	0.01	0.0001	0.010	35.4	28.71	0.50	28.75	28.76	--	--	--	21.34	0.03	0.1960	0.443	39.0	28.71	0.30	28.73	28.86	28.81	24.68	184.29	
2/16/2023	8:21	19.43	0.02	0.0001	0.010	35.3	28.71	0.50	28.75	28.78	28.71	0.56	4.18	21.35	0.02	0.1988	0.446	38.7	28.71	0.30	28.73	28.86	28.81	24.85	185.66	
2/16/2023	8:22	19.32	0.02		--	35.2	28.71	0.50	28.75	28.78	28.70	--	--	21.34	0.02	0.1880	0.434	38.8	28.71	0.30	28.73	28.86	28.81	24.16	180.53	
2/16/2023	8:23	17.86	0.02		--	35.2	28.71	0.50	28.75	28.72	28.64	--	--	21.34	0.01	0.1916	0.438	38.7	28.71	0.30	28.73	28.86	28.80	24.39	182.26	
2/16/2023	8:24	18.40	0.03		--	35.2	28.71	0.50	28.75	28.74	28.67	--	--	21.35	0.01		--	38.6	28.71	0.30	28.73	28.86	28.81	--	--	
2/16/2023	8:25	18.84	0.03		--	35.1	28.71	0.50	28.75	28.76	28.68	--	--	21.35	0.02		--	38.7	28.71	0.30	28.73	28.86	--	--	--	
2/16/2023	8:26	19.92	0.06		--	35.3	28.71	0.50	28.75	28.81	28.73	--	--	21.21	0.02		--	38.8	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	8:27	20.70	0.07		--	35.3	28.71	0.50	28.75	28.84	28.76	--	--	21.16	0.02		--	38.8	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	8:28	20.69	0.07		--	35.1	28.71	0.50	28.75	28.84	--	--	--	21.12	0.02		--	38.9	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	8:29	20.69	0.07		--	36.0	28.71	0.50	28.75	28.84	--	--	--	21.06	0.04		--	41.3	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	8:30	20.69	0.08		--	35.5	28.71	0.50	28.75	28.84	--	--	--	21.00	0.05		--	40.0	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	8:31	20.69	0.08		--	34.9	28.71	0.50	28.75	28.84	--	--	--	20.97	0.06		--	38.6	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	8:32	20.69	0.08		--	35.1	28.71	0.50	28.75	28.84	--	--	--	20.95	0.06		--	38.6	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	8:33	20.69	0.08		--	35.1	28.71	0.50	28.75	28.84	--	--	--	20.95	0.06	0.1980	0.445	38.7	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	8:34	20.69	0.09	0.0002	0.014	35.0	28.71	0.50	28.75	28.84	--	--	--	20.95	0.06	0.2149	0.464	38.4	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	8:35	20.69	0.09	0.0003	0.017	35.0	28.71	0.50	28.75	28.84	--	--	--	20.95	0.07	0.2049	0.453	38.6	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	8:36	20.70	0.09	0.0002	0.014	34.9	28.71	0.50	28.75	28.84	--	--	--	20.95	0.07	0.2067	0.455	38.4	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	8:37	20.70	0.09	0.0003	0.017	34.9	28.71	0.50	28.75	28.84	--	--	--	20.96	0.07	0.2104	0.459	38.3	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	8:38	20.71	0.10	0.0002	0.014	35.1	28.71	0.50	28.75	28.84	--	--	--	20.02	0.05	0.2075	0.456	38.2	28.71	0.30	28.73	28.81	--	--	--	
2/16/2023	8:39	20.69	0.10	0.0002	0.014	34.9	28.71	0.50	28.75	28.84	--	--	--	21.08	0.01	0.2200	0.469	38.0	28.71	0.30	28.73	28.84	--	--	--	
2/16/2023	8:40	20.69	0.10	0.0003	0.017	35.0	28.71	0.50	28.75	28.84	--	--	--	21.10	0.02	0.2076	0.456	38.0	28.71	0.30	28.73	28.85	28.80	25.38	189.90	
2/16/2023	8:41	20.69	0.10	0.0002	0.014	34.8	28.71	0.50	28.75	28.84	--	--	--	21.10	0.02	0.2100	0.458	37.9	28.71	0.30	28.73	28.85	28.80	25.52	191.04	
2/16/2023	8:42	20.69	0.11	0.0001	0.010	34.6	28.71	0.50	28.75	28.85	--	--	--	21.10	0.02	0.1964	0.443	37.8	28.71	0.30	28.73	28.85	28.80	24.68	184.75	
2/16/2023	8:43			0.0002	0.014	34.6	28.71	0.50	28.75	--	--	--	--			0.2036	0.451	37.9	28.71	0.30	28.73	--	--	--	--	
2/16/2023	8:44			0.0003	0.017	34.7	28.71	0.50	28.75	--	--	--	--			0.2013	0.449	38.0	28.71	0.30	28.73	--	--	--	--	
2/16/2023	8:45			0.0002	0.014	34.5	28.71	0.50	28.75	--	--	--	--			0.1987	0.446	38.2	28.71	0.30	28.73	--	--	--	--	
2/16/2023	8:46			0.0001	0.010	34.4	28.71	0.50	28.75	--	--	--	--			0.2039	0.452	38.0	28.71	0.30	28.73	--	--	--	--	
2/16/2023	8:47			0.0001	0.010	34.4	28.71	0.50	28.75	--	--	--	--			0.2019	0.449	38.0	28.71	0.30	28.73	--	--	--	--	
2/16/2023	8:48			0.0002	0.014	34.4	28.71	0.50	28.75	--	--	--	--			0.2056	0.453	38.0	28.71	0.30	28.73	--	--	--	--	
2/16/2023	8:49			0.0002	0.014	34.5	28.71	0.50	28.75	--	--	--	--			0.2058	0.454	37.9	28.71	0.30	28.73	--	--	--	--	
2/16/2023	8:50			0.0003	0.017	34.3	28.71	0.50	28.75	--	--	--	--			0.2056	0.453	38.1	28.71	0.30	28.73	--	--	--	--	
2/16/2023	8:51			0.0002	0.014	34.2	28.71	0.50	28.75	--	--	--	--			0.2025	0.450	38.0	28.71	0.30	28.73	--	--	--	--	
2/16/2023	8:52			0.0003	0.017	34.4	28.71	0.50	28.75	--	--	--	--			0.2014	0.449	37.9	28.71	0.30	28.73	--	--	--	--	
2/16/2023	8:53	18.90	0.08	0.0001	0.010	34.4	28.71	0.50	28.75	28.77	28.71	0.56	4.19	21.15	0.02	0.2027	0.450	38.0	28.71	0.30	28.73	28.85	28.80	25.07	187.67	
2/16/2023	8:54	18.61	0.08	0.0002	0.014	34.3	28.71	0.50	28.75	28.76	28.71	0.79	5.93	21.15	0.01	0.2017	0.449	37.9	28.71	0.30	28.73	28.85	28.80	25.01	187.24	
2/16/2023	8:55	18.74	0.08	0.0003	0.017	34.3	28.71	0.50	28.75	28.76	28.69	0.96	7.25	21.19	0.02	0.2052	0.453	38.0	28.71	0.30	28.73	28.85	28.80	25.23	188.82	
2/16/2023	8:56	19.33	0.08	0.0003	0.017	34.2	28.71	0.50	28.75	28.79	28.71	0.96	7.24	21.19	0.02	0.2045	0.452	37.9	28.71	0.30	28.73	28.85	28.80	25.18	188.51	
2/16/2023	8:57	18.16	0.08	0.0006	0.024	34.3	28.71	0.50	28.75	28.74	28.67	1.36	10.25	21.19	0.02	0.2022	0.450	37.9	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	8:58	18.84	0.08	0.0003	0.017	34.3	28.71	0.50	28.75	28.77	28.70	0.96	7.25	21.18	0.01	0.2034	0.451	37.9	28.71	0.30	28.73	28.85	28.80	25.11	188.02	
2/16/2023	8:59	19.18	0.07	0.0003	0.017	34.2	28.71	0.50	28.75	28.78	28.71	0.96	7.24	21.18	0.01	0.1975	0.444	37.9	28.71	0.30	28.73	28.85	28.80	24.75	185.26	
2/16/2023	9:00	19.05	0.06	0.0003	0.017	34.3	28.71	0.50	28.75	28.77	28.70	0.96	7.25	21.19	0.01	0.2036	0.451	37.9	28.71	0.30	28.73	28.85	28.80	25.13	188.08	
2/16/2023	9:01	17.59	0.05	0.0002	0.014	34.3	28.71	0.50	28.75	28.71	28.64	0.79	5.92	21.18	0.02	0.2009	0.448	38.0	28.71	0.30	28.73	28.85	28.80	24.96	186.82	
2/16/2023	9:02	18.65	0.04	0.0003	0.017	34.3	28.71	0.50	28.75	28.75	28.68	0.96	7.25	21.19	0.02	0.2002	0.447	37.9	28.71	0.30	28.73	28.85	28.80	24.91	186.51	
2/16/2023	9:03	18.50	0.04	0.0002	0.014	34.4	28.71	0.50	28.75	28.75	28.67	0.79	5.92	21.20	0.01	0.1995	0.447	37.9	28.71	0.30	28.73	28.85	28.80	24.87	186.19	
2/16/2023	9:04	19.02	0.04	0.0002	0.014	34.3	28.71	0.50	28.75	28.77	28.70	0.79	5.92	21.20	0.02	0.1995	0.447	37.9	28.71	0.30	28.73	28.85	28.80	24.87	186.18	
2/16/2023	9:05	18.89	0.04	0.0003	0.017	34.3	28.71	0.50	28.75	28.76	28.69	0.96	7.25	21.20	0.01	0.2031	0.451	38.0	28.71	0.30	28.73	28.85	28.80	25.10	187.84	
2/16/2023	9:06	19.22	0.04	0.0003	0.017	34.4	28.71	0.50	28.75	28.78	28.70	0.96	7.24	21.21	0.01	0.2006	0.448	38.1	28.71	0.30	28.73	28.85	28.80	24.94	186.67	
2/16/2023	9:07	19.31	0.04	0.0005	0.022	34.3	28.71	0.50	28.75	28.78	28.71	1.24	9.35	21.21	0.01	0.1971	0.444	38.0	28.71	0.30	28.73	28.85	28.80	24.72	185.04	
2/16/2023	9:08	19.30	0.04	0.0001	0.010	34.3	28.71	0.50	28.75	28.78	28.71	0.56	4.18	21.21	0.02	0.1987	0.446	38.1	28.71	0.30	28.73	28.85	28.80	24.82	185.78	
2/16/2023	9:09	18.61	0.04	0.0003	0.017	34.4	28.71	0.50	28.75	28.75	28.68	0.96	7.25	21.21	0.01	0.2005	0.448	37.9	28.71	0.30	28.73	28.85	28.80	24.93	186.65	
2/16/2023	9:10	17.73	0.04	0.0002	0.014	34.3	28.71	0.50	28.75	28.72	28.64	0.79	5.92	21.20	0.02	0.1972	0.444	38.0	28.71	0.30	28.73	28.85	28.80	24.73	185.09	
2/16/2023	9:11	18.66	0.04	0.0003	0.017	34.5	28.71	0.50	28.75	28.75	--	--	--	21.21	0.01	0.2040	0.452	38.1	28.71	0.30	28.73	28.85	28.80	25.15	188.24	
2/16/2023	9:12	18.98	0.04	0.0002	0.014	34.4	28.71	0.50	28.75	28.77	28.69	0.79	5.92	21.22	0.01	0.2044	0.452	38.2	28.71	0.30	28.73	28.85	28.80	25.18	188.41	
2/16/2023	9:13	19.00	0.04	0.0002	0.014	34.5	28.71	0.50	28.75	28.77	28.69	0.79	5.91	21.22	0.02	0.2043	0.452	38.2	28.71	0.30	28.73	28.85	28.80	25.17	188.37	
2/16/2023	9:14	19.06	0.04	0.0003	0.017	34.5	28.71	0.50	28.75	28.77	28.70	0.96	7.24	21.22	0.01	0.2017	0.449	38.1	28.71	0.30	28.73	28.85	28.80	25.01	187.17	
2/16/2023	9:15	19.31	0.05	0.0004	0.020	34.3	28.71	0.50	28.75	28.78	28.71	1.11	8.36	21.21	0.01	0.1983	0.445	38.3	28.71	0.30	28.73	28.85	28.80	24.81	185.55	
2/16/2023	9:16	18.79	0.05	0.0000	0.000	34.4	28.71	0.50	28.75	28.76	28.69	0.00	0.00	21.22	0.02	0.2030	0.451	38.1	28.71	0.30	28.73	28.85	28.80	25.09	187.77	
2/16/2023	9:17	18.96	0.05	0.0003	0.017	34.4	28.71	0.50	28.75	28.77	28.69	0.96	7.24	21.22	0.01	0.1988	0.446	38.0	28.71	0.30	28.73	28.85	28.80	24.83	185.84	
2/16/2023	9:18	18.40	0.05	0.0002	0.014	34.2	28.71	0.50	28.75	28.74	28.67	0.79	5.92	21.21	0.01	0.1984	0.445	38.0	28.71	0.30	28.73	28.85	28.80	24.81	185.65	
2/16/2023	9:19	17.99	0.05	0.0002	0.014	34.3	28.71	0.50	28.75	28.73	28.66	0.79	5.92	21.22	0.01	0.1998	0.447	38.1	28.71	0.30	28.73	28.85	28.80	24.90	186.29	
2/16/2023	9:20	19.00	0.05	0.0002	0.014	34.4	28.71	0.50	28.75	28.77	28.70	0.79	5.91	21.22	0.02	0.2033	0.451	38.0	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	9:21	18.87	0.05	0.0001	0.010	34.5	28.71	0.50	28.75	28.76	28.69	0.56	4.18	21.22	0.01	0.2008	0.448	38.0	28.71	0.30	28.73	28.85	28.80	24.95	186.78	
2/16/2023	9:22	18.93	0.05	0.0005	0.022	34.5	28.71	0.50	28.75	28.77	28.69	1.24	9.35	21.22	0.01	0.2021	0.450	38.1	28.71	0.30	28.73	28.85	28.80	25.04	187.35	
2/16/2023	9:23	18.85	0.06	0.0000	0.000	34.4	28.71	0.50	28.75	28.76	28.69	0.00	0.00	21.23	0.01	0.2017	0.449	37.9	28.71	0.30	28.73	28.85	28.80	25.01	187.21	
2/16/2023	9:24	19.05	0.06	0.0008	0.028	34.3	28.71	0.50	28.75	28.77	28.70	1.57	11.83	21.23	0.02	0.2025	0.450	38.0	28.71	0.30	28.73	28.85	28.80	25.06	187.55	
2/16/2023	9:25	19.00	0.06	0.0002	0.014	34.4	28.71	0.50	28.75	28.77	28.70	0.79	5.92	21.23	0.02	0.2032	0.451	37.9	28.71	0.30	28.73	28.85	28.80	25.10	187.90	
2/16/2023	9:26	19.25	0.06	0.0002	0.014	34.4	28.71	0.50	28.75	28.78	28.71	0.79	5.91	21.23	0.02	0.1997	0.447	38.0	28.71	0.

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	-
	Status	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	Valid
		Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	
2/16/2023	9:45	18.89	0.06	0.0002	0.014	34.5	28.71	0.50	28.75	28.77	28.69	0.79	5.91	21.25	0.02	0.2060	0.454	37.8	28.71	0.30	28.73	28.85	28.81	25.27	189.23	
2/16/2023	9:46	18.99	0.06	0.0004	0.020	34.6	28.71	0.50	28.75	28.77	28.70	1.11	8.36	21.25	0.01	0.2090	0.457	37.7	28.71	0.30	28.73	28.85	28.81	25.45	190.63	
2/16/2023	9:47	19.38	0.06	0.0003	0.017	34.4	28.71	0.50	28.75	28.78	28.71	0.96	7.24	21.25	0.01	0.2084	0.457	37.6	28.71	0.30	28.73	28.85	28.81	25.41	190.37	
2/16/2023	9:48	19.33	0.06	0.0003	0.017	34.4	28.71	0.50	28.75	28.78	28.71	0.96	7.24	21.25	0.02	0.2087	0.457	37.6	28.71	0.30	28.73	28.85	28.81	25.43	190.49	
2/16/2023	9:49	19.50	0.06	0.0008	0.028	34.5	28.71	0.50	28.75	28.79	28.72	1.57	11.82	21.25	0.02	0.2105	0.459	37.5	28.71	0.30	28.73	28.85	28.81	25.54	191.33	
2/16/2023	9:50	19.27	0.06	0.0002	0.014	34.4	28.71	0.50	28.75	28.78	28.71	0.79	5.91	21.25	0.02	0.2090	0.457	37.6	28.71	0.30	28.73	28.85	28.81	25.45	190.63	
2/16/2023	9:51	18.99	0.06	0.0002	0.014	34.4	28.71	0.50	28.75	28.77	28.70	0.79	5.91	21.25	0.01	0.2099	0.458	37.6	28.71	0.30	28.73	28.85	28.80	25.50	191.05	
2/16/2023	9:52	17.15	0.06	0.0002	0.014	34.3	28.71	0.50	28.75	28.70	28.62	0.79	5.92	21.25	0.01	0.2101	0.458	37.4	28.71	0.30	28.73	28.85	28.81	25.51	191.18	
2/16/2023	9:53	17.44	0.06	0.0002	0.014	34.4	28.71	0.50	28.75	28.71	28.64	0.79	5.92	21.25	0.02	0.2068	0.455	37.6	28.71	0.30	28.73	28.85	28.81	25.31	189.65	
2/16/2023	9:54	18.01	0.06	0.0001	0.010	34.5	28.71	0.50	28.75	28.73	--	--	--	21.25	0.01	0.2097	0.458	37.5	28.71	0.30	28.73	28.85	28.81	25.49	190.97	
2/16/2023	9:55	18.09	0.06	0.0000	0.000	34.5	28.71	0.50	28.75	28.73	28.66	0.00	0.00	21.24	0.01	0.2084	0.457	37.4	28.71	0.30	28.73	28.85	28.80	25.41	190.40	
2/16/2023	9:56	17.70	0.06	0.0002	0.014	34.7	28.71	0.50	28.75	28.72	28.65	0.79	5.92	21.25	0.01	0.2063	0.454	37.9	28.71	0.30	28.73	28.85	28.80	25.29	189.35	
2/16/2023	9:57	18.24	0.06	0.0001	0.010	34.3	28.71	0.50	28.75	28.74	28.67	0.56	4.19	21.26	0.01	0.2214	0.471	37.4	28.71	0.30	28.73	28.85	28.81	26.18	196.27	
2/16/2023	9:58	18.31	0.06	0.0003	0.017	34.2	28.71	0.50	28.75	28.74	28.67	0.96	7.25	21.25	0.02	0.2107	0.459	37.2	28.71	0.30	28.73	28.85	28.81	25.54	191.48	
2/16/2023	9:59	18.13	0.06	0.0004	0.020	34.1	28.71	0.50	28.75	28.73	28.66	1.11	8.37	21.26	0.02	0.2084	0.457	37.3	28.71	0.30	28.73	28.85	28.81	25.40	190.43	
2/16/2023	10:00	16.74	0.06	0.0003	0.017	34.1	28.71	0.50	28.75	28.68	28.61	0.96	7.26	21.25	0.02	0.2081	0.456	37.3	28.71	0.30	28.73	28.85	28.81	25.38	190.29	
2/16/2023	10:01	17.02	0.06	0.0003	0.017	34.3	28.71	0.50	28.75	28.69	28.62	0.96	7.26	21.26	0.01	0.2103	0.459	37.3	28.71	0.30	28.73	28.85	28.81	25.52	191.29	
2/16/2023	10:02	17.50	0.06	0.0004	0.020	34.3	28.71	0.50	28.75	28.71	28.64	1.11	8.38	21.26	0.02	0.2097	0.458	37.2	28.71	0.30	28.73	28.85	28.81	25.48	191.03	
2/16/2023	10:03	17.65	0.06	0.0002	0.014	34.5	28.71	0.50	28.75	28.72	28.64	0.79	5.92	21.27	0.01	0.2099	0.458	37.2	28.71	0.30	28.73	28.85	28.81	25.49	191.14	
2/16/2023	10:04	17.17	0.06	0.0002	0.014	34.3	28.71	0.50	28.75	28.70	28.63	0.79	5.92	21.27	0.01	0.2105	0.459	37.1	28.71	0.30	28.73	28.85	28.81	25.52	191.43	
2/16/2023	10:05	17.50	0.06	0.0002	0.014	34.2	28.71	0.50	28.75	28.71	28.64	0.79	5.92	21.27	0.02	0.2067	0.455	37.0	28.71	0.30	28.73	28.85	28.81	25.29	189.71	
2/16/2023	10:06	17.34	0.06	0.0001	0.010	34.2	28.71	0.50	28.75	28.70	28.63	0.56	4.19	21.26	0.01	0.2065	0.454	37.3	28.71	0.30	28.73	28.85	28.81	25.29	189.57	
2/16/2023	10:07	17.28	0.06	0.0001	0.010	34.2	28.71	0.50	28.75	28.70	28.63	0.56	4.19	21.26	0.02	0.2087	0.457	37.1	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	10:08	16.73	0.06	0.0005	0.022	34.2	28.71	0.50	28.75	28.68	28.61	1.24	9.37	21.26	0.02	0.2081	0.456	37.1	28.71	0.30	28.73	28.85	28.81	25.38	190.33	
2/16/2023	10:09	15.54	0.06	0.0002	0.014	34.1	28.71	0.50	28.75	28.63	28.56	0.79	5.93	21.25	0.02	0.2086	0.457	37.1	28.71	0.30	28.73	28.85	28.81	25.41	190.58	
2/16/2023	10:10	16.05	0.06	0.0001	0.010	34.2	28.71	0.50	28.75	28.65	28.58	0.56	4.19	21.26	0.01	0.2103	0.459	36.9	28.71	0.30	28.73	28.85	28.81	25.51	191.37	
2/16/2023	10:11	16.66	0.06	0.0002	0.014	34.2	28.71	0.50	28.75	28.68	28.61	0.79	5.93	21.26	0.02	0.2032	0.451	36.9	28.71	0.30	28.73	28.85	28.81	25.07	188.12	
2/16/2023	10:12	16.76	0.06	0.0001	0.010	34.2	28.71	0.50	28.75	28.68	28.61	0.56	4.19	21.26	0.02	0.2089	0.457	36.9	28.71	0.30	28.73	28.85	28.81	25.42	190.74	
2/16/2023	10:13	16.71	0.06	0.0002	0.014	34.2	28.71	0.50	28.75	28.68	28.61	0.79	5.93	21.26	0.01	0.2146	0.463	36.8	28.71	0.30	28.73	28.85	28.81	25.76	193.35	
2/16/2023	10:14	16.70	0.06	0.0002	0.014	34.2	28.71	0.50	28.75	28.68	28.61	0.79	5.93	21.26	0.02	0.2131	0.462	37.0	28.71	0.30	28.73	28.85	28.81	25.68	192.64	
2/16/2023	10:15	16.23	0.06	0.0002	0.014	34.2	28.71	0.50	28.75	28.66	28.59	0.79	5.93	21.26	0.02	0.2118	0.460	37.0	28.71	0.30	28.73	28.85	28.81	25.60	192.05	
2/16/2023	10:16	16.07	0.06	0.0000	0.000	34.3	28.71	0.50	28.75	28.65	--	--	--	21.26	0.02	0.2138	0.462	36.9	28.71	0.30	28.73	28.85	28.81	25.72	192.97	
2/16/2023	10:17	14.64	0.06	0.0002	0.014	34.2	28.71	0.50	28.75	28.60	28.53	0.79	5.93	21.26	0.02	0.2096	0.458	36.8	28.71	0.30	28.73	28.85	28.81	25.46	191.09	
2/16/2023	10:18	15.39	0.06	0.0001	0.010	34.2	28.71	0.50	28.75	28.63	28.56	0.56	4.19	21.27	0.01	0.2134	0.462	36.7	28.71	0.30	28.73	28.85	28.81	25.69	192.83	
2/16/2023	10:19	15.32	0.06	0.0001	0.010	34.3	28.71	0.50	28.75	28.62	28.55	0.56	4.19	21.27	0.02	0.2105	0.459	36.9	28.71	0.30	28.73	28.85	28.81	25.52	191.48	
2/16/2023	10:20	15.53	0.06	0.0001	0.010	34.4	28.71	0.50	28.75	28.63	28.56	0.56	4.19	21.27	0.02	0.2144	0.463	36.9	28.71	0.30	28.73	28.85	28.81	25.75	193.25	
2/16/2023	10:21	15.75	0.07	0.0001	0.010	34.2	28.71	0.50	28.75	28.64	28.58	0.56	4.20	21.27	0.02	0.2108	0.459	36.8	28.71	0.30	28.73	28.85	28.81	25.54	191.63	
2/16/2023	10:22	15.53	0.07	0.0002	0.014	34.4	28.71	0.50	28.75	28.63	28.56	0.79	5.93	21.26	0.02	0.2107	0.459	36.9	28.71	0.30	28.73	28.85	28.81	25.53	191.58	
2/16/2023	10:23	15.87	0.07	0.0001	0.010	34.5	28.71	0.50	28.75	28.65	28.58	0.56	4.19	21.27	0.01	0.2098	0.458	36.8	28.71	0.30	28.73	28.85	28.81	25.47	191.18	
2/16/2023	10:24	15.24	0.07	0.0002	0.014	34.4	28.71	0.50	28.75	28.62	28.55	0.79	5.93	21.26	0.02	0.2118	0.460	36.9	28.71	0.30	28.73	28.85	28.81	25.60	192.06	
2/16/2023	10:25	14.47	0.07	0.0001	0.010	34.2	28.71	0.50	28.75	28.59	28.52	0.56	4.20	21.27	0.02	0.2178	0.467	36.7	28.71	0.30	28.73	28.85	28.81	25.95	194.79	
2/16/2023	10:26	14.68	0.07	0.0004	0.020	34.3	28.71	0.50	28.75	28.60	28.53	1.11	8.39	21.27	0.02	0.2098	0.458	36.7	28.71	0.30	28.73	28.85	28.81	25.47	191.19	
2/16/2023	10:27	14.71	0.07	0.0002	0.014	34.4	28.71	0.50	28.75	28.60	28.53	0.79	5.93	21.28	0.02	0.2080	0.456	36.8	28.71	0.30	28.73	28.85	28.81	25.36	190.36	
2/16/2023	10:28	14.84	0.07	0.0001	0.010	34.2	28.71	0.50	28.75	28.60	28.55	0.56	4.20	21.27	0.02	0.2111	0.459	36.7	28.71	0.30	28.73	28.85	28.81	25.55	191.79	
2/16/2023	10:29	14.92	0.07	0.0000	0.000	34.4	28.71	0.50	28.75	28.61	28.56	0.00	0.00	21.27	0.02	0.2097	0.458	36.6	28.71	0.30	28.73	28.85	28.81	25.46	191.17	
2/16/2023	10:30	15.00	0.07	0.0002	0.014	34.3	28.71	0.50	28.75	28.61	28.56	0.79	5.94	21.27	0.02	0.2149	0.464	36.5	28.71	0.30	28.73	28.85	28.81	25.77	193.56	
2/16/2023	10:31	14.91	0.07	0.0001	0.010	34.4	28.71	0.50	28.75	28.61	28.55	0.56	4.20	21.27	0.02	0.2058	0.454	36.6	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	10:32	14.44	0.07	0.0002	0.014	34.3	28.71	0.50	28.75	28.59	28.53	0.79	5.94	21.27	0.02	0.2125	0.461	36.7	28.71	0.30	28.73	28.85	28.81	25.63	192.43	
2/16/2023	10:33	13.87	0.07	0.0001	0.010	34.3	28.71	0.50	28.75	28.57	28.51	0.56	4.20	21.27	0.02	0.2127	0.461	36.7	28.71	0.30	28.73	28.85	28.81	25.65	192.53	
2/16/2023	10:34	14.15	0.07	0.0002	0.014	34.1	28.71	0.50	28.75	28.58	28.52	0.79	5.94	21.27	0.02	0.2168	0.466	36.8	28.71	0.30	28.73	28.85	28.81	25.89	194.36	
2/16/2023	10:35	14.15	0.07	0.0002	0.014	34.2	28.71	0.50	28.75	28.58	28.52	0.79	5.94	21.27	0.02	0.2100	0.458	36.7	28.71	0.30	28.73	28.85	28.81	25.48	191.30	
2/16/2023	10:36	14.10	0.07	0.0002	0.014	34.2	28.71	0.50	28.75	28.58	28.53	0.79	5.95	21.27	0.02	0.2086	0.457	36.7	28.71	0.30	28.73	28.85	28.81	25.40	190.65	
2/16/2023	10:37	14.33	0.07	0.0002	0.014	34.2	28.71	0.50	28.75	28.58	28.54	0.79	5.95	21.27	0.02	0.2162	0.465	36.5	28.71	0.30	28.73	28.85	28.81	25.85	194.15	
2/16/2023	10:38	13.92	0.07	0.0001	0.010	34.2	28.71	0.50	28.75	28.57	--	--	--	21.27	0.02	0.2123	0.461	36.6	28.71	0.30	28.73	28.85	28.81	25.62	192.36	
2/16/2023	10:39	13.81	0.06	0.0001	0.010	34.2	28.71	0.50	28.75	28.56	28.51	0.56	4.21	21.27	0.02	0.2141	0.463	36.6	28.71	0.30	28.73	28.85	28.81	25.73	193.18	
2/16/2023	10:40	12.86	0.07	0.0001	0.010	34.3	28.71	0.50	28.75	28.53	28.47	0.56	4.21	21.27	0.02	0.2109	0.459	36.5	28.71	0.30	28.73	28.85	28.81	25.53	191.75	
2/16/2023	10:41	13.09	0.06	0.0002	0.014	34.4	28.71	0.50	28.75	28.53	28.48	0.79	5.95	21.27	0.03	0.2063	0.454	36.6	28.71	0.30	28.73	28.86	28.81	25.26	189.60	
2/16/2023	10:42	13.14	0.07	0.0002	0.014	34.8	28.71	0.50	28.75	28.54	28.49	0.79	5.95	21.27	0.02	0.2150	0.464	38.5	28.71	0.30	28.73	28.85	28.81	25.83	193.20	
2/16/2023	10:43	13.11	0.07	0.0002	0.014	34.9	28.71	0.50	28.75	28.54	28.48	0.79	5.94	21.28	0.02	0.2108	0.459	39.3	28.71	0.30	28.73	28.85	28.81	25.60	191.15	
2/16/2023	10:44	13.30	0.06	0.0002	0.014	34.7	28.71	0.50	28.75	28.54	28.51	0.79	5.96	21.27	0.03	0.2123	0.461	39.5	28.71	0.30	28.73	28.86	28.81	25.69	191.78	
2/16/2023	10:45	13.36	0.07	0.0002	0.014	34.4	28.71	0.50	28.75	28.55	28.51	0.79	5.95	21.28	0.02	0.2099	0.458	38.1	28.71	0.30	28.73	28.85	28.81	25.51	190.97	
2/16/2023	10:46	13.32	0.06	0.0004	0.020	34.1	28.71	0.50	28.75	28.54	28.50	1.11	8.42	21.28	0.02	0.2122	0.461	36.6	28.71	0.30	28.73	28.85	28.81	25.61	192.30	
2/16/2023	10:47	12.97	0.07	0.0001	0.010	34.1	28.71	0.50	28.75	28.53	28.48	0.56	4.21	21.27	0.02	0.2094	0.458	36.5	28.71	0.30	28.73	28.85	28.81	25.44	191.04	
2/16/2023	10:48	12.92	0.06	0.0002	0.014	34.1	28.71	0.50	28.75	28.53	28.48	0.79	5.95	21.27	0.02	0.2094	0.458	36.4	28.71	0.30	28.73	28.85	28.81	25.44	191.06	
2/16/2023	10:49	13.13	0.06	0.0001	0.010	34.2	28.71	0.50	28.75	28.53	28.49	0.56	4.21	21.28	0.03	0.2127	0.461	36.5	28.71	0.30	28.73	28.86	28.81	25.64	192.54	
2/16/2023	10:50	13.23	0.06	0.0003	0.017	34.1	28.71	0.50	28.75	28.54	28.49	0.97	7.29	21.28	0.02	0.2061	0.454	36.5	28.71	0.30	28.73	28.85	28.81	25.24	189.53	
2/16/2023	10:51	13.30	0.06	0.0001	0.010	34.3	28.71	0.50	28.75	28.54	28.52	0.56	4.22	21.28	0.03	0.2157	0.464	36.6	28.71	0.30	28.73	28.86	28.81	25.82	193.86	
2/16/2023	10:52	13.28	0.06	0.0003	0.017	34.4	28.71	0.50	28.75	28.54	28.50	0.97	7.29	21.28	0.03	0.2160	0.465	36.5	28.71	0.30	28.73	28.86	28.81	25.84	194.03	
2/16/2023	10:53	13.29	0.06	0.0002	0.014	34.4	28.71	0.50	28.75	28.54	28.50	0.79	5.95	21.28	0.03	0.2101	0.458	36.5	28.71	0.30	28.73	28.86	28.81	25.48	191.36	
2/16/2023	10:54	13.23	0.06	0.0002	0.014	34.3	28.71	0.50	28.75	28.54	28.50	0.79	5.95	21.28	0.03	0.2078	0.456	36.5	28.71	0.30	28.73	28.86	28.81	25.34	190.32	
2/16/2023	10:55	12.81	0.06	0.0001	0.010	34.3	28.71	0.50	28.75	28.52	28.48	0.56	4.21	21.27	0.03	0.2096	0.458	36.7	28.71	0.30	28.73	28.86	--	--	--	
2/16/2023	10:56	13.01	0.06	0.0002	0.014	34.4	28.71	0.50	28.75	28.53	28.49	0.79	5.95	21.28	0.03	0.2181	0.467	36.7	28.71	0.30	28.73	28.86	28.81	25.97	194.94	
2/16/2023	10:57	13.06	0.06	0.0001	0.010	34.5	28.71	0.50	28.75	28.53	28.48	0.56	4.21	21.28	0.02	0.2090	0.457	36.5	28.71	0.30	28.73	28.85	28.81	25.42	190.86	
2/16/2023	10:58	13.23	0.06	0.0002	0.014	34.5	28.71	0.50	28.75	28.54	28.51	0.79	5.96	21.29	0.03	0.2070	0.455	36.8	28.71	0.30	28.73	28.86	28.81	25.30	189.90	
2/16/2023	10:59	13.35	0.06	0.0001	0.010	34.5	28.71	0.50	28.75	28.54	28.52	0.56	4.21	21.29	0.03	0.2113	0.460	36.6	28.71	0.30	28.73	28.86	28.81	25.56	191.89	
2/16/2023	11:00	13.48	0.06	0.0000	0.000	34.5	28.71	0.50	28.75	28.55	--	--	--	21.28	0.02	0.2064	0.454	36.7	28.71	0.30	28.73	28.85	28.81	25.26	189.65	
2/16/2023	11:01	13.66	0.06	0.0000	0.000	34.5	28.71	0.50	28.75	28.56	28.52	0.00	0.00	21.29	0.02	0.2125	0.461	36.4	28.71	0.30	28.73	28.85	28.81	25.63	192.49	
2/16/2023	11:02	13.50	0.06	0.0001	0.010	34.6	28.71	0.50	28.75	28.55	28.51	0.56	4.21	21.29	0.03	0.2175	0.466	36.5	28.71	0.30	28.73	28.86	28.81	25.93	194.70	
2/16/2023	11:03	13.44	0.06	0.0001	0.010	34.6	28.71	0.50	28.75	28.55	28.50	0.56	4.21	21.29	0.03	0.2150	0.464	36.4	28.71	0.30	28.73	28.86	28.81	25.78	193.60	
2/16/2023	11:04	13.64	0.06	0.0002	0.014	34.7	28.71	0.50	28.75	28.56	28.50	0.79	5.94	21.28	0.03	0.2153	0.464	36.5	28.71	0.30	28.73	28.86	28.81	25.80	193.72	
2/16/2023	11:05	13.64	0.06	0.0003	0.017	34.6	28.71	0.50	28.75	28.56	28.50	0.97	7.28	21.28	0.03	0.2134	0.462	36.5	28.71	0.30	28.73	28.86	28.81	25.68	192.87	
2/16/2023	11:06	13.77	0.06	0.0001	0.010	34.6	28.71	0.50	28.75	28.56	28.52	0.56	4.21	21.29	0.03	0.2139	0.462	36.5	28.71	0.30	28.73	28.86	28.81	25.71	193.09	
2/16/2023	11:07	13.68	0.06	0.0002	0.014	34.7	28.71	0.50	28.75	28.56	28.52	0.79	5.95	21.28	0.03	0.2139	0.462	36.5	28.71	0.30	28.73	28.86	28.81	25.71	193.10	
2/16/2023	11:08	13.65	0.05	0.0001	0.010	34.7	28.71	0.50	28.75	28.55	28.51	0.56	4.21	21.28	0.03	0.2084	0.457	36.4	28.71	0.30	28.73	28.86	28.81	25.38	190.62	
2/16/2023	11:09	13.57	0.05	0.0001	0.010	34.5	28.71	0.50	28.75	28.55	28.50	0.56	4.20	21.29	0.03	0.2070	0.455	36.4	28.71	0.30	28.73	28.86	28.81	25.29	189.98	
2/16/2023	11:10	12.98	0.06	0.0002	0.014	34.7	28.71	0.50	28.75	28.53	28.49	0.79	5.95	21.28	0.03	0.2095	0.458	36.3	28.71	0.30	28.73	28.86	28.81	25.44	191.12	
2/16/2023	11:11	13.18	0.05	0.0002	0.014	34.7	28.71	0.50	28.75	28.54	28.49	0.79	5.95	21.30	0.03	0.2093	0.457	36.2	28.71	0.30	28.73	28.86	28.81	25.43	191.05	
2/16/2023	11:12	13.32	0.05	0.0003	0.017	34.6	28.71	0.50	28.75	28.54	28.49	0.97	7.28	21.29	0.03	0.2144	0.463	36.4	28.71	0.30	28.73	28.86	28.81	25.74	193.33	
2/16/2023	11:13	13.42	0.06	0.0003	0.017	34.6	28.71	0.50	28.75	28.55	28.52	0.97	7.29	21.29	0.03	0.2100	0.458	36.6	28.71	0.30	28.73	28.86	28.81	25.48	191.30	
2/16/2023	11:14	13.41	0.06	0.0001	0.010	34.7	28.71	0.50	28.75	28.55	28.51	0.56	4.21	21.30	0.03	0.2073	0.455	36.6	28.71	0.30	28.73	28.86	28.81	25.32	190.07	
2/16/2023	11:15	13.39	0.05	0.0002	0.014	34.7	28.71	0.50	28.75	28.54	28.50	0.79	5.95	21.30	0.03	0.2131	0.462	36.6	28.71	0.30	28.73	28.86	28.81	25.67	192.71	
2/16/2023	11:16	13.51	0.05	0.0002	0.014	34.6	28.71	0.50	28.75	28.55	28.50	0.79	5.95	21.29	0.03	0.2112	0.460	36.5	28.71	0.30	28.73	28.86	28.81	25.55	191.86	
2/16/2023	11:17	12.90	0.05	0.0003	0.017	34.8	28.71	0.50	28.75	28.52	28.48	0.97	7.29	21.30	0.03	0.2138	0.462	36.7	28.71	0.30	28.73	28.86	--	--	--	
2/16/2023	11:18	13.26	0.05	0.0001	0.010	34.8	28.71	0.50	28.75	28.54	28.49	0.56	4.20	21.29	0.03	0.2159	0.465	36.6	28.71	0.30	28.73	28.86	28.81	25.84	193.96	
2/16/2023	11:19	13.24	0.05

Alliance SOURCE TESTING

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet O_2 - Inlet % dry	Inlet CO_2 - Inlet % dry	Inlet Delta P in. W.C.	Inlet Sq Rt Delta P	Inlet Temperature (°F)	Inlet Barometric in. Hg	Inlet Stack Pressure in. W.C.	Inlet Stack Pressure in. Hg	Inlet Molecular Weight Md	Inlet Molecular Weight Mw	Inlet Velocity ft/sec	Inlet Flow Rate (DSCFM)	Outlet O_2 - Outlet % dry	Outlet CO_2 - Outlet % dry	Outlet Delta P in. W.C.	Outlet Sq Rt Delta P	Outlet Temperature (°F)	Outlet Barometric in. Hg	Outlet Stack Pressure in. W.C.	Outlet Stack Pressure in. Hg	Outlet Molecular Weight Md	Outlet Molecular Weight Mw	Outlet Velocity ft/sec	Outlet Flow Rate (DSCFM)	Point in Process
	Unit	%	%	in. W.C.		°F	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	DSCFM	%	%	in. W.C.		°F	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	DSCFM	-
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/16/2023	11:43	13.80	0.05	0.0000	0.000	34.6	28.71	0.50	28.75	28.56	--	--	--	21.30	0.03	0.2161	0.465	36.3	28.71	0.30	28.73	28.86	28.81	25.84	194.15	
2/16/2023	11:44	13.85	0.05	0.0000	0.000	34.7	28.71	0.50	28.75	28.56	28.52	0.00	0.00	21.31	0.03	0.2164	0.465	36.1	28.71	0.30	28.73	28.86	28.81	25.85	194.32	
2/16/2023	11:45	13.35	0.05	0.0001	0.010	34.7	28.71	0.50	28.75	28.54	28.49	0.56	4.21	21.31	0.03	0.2211	0.470	36.2	28.71	0.30	28.73	28.86	28.81	26.13	196.39	
2/16/2023	11:46	13.34	0.04	0.0002	0.014	34.9	28.71	0.50	28.75	28.54	28.49	0.79	5.94	21.31	0.03	0.2196	0.469	36.1	28.71	0.30	28.73	28.86	28.81	26.04	195.74	
2/16/2023	11:47	13.42	0.04	0.0001	0.010	34.8	28.71	0.50	28.75	28.54	28.50	0.56	4.20	21.30	0.03	0.2147	0.463	36.1	28.71	0.30	28.73	28.86	28.81	25.75	193.56	
2/16/2023	11:48	13.36	0.04	0.0002	0.014	34.7	28.71	0.50	28.75	28.54	28.49	0.79	5.95	21.29	0.03	0.2181	0.467	36.0	28.71	0.30	28.73	28.86	28.81	25.95	195.09	
2/16/2023	11:49	13.23	0.04	0.0001	0.010	34.6	28.71	0.50	28.75	28.54	28.50	0.56	4.21	21.29	0.03	0.2178	0.467	36.0	28.71	0.30	28.73	28.86	28.81	25.93	194.98	
2/16/2023	11:50	13.13	0.04	0.0001	0.010	34.6	28.71	0.50	28.75	28.53	28.49	0.56	4.21	21.29	0.03	0.2198	0.469	36.0	28.71	0.30	28.73	28.86	28.81	26.05	195.86	
2/16/2023	11:51	13.26	0.04	0.0001	0.010	34.8	28.71	0.50	28.75	28.54	28.50	0.56	4.21	21.29	0.03	0.2181	0.467	35.9	28.71	0.30	28.73	28.86	28.81	25.95	195.11	
2/16/2023	11:52	12.92	0.04	0.0000	0.000	34.6	28.71	0.50	28.75	28.52	28.49	0.00	0.00	21.28	0.03	0.2208	0.470	35.9	28.71	0.30	28.73	28.86	28.81	26.11	196.33	
2/16/2023	11:53	13.04	0.04	0.0003	0.017	34.7	28.71	0.50	28.75	28.53	28.48	0.97	7.29	21.29	0.03	0.2180	0.467	35.8	28.71	0.30	28.73	28.86	28.81	25.94	195.10	
2/16/2023	11:54	13.15	0.04	0.0003	0.017	34.7	28.71	0.50	28.75	28.53	28.50	0.97	7.29	21.29	0.03	0.2249	0.474	35.8	28.71	0.30	28.73	28.86	28.81	26.35	198.16	
2/16/2023	11:55	13.25	0.04	0.0003	0.017	34.8	28.71	0.50	28.75	28.54	28.50	0.97	7.29	21.29	0.03	0.2238	0.473	35.9	28.71	0.30	28.73	28.86	28.81	26.28	197.65	
2/16/2023	11:56	13.35	0.04	0.0002	0.014	34.7	28.71	0.50	28.75	28.54	28.52	0.79	5.96	21.29	0.03	0.2192	0.468	35.9	28.71	0.30	28.73	28.86	28.81	26.01	195.61	
2/16/2023	11:57	13.37	0.04	0.0000	0.000	34.5	28.71	0.50	28.75	28.54	28.51	0.00	0.00	21.29	0.03	0.2191	0.468	35.7	28.71	0.30	28.73	28.86	28.81	26.00	195.60	
2/16/2023	11:58	13.50	0.04	0.0002	0.014	34.7	28.71	0.50	28.75	28.55	28.51	0.79	5.95	21.29	0.03	0.2133	0.462	35.9	28.71	0.30	28.73	28.86	28.81	25.66	192.96	
2/16/2023	11:59	13.49	0.04	0.0002	0.014	34.4	28.71	0.50	28.75	28.55	28.51	0.79	5.95	21.29	0.03	0.2098	0.458	35.7	28.71	0.30	28.73	28.86	28.81	25.44	191.41	
2/16/2023	12:00	13.60	0.04	0.0042	0.065	34.6	28.71	0.50	28.75	28.55	28.50	3.61	27.26	21.29	0.03	0.2738	0.523	35.8	28.71	0.30	28.73	28.86	28.81	29.07	218.64	
2/16/2023	12:01	13.86	0.04	0.0039	0.062	34.4	28.71	0.50	28.75	28.56	28.52	3.48	26.27	21.29	0.03	0.2620	0.512	35.7	28.71	0.30	28.73	28.86	28.81	28.43	213.90	
2/16/2023	12:02	14.11	0.04	0.0034	0.058	34.5	28.71	0.50	28.75	28.57	28.52	3.25	24.50	21.29	0.03	0.2616	0.511	35.7	28.71	0.30	28.73	28.86	28.81	28.41	213.75	
2/16/2023	12:03	11.24	0.04	0.0030	0.055	34.6	28.71	0.50	28.75	28.46	28.41	3.06	23.07	21.10	0.03	0.2679	0.518	35.8	28.71	0.30	28.73	28.85	28.81	28.76	216.30	
2/16/2023	12:04	1.41	0.07	0.0025	0.050	34.6	28.71	0.50	28.75	28.07	28.01	2.81	21.19	21.02	0.03	0.2522	0.502	35.7	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	12:05	1.30	0.07	0.0025	0.050	34.6	28.71	0.50	28.75	28.06	--	--	--	20.94	0.03	0.2472	0.497	35.6	28.71	0.30	28.73	28.84	28.80	27.62	207.84	
2/16/2023	12:06	1.31	0.07	0.0003	0.017	34.6	28.71	0.50	28.75	28.06	28.00	0.97	7.34	20.37	0.02	0.2209	0.470	35.7	28.71	0.30	28.73	28.82	28.78	26.12	196.55	
2/16/2023	12:07	1.27	0.07	0.0001	0.010	34.9	28.71	0.50	28.75	28.06	27.99	0.56	4.23	19.93	0.02	0.2185	0.467	35.6	28.71	0.30	28.73	28.80	28.76	25.99	195.54	
2/16/2023	12:08	1.28	0.07	0.0003	0.017	34.8	28.71	0.50	28.75	28.06	28.04	0.97	7.36	19.92	0.03	0.2132	0.462	35.7	28.71	0.30	28.73	28.80	28.76	25.67	193.13	
2/16/2023	12:09	1.74	0.07	0.0002	0.014	34.8	28.71	0.50	28.75	28.08	28.06	0.80	6.01	21.09	0.02	0.2185	0.467	35.6	28.71	0.30	28.73	28.85	28.80	25.97	195.39	
2/16/2023	12:10	2.27	0.07	0.0000	0.000	34.7	28.71	0.50	28.75	28.10	28.08	0.00	0.00	21.25	0.03	0.2187	0.468	35.5	28.71	0.30	28.73	28.85	28.81	25.97	195.47	
2/16/2023	12:11	2.86	0.06	0.0000	0.000	34.9	28.71	0.50	28.75	28.12	28.10	0.00	0.00	21.25	0.03	0.2188	0.468	35.6	28.71	0.30	28.73	28.85	28.81	25.98	195.49	
2/16/2023	12:12	3.41	0.06	0.0002	0.014	34.8	28.71	0.50	28.75	28.15	28.13	0.79	6.00	21.26	0.03	0.2221	0.471	35.6	28.71	0.30	28.73	28.86	28.81	26.18	196.97	
2/16/2023	12:13	2.83	0.06	0.0001	0.010	34.9	28.71	0.50	28.75	28.12	28.10	0.56	4.24	21.26	0.03	0.2108	0.459	35.6	28.71	0.30	28.73	28.86	28.81	25.50	191.89	
2/16/2023	12:14	3.35	0.06	0.0003	0.017	34.8	28.71	0.50	28.75	28.14	28.08	0.97	7.32	21.26	0.02	0.2151	0.464	35.6	28.71	0.30	28.73	28.85	28.81	25.76	193.84	
2/16/2023	12:15	3.95	0.05	0.0001	0.010	34.8	28.71	0.50	28.75	28.17	28.10	0.56	4.23	21.26	0.03	0.2132	0.462	35.6	28.71	0.30	28.73	28.86	28.81	25.65	192.97	
2/16/2023	12:16	4.66	0.05	0.0002	0.014	34.7	28.71	0.50	28.75	28.19	28.17	0.79	6.00	21.27	0.03	0.2294	0.479	35.5	28.71	0.30	28.73	28.86	28.81	26.60	200.20	
2/16/2023	12:17	5.12	0.05	0.0000	0.000	34.6	28.71	0.50	28.75	28.21	28.19	0.00	0.00	21.27	0.03	0.2169	0.466	35.5	28.71	0.30	28.73	28.86	28.81	25.87	194.66	
2/16/2023	12:18	5.43	0.05	0.0002	0.014	34.9	28.71	0.50	28.75	28.23	28.20	0.79	5.99	21.27	0.03	0.2234	0.473	35.7	28.71	0.30	28.73	28.86	28.81	26.26	197.53	
2/16/2023	12:19	4.97	0.05	0.0001	0.010	34.7	28.71	0.50	28.75	28.21	28.19	0.56	4.24	21.27	0.03	0.2166	0.465	35.5	28.71	0.30	28.73	28.86	28.81	25.85	194.53	
2/16/2023	12:20	4.76	0.05	0.0002	0.014	34.6	28.71	0.50	28.75	28.20	28.18	0.79	6.00	21.27	0.03	0.2203	0.469	35.4	28.71	0.30	28.73	28.86	28.81	26.07	196.21	
2/16/2023	12:21	5.03	0.04	0.0001	0.010	34.6	28.71	0.50	28.75	28.21	28.19	0.56	4.24	21.27	0.03	0.2229	0.472	35.5	28.71	0.30	28.73	28.86	28.81	26.22	197.34	
2/16/2023	12:22	5.53	0.04	0.0002	0.014	34.7	28.71	0.50	28.75	28.23	28.21	0.79	5.99	21.27	0.03	0.2236	0.473	35.4	28.71	0.30	28.73	28.86	28.81	26.26	197.69	
2/16/2023	12:23	5.69	0.04	0.0001	0.010	34.5	28.71	0.50	28.75	28.23	28.21	0.56	4.24	21.27	0.03	0.2259	0.475	35.4	28.71	0.30	28.73	28.86	28.81	26.39	198.68	
2/16/2023	12:24	5.98	0.04	0.0002	0.014	34.5	28.71	0.50	28.75	28.25	28.23	0.79	5.99	21.27	0.03	0.2175	0.466	35.4	28.71	0.30	28.73	28.86	28.81	25.90	194.97	
2/16/2023	12:25	6.08	0.04	0.0002	0.014	34.5	28.71	0.50	28.75	28.25	28.23	0.79	5.99	21.28	0.02	0.2211	0.470	35.4	28.71	0.30	28.73	28.85	28.81	26.11	196.56	
2/16/2023	12:26	5.53	0.04	0.0002	0.014	34.5	28.71	0.50	28.75	28.23	28.21	0.79	5.99	21.27	0.03	0.2198	0.469	35.3	28.71	0.30	28.73	28.86	28.81	26.03	196.00	
2/16/2023	12:27	5.20	0.04	0.0001	0.010	34.5	28.71	0.50	28.75	28.21	--	--	--	21.27	0.03	0.2250	0.474	36.0	28.71	0.30	28.73	28.86	--	--	--	
2/16/2023	12:28	5.50	0.04	0.0001	0.010	34.4	28.71	0.50	28.75	28.23	28.21	0.56	4.24	21.27	0.02	0.2256	0.475	35.5	28.71	0.30	28.73	28.85	28.81	26.38	198.55	
2/16/2023	12:29	6.00	0.04	0.0001	0.010	34.3	28.71	0.50	28.75	28.25	28.23	0.56	4.24	21.27	0.02	0.2179	0.467	35.4	28.71	0.30	28.73	28.85	28.81	25.92	195.15	
2/16/2023	12:30	6.32	0.04	0.0001	0.010	34.4	28.71	0.50	28.75	28.26	28.24	0.56	4.24	21.26	0.03	0.2243	0.474	35.4	28.71	0.30	28.73	28.86	28.81	26.30	197.99	
2/16/2023	12:31	6.62	0.04	0.0001	0.010	34.5	28.71	0.50	28.75	28.27	28.25	0.56	4.23	21.26	0.02	0.2216	0.471	35.6	28.71	0.30	28.73	28.85	28.81	26.15	196.76	
2/16/2023	12:32	6.63	0.04	0.0000	0.000	34.4	28.71	0.50	28.75	28.27	28.25	0.00	0.00	21.26	0.02	0.2268	0.476	35.4	28.71	0.30	28.73	28.85	28.81	26.45	199.09	
2/16/2023	12:33	5.57	0.04	0.0003	0.017	34.5	28.71	0.50	28.75	28.23	28.21	0.97	7.34	21.26	0.02	0.2189	0.468	35.4	28.71	0.30	28.73	28.85	28.81	25.98	195.59	
2/16/2023	12:34	6.22	0.04	0.0001	0.010	34.5	28.71	0.50	28.75	28.26	28.23	0.56	4.24	21.27	0.02	0.2205	0.470	35.5	28.71	0.30	28.73	28.85	28.81	26.08	196.29	
2/16/2023	12:35	6.58	0.04	0.0001	0.010	34.4	28.71	0.50	28.75	28.27	28.25	0.56	4.24	21.26	0.03	0.2216	0.471	35.4	28.71	0.30	28.73	28.86	28.81	26.14	196.79	
2/16/2023	12:36	6.95	0.04	0.0002	0.014	34.4	28.71	0.50	28.75	28.28	28.26	0.79	5.99	21.26	0.03	0.2280	0.477	35.4	28.71	0.30	28.73	28.86	28.81	26.52	199.62	
2/16/2023	12:37	7.25	0.03	0.0001	0.010	34.4	28.71	0.50	28.75	28.29	28.27	0.56	4.23	21.26	0.02	0.2265	0.476	35.4	28.71	0.30	28.73	28.85	28.81	26.43	198.97	
2/16/2023	12:38	7.50	0.03	0.0001	0.010	34.5	28.71	0.50	28.75	28.30	28.28	0.56	4.23	21.26	0.02	0.2233	0.473	35.3	28.71	0.30	28.73	28.85	28.81	26.24	197.58	
2/16/2023	12:39	6.79	0.03	0.0000	0.000	34.4	28.71	0.50	28.75	28.28	28.26	0.00	0.00	21.27	0.02	0.2224	0.472	35.3	28.71	0.30	28.73	28.85	28.81	26.19	197.17	
2/16/2023	12:40	6.97	0.03	0.0001	0.010	34.4	28.71	0.50	28.75	28.28	28.26	0.56	4.23	21.26	0.03	0.2187	0.468	35.4	28.71	0.30	28.73	28.86	28.81	25.97	195.51	
2/16/2023	12:41	7.32	0.03	0.0002	0.014	34.4	28.71	0.50	28.75	28.30	28.27	0.79	5.98	21.27	0.02	0.2237	0.473	35.3	28.71	0.30	28.73	28.85	28.81	26.26	197.76	
2/16/2023	12:42	7.62	0.04	0.0000	0.000	34.6	28.71	0.50	28.75	28.31	28.28	0.00	0.00	21.27	0.02	0.2248	0.474	35.3	28.71	0.30	28.73	28.85	28.81	26.33	198.25	
2/16/2023	12:43	7.59	0.04	0.0001	0.010	34.4	28.71	0.50	28.75	28.31	28.29	0.56	4.23	21.27	0.02	0.2235	0.473	35.3	28.71	0.30	28.73	28.85	28.81	26.25	197.67	
2/16/2023	12:44	7.74	0.03	0.0002	0.014	34.5	28.71	0.50	28.75	28.31	28.29	0.79	5.98	21.27	0.02	0.2240	0.473	35.1	28.71	0.30	28.73	28.85	28.81	26.28	197.93	
2/16/2023	12:45	7.67	0.04	0.0001	0.010	34.5	28.71	0.50	28.75	28.31	28.28	0.56	4.23	21.27	0.02	0.2234	0.473	35.3	28.71	0.30	28.73	28.85	28.81	26.24	197.63	
2/16/2023	12:46	6.76	0.04	0.0001	0.010	34.4	28.71	0.50	28.75	28.28	28.24	0.56	4.23	21.26	0.02	0.2241	0.473	35.3	28.71	0.30	28.73	28.85	28.81	26.28	197.96	
2/16/2023	12:47	7.45	0.03	0.0000	0.000	34.5	28.71	0.50	28.75	28.30	28.27	0.00	0.00	21.26	0.02	0.2248	0.474	35.1	28.71	0.30	28.73	28.85	28.81	26.32	198.29	
2/16/2023	12:48	7.64	0.03	0.0000	0.000	34.4	28.71	0.50	28.75	28.31	28.27	0.00	0.00	21.26	0.02	0.2180	0.467	35.1	28.71	0.30	28.73	28.85	28.81	25.92	195.27	
2/16/2023	12:49	7.92	0.03	0.0001	0.010	34.4	28.71	0.50	28.75	28.32	--	--	--	21.26	0.02	0.2274	0.477	35.0	28.71	0.30	28.73	28.85	28.81	26.47	199.47	
2/16/2023	12:50	8.04	0.03	0.0001	0.010	34.5	28.71	0.50	28.75	28.33	28.31	0.56	4.23	21.26	0.02	0.2230	0.472	35.2	28.71	0.30	28.73	28.85	28.81	26.22	197.49	
2/16/2023	12:51	8.11	0.03	0.0002	0.014	34.4	28.71	0.50	28.75	28.33	28.30	0.79	5.98	21.27	0.02	0.2237	0.473	35.0	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	12:52	7.29	0.03	0.0002	0.014	34.5	28.71	0.50	28.75	28.30	28.26	0.79	5.98	21.26	0.02	0.2248	0.474	35.0	28.71	0.30	28.73	28.85	28.81	26.32	198.32	
2/16/2023	12:53	7.52	0.03	0.0000	0.000	34.4	28.71	0.50	28.75	28.31	28.27	0.00	0.00	21.26	0.01	0.2285	0.478	35.1	28.71	0.30	28.73	28.85	28.81	26.54	199.94	
2/16/2023	12:54	7.78	0.03	0.0000	0.000	34.3	28.71	0.50	28.75	28.32	28.28	0.00	0.00	21.26	0.02	0.2251	0.474	35.2	28.71	0.30	28.73	28.85	28.81	26.34	198.41	
2/16/2023	12:55	8.06	0.03	0.0000	0.000	34.5	28.71	0.50	28.75	28.33	28.29	0.00	0.00	21.26	0.02	0.2229	0.472	35.3	28.71	0.30	28.73	28.85	28.81	26.21	197.42	
2/16/2023	12:56	8.13	0.03	0.0002	0.014	34.5	28.71	0.50	28.75	28.33	28.31	0.79	5.98	21.26	0.02	0.2221	0.471	35.2	28.71	0.30	28.73	28.85	28.81	26.17	197.07	
2/16/2023	12:57	8.23	0.03	0.0001	0.010	34.4	28.71	0.50	28.75	28.33	28.31	0.56	4.23	21.27	0.02	0.2225	0.472	35.1	28.71	0.30	28.73	28.85	28.81	26.19	197.28	
2/16/2023	12:58	7.95	0.03	0.0001	0.010	34.3	28.71	0.50	28.75	28.32	28.29	0.56	4.23	21.26	0.02	0.2216	0.471	35.2	28.71	0.30	28.73	28.85	28.81	26.14	196.87	
2/16/2023	12:59	7.72	0.03	0.0003	0.017	34.5	28.71	0.50	28.75	28.31	28.27	0.97	7.32	21.26	0.02	0.2285	0.478	35.2	28.71	0.30	28.73	28.85	28.81	26.54	199.91	
2/16/2023	13:00	7.94	0.03	0.0000	0.000	34.3	28.71	0.50	28.75	28.32	28.28	0.00	0.00	21.26	0.01	0.2243	0.474	35.3	28.71	0.30	28.73	28.85	28.81	26.30	198.04	
2/16/2023	13:01	8.18	0.03	0.0001	0.010	34.5	28.71	0.50	28.75	28.33	28.28	0.56	4.22	21.27	0.02	0.2245	0.474	35.3	28.71	0.30	28.73	28.85	28.81	26.31	198.13	
2/16/2023	13:02	8.30	0.03	0.0001	0.010	34.7	28.71	0.50	28.75	28.34	28.30	0.56	4.22	21.26	0.02	0.2256	0.475	35.1	28.71	0.30	28.73	28.85	28.81	26.37	198.65	
2/16/2023	13:03	8.40	0.03	0.0000	0.000	34.6	28.71	0.50	28.75	28.34	28.31	0.00	0.00	21.26	0.02	0.2277	0.477	35.1	28.71	0.30	28.73	28.85	28.81	26.49	199.57	
2/16/2023	13:04	8.46	0.03	0.0001	0.010	34.4	28.71	0.50	28.75	28.34	28.30	0.56	4.22	21.26	0.02	0.2262	0.476	35.2	28.71	0.30	28.73	28.85	28.81	26.41	198.90	
2/16/2023	13:05	7.51	0.03	0.0001	0.010	34.5	28.71	0.50	28.75	28.31	28.26	0.56	4.22	21.26	0.01	0.2250	0.474	35.1	28.71	0.30	28.73	28.85	28.81	26.33	198.40	
2/16/2023	13:06	7.92	0.03	0.0002	0.014	34.5	28.71	0.50	28.75	28.32	28.27	0.79	5.97	21.26	0.01	0.2235	0.473	35.1	28.71	0.30	28.73	28.85	28.81	26.25	197.74	
2/16/2023	13:07	8.01	0.03	0.0002	0.014	34.6	28.71	0.50	28.75	28.33	28.28	0.79	5.97	21.26	0.02	0.2246	0.474	35.1	28.71	0.30	28.73	28.85	28.81	26.31	198.21	
2/16/2023	13:08	8.36	0.04	0.0002	0.014	34.7	28.71	0.50	28.75	28.34	28.30	0.79	5.97	21.26	0.01	0.2275	0.477	35.1	28.71	0.30	28.73	28.85	28.81	26.48	199.51	
2/16/2023	13:09	8.37	0.04	0.0001	0.010	34.5	28.71	0.50	28.75	28.34	28.31	0.56	4.23	21.26	0.01	0.2234	0.473	35.2	28.71	0.30	28.73	28.85	28.81	26.24	197.69	
2/16/2023	13:10	8.57	0.04	0.0001	0.010	34.8	28.71	0.50	28.75	28.35	28.31	0.56	4.22	21.26	0.01	0.2310	0.481	35.0	28.71	0.30	28.73	28.85	28.81	26.68	201.04	
2/16/2023	13:11	7.78	0.04	0.0000	0.000	34.5	28.71	0.50	28.75	28.32	--	--	--	21.26	0.02	0.2238	0.473	35.1	28.71	0.30	28.73	28.85	28.81	26.26	197.86	
2/16/2023	13:12	7.80	0.04	0.0002	0.014	34.6	28.71	0.50	28.75	28.32	28.27	0.79	5.97	21.25	0.02	0.2314	0.481	35.0	28.71	0.30	28.73	28.85	28.81	26.70	201.22	
2/16/2023	13:13	8.13	0.03	0.0003	0.017	34.5	28.71	0.50	28.75	28.33	28.28	0.97	7.31	21.26	0.01	0.2311	0.481	35.0	28.71	0.30	28.73	28.85	28.81	26.69	201.11	
2/16/2023	13:14	8.18	0.03	0.0003	0.017	34.6	28.71	0.50	28.75	28.33	28.28	0.97	7.31	21.26	0.02	0.2255	0.475	35.0	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	13:15	8.54	0.03	0.0001	0.010	34.7	28.71	0.50	28.75	28.35	28.29	0.56	4.22	21.26	0.01	0.2251	0.474	34.8	28.71	0.30	28.73	28.85	28.81	26.33	198.52	
2/16/2023	13:16	8.50	0.03	0.0001	0

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet % dry	CO_2 - Inlet % dry	Delta P in. W.C.	Sq Rt Delta P	Temperature (°F)	Barometric in. Hg	Stack Pressure in. W.C.	Stack Pressure in. Hg	Molecular Weight Md	Molecular Weight Mw	Velocity ft/sec	Flow Rate (DSCFM)	O_2 - Outlet % dry	CO_2 - Outlet % dry	Delta P in. W.C.	Sq Rt Delta P	Temperature (°F)	Barometric in. Hg	Stack Pressure in. W.C.	Stack Pressure in. Hg	Molecular Weight Md	Molecular Weight Mw	Velocity ft/sec	Flow Rate (DSCFM)	-
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/16/2023	13:41	9.20	0.02	0.0000	0.000	34.2	28.71	0.50	28.75	28.37	28.32	0.00	0.00	21.27	0.01	0.2313	0.481	34.7	28.71	0.30	28.73	28.85	28.82	26.69	201.31	
2/16/2023	13:42	8.14	0.02	0.0001	0.010	34.2	28.71	0.50	28.75	28.33	28.28	0.56	4.22	21.26	0.02	0.2350	0.485	34.7	28.71	0.30	28.73	28.85	28.82	26.90	202.91	
2/16/2023	13:43	8.11	0.02	0.0001	0.010	34.3	28.71	0.50	28.75	28.33	28.27	0.56	4.22	21.26	0.02	0.2323	0.482	34.5	28.71	0.30	28.73	28.85	28.82	26.74	201.77	
2/16/2023	13:44	7.05	0.02	0.0000	0.000	34.2	28.71	0.50	28.75	28.29	28.23	0.00	0.00	21.26	0.01	0.2373	0.487	34.6	28.71	0.30	28.73	28.85	28.82	27.03	203.91	
2/16/2023	13:45	6.44	0.02	0.0003	0.017	34.2	28.71	0.50	28.75	28.26	28.20	0.97	7.32	21.26	0.01	0.2422	0.492	34.4	28.71	0.30	28.73	28.85	28.82	27.30	206.06	
2/16/2023	13:46	5.84	0.02	0.0000	0.000	34.2	28.71	0.50	28.75	28.24	28.20	0.00	0.00	21.26	0.02	0.2375	0.487	34.4	28.71	0.30	28.73	28.85	28.82	27.03	204.06	
2/16/2023	13:47	5.53	0.03	0.0001	0.010	34.2	28.71	0.50	28.75	28.23	28.21	0.56	4.24	21.26	0.02	0.2361	0.486	34.5	28.71	0.30	28.73	28.85	28.82	26.96	203.43	
2/16/2023	13:48	4.38	0.03	0.0001	0.010	34.1	28.71	0.50	28.75	28.18	28.16	0.56	4.24	21.25	0.02	0.2383	0.488	34.5	28.71	0.30	28.73	28.85	28.82	27.08	204.38	
2/16/2023	13:49	4.37	0.03	0.0001	0.010	33.9	28.71	0.50	28.75	28.18	28.16	0.56	4.24	21.25	0.02	0.2446	0.495	34.2	28.71	0.30	28.73	28.85	28.82	27.43	207.13	
2/16/2023	13:50	4.23	0.03	0.0003	0.017	34.1	28.71	0.50	28.75	28.17	28.15	0.97	7.35	21.26	0.01	0.2426	0.493	34.2	28.71	0.30	28.73	28.85	28.82	27.32	206.28	
2/16/2023	13:51	4.02	0.03	0.0001	0.010	34.0	28.71	0.50	28.75	28.17	28.15	0.56	4.24	21.26	0.02	0.2439	0.494	34.1	28.71	0.30	28.73	28.85	28.82	27.39	206.84	
2/16/2023	13:52	4.04	0.04	0.0000	0.000	33.9	28.71	0.50	28.75	28.17	28.15	0.00	0.00	21.26	0.01	0.2462	0.496	33.8	28.71	0.30	28.73	28.85	28.82	27.51	207.89	
2/16/2023	13:53	3.93	0.04	0.0000	0.000	33.9	28.71	0.50	28.75	28.16	28.14	0.00	0.00	21.26	0.02	0.2448	0.495	33.8	28.71	0.30	28.73	28.85	28.82	27.43	207.32	
2/16/2023	13:54	3.35	0.04	0.0001	0.010	33.9	28.71	0.50	28.75	28.14	28.12	0.56	4.25	21.25	0.01	0.2433	0.493	33.9	28.71	0.30	28.73	28.85	28.82	27.35	206.66	
2/16/2023	13:55	3.41	0.04	0.0001	0.010	33.7	28.71	0.50	28.75	28.14	--	--	--	21.25	0.01	0.2430	0.493	33.9	28.71	0.30	28.73	28.85	28.82	27.33	206.52	
2/16/2023	13:56	3.37	0.04	0.0002	0.014	33.6	28.71	0.50	28.75	28.14	28.12	0.79	6.01	21.25	0.02	0.2405	0.490	33.8	28.71	0.30	28.73	28.85	28.82	27.19	205.47	
2/16/2023	13:57	3.28	0.04	0.0000	0.000	33.7	28.71	0.50	28.75	28.14	28.12	0.00	0.00	21.25	0.02	0.2471	0.497	33.9	28.71	0.30	28.73	28.85	28.82	27.56	208.25	
2/16/2023	13:58	2.99	0.04	0.0002	0.014	33.8	28.71	0.50	28.75	28.13	28.10	0.79	6.01	21.23	0.02	0.2464	0.496	33.9	28.71	0.30	28.73	28.85	28.82	27.52	207.97	
2/16/2023	13:59	2.95	0.05	0.0001	0.010	33.7	28.71	0.50	28.75	28.13	28.07	0.56	4.24	21.23	0.01	0.2444	0.494	33.8	28.71	0.30	28.73	28.85	28.82	27.41	207.15	
2/16/2023	14:00	3.02	0.05	0.0001	0.010	33.7	28.71	0.50	28.75	28.13	28.11	0.56	4.25	21.19	0.01	0.2439	0.494	33.8	28.71	0.30	28.73	28.85	28.81	27.38	206.94	
2/16/2023	14:01	4.60	0.04	0.0000	0.000	33.7	28.71	0.50	28.75	28.19	28.15	0.00	0.00	21.23	0.02	0.2462	0.496	33.8	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	14:02	7.66	0.04	0.0001	0.010	33.8	28.71	0.50	28.75	28.31	28.25	0.56	4.22	21.23	0.02	0.2449	0.495	33.8	28.71	0.30	28.73	28.85	28.82	27.44	207.35	
2/16/2023	14:03	10.94	0.04	0.0001	0.010	33.8	28.71	0.50	28.75	28.44	28.38	0.56	4.21	21.24	0.01	0.2495	0.499	33.7	28.71	0.30	28.73	28.85	28.82	27.69	209.32	
2/16/2023	14:04	12.49	0.04	0.0001	0.010	33.5	28.71	0.50	28.75	28.51	28.44	0.56	4.21	21.23	0.01	0.2468	0.497	33.8	28.71	0.30	28.73	28.85	28.82	27.54	208.16	
2/16/2023	14:05	12.30	0.04	0.0002	0.014	33.5	28.71	0.50	28.75	28.50	28.48	0.79	5.97	21.22	0.02	0.2420	0.492	33.8	28.71	0.30	28.73	28.85	28.82	27.27	206.12	
2/16/2023	14:06	12.04	0.04	0.0001	0.010	33.4	28.71	0.50	28.75	28.49	28.43	0.56	4.21	21.19	0.01	0.2453	0.495	33.8	28.71	0.30	28.73	28.85	28.82	27.46	207.54	
2/16/2023	14:07	13.36	0.04	0.0001	0.010	33.5	28.71	0.50	28.75	28.54	28.47	0.56	4.20	21.23	0.02	0.2563	0.506	33.7	28.71	0.30	28.73	28.85	28.82	28.06	212.15	
2/16/2023	14:08	14.71	0.03	0.0000	0.000	33.3	28.71	0.50	28.75	28.59	28.53	0.00	0.00	21.23	0.02	0.2466	0.497	33.7	28.71	0.30	28.73	28.85	28.82	27.53	208.09	
2/16/2023	14:09	15.43	0.03	0.0002	0.014	33.4	28.71	0.50	28.75	28.62	28.55	0.79	5.94	21.24	0.01	0.2441	0.494	33.8	28.71	0.30	28.73	28.85	28.82	27.39	207.01	
2/16/2023	14:10	15.48	0.03	0.0000	0.000	33.3	28.71	0.50	28.75	28.62	28.56	0.00	0.00	21.22	0.02	0.2464	0.496	33.7	28.71	0.30	28.73	28.85	28.82	27.52	208.01	
2/16/2023	14:11	13.91	0.03	0.0000	0.000	33.5	28.71	0.50	28.75	28.56	28.49	0.00	0.00	21.22	0.02	0.2463	0.496	33.6	28.71	0.30	28.73	28.85	28.82	27.51	207.99	
2/16/2023	14:12	12.94	0.03	0.0000	0.000	33.3	28.71	0.50	28.75	28.52	28.46	0.00	0.00	21.23	0.01	0.2385	0.488	33.6	28.71	0.30	28.73	28.85	28.82	27.07	204.68	
2/16/2023	14:13	13.91	0.03	0.0001	0.010	33.2	28.71	0.50	28.75	28.56	28.49	0.56	4.20	21.18	0.02	0.2458	0.496	33.6	28.71	0.30	28.73	28.85	28.82	27.48	207.78	
2/16/2023	14:14	15.16	0.03	0.0002	0.014	33.2	28.71	0.50	28.75	28.61	28.55	0.79	5.95	21.22	0.01	0.2462	0.496	33.7	28.71	0.30	28.73	28.85	28.82	27.50	207.94	
2/16/2023	14:15	15.80	0.03	0.0003	0.017	33.1	28.71	0.50	28.75	28.64	28.58	0.96	7.28	21.23	0.01	0.2456	0.496	33.8	28.71	0.30	28.73	28.85	28.82	27.48	207.64	
2/16/2023	14:16	15.49	0.03	0.0001	0.010	33.2	28.71	0.50	28.75	28.62	28.56	0.56	4.20	21.23	0.02	0.2424	0.492	33.8	28.71	0.30	28.73	28.85	28.82	27.29	206.31	
2/16/2023	14:17	14.19	0.03	0.0001	0.010	33.1	28.71	0.50	28.75	28.57	--	--	--	21.23	0.01	0.2433	0.493	33.9	28.71	0.30	28.73	28.85	28.82	27.35	206.68	
2/16/2023	14:18	13.47	0.03	0.0003	0.017	33.1	28.71	0.50	28.75	28.54	28.49	0.96	7.29	21.23	0.02	0.2526	0.503	33.7	28.71	0.30	28.73	28.85	28.82	27.86	210.62	
2/16/2023	14:19	14.12	0.03	0.0002	0.014	33.1	28.71	0.50	28.75	28.57	28.53	0.79	5.96	21.19	0.02	0.2505	0.500	33.7	28.71	0.30	28.73	28.85	28.82	27.74	209.75	
2/16/2023	14:20	15.13	0.03	0.0002	0.014	33.0	28.71	0.50	28.75	28.61	28.59	0.79	5.96	21.25	0.02	0.2440	0.494	33.7	28.71	0.30	28.73	28.85	28.82	27.38	206.99	
2/16/2023	14:21	15.76	0.03	0.0001	0.010	33.0	28.71	0.50	28.75	28.64	28.60	0.56	4.21	21.23	0.02	0.2517	0.502	33.7	28.71	0.30	28.73	28.85	28.82	27.81	210.25	
2/16/2023	14:22	15.51	0.03	0.0003	0.017	32.9	28.71	0.50	28.75	28.63	28.60	0.96	7.30	21.24	0.02	0.2669	0.517	33.7	28.71	0.30	28.73	28.85	28.82	28.64	216.50	
2/16/2023	14:23	14.50	0.02	0.0002	0.014	32.8	28.71	0.50	28.75	28.58	28.54	0.79	5.96	21.24	0.02	0.2569	0.507	33.7	28.71	0.30	28.73	28.85	28.82	28.09	212.42	
2/16/2023	14:24	13.92	0.02	0.0001	0.010	33.0	28.71	0.50	28.75	28.56	28.51	0.56	4.21	21.24	0.02	0.2570	0.507	33.5	28.71	0.30	28.73	28.85	28.82	28.10	212.48	
2/16/2023	14:25	13.63	0.02	0.0002	0.014	32.8	28.71	0.50	28.75	28.55	28.48	0.79	5.95	21.20	0.02	0.2465	0.496	33.5	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	14:26	15.04	0.02	0.0002	0.014	32.9	28.71	0.50	28.75	28.60	28.54	0.79	5.94	21.23	0.02	0.2470	0.497	33.6	28.71	0.30	28.73	28.85	28.82	27.55	208.30	
2/16/2023	14:27	15.80	0.02	0.0001	0.010	32.7	28.71	0.50	28.75	28.64	28.59	0.56	4.21	21.25	0.02	0.2575	0.507	33.4	28.71	0.30	28.73	28.85	28.82	28.12	212.72	
2/16/2023	14:28	16.21	0.02	0.0002	0.014	32.6	28.71	0.50	28.75	28.65	28.61	0.79	5.95	21.24	0.02	0.2475	0.497	33.5	28.71	0.30	28.73	28.85	28.82	27.57	208.51	
2/16/2023	14:29	15.40	0.02	0.0000	0.000	32.5	28.71	0.50	28.75	28.62	28.56	0.00	0.00	21.24	0.02	0.2503	0.500	33.7	28.71	0.30	28.73	28.85	28.82	27.73	209.64	
2/16/2023	14:30	14.41	0.02	0.0001	0.010	32.5	28.71	0.50	28.75	28.58	28.51	0.56	4.21	21.24	0.02	0.2449	0.495	33.4	28.71	0.30	28.73	28.85	28.82	27.42	207.43	
2/16/2023	14:31	13.85	0.02	0.0000	0.000	32.5	28.71	0.50	28.75	28.56	28.49	0.00	0.00	21.24	0.02	0.2599	0.510	33.4	28.71	0.30	28.73	28.85	28.82	28.25	213.72	
2/16/2023	14:32	14.10	0.02	0.0003	0.017	32.4	28.71	0.50	28.75	28.57	28.50	0.96	7.29	21.20	0.02	0.2535	0.503	33.5	28.71	0.30	28.73	28.85	28.82	27.90	211.05	
2/16/2023	14:33	15.22	0.02	0.0002	0.014	32.2	28.71	0.50	28.75	28.61	28.55	0.79	5.95	21.24	0.02	0.2483	0.498	33.6	28.71	0.30	28.73	28.85	28.82	27.62	208.83	
2/16/2023	14:34	15.93	0.02	0.0002	0.014	32.4	28.71	0.50	28.75	28.64	28.59	0.79	5.95	21.24	0.02	0.2525	0.502	33.7	28.71	0.30	28.73	28.85	28.82	27.85	210.58	
2/16/2023	14:35	15.88	0.02	0.0001	0.010	32.4	28.71	0.50	28.75	28.64	28.58	0.56	4.20	21.24	0.02	0.2463	0.496	33.6	28.71	0.30	28.73	28.85	28.82	27.51	208.02	
2/16/2023	14:36	14.87	0.02	0.0001	0.010	32.4	28.71	0.50	28.75	28.60	28.53	0.56	4.21	21.24	0.02	0.2456	0.496	35.3	28.71	0.30	28.73	28.85	28.82	27.52	207.35	
2/16/2023	14:37	14.16	0.03	0.0003	0.017	32.5	28.71	0.50	28.75	28.57	28.51	0.96	7.29	21.23	0.02	0.2449	0.495	35.4	28.71	0.30	28.73	28.85	28.82	27.48	207.04	
2/16/2023	14:38	13.73	0.02	0.0003	0.017	32.5	28.71	0.50	28.75	28.55	28.49	0.96	7.29	21.18	0.02	0.2540	0.504	33.5	28.71	0.30	28.73	28.85	28.82	27.93	211.27	
2/16/2023	14:39	14.69	0.02	0.0001	0.010	32.4	28.71	0.50	28.75	28.59	--	--	--	21.23	0.02	0.2448	0.495	33.5	28.71	0.30	28.73	28.85	28.82	27.42	207.39	
2/16/2023	14:40	14.51	0.02	0.0001	0.010	32.4	28.71	0.50	28.75	28.58	28.52	0.56	4.21	21.12	0.02	0.2442	0.494	33.5	28.71	0.30	28.73	28.85	28.82	27.39	207.17	
2/16/2023	14:41	14.37	0.02	0.0001	0.010	32.6	28.71	0.50	28.75	28.58	28.51	0.56	4.21	21.15	0.02	0.2511	0.501	33.6	28.71	0.30	28.73	28.85	28.82	27.77	210.06	
2/16/2023	14:42	14.26	0.02	0.0001	0.010	32.7	28.71	0.50	28.75	28.57	28.51	0.56	4.21	20.85	0.02	0.2415	0.491	33.7	28.71	0.30	28.73	28.84	28.80	27.25	206.00	
2/16/2023	14:43	10.78	0.02	0.0003	0.017	32.6	28.71	0.50	28.75	28.43	28.37	0.97	7.30	21.22	0.02	0.2477	0.498	33.8	28.71	0.30	28.73	28.85	28.82	27.59	208.55	
2/16/2023	14:44	9.07	0.03	0.0001	0.010	32.7	28.71	0.50	28.75	28.37	28.30	0.56	4.22	21.21	0.02	0.2463	0.496	33.8	28.71	0.30	28.73	28.85	28.82	27.51	207.97	
2/16/2023	14:45	7.94	0.03	0.0001	0.010	32.6	28.71	0.50	28.75	28.32	28.26	0.56	4.22	21.23	0.02	0.2480	0.498	33.8	28.71	0.30	28.73	28.85	28.82	27.61	208.70	
2/16/2023	14:46	7.16	0.03	0.0002	0.014	32.7	28.71	0.50	28.75	28.29	28.23	0.79	5.98	21.24	0.02	0.2413	0.491	33.7	28.71	0.30	28.73	28.85	28.82	27.23	205.87	
2/16/2023	14:47	6.31	0.03	0.0002	0.014	32.9	28.71	0.50	28.75	28.26	28.19	0.79	5.98	21.24	0.02	0.2453	0.495	33.8	28.71	0.30	28.73	28.85	28.82	27.45	207.57	
2/16/2023	14:48	5.57	0.04	0.0000	0.000	32.7	28.71	0.50	28.75	28.23	28.21	0.00	0.00	21.24	0.02	0.2504	0.500	33.9	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	14:49	5.05	0.04	0.0001	0.010	32.9	28.71	0.50	28.75	28.21	28.19	0.56	4.25	21.24	0.02	0.2482	0.498	33.9	28.71	0.30	28.73	28.85	28.82	27.62	208.76	
2/16/2023	14:50	3.47	0.04	0.0003	0.017	32.8	28.71	0.50	28.75	28.15	28.12	0.97	7.36	21.20	0.02	0.2446	0.495	33.8	28.71	0.30	28.73	28.85	28.82	27.42	207.26	
2/16/2023	14:51	3.48	0.04	0.0001	0.010	32.8	28.71	0.50	28.75	28.15	28.13	0.56	4.25	21.23	0.02	0.2496	0.500	34.0	28.71	0.30	28.73	28.85	28.82	27.70	209.32	
2/16/2023	14:52	3.12	0.04	0.0001	0.010	32.6	28.71	0.50	28.75	28.13	28.11	0.56	4.25	21.24	0.03	0.2522	0.502	33.7	28.71	0.30	28.73	28.85	28.82	27.84	210.46	
2/16/2023	14:53	2.70	0.04	0.0003	0.017	32.8	28.71	0.50	28.75	28.11	28.08	0.97	7.36	21.24	0.02	0.2477	0.498	33.8	28.71	0.30	28.73	28.85	28.82	27.59	208.57	
2/16/2023	14:54	2.71	0.04	0.0000	0.000	32.7	28.71	0.50	28.75	28.11	28.09	0.00	0.00	21.24	0.02	0.2456	0.496	33.8	28.71	0.30	28.73	28.85	28.82	27.47	207.68	
2/16/2023	14:55	2.40	0.04	0.0003	0.017	32.9	28.71	0.50	28.75	28.10	28.08	0.97	7.37	21.20	0.02	0.2482	0.498	33.8	28.71	0.30	28.73	28.85	28.82	27.62	208.77	
2/16/2023	14:56	2.40	0.04	0.0000	0.000	32.8	28.71	0.50	28.75	28.10	28.08	0.00	0.00	21.24	0.02	0.2530	0.503	33.8	28.71	0.30	28.73	28.85	28.82	27.88	210.79	
2/16/2023	14:57	2.67	0.04	0.0001	0.010	33.0	28.71	0.50	28.75	28.11	28.09	0.56	4.25	21.23	0.02	0.2400	0.490	33.7	28.71	0.30	28.73	28.85	28.82	27.16	205.31	
2/16/2023	14:58	3.05	0.04	0.0001	0.010	32.9	28.71	0.50	28.75	28.13	28.11	0.56	4.25	21.24	0.02	0.2498	0.500	33.8	28.71	0.30	28.73	28.85	28.82	27.71	209.42	
2/16/2023	14:59	4.01	0.04	0.0003	0.017	32.9	28.71	0.50	28.75	28.17	28.14	0.97	7.36	21.24	0.02	0.2532	0.503	33.8	28.71	0.30	28.73	28.85	28.82	27.89	210.86	
2/16/2023	15:00	4.89	0.04	0.0000	0.000	32.9	28.71	0.50	28.75	28.20	--	--	--	21.22	0.02	0.2464	0.496	33.7	28.71	0.30	28.73	28.85	28.82	27.51	208.04	
2/16/2023	15:01	7.18	0.04	0.0001	0.010	32.9	28.71	0.50	28.75	28.29	28.27	0.56	4.24	21.24	0.03	0.2429	0.493	33.7	28.71	0.30	28.73	28.85	28.82	27.32	206.54	
2/16/2023	15:02	9.85	0.04	0.0005	0.022	32.9	28.71	0.50	28.75	28.40	28.38	1.25	9.46	21.25	0.02	0.2481	0.498	33.6	28.71	0.30	28.73	28.85	28.82	27.61	208.76	
2/16/2023	15:03	12.08	0.03	0.0000	0.000	32.8	28.71	0.50	28.75	28.49	28.47	0.00	0.00	21.25	0.02	0.2482	0.498	33.7	28.71	0.30	28.73	28.85	28.82	27.62	208.78	
2/16/2023	15:04	12.97	0.03	0.0001	0.010	32.8	28.71	0.50	28.75	28.52	28.50	0.56	4.22	21.25	0.02	0.2429	0.493	34.0	28.71	0.30	28.73	28.85	28.82	27.33	206.49	
2/16/2023	15:05	13.12	0.03	0.0001	0.010	32.8	28.71	0.50	28.75	28.53	28.51	0.56	4.22	21.26	0.02	0.2414	0.491	34.0	28.71	0.30	28.73	28.85	28.82	27.24	205.85	
2/16/2023	15:06	13.00	0.03	0.0002	0.014	32.9	28.71	0.50	28.75	28.52	28.48	0.79	5.96	21.23	0.02	0.2366	0.486	33.9	28.71	0.30	28.73	28.85	28.82	26.97	203.82	
2/16/2023	15:07	13.81	0.03	0.0003	0.017	33.0	28.71	0.50	28.75	28.56	28.54	0.96	7.31	21.26	0.02	0.2446	0.495	33.9	28.71	0.30	28.73	28.85	28.82	27.42	207.23	
2/16/2023	15:08	14.76	0.03	0.0004	0.020	33.0	28.71	0.50	28.75	28.60	28.57	1.11	8.43	21.26	0.02	0.2511	0.501	34.0	28.71	0.30	28.73	28.85	28.82	27.78	209.96	
2/16/2023	15:09	15.30	0.03	0.0003	0.017	33.0	28.71	0.50	28.75	28.62	28.60	0.96	7.30	21.27	0.03	0.2410	0.491	34.4	28.71	0.30	28.73	28.86	28.82	27.23	205.58	
2/16/2023	15:10	14.63	0.02	0.0002	0.014	33.0	28.71	0.50	28.75	28.59	28.56	0.79	5.96	21.26	0.02	0.2381	0.488	34.0	28.71	0.30	28.73	28.85	28.82	27.06	204.44	
2/16/2023	15:11	13.78	0.03	0.0005	0.022	33.1	28.71	0.50	28.75	28.56	28.51	1.25	9.41	21.25	0.02	0.2385	0.488	34.1	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	15:12	13.41	0.03	0.0002	0.014	32.9	28.71	0.50	28.75	28.54	28.48	0.79	5.95	21.24	0.02	0.2416	0.492	34.0	28.71	0.30	28.73	28.85	28.82	27.25	205.94	
2/16/2023	15:13	14.39	0.03	0.0005	0.022	33.2	28.71	0.50	28.75	28.58	28.51	1.25	9.40	21.26	0.02	0.2416	0.492	34.2	28.71	0.30	28.73	28.85	28.82	27.26	205.91	
2/16/2023	15:14	15.28	0.03	0.0004	0.020	32.9	28.71	0.50	28.75	28.62	28.56	1.11	8.41	21.26	0.02	0.2397	0.490	34.3	28.71	0.30	28.73	28.85	28.82	27.15	205.06	
2/16/2023	15:15	14.35	0.03	0.0004	0.020	32.8	28.71	0.50

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	-
	Status	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	Valid
		Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	
2/16/2023	15:39	4.45	0.00	0.0003	0.017	32.8	28.71	0.50	28.75	28.18	28.11	0.97	7.33	21.31	0.02	0.2447	0.495	34.7	28.71	0.30	28.73	28.86	28.82	27.45	207.11	
2/16/2023	15:40	4.79	0.00	0.0002	0.014	32.7	28.71	0.50	28.75	28.19	28.13	0.79	5.99	21.31	0.02	0.2444	0.494	34.7	28.71	0.30	28.73	28.86	28.82	27.43	206.99	
2/16/2023	15:41	5.04	0.00	0.0003	0.017	32.8	28.71	0.50	28.75	28.20	28.14	0.97	7.33	21.31	0.02	0.2480	0.498	34.5	28.71	0.30	28.73	28.86	28.82	27.62	208.56	
2/16/2023	15:42	5.55	0.00	0.0002	0.014	32.9	28.71	0.50	28.75	28.22	28.16	0.79	5.98	21.31	0.01	0.2480	0.498	34.9	28.71	0.30	28.73	28.85	28.82	27.64	208.47	
2/16/2023	15:43	5.93	0.01	0.0001	0.010	32.7	28.71	0.50	28.75	28.24	28.18	0.56	4.23	21.31	0.02	0.2389	0.489	34.9	28.71	0.30	28.73	28.86	28.83	27.12	204.62	
2/16/2023	15:44	6.31	0.01	0.0002	0.014	32.9	28.71	0.50	28.75	28.25	--	--	--	21.31	0.02	0.2501	0.500	34.3	28.71	0.30	28.73	28.86	28.82	27.74	209.46	
2/16/2023	15:45	6.58	0.01	0.0004	0.020	32.9	28.71	0.50	28.75	28.26	28.20	1.12	8.45	21.31	0.01	0.2477	0.498	34.3	28.71	0.30	28.73	28.85	28.82	27.60	208.47	
2/16/2023	15:46	6.71	0.00	0.0003	0.017	32.8	28.71	0.50	28.75	28.27	28.20	0.97	7.32	21.31	0.02	0.2482	0.498	34.4	28.71	0.30	28.73	28.86	28.82	27.63	208.66	
2/16/2023	15:47	7.35	0.01	0.0001	0.010	32.7	28.71	0.50	28.75	28.30	28.24	0.56	4.23	21.31	0.02	0.2478	0.498	34.3	28.71	0.30	28.73	28.86	28.82	27.61	208.51	
2/16/2023	15:48	7.75	0.01	0.0003	0.017	32.8	28.71	0.50	28.75	28.31	28.25	0.97	7.32	21.31	0.02	0.2553	0.505	34.2	28.71	0.30	28.73	28.86	28.82	28.02	211.66	
2/16/2023	15:49	8.09	0.01	0.0003	0.017	32.9	28.71	0.50	28.75	28.33	28.26	0.97	7.31	21.32	0.01	0.2524	0.502	34.3	28.71	0.30	28.73	28.85	28.82	27.86	210.45	
2/16/2023	15:50	8.16	0.01	0.0001	0.010	32.6	28.71	0.50	28.75	28.33	28.27	0.56	4.23	21.31	0.01	0.2466	0.497	34.2	28.71	0.30	28.73	28.85	28.82	27.54	208.03	
2/16/2023	15:51	8.50	0.01	0.0004	0.020	32.7	28.71	0.50	28.75	28.34	28.28	1.12	8.45	21.31	0.02	0.2601	0.510	34.5	28.71	0.30	28.73	28.86	28.82	28.29	213.59	
2/16/2023	15:52	8.83	0.01	0.0003	0.017	32.6	28.71	0.50	28.75	28.35	28.30	0.97	7.32	21.32	0.01	0.2577	0.508	34.1	28.71	0.30	28.73	28.85	28.82	28.15	212.68	
2/16/2023	15:53	9.09	0.01	0.0387	0.197	32.5	28.71	0.50	28.75	28.37	28.30	10.99	83.06	21.31	0.01	0.2576	0.508	34.1	28.71	0.30	28.73	28.85	28.82	28.14	212.63	
2/16/2023	15:54	9.38	0.01	0.0314	0.177	32.5	28.71	0.50	28.75	28.38	28.32	9.89	74.84	21.32	0.01	0.4313	0.657	33.9	28.71	0.30	28.73	28.85	28.82	36.41	275.18	
2/16/2023	15:55	9.73	0.01	0.0251	0.158	32.4	28.71	0.50	28.75	28.39	28.33	8.84	66.89	21.32	0.02	0.4208	0.649	34.1	28.71	0.30	28.73	28.86	28.82	35.97	271.76	
2/16/2023	15:56	9.83	0.01	0.0197	0.140	32.3	28.71	0.50	28.75	28.39	28.34	7.83	59.26	21.31	0.01	0.4150	0.644	33.9	28.71	0.30	28.73	28.85	28.82	35.71	269.96	
2/16/2023	15:57	9.74	0.26	0.0164	0.128	32.4	28.71	0.50	28.75	28.43	28.37	7.14	54.03	20.29	0.02	0.3891	0.624	33.9	28.71	0.30	28.73	28.81	28.78	34.61	261.56	
2/16/2023	15:58	9.96	0.60	0.0128	0.113	32.7	28.71	0.50	28.75	28.49	28.43	6.31	47.66	18.18	0.12	0.3711	0.609	33.9	28.71	0.30	28.73	28.75	--	--	--	
2/16/2023	15:59	9.97	0.60	0.0102	0.101	33.1	28.71	0.50	28.75	28.49	28.44	5.63	42.54	18.51	0.19	0.3683	0.607	34.1	28.71	0.30	28.73	28.77	28.74	33.70	254.60	
2/16/2023	16:00	9.97	0.60	0.0073	0.085	33.3	28.71	0.50	28.75	28.49	28.43	4.77	35.95	18.73	0.17	0.3491	0.591	33.7	28.71	0.30	28.73	28.78	28.74	32.80	247.93	
2/16/2023	16:01	10.04	0.60	0.0054	0.073	33.5	28.71	0.50	28.75	28.50	28.44	4.10	30.93	18.96	0.16	0.3334	0.577	33.7	28.71	0.30	28.73	28.78	28.75	32.04	242.28	
2/16/2023	16:02	10.06	0.61	0.0003	0.017	33.5	28.71	0.50	28.75	28.50	28.44	0.97	7.29	19.19	0.15	0.3291	0.574	33.6	28.71	0.30	28.73	28.79	28.76	31.83	240.70	
2/16/2023	16:03	9.95	0.60	0.0003	0.017	33.6	28.71	0.50	28.75	28.49	28.43	0.97	7.29	19.37	0.14	0.2552	0.505	33.6	28.71	0.30	28.73	28.80	28.76	28.03	211.92	
2/16/2023	16:04	10.08	0.61	0.0004	0.020	33.6	28.71	0.50	28.75	28.50	28.44	1.12	8.42	19.59	0.12	0.2568	0.507	33.7	28.71	0.30	28.73	28.80	28.77	28.11	212.55	
2/16/2023	16:05	10.10	0.61	0.0002	0.014	33.6	28.71	0.50	28.75	28.50	28.44	0.79	5.95	19.79	0.11	0.2566	0.507	33.4	28.71	0.30	28.73	28.81	28.78	28.09	212.50	
2/16/2023	16:06	10.20	0.61	0.0003	0.017	33.7	28.71	0.50	28.75	28.51	--	--	--	20.29	0.08	0.2621	0.512	33.7	28.71	0.30	28.73	28.82	28.79	28.39	214.66	
2/16/2023	16:07	10.36	0.60	0.0004	0.020	33.5	28.71	0.50	28.75	28.51	28.45	1.12	8.42	21.30	0.02	0.2623	0.512	33.7	28.71	0.30	28.73	28.86	28.82	28.39	214.62	
2/16/2023	16:08	10.82	0.53	0.0001	0.010	33.2	28.71	0.50	28.75	28.52	28.46	0.56	4.21	21.31	0.01	0.2606	0.510	33.7	28.71	0.30	28.73	28.85	28.82	28.29	213.96	
2/16/2023	16:09	11.75	0.39	0.0004	0.020	33.0	28.71	0.50	28.75	28.53	28.47	1.11	8.42	21.31	0.01	0.2584	0.508	33.5	28.71	0.30	28.73	28.85	28.82	28.17	213.10	
2/16/2023	16:10	11.77	0.44	0.0005	0.022	32.7	28.71	0.50	28.75	28.54	28.49	1.25	9.42	21.31	0.02	0.2620	0.512	33.6	28.71	0.30	28.73	28.86	28.82	28.37	214.56	
2/16/2023	16:11	11.65	0.48	0.0002	0.014	32.7	28.71	0.50	28.75	28.54	28.49	0.79	5.96	21.32	0.02	0.2592	0.509	33.6	28.71	0.30	28.73	28.86	28.82	28.22	213.39	
2/16/2023	16:12	11.71	0.47	0.0001	0.010	32.4	28.71	0.50	28.75	28.54	28.48	0.56	4.21	21.32	0.01	0.2555	0.505	33.6	28.71	0.30	28.73	28.85	28.82	28.01	211.87	
2/16/2023	16:13	11.71	0.46	0.0002	0.014	32.3	28.71	0.50	28.75	28.54	28.48	0.79	5.95	21.31	0.01	0.2641	0.514	33.6	28.71	0.30	28.73	28.85	28.82	28.48	215.42	
2/16/2023	16:14	11.53	0.46	0.0002	0.014	32.3	28.71	0.50	28.75	28.53	28.48	0.79	5.96	21.32	0.01	0.2562	0.506	33.5	28.71	0.30	28.73	28.85	28.82	28.05	212.20	
2/16/2023	16:15	11.84	0.43	0.0003	0.017	32.3	28.71	0.50	28.75	28.54	28.48	0.96	7.30	21.32	0.01	0.2569	0.507	33.7	28.71	0.30	28.73	28.85	28.82	28.09	212.45	
2/16/2023	16:16	11.74	0.43	0.0002	0.014	32.1	28.71	0.50	28.75	28.54	28.48	0.79	5.96	21.32	0.02	0.2571	0.507	33.7	28.71	0.30	28.73	28.86	28.83	28.10	212.52	
2/16/2023	16:17	11.83	0.42	0.0002	0.014	32.1	28.71	0.50	28.75	28.54	28.48	0.79	5.96	21.32	0.01	0.2651	0.515	33.6	28.71	0.30	28.73	28.85	28.82	28.53	215.84	
2/16/2023	16:18	11.71	0.42	0.0002	0.014	31.9	28.71	0.50	28.75	28.54	28.48	0.79	5.96	21.32	0.00	0.2632	0.513	33.7	28.71	0.30	28.73	28.85	28.82	28.44	215.04	
2/16/2023	16:19	11.91	0.40	0.0002	0.014	31.9	28.71	0.50	28.75	28.54	28.48	0.79	5.96	21.32	0.01	0.2618	0.512	34.4	28.71	0.30	28.73	28.85	28.82	28.38	214.32	
2/16/2023	16:20	12.20	0.38	0.0002	0.014	32.0	28.71	0.50	28.75	28.55	28.49	0.79	5.96	21.32	0.01	0.2664	0.516	34.2	28.71	0.30	28.73	28.85	28.82	28.62	216.22	
2/16/2023	16:21	12.11	0.39	0.0001	0.010	32.0	28.71	0.50	28.75	28.55	28.48	0.56	4.21	21.32	0.01	0.2655	0.515	33.3	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	16:22	12.65	0.36	0.0003	0.017	32.0	28.71	0.50	28.75	28.56	28.50	0.96	7.29	21.33	0.01	0.2615	0.511	33.3	28.71	0.30	28.73	28.85	28.82	28.33	214.43	
2/16/2023	16:23	12.79	0.35	0.0001	0.010	31.9	28.71	0.50	28.75	28.57	28.51	0.56	4.21	21.32	0.02	0.2619	0.512	33.4	28.71	0.30	28.73	28.86	28.83	28.36	214.55	
2/16/2023	16:24	12.73	0.35	0.0002	0.014	31.8	28.71	0.50	28.75	28.57	28.51	0.79	5.96	21.32	0.01	0.2626	0.512	33.5	28.71	0.30	28.73	28.85	28.82	28.40	214.84	
2/16/2023	16:25	12.53	0.35	0.0001	0.010	31.9	28.71	0.50	28.75	28.56	28.50	0.56	4.21	21.32	0.01	0.2679	0.518	33.5	28.71	0.30	28.73	28.85	28.82	28.68	216.99	
2/16/2023	16:26	12.34	0.34	0.0001	0.010	31.6	28.71	0.50	28.75	28.55	28.50	0.56	4.22	21.32	0.01	0.2629	0.513	33.5	28.71	0.30	28.73	28.85	28.82	28.41	214.96	
2/16/2023	16:27	12.50	0.34	0.0002	0.014	31.7	28.71	0.50	28.75	28.55	28.49	0.79	5.96	21.33	0.01	0.2587	0.509	33.6	28.71	0.30	28.73	28.85	28.82	28.19	213.21	
2/16/2023	16:28	12.57	0.34	0.0002	0.014	31.8	28.71	0.50	28.75	28.56	--	--	--	21.32	0.01	0.2715	0.521	33.7	28.71	0.30	28.73	28.85	28.82	28.88	218.41	
2/16/2023	16:29	12.57	0.33	0.0003	0.017	31.6	28.71	0.50	28.75	28.56	28.49	0.96	7.30	21.32	0.01	0.2625	0.512	33.6	28.71	0.30	28.73	28.85	28.82	28.39	214.77	
2/16/2023	16:30	11.98	0.33	0.0003	0.017	31.5	28.71	0.50	28.75	28.53	28.47	0.96	7.30	21.32	0.01	0.2609	0.511	33.6	28.71	0.30	28.73	28.85	28.82	28.31	214.12	
2/16/2023	16:31	11.32	0.30	0.0003	0.017	31.7	28.71	0.50	28.75	28.50	28.44	0.96	7.30	21.32	0.01	0.2619	0.512	33.5	28.71	0.30	28.73	28.85	28.82	28.36	214.55	
2/16/2023	16:32	11.72	0.30	0.0002	0.014	31.8	28.71	0.50	28.75	28.52	28.45	0.79	5.96	21.31	0.01	0.2632	0.513	33.5	28.71	0.30	28.73	28.85	28.82	28.43	215.08	
2/16/2023	16:33	11.91	0.29	0.0002	0.014	31.4	28.71	0.50	28.75	28.52	28.46	0.79	5.96	21.32	0.01	0.2637	0.514	33.4	28.71	0.30	28.73	28.85	28.82	28.45	215.31	
2/16/2023	16:34	12.05	0.29	0.0002	0.014	31.4	28.71	0.50	28.75	28.53	28.47	0.79	5.96	21.32	0.01	0.2593	0.509	33.5	28.71	0.30	28.73	28.85	28.82	28.22	213.50	
2/16/2023	16:35	11.02	0.28	0.0002	0.014	31.5	28.71	0.50	28.75	28.49	28.43	0.79	5.97	21.32	0.01	0.2662	0.516	33.5	28.71	0.30	28.73	28.85	28.82	28.59	216.32	
2/16/2023	16:36	10.39	0.26	0.0003	0.017	31.5	28.71	0.50	28.75	28.46	28.40	0.96	7.31	21.32	0.01	0.2665	0.516	33.5	28.71	0.30	28.73	28.85	28.82	28.61	216.43	
2/16/2023	16:37	10.85	0.25	0.0002	0.014	31.5	28.71	0.50	28.75	28.47	28.42	0.79	5.97	21.31	0.00	0.2655	0.515	33.4	28.71	0.30	28.73	28.85	28.82	28.55	216.05	
2/16/2023	16:38	11.13	0.25	0.0001	0.010	31.6	28.71	0.50	28.75	28.49	28.43	0.56	4.22	21.32	0.01	0.2627	0.513	33.4	28.71	0.30	28.73	28.85	28.82	28.40	214.89	
2/16/2023	16:39	11.36	0.24	0.0109	0.104	31.5	28.71	0.50	28.75	28.49	28.44	5.81	44.05	21.32	0.01	0.2675	0.517	33.5	28.71	0.30	28.73	28.85	28.82	28.66	216.83	
2/16/2023	16:40	10.27	0.24	0.0050	0.071	31.4	28.71	0.50	28.75	28.45	28.39	3.94	29.86	21.32	0.01	0.2669	0.517	33.4	28.71	0.30	28.73	28.85	28.82	28.63	216.59	
2/16/2023	16:41	9.76	0.22	0.0003	0.017	31.5	28.71	0.50	28.75	28.43	28.36	0.97	7.31	21.31	0.01	0.2713	0.521	33.5	28.71	0.30	28.73	28.85	28.82	28.86	218.37	
2/16/2023	16:42	10.25	0.22	0.0002	0.014	31.3	28.71	0.50	28.75	28.45	28.38	0.79	5.97	21.32	0.01	0.2677	0.517	33.5	28.71	0.30	28.73	28.85	28.82	28.67	216.90	
2/16/2023	16:43	10.10	0.21	0.0000	0.000	31.4	28.71	0.50	28.75	28.44	28.38	0.00	0.00	21.32	0.01	0.2706	0.520	33.5	28.71	0.30	28.73	28.85	28.82	28.83	218.08	
2/16/2023	16:44	8.78	0.34	0.0002	0.014	31.3	28.71	0.50	28.75	28.41	28.36	0.79	5.98	21.30	0.01	0.2718	0.521	33.5	28.71	0.30	28.73	28.85	28.82	28.89	218.57	
2/16/2023	16:45	9.09	0.35	0.0003	0.017	31.4	28.71	0.50	28.75	28.42	28.37	0.97	7.32	21.22	0.01	0.2669	0.517	33.3	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	16:46	9.52	0.32	0.0001	0.010	31.4	28.71	0.50	28.75	28.43	28.38	0.56	4.23	21.31	0.01	0.2627	0.513	33.3	28.71	0.30	28.73	28.85	28.82	28.40	214.92	
2/16/2023	16:47	9.72	0.33	0.0001	0.010	31.3	28.71	0.50	28.75	28.44	28.42	0.56	4.24	21.31	0.01	0.2695	0.519	33.2	28.71	0.30	28.73	28.85	28.82	28.76	217.71	
2/16/2023	16:48	9.76	0.35	0.0003	0.017	31.4	28.71	0.50	28.75	28.45	28.40	0.96	7.32	21.32	0.01	0.2705	0.520	33.3	28.71	0.30	28.73	28.85	28.82	28.82	218.08	
2/16/2023	16:49	9.76	0.36	0.0001	0.010	31.2	28.71	0.50	28.75	28.45	28.40	0.56	4.23	21.31	0.01	0.2700	0.520	33.3	28.71	0.30	28.73	28.85	28.82	28.79	217.90	
2/16/2023	16:50	8.27	0.25	0.0001	0.010	31.3	28.71	0.50	28.75	28.37	--	--	--	21.31	0.01	0.2777	0.527	33.3	28.71	0.30	28.73	28.85	28.82	29.20	220.97	
2/16/2023	16:51	8.26	0.21	0.0000	0.000	31.2	28.71	0.50	28.75	28.36	28.30	0.00	0.00	21.32	0.01	0.2713	0.521	33.3	28.71	0.30	28.73	28.85	28.82	28.86	218.41	
2/16/2023	16:52	8.98	0.23	0.0001	0.010	31.3	28.71	0.50	28.75	28.40	28.34	0.56	4.23	21.32	0.01	0.2760	0.525	33.2	28.71	0.30	28.73	28.85	28.82	29.10	220.32	
2/16/2023	16:53	9.51	0.24	0.0002	0.014	31.2	28.71	0.50	28.75	28.42	28.37	0.79	5.98	21.32	0.01	0.2731	0.523	33.3	28.71	0.30	28.73	28.85	28.82	28.95	219.14	
2/16/2023	16:54	9.79	0.23	0.0003	0.017	31.2	28.71	0.50	28.75	28.43	28.40	0.96	7.33	21.32	0.01	0.2710	0.521	33.5	28.71	0.30	28.73	28.85	28.82	28.85	218.25	
2/16/2023	16:55	9.90	0.21	0.0002	0.014	31.1	28.71	0.50	28.75	28.43	28.39	0.79	5.98	21.32	0.01	0.2757	0.525	33.3	28.71	0.30	28.73	28.85	28.82	29.09	220.18	
2/16/2023	16:56	8.26	0.17	0.0001	0.010	31.1	28.71	0.50	28.75	28.36	28.32	0.56	4.24	21.32	0.01	0.2814	0.530	33.1	28.71	0.30	28.73	28.85	28.82	29.38	222.50	
2/16/2023	16:57	8.64	0.16	0.0003	0.017	31.1	28.71	0.50	28.75	28.37	28.32	0.97	7.33	21.31	0.01	0.2746	0.524	32.9	28.71	0.30	28.73	28.85	28.82	29.02	219.82	
2/16/2023	16:58	9.14	0.16	0.0000	0.000	31.0	28.71	0.50	28.75	28.39	28.34	0.00	0.00	21.32	0.01	0.2760	0.525	32.9	28.71	0.30	28.73	28.85	28.82	29.10	220.38	
2/16/2023	16:59	9.57	0.16	0.0003	0.017	31.0	28.71	0.50	28.75	28.41	28.35	0.97	7.32	21.32	0.01	0.2819	0.531	32.9	28.71	0.30	28.73	28.85	28.82	29.40	222.73	
2/16/2023	17:00	8.49	0.14	0.0002	0.014	31.0	28.71	0.50	28.75	28.36	28.31	0.79	5.98	21.32	0.01	0.2736	0.523	33.0	28.71	0.30	28.73	28.85	28.82	28.97	219.41	
2/16/2023	17:01	8.18	0.13	0.0002	0.014	30.9	28.71	0.50	28.75	28.35	28.30	0.79	5.99	21.32	0.01	0.2717	0.521	33.0	28.71	0.30	28.73	28.85	28.82	28.87	218.64	
2/16/2023	17:02	8.66	0.13	0.0002	0.014	30.8	28.71	0.50	28.75	28.37	28.32	0.79	5.99	21.32	0.01	0.2824	0.531	32.9	28.71	0.30	28.73	28.85	28.82	29.43	222.92	
2/16/2023	17:03	8.45	0.12	0.0002	0.014	30.9	28.71	0.50	28.75	28.36	28.30	0.79	5.99	21.32	0.01	0.2775	0.527	32.7	28.71	0.30	28.73	28.85	28.82	29.17	221.03	
2/16/2023	17:04	7.27	0.11	0.0001	0.010	30.8	28.71	0.50	28.75	28.31	28.29	0.56	4.25	21.32	0.01	0.2828	0.532	32.6	28.71	0.30	28.73	28.85	28.82	29.44	223.15	
2/16/2023	17:05	7.82	0.11	0.0002	0.014	30.6	28.71	0.50	28.75	28.33	28.30	0.79	6.00	21.32	0.01	0.2802	0.529	32.6	28.71	0.30	28.73	28.85	28.82	29.31	222.13	
2/16/2023	17:06	8.30	0.11	0.0003	0.017	30.8	28.71	0.50	28.75	28.35	28.31	0.97	7.34	21.32	0.01	0.2826	0.532	32.6	28.71	0.30	28.73	28.85	28.82	29.43	223.07	
2/16/2023	17:07	8.79	0.10	0.0003	0.017	30.7	28.71	0.50	28.75	28.37	28.35	0.96	7.35	21.33	0.01	0.2869	0.536	32.6	28.71	0.30	28.73	28.85	28.83	29.65	224.76	
2/16/2023	17:08	7.75	0.10	0.0002	0.014	30.6	28.71	0.50	28.75	28.33	28.31	0.79	6.01	21.32	0.01	0.2808	0.530	32.6	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	17:09	7.34	0.09	0.0002	0.014	30.8	28.71	0.50	28.75	28.31	28.29	0.79	6.01	21.32	0.01	0.2828	0.532	32.5	28.71	0.30	28.73	28.85	28.83	29.44	223.20	
2/16/2023	17:10	7.91	0.09	0.0001	0.010	30.5	28.71	0.50	28.75	28.33	28.30	0.56	4.24	21.31	0.01	0.2887	0.537	32.5	28.71	0.30	28.73	28.85	28.82	29.74	225.51	
2/16/2023	17:11	8.40	0.09	0.0002	0.014	30.7	28.71	0.50	28.75	28.35	28.33	0.79	6.00	21.31	0.01	0.2864	0.535	32.4	28.71	0.30	28.73	28.85	28.82	29.62	224.62	
2/16/2023	17:12	8.84	0.09	0.0002	0.014	30.6	28.71	0.50	28.75	28.37	--	--	--	21.32	0.01	0.2753	0.525	32.3	28.71	0.30	28.73	28.85	28.82	29.04	220.23	
2/16/2023	17:13	9.26	0.08	0.0000

Alliance SOURCE TESTING

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet O_2 - Inlet % dry	Inlet CO_2 - Inlet % dry	Inlet Delta P in. W.C.	Inlet Sq Rt Delta P	Inlet Temperature (°F)	Inlet Barometric in. Hg	Inlet Stack Pressure in. W.C.	Inlet Stack Pressure in. Hg	Inlet Molecular Weight Md	Inlet Molecular Weight Mw	Inlet Velocity ft/sec	Inlet Flow Rate (DSCFM)	Outlet O_2 - Outlet % dry	Outlet CO_2 - Outlet % dry	Outlet Delta P in. W.C.	Outlet Sq Rt Delta P	Outlet Temperature (°F)	Outlet Barometric in. Hg	Outlet Stack Pressure in. W.C.	Outlet Stack Pressure in. Hg	Outlet Molecular Weight Md	Outlet Molecular Weight Mw	Outlet Velocity ft/sec	Outlet Flow Rate (DSCFM)	Point in Process -
	Unit																									
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/16/2023	17:37	5.63	0.03	0.0001	0.010	29.9	28.71	0.50	28.75	28.23	28.21	0.56	4.26	21.32	0.02	0.2858	0.535	32.7	28.71	0.30	28.73	28.86	28.83	29.60	224.52	
2/16/2023	17:38	4.60	0.02	0.0002	0.014	29.9	28.71	0.50	28.75	28.19	28.17	0.79	6.03	21.31	0.02	0.2803	0.529	32.6	28.71	0.30	28.73	28.86	28.83	29.31	222.17	
2/16/2023	17:39	5.14	0.02	0.0002	0.014	29.7	28.71	0.50	28.75	28.21	28.19	0.79	6.02	21.31	0.02	0.2907	0.539	32.5	28.71	0.30	28.73	28.86	28.83	29.85	226.28	
2/16/2023	17:40	5.70	0.02	0.0003	0.017	29.8	28.71	0.50	28.75	28.23	28.21	0.97	7.38	21.32	0.02	0.2873	0.536	32.6	28.71	0.30	28.73	28.86	28.83	29.67	224.94	
2/16/2023	17:41	6.29	0.03	0.0002	0.014	29.8	28.71	0.50	28.75	28.26	28.24	0.79	6.02	21.32	0.02	0.2798	0.529	32.5	28.71	0.30	28.73	28.86	28.83	29.28	221.98	
2/16/2023	17:42	6.46	0.03	0.0003	0.017	29.7	28.71	0.50	28.75	28.26	28.24	0.97	7.37	21.32	0.01	0.2853	0.534	32.3	28.71	0.30	28.73	28.85	28.83	29.56	224.22	
2/16/2023	17:43	5.41	0.02	0.0000	0.000	29.7	28.71	0.50	28.75	28.22	28.20	0.00	0.00	21.32	0.02	0.2836	0.533	32.2	28.71	0.30	28.73	28.86	28.83	29.47	223.56	
2/16/2023	17:44	5.96	0.03	0.0002	0.014	29.5	28.71	0.50	28.75	28.24	28.22	0.79	6.02	21.33	0.02	0.2911	0.540	32.3	28.71	0.30	28.73	28.86	28.83	29.86	226.48	
2/16/2023	17:45	6.52	0.03	0.0002	0.014	29.7	28.71	0.50	28.75	28.27	28.25	0.79	6.02	21.32	0.02	0.2860	0.535	32.4	28.71	0.30	28.73	28.86	28.83	29.60	224.46	
2/16/2023	17:46	7.11	0.03	0.0001	0.010	29.6	28.71	0.50	28.75	28.29	28.27	0.56	4.25	21.33	0.02	0.2925	0.541	32.5	28.71	0.30	28.73	28.86	28.83	29.94	226.98	
2/16/2023	17:47	7.54	0.03	0.0001	0.010	29.5	28.71	0.50	28.75	28.31	28.29	0.56	4.25	21.33	0.02	0.2938	0.542	32.4	28.71	0.30	28.73	28.86	28.83	30.00	227.50	
2/16/2023	17:48	6.02	0.03	0.0002	0.014	29.5	28.71	0.50	28.75	28.25	28.23	0.79	6.02	21.33	0.02	0.2860	0.535	32.4	28.71	0.30	28.73	28.86	28.83	29.60	224.47	
2/16/2023	17:49	6.58	0.03	0.0002	0.014	29.5	28.71	0.50	28.75	28.27	28.25	0.79	6.02	21.32	0.02	0.2939	0.542	32.4	28.71	0.30	28.73	28.86	28.83	30.01	227.56	
2/16/2023	17:50	7.09	0.03	0.0001	0.010	29.4	28.71	0.50	28.75	28.29	28.27	0.56	4.26	21.32	0.02	0.2864	0.535	32.2	28.71	0.30	28.73	28.86	28.83	29.62	224.67	
2/16/2023	17:51	7.64	0.03	0.0001	0.010	29.4	28.71	0.50	28.75	28.31	28.29	0.56	4.25	21.32	0.02	0.2927	0.541	32.1	28.71	0.30	28.73	28.86	28.83	29.94	227.16	
2/16/2023	17:52	8.02	0.03	0.0001	0.010	29.2	28.71	0.50	28.75	28.33	28.30	0.56	4.25	21.32	0.02	0.2863	0.535	32.2	28.71	0.30	28.73	28.86	28.83	29.61	224.64	
2/16/2023	17:53	6.71	0.03	0.0003	0.017	29.5	28.71	0.50	28.75	28.27	28.25	0.97	7.37	21.33	0.02	0.2942	0.542	32.3	28.71	0.30	28.73	28.86	28.83	30.02	227.68	
2/16/2023	17:54	7.24	0.03	0.0002	0.014	29.3	28.71	0.50	28.75	28.29	28.27	0.79	6.02	21.33	0.02	0.2919	0.540	32.5	28.71	0.30	28.73	28.86	28.83	29.91	226.74	
2/16/2023	17:55	7.72	0.03	0.0002	0.014	29.4	28.71	0.50	28.75	28.31	--	--	--	21.33	0.02	0.2862	0.535	32.3	28.71	0.30	28.73	28.86	--	--	--	
2/16/2023	17:56	8.21	0.03	0.0002	0.014	29.2	28.71	0.50	28.75	28.33	28.31	0.79	6.01	21.33	0.02	0.2889	0.537	32.3	28.71	0.30	28.73	28.86	28.83	29.75	225.62	
2/16/2023	17:57	5.69	0.03	0.0000	0.000	29.4	28.71	0.50	28.75	28.23	28.21	0.00	0.00	21.31	0.02	0.2882	0.537	32.5	28.71	0.30	28.73	28.86	28.83	29.72	225.30	
2/16/2023	17:58	3.83	0.02	0.0001	0.010	29.4	28.71	0.50	28.75	28.16	28.14	0.56	4.27	21.31	0.02	0.2966	0.545	32.1	28.71	0.30	28.73	28.86	28.83	30.14	228.66	
2/16/2023	17:59	3.65	0.02	0.0002	0.014	29.4	28.71	0.50	28.75	28.15	28.13	0.79	6.03	21.30	0.02	0.2916	0.540	32.1	28.71	0.30	28.73	28.86	28.83	29.88	226.73	
2/16/2023	18:00	4.06	0.02	0.0001	0.010	29.3	28.71	0.50	28.75	28.17	28.15	0.56	4.27	21.32	0.02	0.3008	0.548	32.1	28.71	0.30	28.73	28.86	28.83	30.35	230.27	
2/16/2023	18:01	4.66	0.02	0.0003	0.017	29.4	28.71	0.50	28.75	28.19	28.17	0.97	7.38	21.31	0.02	0.2907	0.539	32.1	28.71	0.30	28.73	28.86	28.83	29.83	226.36	
2/16/2023	18:02	4.02	0.02	0.0001	0.010	29.1	28.71	0.50	28.75	28.16	28.14	0.56	4.27	21.31	0.02	0.2965	0.545	32.1	28.71	0.30	28.73	28.86	28.83	30.13	228.62	
2/16/2023	18:03	4.29	0.02	0.0001	0.010	29.3	28.71	0.50	28.75	28.17	28.12	0.56	4.25	21.31	0.01	0.2932	0.541	32.0	28.71	0.30	28.73	28.85	28.82	29.96	227.37	
2/16/2023	18:04	3.99	0.02	0.0002	0.014	29.2	28.71	0.50	28.75	28.16	28.11	0.79	6.02	21.31	0.02	0.2969	0.545	32.2	28.71	0.30	28.73	28.86	28.83	30.15	228.76	
2/16/2023	18:05	4.49	0.02	0.0003	0.017	29.2	28.71	0.50	28.75	28.18	28.13	0.97	7.37	21.31	0.02	0.2971	0.545	32.2	28.71	0.30	28.73	28.86	28.83	30.16	228.84	
2/16/2023	18:06	3.82	0.02	0.0001	0.010	29.2	28.71	0.50	28.75	28.16	28.10	0.56	4.25	21.31	0.01	0.3064	0.554	32.2	28.71	0.30	28.73	28.85	28.82	30.63	232.38	
2/16/2023	18:07	4.04	0.02	0.0001	0.010	29.2	28.71	0.50	28.75	28.16	28.13	0.56	4.26	21.31	0.02	0.2990	0.547	32.3	28.71	0.30	28.73	28.86	28.83	30.26	229.54	
2/16/2023	18:08	3.77	0.02	0.0002	0.014	29.2	28.71	0.50	28.75	28.15	28.10	0.79	6.02	21.31	0.02	0.2975	0.545	32.2	28.71	0.30	28.73	28.86	28.83	30.18	228.98	
2/16/2023	18:09	4.64	0.02	0.0001	0.010	29.2	28.71	0.50	28.75	28.19	28.13	0.56	4.25	21.32	0.02	0.2880	0.537	32.0	28.71	0.30	28.73	28.86	28.83	29.69	225.34	
2/16/2023	18:10	4.62	0.02	0.0002	0.014	29.1	28.71	0.50	28.75	28.19	28.17	0.79	6.03	21.32	0.02	0.2972	0.545	31.8	28.71	0.30	28.73	28.86	28.83	30.16	228.96	
2/16/2023	18:11	4.44	0.02	0.0001	0.010	29.1	28.71	0.50	28.75	28.18	28.13	0.56	4.25	21.32	0.02	0.2983	0.546	31.9	28.71	0.30	28.73	28.86	28.83	30.22	229.36	
2/16/2023	18:12	5.21	0.02	0.0001	0.010	29.0	28.71	0.50	28.75	28.21	28.19	0.56	4.26	21.33	0.02	0.2946	0.543	31.7	28.71	0.30	28.73	28.86	28.83	30.02	227.99	
2/16/2023	18:13	6.01	0.02	0.0001	0.010	29.1	28.71	0.50	28.75	28.24	28.22	0.56	4.26	21.33	0.02	0.2964	0.544	31.7	28.71	0.30	28.73	28.86	28.83	30.11	228.68	
2/16/2023	18:14	6.55	0.02	0.0000	0.000	29.1	28.71	0.50	28.75	28.27	28.24	0.00	0.00	21.33	0.02	0.3047	0.552	31.6	28.71	0.30	28.73	28.86	28.83	30.53	231.88	
2/16/2023	18:15	7.05	0.02	0.0000	0.000	28.9	28.71	0.50	28.75	28.29	28.26	0.00	0.00	21.33	0.02	0.3093	0.556	31.7	28.71	0.30	28.73	28.86	28.83	30.76	233.60	
2/16/2023	18:16	7.04	0.02	0.0001	0.010	28.8	28.71	0.50	28.75	28.28	28.26	0.56	4.26	21.33	0.02	0.2979	0.546	31.7	28.71	0.30	28.73	28.86	28.83	30.19	229.26	
2/16/2023	18:17	2.56	0.02	0.0001	0.010	29.0	28.71	0.50	28.75	28.11	--	--	--	21.21	0.02	0.2938	0.542	31.9	28.71	0.30	28.73	28.85	28.82	29.99	227.67	
2/16/2023	18:18	1.52	0.03	0.0001	0.010	28.9	28.71	0.50	28.75	28.07	28.05	0.56	4.27	21.16	0.01	0.2981	0.546	31.8	28.71	0.30	28.73	28.85	28.82	30.21	229.35	
2/16/2023	18:19	2.61	0.03	0.0001	0.010	28.9	28.71	0.50	28.75	28.11	28.09	0.56	4.27	21.19	0.02	0.3185	0.564	31.8	28.71	0.30	28.73	28.85	--	--	--	
2/16/2023	18:20	11.11	0.00	0.0001	0.010	28.9	28.71	0.50	28.75	28.44	28.42	0.56	4.25	21.20	0.02	0.3061	0.553	31.9	28.71	0.30	28.73	28.85	28.82	30.61	232.38	
2/16/2023	18:21	14.54	-0.01	0.0001	0.010	28.9	28.71	0.50	28.75	28.58	28.52	0.55	4.22	21.20	0.02	0.3091	0.556	31.9	28.71	0.30	28.73	28.85	28.82	30.76	233.51	
2/16/2023	18:22	14.81	-0.01	0.0001	0.010	28.8	28.71	0.50	28.75	28.59	28.57	0.55	4.24	21.20	0.02	0.3066	0.554	31.7	28.71	0.30	28.73	28.85	28.82	30.63	232.60	
2/16/2023	18:23	14.91	-0.01	0.0001	0.010	28.8	28.71	0.50	28.75	28.59	28.57	0.55	4.24	21.20	0.01	0.3122	0.559	31.6	28.71	0.30	28.73	28.85	28.82	30.91	234.75	
2/16/2023	18:24	15.02	-0.01	0.0001	0.010	28.8	28.71	0.50	28.75	28.60	28.58	0.55	4.23	21.20	0.01	0.3077	0.555	31.6	28.71	0.30	28.73	28.85	28.82	30.68	233.05	
2/16/2023	18:25	15.28	-0.02	0.0000	0.000	28.7	28.71	0.50	28.75	28.61	28.57	0.00	0.00	21.20	0.01	0.3048	0.552	31.4	28.71	0.30	28.73	28.85	28.82	30.53	232.01	
2/16/2023	18:26	15.43	-0.02	0.0000	0.000	28.7	28.71	0.50	28.75	28.61	28.57	0.00	0.00	21.20	0.02	0.3078	0.555	31.4	28.71	0.30	28.73	28.85	28.82	30.68	233.13	
2/16/2023	18:27	15.48	-0.02	0.0005	0.022	28.6	28.71	0.50	28.75	28.62	28.56	1.24	9.44	21.18	0.02	0.3058	0.553	31.5	28.71	0.30	28.73	28.85	28.82	30.58	232.36	
2/16/2023	18:28	15.52	-0.02	0.0006	0.024	28.7	28.71	0.50	28.75	28.62	28.56	1.36	10.34	21.17	0.02	0.2907	0.539	31.6	28.71	0.30	28.73	28.85	28.82	29.82	226.52	
2/16/2023	18:29	15.55	-0.02	0.0005	0.022	28.6	28.71	0.50	28.75	28.62	28.56	1.24	9.44	21.15	0.02	0.2851	0.534	31.8	28.71	0.30	28.73	28.85	28.82	29.54	224.28	
2/16/2023	18:30	15.59	-0.03	0.0004	0.020	28.5	28.71	0.50	28.75	28.62	28.56	1.11	8.45	21.15	0.02	0.2849	0.534	31.9	28.71	0.30	28.73	28.85	28.82	29.53	224.19	
2/16/2023	18:31	15.62	-0.02	0.0006	0.024	28.5	28.71	0.50	28.75	28.62	28.57	1.36	10.35	21.17	0.02	0.2802	0.529	31.9	28.71	0.30	28.73	28.85	28.82	29.29	222.32	
2/16/2023	18:32	15.36	-0.02	0.0004	0.020	28.5	28.71	0.50	28.75	28.61	28.56	1.11	8.45	21.34	0.02	0.2836	0.533	31.8	28.71	0.30	28.73	28.86	28.83	29.46	223.65	
2/16/2023	18:33	15.03	-0.02	0.0004	0.020	28.8	28.71	0.50	28.75	28.60	28.54	1.11	8.45	21.35	0.02	0.2832	0.532	31.9	28.71	0.30	28.73	28.86	28.83	29.44	223.48	
2/16/2023	18:34	14.67	-0.01	0.0004	0.020	29.0	28.71	0.50	28.75	28.59	28.53	1.11	8.45	21.35	0.02	0.2880	0.537	31.8	28.71	0.30	28.73	28.86	28.83	29.69	225.38	
2/16/2023	18:35	14.40	-0.01	0.0004	0.020	29.0	28.71	0.50	28.75	28.57	28.52	1.11	8.45	21.35	0.02	0.2857	0.535	31.6	28.71	0.30	28.73	28.86	28.83	29.56	224.53	
2/16/2023	18:36	14.35	-0.01	0.0004	0.020	29.0	28.71	0.50	28.75	28.57	28.52	1.11	8.45	21.35	0.02	0.2932	0.541	31.6	28.71	0.30	28.73	28.86	28.83	29.95	227.46	
2/16/2023	18:37	14.45	0.00	0.0005	0.022	29.3	28.71	0.50	28.75	28.58	28.52	1.24	9.44	21.35	0.02	0.2809	0.530	31.5	28.71	0.30	28.73	28.86	28.83	29.31	222.66	
2/16/2023	18:38	14.71	0.00	0.0003	0.017	29.2	28.71	0.50	28.75	28.59	28.53	0.96	7.31	21.35	0.01	0.2853	0.534	31.8	28.71	0.30	28.73	28.86	28.83	29.55	224.34	
2/16/2023	18:39	14.93	0.00	0.0002	0.014	29.3	28.71	0.50	28.75	28.60	--	--	--	21.35	0.02	0.2816	0.531	31.7	28.71	0.30	28.73	28.86	28.83	29.35	222.90	
2/16/2023	18:40	15.58	0.00	0.0003	0.017	29.2	28.71	0.50	28.75	28.62	28.57	0.96	7.31	21.34	0.01	0.2956	0.544	31.8	28.71	0.30	28.73	28.86	28.83	30.08	228.35	
2/16/2023	18:41	17.26	0.01	0.0002	0.014	29.3	28.71	0.50	28.75	28.69	28.63	0.78	5.96	21.35	0.01	0.2951	0.543	31.7	28.71	0.30	28.73	28.86	28.83	30.05	228.16	
2/16/2023	18:42	18.88	0.01	0.0001	0.010	29.4	28.71	0.50	28.75	28.76	28.70	0.55	4.21	21.35	0.02	0.3004	0.548	31.8	28.71	0.30	28.73	28.86	--	--	--	
2/16/2023	18:43	19.79	0.01	0.0003	0.017	29.5	28.71	0.50	28.75	28.79	28.73	0.96	7.28	21.35	0.02	0.2937	0.542	31.7	28.71	0.30	28.73	28.86	28.83	29.98	227.62	
2/16/2023	18:44	19.81	0.01	0.0001	0.010	29.4	28.71	0.50	28.75	28.79	28.74	0.55	4.21	21.35	0.01	0.2969	0.545	31.9	28.71	0.30	28.73	28.86	28.83	30.14	228.83	
2/16/2023	18:45	19.77	0.01	0.0002	0.014	29.0	28.71	0.50	28.75	28.79	28.73	0.78	5.95	21.35	0.02	0.2967	0.545	31.9	28.71	0.30	28.73	28.86	28.83	30.13	228.72	
2/16/2023	18:46	19.75	0.01	0.0002	0.014	29.0	28.71	0.50	28.75	28.79	28.73	0.78	5.95	21.34	0.02	0.2948	0.543	31.7	28.71	0.30	28.73	28.86	28.83	30.03	228.06	
2/16/2023	18:47	19.75	0.01	0.0002	0.014	29.1	28.71	0.50	28.75	28.79	28.73	0.78	5.95	21.35	0.02	0.2989	0.547	31.6	28.71	0.30	28.73	28.86	28.83	30.24	229.67	
2/16/2023	18:48	19.77	0.01	0.0002	0.014	28.8	28.71	0.50	28.75	28.79	28.74	0.78	5.95	21.35	0.02	0.2919	0.540	31.5	28.71	0.30	28.73	28.86	28.83	29.88	226.97	
2/16/2023	18:49	19.79	0.01	0.0001	0.010	28.8	28.71	0.50	28.75	28.79	28.74	0.55	4.21	21.35	0.01	0.2954	0.544	31.6	28.71	0.30	28.73	28.86	28.83	30.06	228.31	
2/16/2023	18:50	19.79	0.01	0.0002	0.014	28.7	28.71	0.50	28.75	28.79	28.74	0.78	5.95	21.35	0.01	0.2953	0.543	31.7	28.71	0.30	28.73	28.86	28.83	30.06	228.23	
2/16/2023	18:51	19.76	0.01	0.0002	0.014	28.7	28.71	0.50	28.75	28.79	28.74	0.78	5.95	21.34	0.01	0.2932	0.541	31.7	28.71	0.30	28.73	28.86	28.83	29.95	227.46	
2/16/2023	18:52	19.71	0.01	0.0001	0.010	28.8	28.71	0.50	28.75	28.79	28.73	0.55	4.21	21.35	0.02	0.2949	0.543	31.7	28.71	0.30	28.73	28.86	28.83	30.03	228.10	
2/16/2023	18:53	19.65	0.01	0.0000	0.000	28.4	28.71	0.50	28.75	28.79	28.73	0.00	0.00	21.35	0.01	0.2971	0.545	31.7	28.71	0.30	28.73	28.86	28.83	30.15	228.95	
2/16/2023	18:54	19.61	0.01	0.0001	0.010	28.6	28.71	0.50	28.75	28.79	28.73	0.55	4.21	21.34	0.01	0.2991	0.547	31.7	28.71	0.30	28.73	28.86	28.83	30.25	229.71	
2/16/2023	18:55	19.59	0.01	0.0001	0.010	28.8	28.71	0.50	28.75	28.79	28.73	0.55	4.21	21.35	0.02	0.2980	0.546	32.0	28.71	0.30	28.73	28.86	28.83	30.20	229.20	
2/16/2023	18:56	19.59	0.01	0.0002	0.014	28.6	28.71	0.50	28.75	28.79	28.73	0.78	5.96	21.35	0.02	0.2970	0.545	32.1	28.71	0.30	28.73	28.86	28.83	30.15	228.81	
2/16/2023	18:57	19.58	0.01	0.0002	0.014	28.5	28.71	0.50	28.75	28.78	28.73	0.78	5.96	21.35	0.01	0.2966	0.545	32.0	28.71	0.30	28.73	28.86	28.83	30.13	228.66	
2/16/2023	18:58	19.57	0.01	0.0002	0.014	28.5	28.71	0.50	28.75	28.78	28.73	0.78	5.96	21.35	0.01	0.2940	0.542	32.1	28.71	0.30	28.73	28.86	28.83	30.00	227.64	
2/16/2023	18:59	19.57	0.01	0.0003	0.017	28.4	28.71	0.50	28.75	28.78	28.73	0.96	7.30	21.35	0.01	0.3001	0.548	32.0	28.71	0.30	28.73	28.86	28.83	30.31	230.02	
2/16/2023	19:00	19.55	0.01	0.0001	0.010	28.5	28.71	0.50	28.75	28.78	28.73	0.55	4.21	21.35	0.01	0.2949	0.543	31.7	28.71	0.30	28.73	28.86	28.83	30.04	228.07	
2/16/2023	19:01	19.50	0.01	0.0002	0.014	28.5	28.71	0.50	28.75	28.78	--	--	--	21.35	0.01	0.2945	0.543	31.6	28.71	0.30	28.73	28.86	28.83	30.01	227.95	
2/16/2023	19:02	19.45	0.01	0.0000	0.000	28.4	28.71	0.50	28.75	28.78	28.72	0.00	0.00	21.35	0.01	0.2994	0.547	31.6	28.71	0.30	28.73	28.86	28.83	30.26	229.83	
2/16/2023	19:03	19.41	0.01	0.0000	0.000	28.6	28.71	0.50	28.75	28.78	28.72	0.00	0.00	21.35	0.01	0.3048	0.552	31.5	28.71	0.30	28.73	28.86	28.83	30.53	231.93	
2/16/2023	19:04	19.38	0.01	0.0002	0.014	28.5	28.71	0.50	28.75	28.78	28.72	0.78	5.96	21.35	0.01	0.2903	0.539	31.5	28.71	0.30	28.73	28.86	28.83	29.80	226.35	
2/16/2023	19:05	19.38	0.01	0.0000	0.000	28.3	28.71	0.50	28.75	28.78	28.72	0.00	0.00	21.35	0.01	0.3048	0.552	31.6	28.71	0.30	28.73	28.86	28.83	30.53	231.91	
2/16/2023	19:06	19.43	0.01	0.0001	0.010	28.5	28.71	0.50	28.75	28.78	28.72	0.55	4.21	21.35	0.01	0.3042	0.552	31.6	28.71	0.30	28.73	28.86	--	--	--	
2/16/2023	19:07	19.11	0.01	0.0002	0.014	28.4	28.71	0.50	28.75	28.77	28.71	0.78	5.96	21.35	0.01	0.3001	0.548	31.7	28.71	0.30	28.73	28.86	28.83	30.30	230.09	
2/16/2023	19:08	18.71	0.01	0.0001	0.010	28.6	28.71	0.50	28.75	28.75	28.69	0.55	4.21	21.35	0.01	0.2955	0.544	31.7	28.71	0.30	28.73	28.86	28.83	30.07	228.33	
2/16/2023	19:09	18.37	0.01	0.0002	0.014	28.5	28.71	0.50	28.75	28.74	28.68	0.78	5.96	21.35	0.01	0.3092	0.556	31.8	28.71	0.30	28.73	28.86	28.83	30.76	233.54	
2/16/2023	19:10	17.77	0.00	0.0001	0.010	28.5	28.71	0.50	28.75	28.71	28.66	0.55	4.22	21.34	0.01	0.3075	0

Alliance SOURCE TESTING

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet O_2 - Inlet	Inlet CO_2 - Inlet	Inlet Delta P	Inlet Sq Rt Delta P	Inlet Temperature	Inlet Barometric	Inlet Stack Pressure	Inlet Stack Pressure	Inlet Molecular Weight	Inlet Molecular Weight	Inlet Velocity	Inlet Flow Rate	Outlet O_2 - Outlet	Outlet CO_2 - Outlet	Outlet Delta P	Outlet Sq Rt Delta P	Outlet Temperature	Outlet Barometric	Outlet Stack Pressure	Outlet Stack Pressure	Outlet Molecular Weight	Outlet Molecular Weight	Outlet Velocity	Outlet Flow Rate	Point in Process
	Unit	% dry	% dry	in. W.C.		(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.		(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	-
	Status	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/16/2023	19:35	15.97	-0.02	0.0002	0.014	28.2	28.71	0.50	28.75	28.64	28.58	0.78	5.97	21.36	0.01	0.3007	0.548	31.5	28.71	0.30	28.73	28.86	28.83	30.32	230.38	
2/16/2023	19:36	15.83	-0.02	0.0002	0.014	28.2	28.71	0.50	28.75	28.63	28.58	0.78	5.97	21.35	0.01	0.3089	0.556	31.5	28.71	0.30	28.73	28.86	28.83	30.74	233.49	
2/16/2023	19:37	15.91	-0.02	0.0001	0.010	28.2	28.71	0.50	28.75	28.63	28.58	0.55	4.22	21.35	0.01	0.2992	0.547	31.5	28.71	0.30	28.73	28.86	28.83	30.25	229.79	
2/16/2023	19:38	15.86	-0.02	0.0001	0.010	28.3	28.71	0.50	28.75	28.63	28.58	0.55	4.22	21.35	0.01	0.3049	0.552	31.4	28.71	0.30	28.73	28.86	28.83	30.53	231.98	
2/16/2023	19:39	15.89	-0.02	0.0002	0.014	28.3	28.71	0.50	28.75	28.63	28.58	0.78	5.97	21.35	0.01	0.3113	0.558	31.3	28.71	0.30	28.73	28.86	28.83	30.85	234.42	
2/16/2023	19:40	15.89	-0.02	0.0001	0.010	28.2	28.71	0.50	28.75	28.63	28.58	0.55	4.22	21.35	0.01	0.3071	0.554	31.3	28.71	0.30	28.73	28.86	28.83	30.64	232.84	
2/16/2023	19:41	15.89	-0.02	0.0002	0.014	28.2	28.71	0.50	28.75	28.63	28.58	0.78	5.97	21.35	0.01	0.2991	0.547	31.5	28.71	0.30	28.73	28.86	28.83	30.24	229.76	
2/16/2023	19:42	15.85	-0.02	0.0001	0.010	28.3	28.71	0.50	28.75	28.63	28.58	0.55	4.22	21.35	0.01	0.3037	0.551	31.6	28.71	0.30	28.73	28.86	28.83	30.48	231.50	
2/16/2023	19:43	15.93	-0.02	0.0001	0.010	28.2	28.71	0.50	28.75	28.63	28.58	0.55	4.22	21.35	0.01	0.3044	0.552	31.5	28.71	0.30	28.73	28.86	28.83	30.51	231.79	
2/16/2023	19:44	15.91	-0.02	0.0001	0.010	28.3	28.71	0.50	28.75	28.63	28.58	0.55	4.22	21.35	0.01	0.3077	0.555	31.5	28.71	0.30	28.73	28.86	28.83	30.68	233.04	
2/16/2023	19:45	15.86	-0.02	0.0001	0.010	28.2	28.71	0.50	28.75	28.63	--	--	--	21.36	0.01	0.3012	0.549	31.5	28.71	0.30	28.73	28.86	28.83	30.35	230.55	
2/16/2023	19:46	15.82	-0.03	0.0001	0.010	28.2	28.71	0.50	28.75	28.63	28.57	0.55	4.22	21.35	0.01	0.3030	0.550	31.4	28.71	0.30	28.73	28.86	28.83	30.44	231.28	
2/16/2023	19:47	15.80	-0.03	0.0003	0.017	28.3	28.71	0.50	28.75	28.63	28.57	0.96	7.32	21.35	0.01	0.2961	0.544	31.3	28.71	0.30	28.73	28.86	28.83	30.09	228.64	
2/16/2023	19:48	15.84	-0.03	0.0002	0.014	28.3	28.71	0.50	28.75	28.63	28.57	0.78	5.97	21.35	0.01	0.3004	0.548	31.3	28.71	0.30	28.73	28.86	28.83	30.30	230.30	
2/16/2023	19:49	15.80	-0.03	0.0001	0.010	28.2	28.71	0.50	28.75	28.63	28.57	0.55	4.22	21.35	0.01	0.2973	0.545	31.3	28.71	0.30	28.73	28.86	28.83	30.15	229.12	
2/16/2023	19:50	15.77	-0.03	0.0001	0.010	28.1	28.71	0.50	28.75	28.63	28.57	0.55	4.23	21.35	0.01	0.3080	0.555	31.3	28.71	0.30	28.73	28.86	28.83	30.68	233.20	
2/16/2023	19:51	15.83	-0.03	0.0001	0.010	28.2	28.71	0.50	28.75	28.63	28.57	0.55	4.22	21.35	0.01	0.2988	0.547	31.3	28.71	0.30	28.73	28.86	28.83	30.22	229.68	
2/16/2023	19:52	15.80	-0.03	0.0001	0.010	28.2	28.71	0.50	28.75	28.63	28.57	0.55	4.22	21.35	0.01	0.3062	0.553	31.3	28.71	0.30	28.73	28.86	--	--	--	
2/16/2023	19:53	15.72	-0.03	0.0000	0.000	28.2	28.71	0.50	28.75	28.62	28.57	0.00	0.00	21.35	0.01	0.3019	0.549	31.3	28.71	0.30	28.73	28.86	28.83	30.38	230.87	
2/16/2023	19:54	15.78	-0.03	0.0002	0.014	28.3	28.71	0.50	28.75	28.63	28.57	0.78	5.97	21.35	0.01	0.3055	0.553	31.6	28.71	0.30	28.73	28.86	28.83	30.57	232.18	
2/16/2023	19:55	15.76	-0.03	0.0001	0.010	28.3	28.71	0.50	28.75	28.63	28.57	0.55	4.22	21.35	0.01	0.3017	0.549	31.6	28.71	0.30	28.73	28.86	28.83	30.38	230.73	
2/16/2023	19:56	15.79	-0.03	0.0001	0.010	28.3	28.71	0.50	28.75	28.63	28.57	0.55	4.22	21.35	0.02	0.2927	0.541	31.6	28.71	0.30	28.73	28.86	28.83	29.92	227.25	
2/16/2023	19:57	15.78	-0.03	0.0000	0.000	28.2	28.71	0.50	28.75	28.63	28.57	0.00	0.00	21.35	0.01	0.3045	0.552	31.6	28.71	0.30	28.73	28.86	28.83	30.52	231.82	
2/16/2023	19:58	15.75	-0.03	0.0001	0.010	28.3	28.71	0.50	28.75	28.63	28.57	0.55	4.22	21.34	0.02	0.3039	0.551	31.5	28.71	0.30	28.73	28.86	28.83	30.49	231.58	
2/16/2023	19:59	15.75	-0.03	0.0002	0.014	28.2	28.71	0.50	28.75	28.63	28.57	0.78	5.97	21.35	0.01	0.2983	0.546	31.4	28.71	0.30	28.73	28.86	28.83	30.20	229.45	
2/16/2023	20:00	15.77	-0.03	0.0002	0.014	28.2	28.71	0.50	28.75	28.63	28.57	0.78	5.97	21.35	0.01	0.3032	0.551	31.4	28.71	0.30	28.73	28.86	28.83	30.45	231.35	
2/16/2023	20:01	15.77	-0.03	0.0001	0.010	28.2	28.71	0.50	28.75	28.63	28.57	0.55	4.22	21.35	0.01	0.2981	0.546	31.3	28.71	0.30	28.73	28.86	28.83	30.19	229.43	
2/16/2023	20:02	15.78	-0.03	0.0001	0.010	28.3	28.71	0.50	28.75	28.63	28.57	0.55	4.22	21.36	0.02	0.2971	0.545	31.4	28.71	0.30	28.73	28.86	28.83	30.14	229.00	
2/16/2023	20:03	15.73	-0.03	0.0001	0.010	28.1	28.71	0.50	28.75	28.62	28.57	0.55	4.23	21.36	0.01	0.2980	0.546	31.3	28.71	0.30	28.73	28.86	28.83	30.18	229.38	
2/16/2023	20:04	15.77	-0.03	0.0001	0.010	28.3	28.71	0.50	28.75	28.63	28.57	0.55	4.22	21.35	0.01	0.2998	0.548	31.4	28.71	0.30	28.73	28.86	28.83	30.28	230.04	
2/16/2023	20:05	15.75	-0.03	0.0002	0.014	28.2	28.71	0.50	28.75	28.63	28.57	0.78	5.97	21.35	0.01	0.2974	0.545	31.5	28.71	0.30	28.73	28.86	28.83	30.16	229.08	
2/16/2023	20:06	15.73	-0.03	0.0003	0.017	28.2	28.71	0.50	28.75	28.62	28.57	0.96	7.32	21.36	0.01	0.3011	0.549	31.4	28.71	0.30	28.73	28.86	28.83	30.34	230.54	
2/16/2023	20:07	15.74	-0.03	0.0002	0.014	28.2	28.71	0.50	28.75	28.62	--	--	--	21.36	0.02	0.2993	0.547	31.5	28.71	0.30	28.73	28.86	28.83	30.25	229.83	
2/16/2023	20:08	15.76	-0.03	0.0001	0.010	28.3	28.71	0.50	28.75	28.63	28.57	0.55	4.22	21.36	0.01	0.3026	0.550	31.3	28.71	0.30	28.73	28.86	28.83	30.41	231.14	
2/16/2023	20:09	15.72	-0.03	0.0001	0.010	28.2	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.36	0.01	0.2973	0.545	31.9	28.71	0.30	28.73	28.86	28.83	30.16	228.97	
2/16/2023	20:10	15.73	-0.03	0.0001	0.010	28.0	28.71	0.50	28.75	28.62	28.57	0.55	4.23	21.35	0.02	0.2994	0.547	34.6	28.71	0.30	28.73	28.86	28.83	30.35	229.13	
2/16/2023	20:11	15.72	-0.03	0.0002	0.014	28.2	28.71	0.50	28.75	28.62	28.57	0.78	5.98	21.35	0.01	0.3029	0.550	34.1	28.71	0.30	28.73	28.86	28.83	30.52	230.58	
2/16/2023	20:12	15.71	-0.03	0.0001	0.010	28.4	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.35	0.02	0.2985	0.546	31.6	28.71	0.30	28.73	28.86	28.83	30.21	229.49	
2/16/2023	20:13	15.71	-0.03	0.0001	0.010	28.2	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.35	0.02	0.3000	0.548	31.5	28.71	0.30	28.73	28.86	28.83	30.29	230.08	
2/16/2023	20:14	15.70	-0.03	0.0001	0.010	28.4	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.35	0.02	0.3029	0.550	31.7	28.71	0.30	28.73	28.86	28.83	30.44	231.15	
2/16/2023	20:15	15.68	-0.03	0.0002	0.014	28.4	28.71	0.50	28.75	28.62	28.57	0.78	5.97	21.35	0.02	0.3069	0.554	31.6	28.71	0.30	28.73	28.86	28.83	30.64	232.70	
2/16/2023	20:16	15.72	-0.03	0.0001	0.010	28.5	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.35	0.02	0.3035	0.551	31.6	28.71	0.30	28.73	28.86	--	--	--	
2/16/2023	20:17	15.70	-0.03	0.0001	0.010	28.5	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.36	0.02	0.2986	0.546	31.7	28.71	0.30	28.73	28.86	28.83	30.22	229.50	
2/16/2023	20:18	15.72	-0.03	0.0002	0.014	28.4	28.71	0.50	28.75	28.62	28.57	0.78	5.97	21.35	0.02	0.3029	0.550	31.7	28.71	0.30	28.73	28.86	28.83	30.44	231.14	
2/16/2023	20:19	15.68	-0.03	0.0001	0.010	28.4	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.35	0.02	0.2965	0.545	31.4	28.71	0.30	28.73	28.86	28.83	30.11	228.76	
2/16/2023	20:20	15.72	-0.03	0.0001	0.010	28.4	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.36	0.01	0.3002	0.548	31.4	28.71	0.30	28.73	28.86	28.83	30.30	230.18	
2/16/2023	20:21	15.73	-0.03	0.0001	0.010	28.5	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.36	0.02	0.2991	0.547	31.3	28.71	0.30	28.73	28.86	28.83	30.24	229.80	
2/16/2023	20:22	15.69	-0.03	0.0001	0.010	28.5	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.35	0.02	0.3039	0.551	31.4	28.71	0.30	28.73	28.86	28.83	30.48	231.61	
2/16/2023	20:23	15.70	-0.03	0.0001	0.010	28.5	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.35	0.01	0.3026	0.550	31.5	28.71	0.30	28.73	28.86	28.83	30.42	231.09	
2/16/2023	20:24	15.69	-0.03	0.0001	0.010	28.4	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.35	0.02	0.3001	0.548	31.6	28.71	0.30	28.73	28.86	28.83	30.30	230.11	
2/16/2023	20:25	15.69	-0.03	0.0001	0.010	28.5	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.35	0.02	0.3019	0.549	31.5	28.71	0.30	28.73	28.86	28.83	30.38	230.82	
2/16/2023	20:26	15.67	-0.03	0.0001	0.010	28.4	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.36	0.02	0.3024	0.550	31.6	28.71	0.30	28.73	28.86	28.83	30.41	230.98	
2/16/2023	20:27	15.68	-0.03	0.0001	0.010	28.5	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.35	0.02	0.2904	0.539	31.6	28.71	0.30	28.73	28.86	28.83	29.80	226.34	
2/16/2023	20:28	15.70	-0.03	0.0002	0.014	28.5	28.71	0.50	28.75	28.62	28.57	0.78	5.97	21.36	0.02	0.2991	0.547	31.6	28.71	0.30	28.73	28.86	28.83	30.25	229.72	
2/16/2023	20:29	15.68	-0.03	0.0002	0.014	28.5	28.71	0.50	28.75	28.62	--	--	--	21.35	0.02	0.2957	0.544	31.7	28.71	0.30	28.73	28.86	28.83	30.08	228.39	
2/16/2023	20:30	15.68	-0.03	0.0002	0.014	28.5	28.71	0.50	28.75	28.62	28.57	0.78	5.97	21.35	0.02	0.2932	0.541	31.6	28.71	0.30	28.73	28.86	28.83	29.95	227.44	
2/16/2023	20:31	15.68	-0.03	0.0002	0.014	28.6	28.71	0.50	28.75	28.62	28.57	0.78	5.97	21.35	0.02	0.2965	0.545	31.4	28.71	0.30	28.73	28.86	28.83	30.11	228.77	
2/16/2023	20:32	15.68	-0.03	0.0001	0.010	28.3	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.35	0.02	0.3028	0.550	31.3	28.71	0.30	28.73	28.86	28.83	30.42	231.20	
2/16/2023	20:33	15.68	-0.03	0.0002	0.014	28.6	28.71	0.50	28.75	28.62	28.57	0.78	5.97	21.35	0.02	0.2981	0.546	31.5	28.71	0.30	28.73	28.86	28.83	30.19	229.35	
2/16/2023	20:34	15.67	-0.03	0.0002	0.014	28.4	28.71	0.50	28.75	28.62	28.57	0.78	5.97	21.36	0.02	0.2941	0.542	31.6	28.71	0.30	28.73	28.86	28.83	29.99	227.78	
2/16/2023	20:35	15.65	-0.03	0.0001	0.010	28.5	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.36	0.02	0.2932	0.541	31.5	28.71	0.30	28.73	28.86	28.83	29.94	227.45	
2/16/2023	20:36	15.69	-0.03	0.0001	0.010	28.5	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.35	0.02	0.2911	0.540	31.6	28.71	0.30	28.73	28.86	28.83	29.84	226.61	
2/16/2023	20:37	15.66	-0.03	0.0002	0.014	28.5	28.71	0.50	28.75	28.62	28.57	0.78	5.97	21.36	0.02	0.2985	0.546	31.6	28.71	0.30	28.73	28.86	28.83	30.22	229.47	
2/16/2023	20:38	15.69	-0.03	0.0000	0.000	28.3	28.71	0.50	28.75	28.62	28.57	0.00	0.00	21.35	0.02	0.2967	0.545	32.3	28.71	0.30	28.73	28.86	28.83	30.15	228.62	
2/16/2023	20:39	15.67	-0.03	0.0001	0.010	28.4	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.35	0.02	0.2919	0.540	31.7	28.71	0.30	28.73	28.86	--	--	--	
2/16/2023	20:40	15.66	-0.03	0.0001	0.010	28.6	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.35	0.02	0.2907	0.539	31.8	28.71	0.30	28.73	28.86	28.83	29.83	226.41	
2/16/2023	20:41	15.67	-0.03	0.0002	0.014	28.6	28.71	0.50	28.75	28.62	28.57	0.78	5.97	21.36	0.02	0.3017	0.549	31.7	28.71	0.30	28.73	28.86	28.83	30.38	230.67	
2/16/2023	20:42	15.67	-0.03	0.0000	0.000	28.5	28.71	0.50	28.75	28.62	28.57	0.00	0.00	21.36	0.02	0.2853	0.534	31.9	28.71	0.30	28.73	28.86	28.83	29.55	224.30	
2/16/2023	20:43	15.66	-0.03	0.0001	0.010	28.5	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.36	0.02	0.2961	0.544	32.0	28.71	0.30	28.73	28.86	28.83	30.11	228.47	
2/16/2023	20:44	15.66	-0.03	0.0002	0.014	28.6	28.71	0.50	28.75	28.62	28.57	0.78	5.97	21.35	0.02	0.2963	0.544	31.8	28.71	0.30	28.73	28.86	28.83	30.11	228.58	
2/16/2023	20:45	15.65	-0.03	0.0002	0.014	28.5	28.71	0.50	28.75	28.62	28.57	0.78	5.97	21.35	0.02	0.2992	0.547	31.9	28.71	0.30	28.73	28.86	28.83	30.26	229.68	
2/16/2023	20:46	15.68	-0.03	0.0002	0.014	28.6	28.71	0.50	28.75	28.62	28.57	0.78	5.97	21.36	0.02	0.2974	0.545	32.0	28.71	0.30	28.73	28.86	28.83	30.17	228.97	
2/16/2023	20:47	15.67	-0.03	0.0002	0.014	28.4	28.71	0.50	28.75	28.62	28.57	0.78	5.97	21.36	0.02	0.2912	0.540	31.7	28.71	0.30	28.73	28.86	28.83	29.85	226.63	
2/16/2023	20:48	15.66	-0.03	0.0001	0.010	28.7	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.35	0.02	0.2950	0.543	31.8	28.71	0.30	28.73	28.86	28.83	30.04	228.09	
2/16/2023	20:49	15.67	-0.03	0.0001	0.010	28.7	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.36	0.02	0.2921	0.540	31.7	28.71	0.30	28.73	28.86	28.83	29.89	226.97	
2/16/2023	20:50	15.64	-0.03	0.0002	0.014	28.7	28.71	0.50	28.75	28.62	28.57	0.78	5.97	21.37	0.02	0.2958	0.544	31.7	28.71	0.30	28.73	28.86	28.83	30.08	228.42	
2/16/2023	20:51	15.64	-0.03	0.0001	0.010	28.7	28.71	0.50	28.75	28.62	--	--	--	21.36	0.02	0.2969	0.545	31.8	28.71	0.30	28.73	28.86	28.83	30.14	228.84	
2/16/2023	20:52	15.64	-0.03	0.0000	0.000	28.5	28.71	0.50	28.75	28.62	28.57	0.00	0.00	21.36	0.02	0.2909	0.539	31.8	28.71	0.30	28.73	28.86	28.83	29.83	226.51	
2/16/2023	20:53	15.64	-0.03	0.0000	0.000	28.5	28.71	0.50	28.75	28.62	28.57	0.00	0.00	21.35	0.02	0.2947	0.543	31.8	28.71	0.30	28.73	28.86	28.83	30.03	227.97	
2/16/2023	20:54	15.64	-0.03	0.0002	0.014	28.6	28.71	0.50	28.75	28.62	28.57	0.78	5.97	21.36	0.01	0.2868	0.536	32.5	28.71	0.30	28.73	28.86	28.83	29.65	224.75	
2/16/2023	20:55	15.66	-0.03	0.0001	0.010	28.7	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.36	0.02	0.2919	0.540	31.8	28.71	0.30	28.73	28.86	28.83	29.89	226.89	
2/16/2023	20:56	15.64	-0.03	0.0002	0.014	28.8	28.71	0.50	28.75	28.62	28.56	0.78	5.97	21.36	0.02	0.2901	0.539	32.1	28.71	0.30	28.73	28.86	28.83	29.80	226.12	
2/16/2023	20:57	15.64	-0.03	0.0001	0.010	28.7	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.36	0.02	0.2967	0.545	32.0	28.71	0.30	28.73	28.86	28.83	30.14	228.68	
2/16/2023	20:58	15.65	-0.03	0.0002	0.014	28.7	28.71	0.50	28.75	28.62	28.57	0.78	5.97	21.36	0.01	0.2966	0.545	32.2	28.71	0.30	28.73	28.86	28.83	30.14	228.62	
2/16/2023	20:59	15.64	-0.03	0.0001	0.010	28.7	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.36	0.02	0.2962	0.544	32.0	28.71	0.30	28.73	28.86	28.83	30.11	228.50	
2/16/2023	21:00	15.63	-0.03	0.0001	0.010	28.8	28.71	0.50	28.75	28.62	28.56	0.55	4.22	21.36	0.02	0.2922	0.541	32.2	28.71	0.30	28.73	28.86	28.83	29.91	226.90	
2/16/2023	21:01	15.66	-0.03	0.0002	0.014	28.7	28.71	0.50	28.75	28.62	28.57	0.78	5.97	21.36	0.02	0.2865	0.535	32.0	28.71	0.30	28.73	28.86	28.83	29.62	224.72	
2/16/2023	21:02	15.64	-0.03	0.0001	0.010	28.5	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.36	0.02	0.2899	0.538	31.9	28.71	0.30	28.73	28.86	28.83	29.79	226.09	
2/16/2023	21:03	15.93	-0.03	0.0001	0.010	28.7	28.71	0.50	28.75	28.63	28.58	0.55	4.22	21.37	0.02	0.2967	0.545	31.9	28.71	0.30	28.73	28.86	--	--	--	
2/16/2023	21:04	15.74	-0.03	0.0001	0.010	28.7	28.71	0.50	28.75	28.62	28.57	0.55	4.22	21.36	0.02	0.3006	0.548	31.9	28.71	0.30	28.73	28.86	28.83	30.33	230.20	
2/16/2023	21:05	15.86	-0.03	0.0001	0.010	28.8	28.71	0.50	28.75	28.63	28.57	0.55	4.22	21.37	0.02	0.2891	0.538	32.0	28.71	0.30	28.73	28.86	28.83	29.75	225.76	
2/16/2023	21:06	15.84	-0.03	0.0001	0.010	28.6	28.71	0.50	28.75	28.63	28.57	0.55	4.22	21.37	0.02	0.2987	0.547	31.9	28.71	0.30	28.73	28.86	28.83	30.24	229.48	
2/16/2023	21:07	15.84	-0.03	0.0001	0.010	28.8	28.71	0.50	28.75	28.63	28.57	0.55	4.22	21.37	0.01	0.3011	0.549	31.8	28.71	0.30	28.73	28.86	28.83	30.35	230.44	
2/16/2023	21:08	15.79	-0.03	0.0001	0.010	28.7	28.71	0.50	28.75	28.63	28.57	0.55	4.22	21.37	0.02	0.2964

Alliance SOURCE TESTING

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	-
	Status	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	
		Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/16/2023	21:33	16.37	-0.01	0.0001	0.010	29.2	28.71	0.50	28.75	28.65	28.60	0.55	4.22	21.38	0.01	0.2901	0.539	32.3	28.71	0.30	28.73	28.86	28.83	29.81	226.08	
2/16/2023	21:34	16.59	-0.01	0.0001	0.010	29.0	28.71	0.50	28.75	28.66	28.61	0.55	4.22	21.38	0.01	0.2933	0.542	32.1	28.71	0.30	28.73	28.86	28.83	29.97	227.36	
2/16/2023	21:35	16.66	0.00	0.0001	0.010	29.2	28.71	0.50	28.75	28.67	--	--	--	21.38	0.01	0.2970	0.545	32.2	28.71	0.30	28.73	28.86	28.83	30.16	228.77	
2/16/2023	21:36	16.77	0.00	0.0001	0.010	29.2	28.71	0.50	28.75	28.67	28.61	0.55	4.22	21.37	0.02	0.2858	0.535	32.0	28.71	0.30	28.73	28.86	28.83	29.58	224.45	
2/16/2023	21:37	16.82	0.00	0.0001	0.010	29.2	28.71	0.50	28.75	28.67	28.62	0.55	4.22	21.38	0.01	0.2908	0.539	32.1	28.71	0.30	28.73	28.86	28.83	29.84	226.37	
2/16/2023	21:38	17.03	0.01	0.0001	0.010	29.3	28.71	0.50	28.75	28.68	28.63	0.55	4.21	21.38	0.01	0.2904	0.539	32.0	28.71	0.30	28.73	28.86	28.83	29.82	226.25	
2/16/2023	21:39	17.19	0.01	0.0001	0.010	29.4	28.71	0.50	28.75	28.69	28.63	0.55	4.21	21.38	0.01	0.2878	0.536	32.0	28.71	0.30	28.73	28.86	28.83	29.68	225.24	
2/16/2023	21:40	17.15	0.01	0.0002	0.014	29.2	28.71	0.50	28.75	28.69	28.63	0.78	5.96	21.38	0.01	0.2916	0.540	31.9	28.71	0.30	28.73	28.86	28.83	29.88	226.73	
2/16/2023	21:41	17.24	0.00	0.0001	0.010	29.4	28.71	0.50	28.75	28.69	28.63	0.55	4.21	21.38	0.01	0.2942	0.542	32.0	28.71	0.30	28.73	28.86	28.83	30.01	227.72	
2/16/2023	21:42	17.07	0.00	0.0001	0.010	29.4	28.71	0.50	28.75	28.68	28.62	0.55	4.21	21.38	0.01	0.2884	0.537	31.9	28.71	0.30	28.73	28.86	28.83	29.71	225.48	
2/16/2023	21:43	17.10	0.01	0.0001	0.010	29.4	28.71	0.50	28.75	28.69	28.63	0.55	4.21	21.38	0.01	0.2884	0.537	32.1	28.71	0.30	28.73	28.86	28.83	29.72	225.43	
2/16/2023	21:44	17.22	0.01	0.0001	0.010	29.3	28.71	0.50	28.75	28.69	28.63	0.55	4.21	21.38	0.01	0.2948	0.543	32.1	28.71	0.30	28.73	28.86	28.83	30.05	227.92	
2/16/2023	21:45	17.11	0.01	0.0001	0.010	29.5	28.71	0.50	28.75	28.69	28.63	0.55	4.21	21.38	0.01	0.2863	0.535	32.1	28.71	0.30	28.73	28.86	28.83	29.61	224.62	
2/16/2023	21:46	17.15	0.00	0.0000	0.000	29.7	28.71	0.50	28.75	28.69	28.63	0.00	0.00	21.39	0.01	0.2902	0.539	32.1	28.71	0.30	28.73	28.86	28.83	29.81	226.15	
2/16/2023	21:47	16.85	0.01	0.0001	0.010	29.5	28.71	0.50	28.75	28.68	28.62	0.55	4.21	21.38	0.01	0.2917	0.540	32.2	28.71	0.30	28.73	28.86	28.83	29.89	226.70	
2/16/2023	21:48	16.91	0.01	0.0002	0.014	29.5	28.71	0.50	28.75	28.68	28.62	0.78	5.96	21.38	0.01	0.2838	0.533	32.3	28.71	0.30	28.73	28.86	28.83	29.48	223.60	
2/16/2023	21:49	16.95	0.01	0.0003	0.017	29.5	28.71	0.50	28.75	28.68	28.62	0.96	7.30	21.38	0.01	0.2931	0.541	32.3	28.71	0.30	28.73	28.86	28.83	29.96	227.24	
2/16/2023	21:50	17.05	0.01	0.0001	0.010	29.6	28.71	0.50	28.75	28.68	28.63	0.55	4.21	21.38	0.00	0.2905	0.539	32.3	28.71	0.30	28.73	28.86	--	--	--	
2/16/2023	21:51	17.13	0.01	0.0001	0.010	29.6	28.71	0.50	28.75	28.69	28.63	0.55	4.21	21.38	0.01	0.2881	0.537	32.1	28.71	0.30	28.73	28.86	28.83	29.70	225.33	
2/16/2023	21:52	17.07	0.01	0.0001	0.010	29.7	28.71	0.50	28.75	28.68	28.63	0.55	4.21	21.39	0.01	0.2910	0.539	32.0	28.71	0.30	28.73	28.86	28.83	29.85	226.48	
2/16/2023	21:53	17.10	0.01	0.0001	0.010	29.5	28.71	0.50	28.75	28.69	28.63	0.55	4.21	21.38	0.01	0.2903	0.539	32.0	28.71	0.30	28.73	28.86	28.83	29.81	226.21	
2/16/2023	21:54	17.04	0.01	0.0001	0.010	29.4	28.71	0.50	28.75	28.68	28.63	0.55	4.21	21.38	0.01	0.2947	0.543	32.7	28.71	0.30	28.73	28.86	28.83	30.06	227.75	
2/16/2023	21:55	16.96	0.01	0.0147	0.121	29.5	28.71	0.50	28.75	28.68	28.62	6.71	51.09	21.38	0.01	0.2924	0.541	32.2	28.71	0.30	28.73	28.86	28.83	29.92	226.98	
2/16/2023	21:56	17.06	0.01	0.0003	0.017	29.5	28.71	0.50	28.75	28.68	28.63	0.96	7.30	21.38	0.01	0.2894	0.538	32.1	28.71	0.30	28.73	28.86	28.83	29.77	225.84	
2/16/2023	21:57	17.06	0.01	0.0001	0.010	29.4	28.71	0.50	28.75	28.68	--	--	--	21.38	0.01	0.3336	0.578	32.0	28.71	0.30	28.73	28.86	28.83	31.96	242.49	
2/16/2023	21:58	17.01	0.01	0.0001	0.010	29.6	28.71	0.50	28.75	28.68	28.62	0.55	4.21	21.38	0.01	0.2897	0.538	32.2	28.71	0.30	28.73	28.86	28.83	29.79	225.93	
2/16/2023	21:59	17.00	0.01	0.0002	0.014	29.5	28.71	0.50	28.75	28.68	28.62	0.78	5.96	21.37	0.00	0.2945	0.543	32.0	28.71	0.30	28.73	28.85	28.82	30.03	227.84	
2/16/2023	22:00	16.98	0.01	0.0002	0.014	29.5	28.71	0.50	28.75	28.68	28.62	0.78	5.96	21.38	0.01	0.2891	0.538	32.1	28.71	0.30	28.73	28.86	28.83	29.75	225.71	
2/16/2023	22:01	7.01	0.00	0.0002	0.014	29.6	28.71	0.50	28.75	28.28	28.22	0.79	6.00	21.05	0.01	0.3142	0.561	31.9	28.71	0.30	28.73	28.84	28.81	31.02	235.39	
2/16/2023	22:02	1.90	0.01	0.0001	0.010	29.6	28.71	0.50	28.75	28.08	28.02	0.56	4.26	21.32	0.01	0.2876	0.536	32.0	28.71	0.30	28.73	28.85	28.82	29.67	225.15	
2/16/2023	22:03	2.74	0.01	0.0002	0.014	29.5	28.71	0.50	28.75	28.11	28.06	0.79	6.02	21.35	0.01	0.2912	0.540	31.8	28.71	0.30	28.73	28.86	28.82	29.85	226.58	
2/16/2023	22:04	4.27	0.00	0.0000	0.000	29.7	28.71	0.50	28.75	28.17	28.12	0.00	0.00	21.35	0.01	0.2901	0.539	32.3	28.71	0.30	28.73	28.86	28.82	29.81	226.05	
2/16/2023	22:05	2.62	0.01	0.0002	0.014	29.5	28.71	0.50	28.75	28.11	28.05	0.79	6.02	21.34	0.01	0.2878	0.536	32.1	28.71	0.30	28.73	28.86	28.82	29.69	225.19	
2/16/2023	22:06	3.67	0.00	0.0002	0.014	29.5	28.71	0.50	28.75	28.15	28.09	0.79	6.02	21.35	0.01	0.2826	0.532	32.3	28.71	0.30	28.73	28.86	28.82	29.42	223.11	
2/16/2023	22:07	5.45	0.00	0.0002	0.014	29.4	28.71	0.50	28.75	28.22	28.17	0.79	6.01	21.36	0.00	0.2925	0.541	32.2	28.71	0.30	28.73	28.85	28.82	29.93	227.02	
2/16/2023	22:08	6.94	0.00	0.0001	0.010	29.4	28.71	0.50	28.75	28.28	28.26	0.56	4.26	21.36	0.01	0.2877	0.536	32.3	28.71	0.30	28.73	28.86	28.82	29.69	225.11	
2/16/2023	22:09	6.87	0.00	0.0002	0.014	29.2	28.71	0.50	28.75	28.27	28.25	0.79	6.02	21.37	0.01	0.2904	0.539	32.2	28.71	0.30	28.73	28.86	28.82	29.82	226.19	
2/16/2023	22:10	8.14	0.00	0.0001	0.010	29.2	28.71	0.50	28.75	28.33	28.30	0.56	4.25	21.37	0.01	0.2871	0.536	32.1	28.71	0.30	28.73	28.86	28.82	29.65	224.92	
2/16/2023	22:11	10.49	0.00	0.0001	0.010	29.2	28.71	0.50	28.75	28.42	28.40	0.56	4.25	21.37	0.01	0.2866	0.535	32.2	28.71	0.30	28.73	28.86	28.82	29.63	224.71	
2/16/2023	22:12	12.18	0.00	0.0002	0.014	29.1	28.71	0.50	28.75	28.49	28.47	0.78	6.00	21.37	0.01	0.2912	0.540	32.1	28.71	0.30	28.73	28.86	28.82	29.86	226.50	
2/16/2023	22:13	13.28	0.00	0.0001	0.010	29.3	28.71	0.50	28.75	28.53	28.50	0.55	4.24	21.38	0.01	0.2880	0.537	32.0	28.71	0.30	28.73	28.86	--	--	--	
2/16/2023	22:14	13.78	0.00	0.0002	0.014	29.3	28.71	0.50	28.75	28.55	28.49	0.78	5.97	21.38	0.00	0.2916	0.540	32.2	28.71	0.30	28.73	28.86	28.82	29.89	226.65	
2/16/2023	22:15	13.94	0.00	0.0001	0.010	29.3	28.71	0.50	28.75	28.56	28.50	0.55	4.22	21.37	0.01	0.2892	0.538	32.0	28.71	0.30	28.73	28.86	28.82	29.76	225.75	
2/16/2023	22:16	14.01	0.01	0.0001	0.010	29.4	28.71	0.50	28.75	28.56	28.50	0.55	4.22	21.38	0.01	0.2883	0.537	32.1	28.71	0.30	28.73	28.86	28.82	29.71	225.39	
2/16/2023	22:17	13.99	0.01	0.0001	0.010	29.4	28.71	0.50	28.75	28.56	28.50	0.55	4.22	21.37	0.01	0.2942	0.542	32.0	28.71	0.30	28.73	28.86	28.82	30.01	227.72	
2/16/2023	22:18	13.94	0.01	0.0001	0.010	29.4	28.71	0.50	28.75	28.56	28.50	0.55	4.22	21.38	0.01	0.2977	0.546	32.1	28.71	0.30	28.73	28.86	28.82	30.19	229.02	
2/16/2023	22:19	14.02	0.01	0.0001	0.010	29.3	28.71	0.50	28.75	28.56	--	--	--	21.38	0.01	0.2943	0.542	32.1	28.71	0.30	28.73	28.86	28.82	30.02	227.71	
2/16/2023	22:20	14.11	0.01	0.0002	0.014	29.3	28.71	0.50	28.75	28.57	28.51	0.78	5.97	21.38	0.01	0.2888	0.537	32.1	28.71	0.30	28.73	28.86	28.82	29.74	225.56	
2/16/2023	22:21	14.16	0.01	0.0002	0.014	29.4	28.71	0.50	28.75	28.57	28.51	0.78	5.97	21.38	0.01	0.2894	0.538	32.1	28.71	0.30	28.73	28.86	28.82	29.77	225.81	
2/16/2023	22:22	14.33	0.01	0.0000	0.000	29.3	28.71	0.50	28.75	28.57	28.52	0.00	0.00	21.38	0.01	0.2851	0.534	32.2	28.71	0.30	28.73	28.86	28.83	29.55	224.12	
2/16/2023	22:23	14.41	0.01	0.0001	0.010	29.4	28.71	0.50	28.75	28.58	28.52	0.55	4.22	21.38	0.01	0.2833	0.532	32.3	28.71	0.30	28.73	28.86	28.83	29.46	223.37	
2/16/2023	22:24	14.27	0.01	0.0002	0.014	29.3	28.71	0.50	28.75	28.57	28.52	0.78	5.97	21.38	0.01	0.2883	0.537	35.4	28.71	0.30	28.73	28.86	28.82	29.81	224.62	
2/16/2023	22:25	14.46	0.01	0.0001	0.010	29.3	28.71	0.50	28.75	28.58	28.52	0.55	4.22	21.38	0.01	0.2862	0.535	35.8	28.71	0.30	28.73	28.86	28.83	29.71	223.74	
2/16/2023	22:26	14.57	0.01	0.0002	0.014	29.3	28.71	0.50	28.75	28.58	28.53	0.78	5.97	21.38	0.01	0.2872	0.536	35.6	28.71	0.30	28.73	28.86	28.82	29.76	224.17	
2/16/2023	22:27	14.33	0.01	0.0001	0.010	29.3	28.71	0.50	28.75	28.57	28.52	0.55	4.22	21.38	0.01	0.2855	0.534	32.4	28.71	0.30	28.73	28.86	28.83	29.58	224.22	
2/16/2023	22:28	14.39	0.01	0.0001	0.010	29.4	28.71	0.50	28.75	28.58	28.52	0.55	4.22	21.38	0.01	0.2870	0.536	32.0	28.71	0.30	28.73	28.86	28.83	29.64	224.91	
2/16/2023	22:29	14.47	0.01	0.0001	0.010	29.5	28.71	0.50	28.75	28.58	28.52	0.55	4.22	21.37	0.01	0.2955	0.544	32.1	28.71	0.30	28.73	28.86	28.82	30.08	228.20	
2/16/2023	22:30	14.49	0.01	0.0001	0.010	29.3	28.71	0.50	28.75	28.58	28.52	0.55	4.22	21.38	0.01	0.2903	0.539	32.0	28.71	0.30	28.73	28.86	28.83	29.81	226.19	
2/16/2023	22:31	14.70	0.01	0.0002	0.014	29.4	28.71	0.50	28.75	28.59	28.53	0.78	5.97	21.38	0.00	0.2948	0.543	32.0	28.71	0.30	28.73	28.86	28.82	30.04	227.95	
2/16/2023	22:32	14.55	0.01	0.0002	0.014	29.4	28.71	0.50	28.75	28.58	28.53	0.78	5.97	21.38	0.01	0.2866	0.535	32.0	28.71	0.30	28.73	28.86	28.83	29.62	224.75	
2/16/2023	22:33	14.74	0.01	0.0002	0.014	29.4	28.71	0.50	28.75	28.59	28.53	0.78	5.97	21.38	0.01	0.2825	0.532	31.9	28.71	0.30	28.73	28.86	28.83	29.41	223.15	
2/16/2023	22:34	15.02	0.01	0.0002	0.014	29.5	28.71	0.50	28.75	28.60	28.54	0.78	5.97	21.38	0.01	0.2884	0.537	32.0	28.71	0.30	28.73	28.86	28.83	29.71	225.46	
2/16/2023	22:35	15.01	0.01	0.0001	0.010	29.4	28.71	0.50	28.75	28.60	28.54	0.55	4.22	21.38	0.01	0.2844	0.533	32.0	28.71	0.30	28.73	28.86	28.83	29.51	223.88	
2/16/2023	22:36	14.65	0.01	0.0002	0.014	29.5	28.71	0.50	28.75	28.59	28.53	0.78	5.97	21.38	0.01	0.2802	0.529	32.0	28.71	0.30	28.73	28.86	--	--	--	
2/16/2023	22:37	14.73	0.02	0.0001	0.010	29.5	28.71	0.50	28.75	28.59	28.53	0.55	4.22	21.38	0.01	0.2878	0.536	32.0	28.71	0.30	28.73	28.86	28.83	29.68	225.23	
2/16/2023	22:38	14.89	0.02	0.0000	0.000	29.5	28.71	0.50	28.75	28.60	28.54	0.00	0.00	21.38	0.01	0.2874	0.536	32.1	28.71	0.30	28.73	28.86	28.83	29.66	225.05	
2/16/2023	22:39	15.03	0.02	0.0001	0.010	29.4	28.71	0.50	28.75	28.60	28.55	0.55	4.22	21.37	0.01	0.2947	0.543	31.9	28.71	0.30	28.73	28.86	28.82	30.03	227.92	
2/16/2023	22:40	15.09	0.01	0.0001	0.010	29.5	28.71	0.50	28.75	28.61	28.55	0.55	4.22	21.37	0.01	0.2857	0.535	32.1	28.71	0.30	28.73	28.86	28.83	29.58	224.39	
2/16/2023	22:41	15.03	0.02	0.0001	0.010	29.4	28.71	0.50	28.75	28.60	--	--	--	21.38	0.01	0.2914	0.540	32.1	28.71	0.30	28.73	28.86	28.83	29.87	226.60	
2/16/2023	22:42	15.13	0.02	0.0002	0.014	29.5	28.71	0.50	28.75	28.61	28.55	0.78	5.97	21.38	0.01	0.2916	0.540	32.1	28.71	0.30	28.73	28.86	28.83	29.88	226.67	
2/16/2023	22:43	15.35	0.01	0.0002	0.014	29.4	28.71	0.50	28.75	28.62	28.56	0.78	5.97	21.38	0.02	0.2895	0.538	32.1	28.71	0.30	28.73	28.86	28.83	29.77	225.85	
2/16/2023	22:44	15.19	0.02	0.0002	0.014	29.3	28.71	0.50	28.75	28.61	28.55	0.78	5.97	21.38	0.01	0.2864	0.535	34.2	28.71	0.30	28.73	28.86	28.83	29.68	224.16	
2/16/2023	22:45	15.25	0.02	0.0000	0.000	29.4	28.71	0.50	28.75	28.61	28.56	0.00	0.00	21.38	0.02	0.2890	0.538	32.0	28.71	0.30	28.73	28.86	28.83	29.74	225.68	
2/16/2023	22:46	15.31	0.02	0.0002	0.014	29.4	28.71	0.50	28.75	28.62	28.56	0.78	5.97	21.38	0.01	0.2869	0.536	32.0	28.71	0.30	28.73	28.86	28.83	29.64	224.87	
2/16/2023	22:47	15.37	0.02	0.0002	0.014	29.5	28.71	0.50	28.75	28.62	28.56	0.78	5.97	21.38	0.01	0.3014	0.549	32.0	28.71	0.30	28.73	28.86	28.83	30.38	230.48	
2/16/2023	22:48	15.38	0.02	0.0001	0.010	29.6	28.71	0.50	28.75	28.62	28.56	0.55	4.22	21.38	0.01	0.2876	0.536	32.0	28.71	0.30	28.73	28.86	28.83	29.67	225.13	
2/16/2023	22:49	15.55	0.02	0.0001	0.010	29.4	28.71	0.50	28.75	28.63	28.57	0.55	4.22	21.38	0.01	0.2907	0.539	31.9	28.71	0.30	28.73	28.86	28.83	29.83	226.36	
2/16/2023	22:50	15.69	0.02	0.0001	0.010	29.3	28.71	0.50	28.75	28.63	28.57	0.55	4.22	21.38	0.01	0.2889	0.537	32.0	28.71	0.30	28.73	28.86	28.82	29.74	225.64	
2/16/2023	22:51	15.82	0.01	0.0001	0.010	29.5	28.71	0.50	28.75	28.63	28.58	0.55	4.22	21.38	0.01	0.2873	0.536	32.1	28.71	0.30	28.73	28.86	28.82	29.66	224.99	
2/16/2023	22:52	15.99	0.01	0.0002	0.014	29.5	28.71	0.50	28.75	28.64	28.58	0.78	5.96	21.38	0.01	0.2954	0.544	32.1	28.71	0.30	28.73	28.86	28.83	30.07	228.17	
2/16/2023	22:53	15.55	0.02	0.0001	0.010	29.5	28.71	0.50	28.75	28.63	28.57	0.55	4.22	21.38	0.01	0.2867	0.535	32.2	28.71	0.30	28.73	28.86	28.83	29.63	224.75	
2/16/2023	22:54	15.65	0.02	0.0002	0.014	29.4	28.71	0.50	28.75	28.63	28.57	0.78	5.97	21.38	0.01	0.2928	0.541	32.1	28.71	0.30	28.73	28.86	28.83	29.94	227.14	
2/16/2023	22:55	15.67	0.02	0.0001	0.010	29.5	28.71	0.50	28.75	28.63	28.57	0.55	4.22	21.38	0.01	0.2978	0.546	32.3	28.71	0.30	28.73	28.86	28.83	30.20	229.03	
2/16/2023	22:56	15.71	0.02	0.0002	0.014	29.4	28.71	0.50	28.75	28.63	28.57	0.78	5.97	21.38	0.01	0.2838	0.533	32.2	28.71	0.30	28.73	28.86	28.83	29.48	223.60	
2/16/2023	22:57	15.91	0.02	0.0002	0.014	29.4	28.71	0.50	28.75	28.64	28.58	0.78	5.96	21.38	0.01	0.2916	0.540	32.2	28.71	0.30	28.73	28.86	28.82	29.88	226.65	
2/16/2023	22:58	15.79	0.02	0.0001	0.010	29.5	28.71	0.50	28.75	28.63	28.58	0.55	4.22	21.38	0.02	0.2848	0.534	32.2	28.71	0.30	28.73	28.86	28.83	29.53	223.98	
2/16/2023	22:59	16.16	0.02	0.0002	0.014	29.6	28.71	0.50	28.75	28.65	28.59	0.78	5.96	21.38	0.01	0.2909	0.539	32.2	28.71	0.30	28.73	28.86	28.82	29.85	226.38	
2/16/2023	23:00	16.02	0.02	0.0001	0.010	29.4	28.71	0.50	28.75	28.64	28.59	0.55	4.22	21.39	0.02	0.2830	0.532	32.1	28.71	0.30	28.73	28.86	--	--	--	
2/16/2023	23:01	15.95	0.02	0.0001	0.010	29.4	28.71	0.50	28.75	28.64	28.58	0.55	4.22	21.38	0.02	0.2901	0.539	32.1	28.71	0.30	28.73	28.86	28.83	29.80	226.08	
2/16/2023	23:02	16.05	0.02	0.0001	0.010	29.5	28.71	0.50	28.75	28.65	28.59	0.55	4.22	21.39	0.02	0.2886	0.537	32.1	28.71	0.30	28.73	28.86	28.83	29.73	225.48	
2/16/2023	23:03	16.06	0.02	0.0002	0.014	29.5	28.71	0.50	28.75	28.65	--	--	--	21.39	0.02	0.2844	0.533	32.2	28.71	0.30	28.73	28.86	28.83	29.51	223.81	
2/16/2023	23:04	16.15	0.02	0.0001	0.010	29.3	28.71	0.50	28.75	28.65	28.59	0.55	4.22	21.39	0.02	0.2823	0.531	32.5	28.71	0.30	28.73	28.86	28.83	29.41	222.93	
2/16/2023	23:05	16.22	0.02	0.0001	0.010	29.4	28.71	0.50	28.75	28.65	28.59	0.55	4.22	21.39	0.02	0.2848	0.534	32.2	28.71	0.30	28.73	28.86	28.83	29.53	223.96	
2/16/2023	23:06	16.18	0.02	0.0002	0.014	29.4	28.71	0.50	28.75	28.65	28.59	0.78	5.96	21.38	0.02	0.2904	0.539	32.3	28.71	0.30	28.73	28.86	28.83	29.82	226.15	
2/16/2023	23:07	16.26

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	-
	Status	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	
		Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/16/2023	23:31	16.67	0.02	0.0000	0.000	29.6	28.71	0.50	28.75	28.67	28.61	0.00	0.00	21.40	0.02	0.2838	0.533	32.4	28.71	0.30	28.73	28.86	28.83	29.49	223.53	
2/16/2023	23:32	16.64	0.02	0.0001	0.010	29.5	28.71	0.50	28.75	28.67	28.61	0.55	4.21	21.38	0.02	0.2872	0.536	32.4	28.71	0.30	28.73	28.86	28.83	29.66	224.87	
2/16/2023	23:33	16.87	0.01	0.0000	0.000	29.8	28.71	0.50	28.75	28.68	28.62	0.00	0.00	21.39	0.02	0.2847	0.534	32.3	28.71	0.30	28.73	28.86	28.83	29.53	223.91	
2/16/2023	23:34	16.89	0.01	0.0002	0.014	29.6	28.71	0.50	28.75	28.68	28.62	0.78	5.96	21.40	0.02	0.2946	0.543	32.3	28.71	0.30	28.73	28.86	28.83	30.04	227.77	
2/16/2023	23:35	16.91	0.01	0.0001	0.010	29.6	28.71	0.50	28.75	28.68	28.62	0.55	4.21	21.39	0.02	0.2875	0.536	32.5	28.71	0.30	28.73	28.86	28.83	29.68	224.97	
2/16/2023	23:36	16.98	0.02	0.0001	0.010	29.7	28.71	0.50	28.75	28.68	28.62	0.55	4.21	21.40	0.02	0.2990	0.547	32.4	28.71	0.30	28.73	28.86	28.83	30.26	229.45	
2/16/2023	23:37	16.93	0.02	0.0002	0.014	29.6	28.71	0.50	28.75	28.68	28.62	0.78	5.96	21.39	0.02	0.2898	0.538	32.4	28.71	0.30	28.73	28.86	28.83	29.80	225.89	
2/16/2023	23:38	16.93	0.02	0.0002	0.014	29.6	28.71	0.50	28.75	28.68	28.62	0.78	5.96	21.39	0.02	0.2867	0.535	32.4	28.71	0.30	28.73	28.86	28.83	29.64	224.69	
2/16/2023	23:39	16.87	0.02	0.0001	0.010	29.6	28.71	0.50	28.75	28.68	28.62	0.55	4.21	21.40	0.02	0.2848	0.534	32.3	28.71	0.30	28.73	28.86	28.83	29.53	223.96	
2/16/2023	23:40	16.39	0.01	0.0001	0.010	29.5	28.71	0.50	28.75	28.66	28.60	0.55	4.22	21.39	0.02	0.2895	0.538	32.3	28.71	0.30	28.73	28.86	28.83	29.78	225.80	
2/16/2023	23:41	16.80	0.01	0.0002	0.014	29.6	28.71	0.50	28.75	28.67	28.62	0.78	5.96	21.39	0.02	0.2842	0.533	32.3	28.71	0.30	28.73	28.86	28.83	29.50	223.73	
2/16/2023	23:42	16.89	0.01	0.0001	0.010	29.5	28.71	0.50	28.75	28.68	28.62	0.55	4.21	21.40	0.02	0.2855	0.534	32.3	28.71	0.30	28.73	28.86	28.83	29.57	224.23	
2/16/2023	23:43	16.96	0.02	0.0001	0.010	29.6	28.71	0.50	28.75	28.68	28.62	0.55	4.21	21.40	0.02	0.2940	0.542	32.2	28.71	0.30	28.73	28.86	28.83	30.01	227.55	
2/16/2023	23:44	16.95	0.02	0.0001	0.010	29.5	28.71	0.50	28.75	28.68	28.62	0.55	4.21	21.39	0.02	0.2907	0.539	32.3	28.71	0.30	28.73	28.86	28.83	29.84	226.26	
2/16/2023	23:45	16.86	0.02	0.0001	0.010	29.6	28.71	0.50	28.75	28.68	28.62	0.55	4.21	21.40	0.02	0.2858	0.535	32.4	28.71	0.30	28.73	28.86	28.83	29.59	224.33	
2/16/2023	23:46	16.88	0.02	0.0001	0.010	29.7	28.71	0.50	28.75	28.68	28.62	0.55	4.21	21.40	0.01	0.2789	0.528	32.3	28.71	0.30	28.73	28.86	28.83	29.23	221.63	
2/16/2023	23:47	16.95	0.02	0.0001	0.010	29.7	28.71	0.50	28.75	28.68	--	--	--	21.39	0.01	0.2835	0.532	32.3	28.71	0.30	28.73	28.86	--	--	--	
2/16/2023	23:48	16.89	0.01	0.0002	0.014	29.8	28.71	0.50	28.75	28.68	28.62	0.78	5.96	21.39	0.01	0.2855	0.534	32.4	28.71	0.30	28.73	28.86	28.82	29.58	224.22	
2/16/2023	23:49	16.94	0.01	0.0000	0.000	29.5	28.71	0.50	28.75	28.68	28.62	0.00	0.00	21.39	0.02	0.2868	0.536	32.3	28.71	0.30	28.73	28.86	28.83	29.64	224.74	
2/16/2023	23:50	16.98	0.01	0.0002	0.014	29.8	28.71	0.50	28.75	28.68	28.62	0.78	5.96	21.39	0.01	0.2850	0.534	32.5	28.71	0.30	28.73	28.86	28.82	29.55	224.00	
2/16/2023	23:51	17.14	0.02	0.0001	0.010	29.7	28.71	0.50	28.75	28.69	28.63	0.55	4.21	21.39	0.02	0.2776	0.527	32.3	28.71	0.30	28.73	28.86	28.83	29.16	221.09	
2/16/2023	23:52	17.14	0.02	0.0002	0.014	29.5	28.71	0.50	28.75	28.69	28.63	0.78	5.96	21.39	0.02	0.2881	0.537	32.3	28.71	0.30	28.73	28.86	28.83	29.71	225.25	
2/16/2023	23:53	17.09	0.02	0.0001	0.010	29.4	28.71	0.50	28.75	28.69	28.63	0.55	4.21	21.39	0.02	0.2817	0.531	32.2	28.71	0.30	28.73	28.86	28.83	29.37	222.75	
2/16/2023	23:54	17.04	0.02	0.0002	0.014	29.6	28.71	0.50	28.75	28.68	28.63	0.78	5.96	21.39	0.02	0.2851	0.534	32.3	28.71	0.30	28.73	28.86	28.83	29.55	224.06	
2/16/2023	23:55	16.71	0.02	0.0001	0.010	29.5	28.71	0.50	28.75	28.67	28.61	0.55	4.21	21.39	0.02	0.2847	0.534	32.4	28.71	0.30	28.73	28.86	28.83	29.53	223.89	
2/16/2023	23:56	16.22	0.01	0.0001	0.010	29.6	28.71	0.50	28.75	28.65	28.59	0.55	4.22	21.39	0.02	0.2867	0.535	32.3	28.71	0.30	28.73	28.86	28.83	29.64	224.68	
2/16/2023	23:57	16.56	0.01	0.0001	0.010	29.6	28.71	0.50	28.75	28.66	28.61	0.55	4.21	21.39	0.02	0.2802	0.529	32.4	28.71	0.30	28.73	28.86	28.83	29.30	222.12	
2/16/2023	23:58	16.66	0.01	0.0002	0.014	29.6	28.71	0.50	28.75	28.67	28.61	0.78	5.96	21.40	0.01	0.2877	0.536	32.3	28.71	0.30	28.73	28.86	28.83	29.69	225.09	
2/16/2023	23:59	16.85	0.01	0.0001	0.010	29.7	28.71	0.50	28.75	28.68	28.62	0.55	4.21	21.39	0.01	0.2848	0.534	32.4	28.71	0.30	28.73	28.86	28.82	29.54	223.92	
2/17/2023	0:00	16.88	0.01	0.0001	0.010	29.5	28.71	0.50	28.75	28.68	28.62	0.55	4.21	21.40	0.02	0.2838	0.533	32.4	28.71	0.30	28.73	28.86	28.83	29.49	223.53	
2/17/2023	0:01	16.83	0.01	0.0002	0.014	29.6	28.71	0.50	28.75	28.67	28.62	0.78	5.96	21.39	0.02	0.2870	0.536	32.4	28.71	0.30	28.73	28.86	28.83	29.65	224.80	
2/17/2023	0:02	16.52	0.01	0.0001	0.010	29.7	28.71	0.50	28.75	28.66	28.60	0.55	4.21	21.40	0.02	0.2885	0.537	32.4	28.71	0.30	28.73	28.86	28.83	29.73	225.37	
2/17/2023	0:03	16.03	0.01	0.0001	0.010	29.6	28.71	0.50	28.75	28.64	28.58	0.55	4.22	21.40	0.02	0.2919	0.540	32.5	28.71	0.30	28.73	28.86	28.83	29.91	226.69	
2/17/2023	0:04	15.23	0.01	0.0002	0.014	29.7	28.71	0.50	28.75	28.61	28.55	0.78	5.97	21.39	0.01	0.2880	0.537	32.4	28.71	0.30	28.73	28.86	28.82	29.71	225.17	
2/17/2023	0:05	15.82	0.01	0.0001	0.010	29.7	28.71	0.50	28.75	28.63	28.58	0.55	4.22	21.39	0.02	0.2893	0.538	32.6	28.71	0.30	28.73	28.86	28.83	29.78	225.65	
2/17/2023	0:06	16.11	0.01	0.0002	0.014	29.6	28.71	0.50	28.75	28.65	28.59	0.78	5.96	21.39	0.02	0.2861	0.535	32.5	28.71	0.30	28.73	28.86	28.83	29.61	224.42	
2/17/2023	0:07	16.42	0.01	0.0001	0.010	29.7	28.71	0.50	28.75	28.66	28.60	0.55	4.21	21.40	0.01	0.2849	0.534	32.4	28.71	0.30	28.73	28.86	28.82	29.55	223.96	
2/17/2023	0:08	16.60	0.01	0.0001	0.010	29.7	28.71	0.50	28.75	28.67	28.61	0.55	4.21	21.40	0.01	0.2904	0.539	32.5	28.71	0.30	28.73	28.86	28.82	29.83	226.10	
2/17/2023	0:09	16.62	0.01	0.0001	0.010	29.6	28.71	0.50	28.75	28.67	--	--	--	21.39	0.02	0.2921	0.540	32.6	28.71	0.30	28.73	28.86	28.83	29.92	226.73	
2/17/2023	0:10	16.39	0.01	0.0001	0.010	29.6	28.71	0.50	28.75	28.66	28.60	0.55	4.22	21.39	0.01	0.2863	0.535	32.6	28.71	0.30	28.73	28.86	--	--	--	
2/17/2023	0:11	14.94	0.01	0.0001	0.010	29.6	28.71	0.50	28.75	28.60	28.54	0.55	4.22	21.39	0.01	0.2877	0.536	32.5	28.71	0.30	28.73	28.86	28.82	29.69	225.05	
2/17/2023	0:12	14.92	0.01	0.0002	0.014	29.6	28.71	0.50	28.75	28.60	28.54	0.78	5.97	21.40	0.02	0.2831	0.532	32.5	28.71	0.30	28.73	28.86	28.83	29.45	223.25	
2/17/2023	0:13	15.29	0.01	0.0001	0.010	29.6	28.71	0.50	28.75	28.61	28.56	0.55	4.22	21.39	0.01	0.2835	0.532	32.5	28.71	0.30	28.73	28.86	28.82	29.48	223.40	
2/17/2023	0:14	15.08	0.01	0.0002	0.014	29.6	28.71	0.50	28.75	28.60	28.55	0.78	5.97	21.39	0.01	0.2869	0.536	32.5	28.71	0.30	28.73	28.86	28.82	29.65	224.73	
2/17/2023	0:15	15.74	0.01	0.0001	0.010	29.7	28.71	0.50	28.75	28.63	28.57	0.55	4.22	21.39	0.02	0.2866	0.535	32.6	28.71	0.30	28.73	28.86	28.83	29.64	224.59	
2/17/2023	0:16	15.46	0.01	0.0002	0.014	29.8	28.71	0.50	28.75	28.62	28.56	0.78	5.96	21.39	0.01	0.2847	0.534	32.4	28.71	0.30	28.73	28.86	28.83	29.54	223.89	
2/17/2023	0:17	15.54	0.01	0.0002	0.014	29.7	28.71	0.50	28.75	28.62	28.57	0.78	5.96	21.40	0.01	0.2885	0.537	32.5	28.71	0.30	28.73	28.86	28.82	29.73	225.36	
2/17/2023	0:18	13.50	0.01	0.0000	0.000	29.7	28.71	0.50	28.75	28.54	28.48	0.00	0.00	21.39	0.01	0.2770	0.526	32.5	28.71	0.30	28.73	28.86	28.82	29.14	220.81	
2/17/2023	0:19	13.99	0.01	0.0001	0.010	29.7	28.71	0.50	28.75	28.56	28.50	0.55	4.22	21.39	0.01	0.2866	0.535	32.5	28.71	0.30	28.73	28.86	28.82	29.63	224.63	
2/17/2023	0:20	14.50	0.01	0.0001	0.010	29.7	28.71	0.50	28.75	28.58	28.52	0.55	4.22	21.39	0.01	0.2906	0.539	32.5	28.71	0.30	28.73	28.86	28.82	29.84	226.18	
2/17/2023	0:21	14.73	0.01	0.0001	0.010	29.6	28.71	0.50	28.75	28.59	28.53	0.55	4.22	21.39	0.01	0.3031	0.551	32.4	28.71	0.30	28.73	28.86	28.82	30.47	231.02	
2/17/2023	0:22	15.03	0.01	0.0001	0.010	29.6	28.71	0.50	28.75	28.60	28.54	0.55	4.22	21.40	0.01	0.2881	0.537	32.5	28.71	0.30	28.73	28.86	28.82	29.71	225.19	
2/17/2023	0:23	14.76	0.01	0.0002	0.014	29.6	28.71	0.50	28.75	28.59	28.53	0.78	5.97	21.39	0.01	0.2840	0.533	32.5	28.71	0.30	28.73	28.86	28.82	29.50	223.58	
2/17/2023	0:24	14.89	0.01	0.0002	0.014	29.8	28.71	0.50	28.75	28.60	28.54	0.78	5.97	21.39	0.01	0.2842	0.533	32.6	28.71	0.30	28.73	28.86	28.82	29.51	223.65	
2/17/2023	0:25	12.95	0.01	0.0002	0.014	29.7	28.71	0.50	28.75	28.52	28.46	0.79	5.98	21.39	0.01	0.2827	0.532	32.7	28.71	0.30	28.73	28.86	28.82	29.44	223.03	
2/17/2023	0:26	13.08	0.01	0.0002	0.014	29.7	28.71	0.50	28.75	28.52	28.47	0.79	5.97	21.39	0.01	0.2819	0.531	32.5	28.71	0.30	28.73	28.86	28.82	29.39	222.75	
2/17/2023	0:27	13.15	0.01	0.0001	0.010	29.7	28.71	0.50	28.75	28.53	28.47	0.56	4.22	21.39	0.01	0.2905	0.539	32.6	28.71	0.30	28.73	28.86	28.82	29.84	226.12	
2/17/2023	0:28	13.52	0.01	0.0001	0.010	29.6	28.71	0.50	28.75	28.54	28.48	0.56	4.22	21.39	0.01	0.2898	0.538	32.4	28.71	0.30	28.73	28.86	28.82	29.80	225.88	
2/17/2023	0:29	13.81	0.01	0.0001	0.010	29.8	28.71	0.50	28.75	28.55	28.50	0.56	4.22	21.39	0.01	0.2884	0.537	32.5	28.71	0.30	28.73	28.86	28.82	29.73	225.32	
2/17/2023	0:30	13.60	0.01	0.0001	0.010	29.7	28.71	0.50	28.75	28.55	28.49	0.56	4.22	21.39	0.01	0.2856	0.534	32.5	28.71	0.30	28.73	28.86	28.82	29.58	224.22	
2/17/2023	0:31	13.51	0.01	0.0002	0.014	29.7	28.71	0.50	28.75	28.54	--	--	--	21.39	0.01	0.2811	0.530	32.6	28.71	0.30	28.73	28.86	28.82	29.35	222.44	
2/17/2023	0:32	13.26	0.01	0.0002	0.014	29.8	28.71	0.50	28.75	28.53	28.47	0.79	5.97	21.39	0.01	0.2840	0.533	32.6	28.71	0.30	28.73	28.86	28.83	29.50	223.58	
2/17/2023	0:33	11.54	0.01	0.0001	0.010	29.8	28.71	0.50	28.75	28.46	28.41	0.56	4.23	21.39	0.00	0.2863	0.535	32.6	28.71	0.30	28.73	28.86	28.82	29.62	224.48	
2/17/2023	0:34	11.82	0.01	0.0002	0.014	29.7	28.71	0.50	28.75	28.47	28.42	0.79	5.98	21.39	0.01	0.2900	0.539	32.5	28.71	0.30	28.73	28.86	--	--	--	
2/17/2023	0:35	12.08	0.01	0.0002	0.014	30.0	28.71	0.50	28.75	28.48	28.43	0.79	5.98	21.39	0.01	0.2856	0.534	32.7	28.71	0.30	28.73	28.86	28.82	29.59	224.18	
2/17/2023	0:36	12.28	0.01	0.0002	0.014	29.6	28.71	0.50	28.75	28.49	28.44	0.79	5.98	21.39	0.01	0.2806	0.530	32.7	28.71	0.30	28.73	28.86	28.82	29.33	222.20	
2/17/2023	0:37	12.36	0.01	0.0001	0.010	29.9	28.71	0.50	28.75	28.50	28.45	0.56	4.23	21.39	0.01	0.2799	0.529	32.9	28.71	0.30	28.73	28.86	28.82	29.30	221.90	
2/17/2023	0:38	12.75	0.01	0.0001	0.010	29.7	28.71	0.50	28.75	28.51	28.47	0.56	4.23	21.39	0.01	0.2853	0.534	32.7	28.71	0.30	28.73	28.86	28.82	29.57	224.07	
2/17/2023	0:39	12.31	0.01	0.0001	0.010	30.0	28.71	0.50	28.75	28.49	28.44	0.56	4.23	21.39	0.01	0.2836	0.533	32.7	28.71	0.30	28.73	28.86	28.82	29.49	223.40	
2/17/2023	0:40	10.75	0.01	0.0001	0.010	29.8	28.71	0.50	28.75	28.43	28.38	0.56	4.23	21.38	0.01	0.2904	0.539	32.6	28.71	0.30	28.73	28.86	28.82	29.84	226.08	
2/17/2023	0:41	11.30	0.01	0.0002	0.014	29.7	28.71	0.50	28.75	28.45	28.40	0.79	5.98	21.39	0.01	0.2816	0.531	32.6	28.71	0.30	28.73	28.86	28.82	29.38	222.61	
2/17/2023	0:42	11.52	0.01	0.0001	0.010	29.7	28.71	0.50	28.75	28.46	28.41	0.56	4.23	21.38	0.01	0.2916	0.540	32.6	28.71	0.30	28.73	28.86	28.82	29.90	226.54	
2/17/2023	0:43	11.80	0.01	0.0002	0.014	29.7	28.71	0.50	28.75	28.47	28.43	0.79	5.99	21.38	0.01	0.2833	0.532	32.7	28.71	0.30	28.73	28.86	28.82	29.47	223.28	
2/17/2023	0:44	11.95	0.01	0.0002	0.014	29.7	28.71	0.50	28.75	28.48	28.44	0.79	5.99	21.39	0.01	0.2848	0.534	32.7	28.71	0.30	28.73	28.86	28.82	29.55	223.87	
2/17/2023	0:45	12.53	0.01	0.0002	0.014	29.8	28.71	0.50	28.75	28.50	28.47	0.79	5.99	21.38	0.01	0.2855	0.534	32.6	28.71	0.30	28.73	28.86	28.82	29.58	224.16	
2/17/2023	0:46	10.60	0.01	0.0001	0.010	29.8	28.71	0.50	28.75	28.43	28.37	0.56	4.23	21.39	0.01	0.2754	0.525	32.6	28.71	0.30	28.73	28.86	28.82	29.06	220.15	
2/17/2023	0:47	10.51	0.01	0.0002	0.014	29.7	28.71	0.50	28.75	28.42	28.37	0.79	5.99	21.38	0.01	0.2827	0.532	32.6	28.71	0.30	28.73	28.86	28.82	29.44	223.06	
2/17/2023	0:48	10.52	0.01	0.0002	0.014	29.7	28.71	0.50	28.75	28.42	28.37	0.79	5.99	21.38	0.01	0.2774	0.527	32.6	28.71	0.30	28.73	28.86	28.82	29.16	220.96	
2/17/2023	0:49	10.45	0.01	0.0001	0.010	29.7	28.71	0.50	28.75	28.42	28.38	0.56	4.24	21.39	0.01	0.2857	0.535	32.6	28.71	0.30	28.73	28.86	28.82	29.59	224.24	
2/17/2023	0:50	10.92	0.01	0.0001	0.010	29.7	28.71	0.50	28.75	28.44	28.42	0.56	4.24	21.38	0.01	0.2851	0.534	32.7	28.71	0.30	28.73	28.86	28.82	29.57	223.96	
2/17/2023	0:51	11.10	0.01	0.0002	0.014	29.7	28.71	0.50	28.75	28.45	28.42	0.79	6.00	21.39	0.01	0.2853	0.534	32.7	28.71	0.30	28.73	28.86	28.82	29.58	224.05	
2/17/2023	0:52	11.36	0.01	0.0001	0.010	29.9	28.71	0.50	28.75	28.46	28.44	0.56	4.24	21.39	0.01	0.2838	0.533	32.6	28.71	0.30	28.73	28.86	28.82	29.49	223.48	
2/17/2023	0:53	9.43	0.01	0.0001	0.010	29.5	28.71	0.50	28.75	28.38	--	--	--	21.39	0.01	0.2837	0.533	32.9	28.71	0.30	28.73	28.86	28.82	29.50	223.38	
2/17/2023	0:54	9.40	0.01	0.0001	0.010	29.8	28.71	0.50	28.75	28.38	28.35	0.56	4.25	21.38	0.01	0.2795	0.529	32.7	28.71	0.30	28.73	28.86	28.82	29.27	221.77	
2/17/2023	0:55	9.68	0.01	0.0001	0.010	29.6	28.71	0.50	28.75	28.39	28.36	0.56	4.25	21.38	0.01	0.2783	0.528	32.7	28.71	0.30	28.73	28.86	28.82	29.21	221.29	
2/17/2023	0:56	9.50	0.01	0.0002	0.014	29.7	28.71	0.50	28.75	28.38	28.34	0.79	6.00	21.39	0.00	0.2833	0.532	32.7	28.71	0.30	28.73	28.86	28.82	29.47	223.28	
2/17/2023	0:57	9.73	0.01	0.0001	0.010	29.8	28.71	0.50	28.75	28.39	28.37	0.56	4.25	21.39	0.01	0.2875	0.536	32.7	28.71	0.30	28.73	28.86	--	--	--	
2/17/2023	0:58	9.82	0.01	0.0002	0.014	29.7	28.71	0.50	28.75	28.39	28.37	0.79	6.01	21.39	0.01	0.2819	0.531	32.7	28.71	0.30	28.73	28.86	28.82	29.40	222.72	
2/17/2023	0:59	9.04	0.01	0.0001	0.010	29.7	28.71	0.50	28.75	28.36	28.34	0.56	4.25	21.38	0.01	0.2835	0.532	32.7	28.71	0.30	28.73	28.86	28.82	29.48	223.35	
2/17/2023	1:00	8.34	0.01	0.0001	0.010	29.7	28.71	0.50	28.75	28.34	28.31	0.56	4.25	21.38	0.00	0.2891	0.538	32.7	28.71	0.30	28.73	28.86	28.82	29.77	225.56	
2/17/2023	1:01	8.84	0.01	0.0002	0.014	29.8	28.71	0.50	28.75	28.36	28.33	0.79	6.01	21.39	0.01	0.2786	0.528	32.6	28.71	0.30	28.73	28.86	28.82	29.22	221.44	
2/17/2023	1:02	9.15	0.01	0.0002	0.014	29.9	28.71	0.50	28.75	28.37	28.35	0.79	6.01	21.38	0.01	0.2884	0.537	32.7	28.71	0.30	28.73	28.86	28.82	29.74	225.25	
2/17/2023	1:03	9.51	0.01	0.0002	0.014	29.8	28.71	0.50	28.75	28.38	28.36	0.79	6.01	21.39	0.01	0.2852	0.534	32.6	28.71	0.30	28.73	28.86	28.82	29.57	224.05	
2/17/2023	1:04	9.75	0.01	0.0001	0.010	29.6	28.71	0.50	28.75	28.39	28.37	0.56	4.25	21.39	0.00	0.2882	0.537	32.7	28.71	0.30	28.73	28.86	28.82	29.73	225.20	
2/17/2023	1:05	10.08	0.01

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	-
	Status	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	Valid
		Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	
2/17/2023	1:29	17.90	0.02	0.0001	0.010	30.0	28.71	0.50	28.75	28.72	28.66	0.55	4.21	21.41	0.01	0.2889	0.537	32.9	28.71	0.30	28.73	28.86	28.83	29.77	225.43	
2/17/2023	1:30	18.11	0.02	0.0001	0.010	30.0	28.71	0.50	28.75	28.73	28.67	0.55	4.21	21.41	0.01	0.2879	0.537	32.8	28.71	0.30	28.73	28.86	28.83	29.71	225.05	
2/17/2023	1:31	18.26	0.02	0.0001	0.010	29.9	28.71	0.50	28.75	28.73	28.67	0.55	4.21	21.41	0.01	0.2819	0.531	32.8	28.71	0.30	28.73	28.86	28.83	29.40	222.70	
2/17/2023	1:32	18.30	0.02	0.0001	0.010	29.9	28.71	0.50	28.75	28.74	28.68	0.55	4.21	21.41	0.01	0.2780	0.527	32.9	28.71	0.30	28.73	28.86	28.83	29.20	221.12	
2/17/2023	1:33	18.14	0.02	0.0002	0.014	29.9	28.71	0.50	28.75	28.73	28.67	0.78	5.95	21.41	0.01	0.2861	0.535	32.9	28.71	0.30	28.73	28.86	28.83	29.62	224.33	
2/17/2023	1:34	18.22	0.02	0.0001	0.010	30.0	28.71	0.50	28.75	28.73	28.67	0.55	4.21	21.41	0.01	0.2862	0.535	33.0	28.71	0.30	28.73	28.86	28.83	29.63	224.33	
2/17/2023	1:35	18.32	0.02	0.0001	0.010	30.0	28.71	0.50	28.75	28.74	28.68	0.55	4.21	21.42	0.01	0.2825	0.532	33.7	28.71	0.30	28.73	28.86	28.83	29.46	222.74	
2/17/2023	1:36	18.34	0.02	0.0001	0.010	29.7	28.71	0.50	28.75	28.74	28.68	0.55	4.21	21.42	0.01	0.2853	0.534	36.2	28.71	0.30	28.73	28.86	28.83	29.68	223.27	
2/17/2023	1:37	18.33	0.02	0.0001	0.010	29.6	28.71	0.50	28.75	28.74	--	--	--	21.42	0.02	0.2906	0.539	36.3	28.71	0.30	28.73	28.86	28.83	29.96	225.31	
2/17/2023	1:38	18.31	0.02	0.0002	0.014	29.8	28.71	0.50	28.75	28.74	28.68	0.78	5.95	21.42	0.01	0.2908	0.539	36.1	28.71	0.30	28.73	28.86	28.83	29.96	225.45	
2/17/2023	1:39	18.21	0.02	0.0002	0.014	29.8	28.71	0.50	28.75	28.73	28.67	0.78	5.95	21.42	0.02	0.2761	0.525	36.0	28.71	0.30	28.73	28.86	28.83	29.19	219.67	
2/17/2023	1:40	18.15	0.02	0.0001	0.010	29.7	28.71	0.50	28.75	28.73	28.67	0.55	4.21	21.41	0.01	0.2760	0.525	36.0	28.71	0.30	28.73	28.86	28.83	29.19	219.64	
2/17/2023	1:41	18.18	0.02	0.0002	0.014	29.7	28.71	0.50	28.75	28.73	28.67	0.78	5.95	21.42	0.01	0.2807	0.530	36.1	28.71	0.30	28.73	28.86	28.83	29.44	221.49	
2/17/2023	1:42	18.23	0.02	0.0001	0.010	29.9	28.71	0.50	28.75	28.73	28.67	0.55	4.21	21.42	0.02	0.2796	0.529	33.3	28.71	0.30	28.73	28.86	28.83	29.29	221.67	
2/17/2023	1:43	18.18	0.02	0.0001	0.010	30.1	28.71	0.50	28.75	28.73	28.67	0.55	4.21	21.41	0.01	0.2843	0.533	32.9	28.71	0.30	28.73	28.86	28.83	29.53	223.62	
2/17/2023	1:44	18.13	0.02	0.0001	0.010	30.0	28.71	0.50	28.75	28.73	28.67	0.55	4.21	21.42	0.02	0.2785	0.528	33.1	28.71	0.30	28.73	28.86	--	--	--	
2/17/2023	1:45	18.02	0.02	0.0001	0.010	30.0	28.71	0.50	28.75	28.72	28.66	0.55	4.21	21.42	0.01	0.2786	0.528	32.9	28.71	0.30	28.73	28.86	28.83	29.23	221.37	
2/17/2023	1:46	17.69	0.02	0.0001	0.010	30.1	28.71	0.50	28.75	28.71	28.65	0.55	4.21	21.42	0.02	0.2761	0.525	33.1	28.71	0.30	28.73	28.86	28.83	29.11	220.31	
2/17/2023	1:47	17.68	0.02	0.0001	0.010	29.9	28.71	0.50	28.75	28.71	28.65	0.55	4.21	21.42	0.02	0.2829	0.532	33.1	28.71	0.30	28.73	28.86	28.83	29.46	223.02	
2/17/2023	1:48	17.73	0.02	0.0002	0.014	30.0	28.71	0.50	28.75	28.71	28.65	0.78	5.95	21.41	0.02	0.2978	0.546	32.9	28.71	0.30	28.73	28.86	28.83	30.22	228.85	
2/17/2023	1:49	17.77	0.02	0.0001	0.010	30.0	28.71	0.50	28.75	28.71	28.65	0.55	4.21	21.42	0.02	0.2819	0.531	32.9	28.71	0.30	28.73	28.86	28.83	29.40	222.68	
2/17/2023	1:50	17.81	0.02	0.0001	0.010	30.0	28.71	0.50	28.75	28.72	28.66	0.55	4.21	21.42	0.03	0.2816	0.531	32.9	28.71	0.30	28.73	28.86	28.83	29.39	222.54	
2/17/2023	1:51	17.86	0.02	0.0000	0.000	30.0	28.71	0.50	28.75	28.72	28.66	0.00	0.00	21.42	0.02	0.2803	0.529	32.9	28.71	0.30	28.73	28.86	28.83	29.32	222.02	
2/17/2023	1:52	16.71	0.02	0.0001	0.010	30.0	28.71	0.50	28.75	28.67	28.61	0.55	4.21	21.42	0.02	0.2847	0.534	32.9	28.71	0.30	28.73	28.86	28.83	29.55	223.76	
2/17/2023	1:53	16.60	0.02	0.0002	0.014	30.0	28.71	0.50	28.75	28.67	28.61	0.78	5.96	21.42	0.01	0.2789	0.528	32.9	28.71	0.30	28.73	28.86	28.83	29.25	221.47	
2/17/2023	1:54	16.81	0.02	0.0001	0.010	30.0	28.71	0.50	28.75	28.68	28.62	0.55	4.21	21.42	0.02	0.2796	0.529	33.1	28.71	0.30	28.73	28.86	28.83	29.29	221.71	
2/17/2023	1:55	16.98	0.02	0.0001	0.010	30.0	28.71	0.50	28.75	28.68	28.62	0.55	4.21	21.42	0.02	0.2749	0.524	33.0	28.71	0.30	28.73	28.86	28.83	29.04	219.85	
2/17/2023	1:56	17.11	0.01	0.0001	0.010	29.9	28.71	0.50	28.75	28.69	28.63	0.55	4.21	21.42	0.02	0.2853	0.534	33.1	28.71	0.30	28.73	28.86	28.83	29.59	223.95	
2/17/2023	1:57	17.22	0.01	0.0002	0.014	30.0	28.71	0.50	28.75	28.69	28.63	0.78	5.95	21.42	0.02	0.2800	0.529	32.9	28.71	0.30	28.73	28.86	28.83	29.30	221.90	
2/17/2023	1:58	16.17	0.01	0.0002	0.014	30.0	28.71	0.50	28.75	28.65	28.59	0.78	5.96	21.42	0.02	0.2786	0.528	33.1	28.71	0.30	28.73	28.86	28.83	29.24	221.31	
2/17/2023	1:59	15.51	0.01	0.0002	0.014	30.1	28.71	0.50	28.75	28.62	--	--	--	21.42	0.02	0.2863	0.535	33.0	28.71	0.30	28.73	28.86	28.83	29.63	224.37	
2/17/2023	2:00	15.84	0.01	0.0002	0.014	29.9	28.71	0.50	28.75	28.64	28.58	0.78	5.96	21.42	0.02	0.2781	0.527	33.1	28.71	0.30	28.73	28.86	28.83	29.21	221.11	
2/17/2023	2:01	16.11	0.01	0.0002	0.014	29.9	28.71	0.50	28.75	28.65	28.59	0.78	5.96	21.42	0.02	0.2897	0.538	33.1	28.71	0.30	28.73	28.86	28.83	29.81	225.67	
2/17/2023	2:02	16.31	0.01	0.0002	0.014	29.9	28.71	0.50	28.75	28.65	28.60	0.78	5.96	21.41	0.02	0.2767	0.526	33.0	28.71	0.30	28.73	28.86	28.83	29.13	220.57	
2/17/2023	2:03	16.46	0.01	0.0001	0.010	30.1	28.71	0.50	28.75	28.66	28.60	0.55	4.21	21.42	0.02	0.2767	0.526	32.9	28.71	0.30	28.73	28.86	28.83	29.13	220.59	
2/17/2023	2:04	15.99	0.01	0.0001	0.010	30.0	28.71	0.50	28.75	28.64	28.58	0.55	4.21	21.42	0.02	0.2759	0.524	33.3	28.71	0.30	28.73	28.86	28.83	29.05	219.85	
2/17/2023	2:05	14.23	0.01	0.0001	0.010	30.2	28.71	0.50	28.75	28.57	28.51	0.56	4.22	21.41	0.02	0.2758	0.525	33.1	28.71	0.30	28.73	28.86	28.83	29.09	220.21	
2/17/2023	2:06	14.75	0.01	0.0001	0.010	30.3	28.71	0.50	28.75	28.59	28.53	0.56	4.22	21.42	0.02	0.2752	0.525	33.3	28.71	0.30	28.73	28.86	28.83	29.06	219.92	
2/17/2023	2:07	15.12	0.01	0.0001	0.010	30.0	28.71	0.50	28.75	28.61	28.55	0.55	4.22	21.42	0.02	0.2894	0.538	33.1	28.71	0.30	28.73	28.86	--	--	--	
2/17/2023	2:08	15.45	0.01	0.0002	0.014	29.9	28.71	0.50	28.75	28.62	28.56	0.78	5.96	21.41	0.02	0.2799	0.529	32.9	28.71	0.30	28.73	28.86	28.83	29.30	221.86	
2/17/2023	2:09	15.01	0.01	0.0001	0.010	30.1	28.71	0.50	28.75	28.63	28.57	0.55	4.21	21.42	0.02	0.2759	0.525	33.0	28.71	0.30	28.73	28.86	28.83	29.09	220.26	
2/17/2023	2:10	15.85	0.01	0.0002	0.014	29.9	28.71	0.50	28.75	28.64	28.58	0.78	5.96	21.42	0.02	0.2747	0.524	33.1	28.71	0.30	28.73	28.86	28.83	29.03	219.76	
2/17/2023	2:11	14.00	0.01	0.0002	0.014	29.9	28.71	0.50	28.75	28.56	28.50	0.79	5.97	21.42	0.02	0.2822	0.531	33.0	28.71	0.30	28.73	28.86	28.83	29.42	222.77	
2/17/2023	2:12	13.73	0.01	0.0001	0.010	30.0	28.71	0.50	28.75	28.55	28.49	0.56	4.22	21.42	0.02	0.2746	0.524	33.0	28.71	0.30	28.73	28.86	28.83	29.02	219.74	
2/17/2023	2:13	14.21	0.01	0.0001	0.010	30.1	28.71	0.50	28.75	28.57	28.51	0.56	4.22	21.42	0.02	0.2755	0.525	33.0	28.71	0.30	28.73	28.86	28.83	29.07	220.10	
2/17/2023	2:14	14.62	0.01	0.0001	0.010	30.2	28.71	0.50	28.75	28.59	28.53	0.56	4.22	21.42	0.02	0.2782	0.527	33.0	28.71	0.30	28.73	28.86	28.83	29.21	221.18	
2/17/2023	2:15	14.98	0.01	0.0002	0.014	30.1	28.71	0.50	28.75	28.60	28.55	0.78	5.97	21.42	0.02	0.2716	0.521	33.2	28.71	0.30	28.73	28.86	28.83	28.87	218.50	
2/17/2023	2:16	15.22	0.01	0.0134	0.116	29.9	28.71	0.50	28.75	28.61	28.55	6.42	48.82	21.42	0.02	0.2840	0.533	33.0	28.71	0.30	28.73	28.86	28.83	29.52	223.47	
2/17/2023	2:17	14.57	0.01	0.0250	0.158	30.1	28.71	0.50	28.75	28.58	28.53	8.77	66.70	21.42	0.01	0.2826	0.532	33.1	28.71	0.30	28.73	28.86	28.83	29.45	222.91	
2/17/2023	2:18	12.75	0.01	0.0330	0.182	29.9	28.71	0.50	28.75	28.51	28.45	10.09	76.74	21.42	0.02	0.2809	0.530	33.1	28.71	0.30	28.73	28.86	28.83	29.36	222.22	
2/17/2023	2:19	13.33	0.01	0.0395	0.199	30.1	28.71	0.50	28.75	28.53	28.48	11.04	83.91	21.42	0.02	0.2925	0.541	33.2	28.71	0.30	28.73	28.86	28.83	29.96	226.75	
2/17/2023	2:20	13.78	0.01	0.0436	0.209	30.0	28.71	0.50	28.75	28.55	28.49	11.59	88.14	21.42	0.02	0.4028	0.635	33.0	28.71	0.30	28.73	28.86	28.83	35.15	266.14	
2/17/2023	2:21	14.21	0.01	0.0461	0.215	29.9	28.71	0.50	28.75	28.57	--	--	--	21.42	0.02	0.4319	0.657	33.1	28.71	0.30	28.73	28.86	28.83	36.40	275.55	
2/17/2023	2:22	14.55	0.01	0.0474	0.218	30.1	28.71	0.50	28.75	28.58	28.53	12.08	91.91	21.42	0.02	0.4513	0.672	33.1	28.71	0.30	28.73	28.86	28.83	37.21	281.67	
2/17/2023	2:23	10.83	0.02	0.0490	0.221	29.9	28.71	0.50	28.75	28.44	28.38	12.31	93.68	21.34	0.01	0.4585	0.677	33.2	28.71	0.30	28.73	28.86	28.82	37.51	283.92	
2/17/2023	2:24	2.83	-0.02	0.0495	0.222	30.3	28.71	0.50	28.75	28.11	28.06	12.45	94.63	19.88	0.02	0.4711	0.686	33.2	28.71	0.30	28.73	28.80	28.77	38.06	288.07	
2/17/2023	2:25	2.37	-0.02	0.0517	0.227	30.9	28.71	0.50	28.75	28.09	28.03	12.74	96.65	16.78	0.01	0.4736	0.688	33.3	28.71	0.30	28.73	28.67	28.64	38.25	289.44	
2/17/2023	2:26	2.05	-0.02	0.0514	0.227	32.1	28.71	0.50	28.75	28.08	28.02	12.72	96.29	16.17	0.00	0.4752	0.689	33.3	28.71	0.30	28.73	28.65	28.62	38.33	290.06	
2/17/2023	2:27	1.81	-0.02	0.0512	0.226	33.6	28.71	0.50	28.75	28.07	28.05	12.71	96.26	15.85	0.01	0.4871	0.698	33.3	28.71	0.30	28.73	28.64	28.60	38.82	293.73	
2/17/2023	2:28	1.64	-0.02	0.0523	0.229	35.5	28.71	0.50	28.75	28.06	28.04	12.87	97.10	15.63	0.00	0.4769	0.691	33.2	28.71	0.30	28.73	28.63	28.59	38.41	290.68	
2/17/2023	2:29	1.49	-0.02	0.0528	0.230	37.4	28.71	0.50	28.75	28.06	28.04	12.96	97.39	15.47	0.00	0.4814	0.694	33.2	28.71	0.30	28.73	28.62	28.59	38.60	292.08	
2/17/2023	2:30	1.38	-0.02	0.0522	0.228	39.2	28.71	0.50	28.75	28.05	28.03	12.91	96.67	15.37	0.00	0.4729	0.688	33.1	28.71	0.30	28.73	28.61	--	--	--	
2/17/2023	2:31	1.28	-0.02	0.0528	0.230	41.1	28.71	0.50	28.75	28.05	28.03	13.01	97.05	15.24	0.00	0.4738	0.688	33.2	28.71	0.30	28.73	28.61	28.58	38.30	289.81	
2/17/2023	2:32	1.21	-0.03	0.0533	0.231	43.0	28.71	0.50	28.75	28.04	28.02	13.10	97.33	15.18	0.00	0.4704	0.686	33.2	28.71	0.30	28.73	28.61	28.57	38.16	288.76	
2/17/2023	2:33	1.15	-0.03	0.0537	0.232	44.8	28.71	0.50	28.75	28.04	28.02	13.17	97.52	15.14	0.00	0.4717	0.687	33.3	28.71	0.30	28.73	28.61	28.57	38.22	289.13	
2/17/2023	2:34	1.10	-0.03	0.0537	0.232	46.7	28.71	0.50	28.75	28.04	28.02	13.19	97.34	15.11	0.00	0.4766	0.690	33.5	28.71	0.30	28.73	28.60	28.57	38.42	290.59	
2/17/2023	2:35	1.07	-0.03	0.0531	0.230	48.5	28.71	0.50	28.75	28.04	28.02	13.14	96.63	15.08	0.00	0.4673	0.684	33.4	28.71	0.30	28.73	28.60	28.57	38.05	287.76	
2/17/2023	2:36	1.04	-0.03	0.0531	0.230	49.9	28.71	0.50	28.75	28.04	28.02	13.16	96.50	15.05	0.00	0.4831	0.695	33.3	28.71	0.30	28.73	28.60	28.57	38.68	292.63	
2/17/2023	2:37	1.00	-0.03	0.0550	0.235	51.4	28.71	0.50	28.75	28.04	28.02	13.42	98.07	15.04	0.00	0.4719	0.687	33.5	28.71	0.30	28.73	28.60	28.57	38.24	289.16	
2/17/2023	2:38	0.98	-0.03	0.0544	0.233	52.7	28.71	0.50	28.75	28.03	28.01	13.36	97.41	14.99	0.00	0.4632	0.681	33.4	28.71	0.30	28.73	28.60	28.56	37.88	286.51	
2/17/2023	2:39	0.96	-0.03	0.0543	0.233	54.0	28.71	0.50	28.75	28.03	28.01	13.37	97.20	15.01	0.00	0.4670	0.683	33.4	28.71	0.30	28.73	28.60	28.57	38.04	287.66	
2/17/2023	2:40	0.94	-0.03	0.0553	0.235	55.1	28.71	0.50	28.75	28.03	28.01	13.50	97.99	15.01	0.00	0.4710	0.686	33.5	28.71	0.30	28.73	28.60	28.57	38.20	288.87	
2/17/2023	2:41	0.93	-0.03	0.0554	0.235	56.1	28.71	0.50	28.75	28.03	28.01	13.53	97.98	15.02	0.00	0.4706	0.686	33.5	28.71	0.30	28.73	28.60	28.57	38.19	288.73	
2/17/2023	2:42	0.92	-0.03	0.0562	0.237	57.1	28.71	0.50	28.75	28.03	28.01	13.64	98.59	15.05	0.00	0.4766	0.690	33.5	28.71	0.30	28.73	28.60	28.57	38.43	290.56	
2/17/2023	2:43	0.91	-0.03	0.0550	0.235	58.0	28.71	0.50	28.75	28.03	--	--	--	15.05	-0.01	0.4728	0.688	33.6	28.71	0.30	28.73	28.60	28.56	38.28	289.36	
2/17/2023	2:44	0.90	-0.03	0.0566	0.238	58.9	28.71	0.50	28.75	28.03	28.01	13.71	98.77	15.01	0.00	0.4745	0.689	33.6	28.71	0.30	28.73	28.60	28.56	38.35	289.89	
2/17/2023	2:45	0.89	-0.03	0.0567	0.238	59.5	28.71	0.50	28.75	28.03	28.01	13.73	98.80	15.02	0.00	0.4697	0.685	33.7	28.71	0.30	28.73	28.60	28.56	38.16	288.40	
2/17/2023	2:46	0.89	-0.03	0.0558	0.236	60.0	28.71	0.50	28.75	28.03	28.01	13.63	97.96	15.01	0.00	0.4849	0.696	33.7	28.71	0.30	28.73	28.60	28.56	38.77	293.02	
2/17/2023	2:47	0.88	-0.03	0.0565	0.238	60.6	28.71	0.50	28.75	28.03	28.01	13.72	98.52	14.96	0.00	0.4692	0.685	33.7	28.71	0.30	28.73	28.60	28.56	38.14	288.26	
2/17/2023	2:48	0.87	-0.03	0.0558	0.236	61.3	28.71	0.50	28.75	28.03	28.01	13.64	97.84	14.94	0.00	0.4798	0.693	33.5	28.71	0.30	28.73	28.60	28.56	38.56	291.55	
2/17/2023	2:49	0.86	-0.03	0.0560	0.237	61.8	28.71	0.50	28.75	28.03	28.01	13.68	97.98	14.93	0.00	0.4759	0.690	33.7	28.71	0.30	28.73	28.60	28.56	38.41	290.31	
2/17/2023	2:50	0.86	-0.03	0.0560	0.237	62.0	28.71	0.50	28.75	28.03	28.01	13.68	97.95	14.92	0.00	0.4715	0.687	33.7	28.71	0.30	28.73	28.60	28.56	38.23	288.97	
2/17/2023	2:51	0.86	-0.03	0.0554	0.235	62.3	28.71	0.50	28.75	28.03	28.01	13.61	97.40	14.92	0.00	0.4723	0.687	33.7	28.71	0.30	28.73	28.60	28.56	38.27	289.20	
2/17/2023	2:52	0.86	-0.03	0.0559	0.236	62.6	28.71	0.50	28.75	28.03	28.01	13.67	97.81	14.90	0.00	0.4830	0.695	33.6	28.71	0.30	28.73	28.60	28.56	38.69	292.50	
2/17/2023	2:53	0.86	-0.03	0.0560	0.237	62.9	28.71	0.50	28.75	28.03	28.01	13.69	97.87	14.90	-0.01	0.4818	0.694	33.7	28.71	0.30	28.73	28.59	28.56	38.65	292.13	
2/17/2023	2:54	0.86	-0.03	0.0550	0.235	62.8	28.71	0.50	28.75	28.03	28.01	13.57	97.00	14.91	-0.01	0.4773	0.691	33.7	28.71	0.30	28.73	28.59	--	--	--	
2/17/2023	2:55	0.86	-0.03	0.0554	0.235	63.2	28.71	0.50	28.75	28.03	28.01	13.62	97.32	14.91	-0.01	0.4787	0.692	33.7	28.71	0.30	28.73	28.59	28.56	38.53	291.17	
2/17/2023	2:56	0.86	-0.03	0.0551	0.235	63.0	28.71	0.50	28.75	28.03	28.01	13.58	97.07	14.90	0.00	0.4749	0.689	33.7	28.71	0.30	28.73	28.60	28.56	38.37	290.00	
2/17/2023	2:57	0.86	-0.03	0.0551	0.235	63.1	28.71	0.50	28.75	28.03	28.01	13.58	97.06	14.87	-0.01	0.4730	0.688	33.8	28.71	0.30	28.73	28.59	28.56	38.30	289.40	
2/17/2023	2:58	0.87	-0.03	0.0556	0.236	62.9	28.71	0.50	28.75	28.03	28.01	13.64	97.52	14.84	0.00	0.4710	0.686	33.9	28.71	0.30	28.73	28.59	28.56	38.22	288.77	
2/17/2023	2:59	0.87	-0.03	0.0557	0.236	63.0	28.71	0.50	28.75	28.03	28.01	13.66	97.60	14.93	0.00	0.4822	0.694	33.9	28.71	0.30	28.73	28.60	28.56	38.67	292.15	
2/17/2023	3:00	0.87	-0.03	0.0556	0.236	63.1	28.71	0.50	28.75	28.03	28.01	13.64	97.50	14.96	0.00	0.4722	0.687	33.8	28.71	0.30	28.73	28.60	28.56	38.26	289.13	
2/17/2023	3:01	0.87	-0.03	0.0562	0.237	63.1	28.71	0.50	28.75	28.03	28.01	13.72	98.03	14.87	-0.01	0.4813	0.694	33.6	28.71	0.30	28.73	28.59	28.56	38.63	291.99	
2/17/2023	3:02	0.88	-0.03	0.0556	0.236	63.1	28.71	0.50	28.75	28.03	28.01	13.64	97.51	14.92	-0.01	0.4768	0.691	33.6	28.71	0.30	28.73	28.60	28.56	38.45	290.61	
2/17/2023	3:03	0.88	-0.03

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	-
	Status	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	
		Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
2/17/2023	3:27	1.74	-0.03	0.0620	0.249	64.9	28.71	0.50	28.75	28.06	--	--	--	14.81	-0.01	0.4746	0.689	33.8	28.71	0.30	28.73	28.59	28.55	38.37	289.92	
2/17/2023	3:28	1.94	-0.03	0.0552	0.235	64.8	28.71	0.50	28.75	28.07	28.05	13.61	96.92	14.87	0.00	0.4770	0.691	33.6	28.71	0.30	28.73	28.59	28.56	38.45	290.70	
2/17/2023	3:29	2.13	-0.03	0.0555	0.236	64.8	28.71	0.50	28.75	28.08	28.06	13.64	97.17	14.88	-0.01	0.4808	0.693	33.6	28.71	0.30	28.73	28.59	28.56	38.61	291.86	
2/17/2023	3:30	2.49	-0.03	0.0556	0.236	64.7	28.71	0.50	28.75	28.09	28.07	13.65	97.24	14.90	-0.01	0.4774	0.691	33.4	28.71	0.30	28.73	28.59	28.56	38.46	290.87	
2/17/2023	3:31	2.99	-0.03	0.0621	0.249	64.4	28.71	0.50	28.75	28.11	28.09	14.42	102.76	14.91	0.00	0.4738	0.688	33.5	28.71	0.30	28.73	28.60	28.56	38.32	289.76	
2/17/2023	3:32	3.33	-0.03	0.0554	0.235	64.5	28.71	0.50	28.75	28.13	28.11	13.61	97.02	14.90	-0.01	0.4913	0.701	33.4	28.71	0.30	28.73	28.59	28.56	39.02	295.09	
2/17/2023	3:33	3.93	-0.02	0.0553	0.235	64.5	28.71	0.50	28.75	28.15	28.13	13.59	96.90	14.88	-0.01	0.4857	0.697	33.5	28.71	0.30	28.73	28.59	28.56	38.80	293.36	
2/17/2023	3:34	4.50	-0.02	0.0553	0.235	64.4	28.71	0.50	28.75	28.18	28.16	13.59	96.86	14.86	-0.01	0.4785	0.692	33.5	28.71	0.30	28.73	28.59	28.56	38.51	291.19	
2/17/2023	3:35	5.29	-0.02	0.0550	0.235	64.2	28.71	0.50	28.75	28.21	28.19	13.54	96.56	14.91	0.00	0.4918	0.701	33.4	28.71	0.30	28.73	28.60	28.56	39.04	295.20	
2/17/2023	3:36	5.58	-0.02	0.0559	0.236	64.1	28.71	0.50	28.75	28.22	28.20	13.65	97.34	14.90	0.00	0.4905	0.700	33.3	28.71	0.30	28.73	28.60	28.56	38.98	294.85	
2/17/2023	3:37	6.82	-0.02	0.0549	0.234	64.0	28.71	0.50	28.75	28.27	28.25	13.51	96.39	14.93	0.00	0.4857	0.697	33.3	28.71	0.30	28.73	28.60	28.56	38.79	293.41	
2/17/2023	3:38	7.89	-0.02	0.0557	0.236	63.7	28.71	0.50	28.75	28.31	28.29	13.60	97.05	14.91	-0.01	0.4886	0.699	33.3	28.71	0.30	28.73	28.59	28.56	38.91	294.30	
2/17/2023	3:39	9.41	-0.01	0.0548	0.234	63.5	28.71	0.50	28.75	28.37	28.35	13.47	96.17	14.91	-0.01	0.4927	0.702	33.4	28.71	0.30	28.73	28.59	28.56	39.07	295.51	
2/17/2023	3:40	11.17	-0.01	0.0551	0.235	62.9	28.71	0.50	28.75	28.45	28.42	13.48	96.37	14.91	-0.01	0.4837	0.695	33.2	28.71	0.30	28.73	28.59	28.56	38.71	292.84	
2/17/2023	3:41	10.69	-0.01	0.0551	0.235	62.7	28.71	0.50	28.75	28.43	28.41	13.48	96.42	14.99	-0.01	0.4841	0.696	33.1	28.71	0.30	28.73	28.60	--	--	--	
2/17/2023	3:42	10.56	-0.01	0.0556	0.236	62.6	28.71	0.50	28.75	28.42	28.40	13.54	96.88	14.95	-0.01	0.4942	0.703	33.0	28.71	0.30	28.73	28.60	28.56	39.12	296.06	
2/17/2023	3:43	10.56	-0.01	0.0561	0.237	62.3	28.71	0.50	28.75	28.42	28.40	13.60	97.33	14.92	-0.01	0.4910	0.701	32.9	28.71	0.30	28.73	28.60	28.56	38.98	295.15	
2/17/2023	3:44	10.52	-0.01	0.0555	0.236	62.5	28.71	0.50	28.75	28.42	28.40	13.53	96.79	14.95	0.00	0.4919	0.701	33.0	28.71	0.30	28.73	28.60	28.56	39.02	295.37	
2/17/2023	3:45	10.82	-0.01	0.0557	0.236	62.6	28.71	0.50	28.75	28.43	28.41	13.55	96.94	14.95	-0.01	0.4852	0.697	33.0	28.71	0.30	28.73	28.60	28.56	38.76	293.36	
2/17/2023	3:46	11.43	-0.01	0.0558	0.236	62.3	28.71	0.50	28.75	28.46	28.43	13.56	97.02	14.91	0.00	0.4894	0.700	32.8	28.71	0.30	28.73	28.60	28.56	38.92	294.68	
2/17/2023	3:47	11.60	-0.01	0.0546	0.234	62.3	28.71	0.50	28.75	28.46	28.44	13.41	95.95	14.98	0.00	0.5015	0.708	33.0	28.71	0.30	28.73	28.60	28.56	39.40	298.24	
2/17/2023	3:48	11.62	-0.01	0.0560	0.237	62.4	28.71	0.50	28.75	28.46	28.44	13.58	97.15	14.96	-0.01	0.4987	0.706	33.4	28.71	0.30	28.73	28.60	28.56	39.31	297.30	
2/17/2023	3:49	11.49	-0.01	0.0550	0.235	61.9	28.71	0.50	28.75	28.46	--	--	--	14.95	0.00	0.4885	0.699	32.9	28.71	0.30	28.73	28.60	28.56	38.88	294.37	
2/17/2023	3:50	11.35	-0.01	0.0556	0.236	62.5	28.71	0.50	28.75	28.45	28.42	13.54	96.78	14.94	-0.01	0.4917	0.701	32.8	28.71	0.30	28.73	28.60	28.56	39.01	295.38	
2/17/2023	3:51	11.19	-0.01	0.0553	0.235	62.3	28.71	0.50	28.75	28.45	28.42	13.50	96.54	14.99	-0.01	0.4891	0.699	32.7	28.71	0.30	28.73	28.60	28.56	38.90	294.61	
2/17/2023	3:52	11.06	-0.01	0.0554	0.235	62.5	28.71	0.50	28.75	28.44	28.41	13.51	96.61	14.97	0.00	0.4849	0.696	32.7	28.71	0.30	28.73	28.60	28.56	38.73	293.33	
2/17/2023	3:53	10.97	-0.01	0.0551	0.235	62.4	28.71	0.50	28.75	28.44	28.41	13.48	96.36	14.96	-0.01	0.4862	0.697	32.8	28.71	0.30	28.73	28.60	28.56	38.79	293.74	
2/17/2023	3:54	10.97	-0.01	0.0547	0.234	62.3	28.71	0.50	28.75	28.44	28.41	13.43	96.02	14.95	0.00	0.4980	0.706	32.6	28.71	0.30	28.73	28.60	28.56	39.25	297.32	
2/17/2023	3:55	10.82	-0.01	0.0564	0.237	62.3	28.71	0.50	28.75	28.43	28.40	13.64	97.52	14.96	0.00	0.4941	0.703	32.6	28.71	0.30	28.73	28.60	28.56	39.10	296.14	
2/17/2023	3:56	10.70	-0.01	0.0555	0.236	62.4	28.71	0.50	28.75	28.43	28.40	13.53	96.74	14.95	-0.01	0.5030	0.709	32.6	28.71	0.30	28.73	28.60	28.56	39.45	298.81	
2/17/2023	3:57	10.51	-0.01	0.0558	0.236	62.7	28.71	0.50	28.75	28.42	28.39	13.57	96.98	14.98	-0.01	0.4913	0.701	32.5	28.71	0.30	28.73	28.60	28.56	38.98	295.35	
2/17/2023	3:58	10.35	-0.01	0.0551	0.235	63.0	28.71	0.50	28.75	28.41	28.38	13.49	96.36	14.98	0.00	0.4896	0.700	32.6	28.71	0.30	28.73	28.60	28.56	38.92	294.79	
2/17/2023	3:59	10.24	-0.01	0.0428	0.207	63.1	28.71	0.50	28.75	28.41	28.38	11.89	84.92	14.96	0.00	0.4941	0.703	32.8	28.71	0.30	28.73	28.60	28.56	39.10	296.09	
2/17/2023	4:00	10.13	-0.01	0.0378	0.194	63.4	28.71	0.50	28.75	28.40	28.37	11.18	79.79	14.95	0.00	0.4986	0.706	32.8	28.71	0.30	28.73	28.60	28.56	39.28	297.43	
2/17/2023	4:01	10.05	-0.01	0.0398	0.199	63.5	28.71	0.50	28.75	28.40	28.37	11.47	81.87	14.97	0.00	0.4897	0.700	32.9	28.71	0.30	28.73	28.60	28.56	38.93	294.73	
2/17/2023	4:02	9.97	-0.01	0.0451	0.212	63.8	28.71	0.50	28.75	28.40	28.37	12.22	87.13	14.96	-0.01	0.4763	0.690	32.7	28.71	0.30	28.73	28.60	28.56	38.39	290.73	
2/17/2023	4:03	9.88	-0.01	0.0480	0.219	64.0	28.71	0.50	28.75	28.39	28.36	12.61	89.86	14.98	0.00	0.4603	0.678	32.7	28.71	0.30	28.73	28.60	28.56	37.74	285.80	
2/17/2023	4:04	9.76	-0.02	0.0502	0.224	64.1	28.71	0.50	28.75	28.39	28.36	12.90	91.91	14.98	0.00	0.4586	0.677	32.7	28.71	0.30	28.73	28.60	--	--	--	
2/17/2023	4:05	9.64	-0.02	0.0534	0.231	64.0	28.71	0.50	28.75	28.38	28.35	13.30	94.81	14.98	0.00	0.4655	0.682	32.6	28.71	0.30	28.73	28.60	28.56	37.95	287.43	
2/17/2023	4:06	9.54	-0.02	0.0536	0.232	63.7	28.71	0.50	28.75	28.38	28.35	13.32	95.02	15.37	0.00	0.4819	0.694	32.6	28.71	0.30	28.73	28.61	28.58	38.60	292.39	
2/17/2023	4:07	9.45	-0.02	0.0554	0.235	63.2	28.71	0.50	28.75	28.37	28.35	13.54	96.66	15.80	0.00	0.4814	0.694	32.5	28.71	0.30	28.73	28.63	28.60	38.56	292.18	
2/17/2023	4:08	9.38	-0.02	0.0546	0.234	62.4	28.71	0.50	28.75	28.37	28.34	13.43	96.04	15.87	0.00	0.4911	0.701	32.5	28.71	0.30	28.73	28.63	28.60	38.95	295.09	
2/17/2023	4:09	9.31	-0.02	0.0553	0.235	62.0	28.71	0.50	28.75	28.37	28.34	13.51	96.70	15.64	0.00	0.5048	0.710	32.5	28.71	0.30	28.73	28.63	28.59	39.49	299.24	
2/17/2023	4:10	9.24	-0.02	0.0560	0.237	61.9	28.71	0.50	28.75	28.37	28.34	13.60	97.31	15.41	0.00	0.4921	0.701	32.5	28.71	0.30	28.73	28.62	28.58	39.00	295.48	
2/17/2023	4:11	9.24	-0.02	0.0552	0.235	61.8	28.71	0.50	28.75	28.37	--	--	--	15.28	0.00	0.4968	0.705	32.2	28.71	0.30	28.73	28.61	28.58	39.18	297.02	
2/17/2023	4:12	9.21	-0.02	0.0555	0.236	61.9	28.71	0.50	28.75	28.37	28.34	13.54	96.89	15.18	0.00	0.5001	0.707	32.5	28.71	0.30	28.73	28.61	28.57	39.32	297.95	
2/17/2023	4:13	9.14	-0.02	0.0545	0.233	61.8	28.71	0.50	28.75	28.36	28.33	13.41	96.03	15.08	0.00	0.5017	0.708	32.1	28.71	0.30	28.73	28.60	28.57	39.37	298.55	
2/17/2023	4:14	9.09	-0.02	0.0556	0.236	61.9	28.71	0.50	28.75	28.36	28.33	13.55	96.98	15.04	0.00	0.4979	0.706	32.1	28.71	0.30	28.73	28.60	28.57	39.22	297.43	
2/17/2023	4:15	9.02	-0.02	0.0564	0.237	61.9	28.71	0.50	28.75	28.36	28.33	13.65	97.68	15.03	0.00	0.5054	0.711	32.1	28.71	0.30	28.73	28.60	28.57	39.52	299.67	
2/17/2023	4:16	8.93	-0.02	0.0566	0.238	61.8	28.71	0.50	28.75	28.35	28.32	13.67	97.87	15.02	0.00	0.5094	0.714	31.8	28.71	0.30	28.73	28.60	28.57	39.66	300.95	
2/17/2023	4:17	8.85	-0.02	0.0559	0.236	62.1	28.71	0.50	28.75	28.35	28.32	13.59	97.23	15.02	0.00	0.5047	0.710	32.0	28.71	0.30	28.73	28.60	28.57	39.48	299.51	
2/17/2023	4:18	8.81	-0.02	0.0569	0.239	62.1	28.71	0.50	28.75	28.35	28.32	13.71	98.10	15.01	0.00	0.5006	0.708	32.0	28.71	0.30	28.73	28.60	28.57	39.33	298.28	
2/17/2023	4:19	8.78	-0.02	0.0570	0.239	62.1	28.71	0.50	28.75	28.35	28.32	13.73	98.19	14.96	0.00	0.5042	0.710	32.1	28.71	0.30	28.73	28.60	28.57	39.47	299.36	
2/17/2023	4:20	8.74	-0.02	0.0566	0.238	62.0	28.71	0.50	28.75	28.35	28.32	13.68	97.86	15.01	0.00	0.5094	0.714	32.0	28.71	0.30	28.73	28.60	28.57	39.67	300.89	
2/17/2023	4:21	8.69	-0.02	0.0570	0.239	61.9	28.71	0.50	28.75	28.34	28.31	13.72	98.21	15.04	0.01	0.4952	0.704	32.0	28.71	0.30	28.73	28.60	28.57	39.11	296.65	
2/17/2023	4:22	8.64	-0.02	0.0559	0.236	62.1	28.71	0.50	28.75	28.34	28.31	13.59	97.25	15.02	0.00	0.5013	0.708	31.9	28.71	0.30	28.73	28.60	28.57	39.35	298.51	
2/17/2023	4:23	8.59	-0.02	0.0559	0.236	62.1	28.71	0.50	28.75	28.34	28.31	13.59	97.24	15.02	0.00	0.5023	0.709	32.0	28.71	0.30	28.73	28.60	28.57	39.39	298.81	
2/17/2023	4:24	8.55	-0.02	0.0559	0.236	62.1	28.71	0.50	28.75	28.34	28.31	13.60	97.23	15.06	0.00	0.5125	0.716	32.0	28.71	0.30	28.73	28.60	28.57	39.79	301.82	
2/17/2023	4:25	8.51	-0.02	0.0559	0.236	62.3	28.71	0.50	28.75	28.34	28.31	13.60	97.22	15.02	0.00	0.5185	0.720	32.0	28.71	0.30	28.73	28.60	28.57	40.02	303.56	
2/17/2023	4:26	8.47	-0.02	0.0563	0.237	62.3	28.71	0.50	28.75	28.34	28.30	13.65	97.57	14.99	0.00	0.5022	0.709	31.8	28.71	0.30	28.73	28.60	28.57	39.38	298.82	
2/17/2023	4:27	8.45	-0.02	0.0550	0.235	62.3	28.71	0.50	28.75	28.33	28.30	13.49	96.44	14.91	0.00	0.5084	0.713	31.8	28.71	0.30	28.73	28.60	--	--	--	
2/17/2023	4:28	8.42	-0.02	0.0559	0.236	62.2	28.71	0.50	28.75	28.33	28.30	13.60	97.23	15.04	0.00	0.5117	0.715	31.8	28.71	0.30	28.73	28.60	28.57	39.75	301.65	
2/17/2023	4:29	8.39	-0.02	0.0561	0.237	62.0	28.71	0.50	28.75	28.33	28.30	13.62	97.42	15.06	0.00	0.5136	0.717	31.9	28.71	0.30	28.73	28.60	28.57	39.83	302.14	
2/17/2023	4:30	8.34	-0.02	0.0562	0.237	61.8	28.71	0.50	28.75	28.33	28.30	13.63	97.52	15.12	0.01	0.5098	0.714	31.9	28.71	0.30	28.73	28.61	28.57	39.68	301.02	
2/17/2023	4:31	8.28	-0.02	0.0557	0.236	61.7	28.71	0.50	28.75	28.33	28.29	13.57	97.10	15.00	0.00	0.5070	0.712	31.8	28.71	0.30	28.73	28.60	28.57	39.57	300.25	
2/17/2023	4:32	8.25	-0.02	0.0562	0.237	61.9	28.71	0.50	28.75	28.33	28.29	13.63	97.53	15.06	0.00	0.5138	0.717	31.9	28.71	0.30	28.73	28.60	28.57	39.83	302.22	
2/17/2023	4:33	8.20	-0.02	0.0567	0.238	61.6	28.71	0.50	28.75	28.32	--	--	--	15.06	0.00	0.5170	0.719	31.8	28.71	0.30	28.73	28.60	28.57	39.96	303.17	
2/17/2023	4:34	8.18	-0.02	0.0561	0.237	61.5	28.71	0.50	28.75	28.32	28.29	13.62	97.47	15.07	0.00	0.5022	0.709	31.8	28.71	0.30	28.73	28.60	28.57	39.38	298.84	
2/17/2023	4:35	8.15	-0.02	0.0553	0.235	61.7	28.71	0.50	28.75	28.32	28.29	13.52	96.76	15.09	0.01	0.5199	0.721	31.5	28.71	0.30	28.73	28.61	28.57	40.05	304.13	
2/17/2023	4:36	8.14	-0.02	0.0551	0.235	61.4	28.71	0.50	28.75	28.32	28.29	13.49	96.61	15.08	0.01	0.5103	0.714	31.3	28.71	0.30	28.73	28.60	28.57	39.67	301.36	
2/17/2023	4:37	8.10	-0.02	0.0554	0.235	61.4	28.71	0.50	28.75	28.32	28.28	13.53	96.87	15.09	0.01	0.5149	0.718	31.4	28.71	0.30	28.73	28.61	28.57	39.85	302.69	
2/17/2023	4:38	8.07	-0.02	0.0554	0.235	61.4	28.71	0.50	28.75	28.32	28.28	13.53	96.87	15.08	0.01	0.5054	0.711	31.4	28.71	0.30	28.73	28.60	28.57	39.48	299.89	
2/17/2023	4:39	8.06	-0.02	0.0553	0.235	61.4	28.71	0.50	28.75	28.32	28.28	13.52	96.79	15.08	0.01	0.5194	0.721	31.4	28.71	0.30	28.73	28.60	28.57	40.03	304.02	
2/17/2023	4:40	8.03	-0.02	0.0565	0.238	61.5	28.71	0.50	28.75	28.32	28.28	13.67	97.82	15.08	0.00	0.5082	0.713	31.2	28.71	0.30	28.73	28.60	28.57	39.59	300.79	
2/17/2023	4:41	8.04	-0.02	0.0566	0.238	61.4	28.71	0.50	28.75	28.32	28.28	13.68	97.92	15.05	0.00	0.5092	0.714	31.4	28.71	0.30	28.73	28.60	28.57	39.64	301.02	
2/17/2023	4:42	8.00	-0.02	0.0567	0.238	61.6	28.71	0.50	28.75	28.32	28.28	13.69	97.99	15.12	0.01	0.5081	0.713	31.3	28.71	0.30	28.73	28.61	28.57	39.59	300.71	
2/17/2023	4:43	7.96	-0.02	0.0565	0.238	61.7	28.71	0.50	28.75	28.32	28.28	13.67	97.81	15.12	0.00	0.5095	0.714	31.4	28.71	0.30	28.73	28.60	28.57	39.65	301.09	
2/17/2023	4:44	7.92	-0.02	0.0564	0.237	61.7	28.71	0.50	28.75	28.31	28.28	13.66	97.71	15.18	0.00	0.5089	0.713	31.4	28.71	0.30	28.73	28.61	28.57	39.62	300.92	
2/17/2023	4:45	7.89	-0.02	0.0563	0.237	61.6	28.71	0.50	28.75	28.31	28.28	13.64	97.64	15.10	0.00	0.5190	0.720	31.3	28.71	0.30	28.73	28.60	28.57	40.01	303.95	
2/17/2023	4:46	7.84	-0.02	0.0561	0.237	61.5	28.71	0.50	28.75	28.31	28.27	13.62	97.49	15.10	0.01	0.5135	0.717	31.3	28.71	0.30	28.73	28.61	28.57	39.79	302.32	
2/17/2023	4:47	7.85	-0.02	0.0567	0.238	61.2	28.71	0.50	28.75	28.31	28.27	13.69	98.03	15.07	0.00	0.5135	0.717	31.0	28.71	0.30	28.73	28.60	28.57	39.78	302.42	
2/17/2023	4:48	7.83	-0.02	0.0573	0.239	61.4	28.71	0.50	28.75	28.31	28.27	13.76	98.52	15.08	0.00	0.5143	0.717	31.0	28.71	0.30	28.73	28.60	28.57	39.82	302.67	
2/17/2023	4:49	7.81	-0.02	0.0562	0.237	61.3	28.71	0.50	28.75	28.31	28.27	13.63	97.59	15.07	0.00	0.5108	0.715	31.0	28.71	0.30	28.73	28.60	28.57	39.68	301.63	
2/17/2023	4:50	7.76	-0.02	0.0564	0.237	61.5	28.71	0.50	28.75	28.31	28.27	13.66	97.74	15.07	0.00	0.5207	0.722	31.1	28.71	0.30	28.73	28.60	28.57	40.07	304.49	
2/17/2023	4:51	7.71	-0.02	0.0562	0.237	61.6	28.71	0.50	28.75	28.31	28.27	13.63	97.56	15.08	0.01	0.5125	0.716	30.9	28.71	0.30	28.73	28.60	--	--	--	
2/17/2023	4:52	7.64	-0.02	0.0563	0.237	61.7	28.71	0.50	28.75	28.30	28.26	13.65	97.62	15.08	0.00	0.5178	0.720	31.0	28.71	0.30	28.73	28.60	28.57	39.95	303.69	
2/17/2023	4:53	7.60	-0.02	0.0570	0.239	61.9	28.71	0.50	28.75	28.30	28.26	13.74	98.21	15.06	0.00	0.5206	0.722	30.9	28.71	0.30	28.73	28.60	28.57	40.06	304.53	
2/17/2023	4:54	7.56	-0.02	0.0573	0.239	61.9	28.71	0.50	28.75	28.30	28.26	13.77	98.48	15.03	0.00	0.5327	0.730	30.9	28.71	0.30	28.73	28.60	28.57	40.52	308.05	
2/17/2023	4:55	7.56	-0.02	0.0564	0.237	62.0	28.71	0.50	28.75	28.30	--	--	--	15.11	0.00	0.5188	0.720	31.0	28.71	0.30	28.73	28.60	28.57	39.99	303.99	
2/17/2023	4:56	7.56	-0.02	0.0569	0.239	62.1	28.71	0.50	28.75	28.30	28.26	13.73	98.11	15.10	0.00	0.5352	0.732	31.0	28.71	0.30	28.73	28.60	28.57	40.62	308.74	
2/17/2023	4:57	7.61	-0.02	0.0560	0.237	61.9	28.71	0.50	28.75	28.30	28.26	13.62	97.35	15.12	0.00	0.5290	0.727	31.0	28.71	0.30	28.73	28.60	28.57	40.38	306.95	
2/17/2023	4:58	7.74	-0.02	0.0575	0.240	61.9	28.71	0.50	28.75	28.31	28.27	13.80	98.65	15.08	0.00	0.5238	0.724	30.9	28.71	0.30	28.73	28.60	28.57	40.18	305.47	
2/17/2023	4:59	8.37	-0.02	0.0567	0.238	61.6	28.71	0.50	28.75	28.33	28.29	13.69	97.92	15.10	0.00	0.5250	0.725	30.8	28.71	0.30	28.73	28.60	28.57	40.22	305.84	
2/17/2023	5:00	14.39	-0.01	0.0568	0.238	61.6	28.71	0.50	28.75	28.57	28.53	13.64	97.59	15.09	0.00	0.5225	0.723	30.6	28.71	0.30	28.73	28.60	28.57	40.12	305.20	
2/17/2023	5:01	11.67	-0.01	0.0570

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet												Outlet									Point in Process
	Unit	O_2 - Inlet	CO_2 - Inlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	O_2 - Outlet	CO_2 - Outlet	Delta P	Sq Rt	Temperature	Barometric	Stack Pressure	Stack Pressure	Molecular Weight	Molecular Weight	Velocity	Flow Rate	-
	Status	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	% dry	% dry	in. W.C.	Delta P	(°F)	in. Hg	in. W.C.	in. Hg	Md	Mw	ft/sec	(DSCFM)	Valid
		Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	
2/17/2023	5:25	9.20	-0.02	0.0564	0.237	60.2	28.71	0.50	28.75	28.36	28.32	13.63	97.69	15.16	0.00	0.5316	0.729	30.0	28.71	0.30	28.73	28.61	28.57	40.44	308.01	
2/17/2023	5:26	10.40	-0.01	0.0569	0.239	60.4	28.71	0.50	28.75	28.41	28.37	13.68	98.03	15.23	0.00	0.5359	0.732	29.9	28.71	0.30	28.73	28.61	28.58	40.59	309.30	
2/17/2023	5:27	9.91	-0.02	0.0569	0.239	60.4	28.71	0.50	28.75	28.39	28.35	13.68	98.06	15.15	-0.01	0.5367	0.733	29.9	28.71	0.30	28.73	28.60	28.57	40.63	309.54	
2/17/2023	5:28	9.80	-0.02	0.0564	0.237	60.5	28.71	0.50	28.75	28.39	28.34	13.63	97.62	15.10	0.00	0.5362	0.732	29.8	28.71	0.30	28.73	28.60	28.57	40.60	309.44	
2/17/2023	5:29	9.87	-0.02	0.0581	0.241	60.6	28.71	0.50	28.75	28.39	28.34	13.83	99.05	15.18	0.00	0.5323	0.730	30.0	28.71	0.30	28.73	28.61	28.58	40.46	308.24	
2/17/2023	5:30	9.94	-0.02	0.0568	0.238	60.8	28.71	0.50	28.75	28.39	28.35	13.68	97.92	15.18	0.00	0.5438	0.737	30.0	28.71	0.30	28.73	28.61	28.58	40.89	311.56	
2/17/2023	5:31	9.88	-0.02	0.0662	0.257	60.7	28.71	0.50	28.75	28.39	28.34	14.77	105.73	15.16	0.00	0.5422	0.736	30.0	28.71	0.30	28.73	28.61	28.57	40.84	311.09	
2/17/2023	5:32	9.84	-0.02	0.0565	0.238	60.5	28.71	0.50	28.75	28.39	28.34	13.64	97.69	15.16	0.00	0.5406	0.735	29.9	28.71	0.30	28.73	28.61	28.57	40.77	310.65	
2/17/2023	5:33	9.76	-0.02	0.0557	0.236	60.6	28.71	0.50	28.75	28.39	28.34	13.54	96.99	15.16	0.00	0.5353	0.732	29.9	28.71	0.30	28.73	28.61	28.58	40.57	309.15	
2/17/2023	5:34	9.76	-0.02	0.0562	0.237	60.8	28.71	0.50	28.75	28.39	28.34	13.61	97.41	15.17	0.00	0.5316	0.729	29.7	28.71	0.30	28.73	28.61	28.58	40.42	308.12	
2/17/2023	5:35	9.76	-0.02	0.0542	0.233	60.7	28.71	0.50	28.75	28.39	28.34	13.36	95.67	15.19	0.00	0.5345	0.731	29.9	28.71	0.30	28.73	28.61	28.58	40.54	308.89	
2/17/2023	5:36	9.77	-0.02	0.0548	0.234	60.8	28.71	0.50	28.75	28.39	28.34	13.44	96.19	15.17	-0.01	0.5421	0.736	29.9	28.71	0.30	28.73	28.61	28.57	40.83	311.09	
2/17/2023	5:37	9.77	-0.02	0.0540	0.232	60.8	28.71	0.50	28.75	28.39	28.34	13.34	95.48	15.18	-0.01	0.5351	0.732	29.9	28.71	0.30	28.73	28.61	--	--	--	
2/17/2023	5:38	9.76	-0.02	0.0542	0.233	60.6	28.71	0.50	28.75	28.39	28.34	13.36	95.68	15.18	0.00	0.5292	0.727	30.0	28.71	0.30	28.73	28.61	28.58	40.34	307.33	
2/17/2023	5:39	9.74	-0.02	0.0539	0.232	60.5	28.71	0.50	28.75	28.39	--	--	--	15.18	0.00	0.5321	0.729	29.8	28.71	0.30	28.73	28.61	28.58	40.45	308.24	
2/17/2023	5:40	9.74	-0.02	0.0562	0.237	60.7	28.71	0.50	28.75	28.39	28.34	13.61	97.42	15.22	0.00	0.5328	0.730	29.7	28.71	0.30	28.73	28.61	28.58	40.47	308.45	
2/17/2023	5:41	9.74	-0.02	0.0547	0.234	60.5	28.71	0.50	28.75	28.39	28.34	13.42	96.13	15.25	0.00	0.5402	0.735	29.7	28.71	0.30	28.73	28.61	28.58	40.75	310.59	
2/17/2023	5:42	9.74	-0.02	0.0555	0.236	60.3	28.71	0.50	28.75	28.39	28.34	13.52	96.84	15.27	-0.01	0.5333	0.730	29.7	28.71	0.30	28.73	28.61	28.58	40.48	308.61	
2/17/2023	5:43	9.72	-0.02	0.0567	0.238	60.2	28.71	0.50	28.75	28.39	28.34	13.66	97.91	15.27	0.00	0.5327	0.730	29.7	28.71	0.30	28.73	28.61	28.58	40.46	308.41	
2/17/2023	5:44	9.71	-0.02	0.0566	0.238	60.3	28.71	0.50	28.75	28.39	28.34	13.65	97.81	15.31	0.00	0.5387	0.734	29.7	28.71	0.30	28.73	28.61	28.58	40.69	310.14	
2/17/2023	5:45	9.67	-0.02	0.0566	0.238	60.2	28.71	0.50	28.75	28.38	28.34	13.65	97.82	15.31	-0.01	0.5455	0.739	29.8	28.71	0.30	28.73	28.61	28.58	40.95	312.07	
2/17/2023	5:46	9.67	-0.02	0.0572	0.239	60.4	28.71	0.50	28.75	28.38	28.34	13.72	98.32	15.29	-0.01	0.5440	0.738	29.8	28.71	0.30	28.73	28.61	28.58	40.89	311.66	
2/17/2023	5:47	9.67	-0.02	0.0563	0.237	60.5	28.71	0.50	28.75	28.38	28.34	13.62	97.53	15.31	-0.01	0.5503	0.742	29.5	28.71	0.30	28.73	28.61	28.58	41.12	313.53	
2/17/2023	5:48	9.70	-0.02	0.0565	0.238	60.4	28.71	0.50	28.75	28.38	28.34	13.64	97.71	15.27	-0.01	0.5388	0.734	29.7	28.71	0.30	28.73	28.61	28.58	40.69	310.22	
2/17/2023	5:49	9.72	-0.02	0.0569	0.239	60.4	28.71	0.50	28.75	28.39	28.34	13.69	98.05	15.26	-0.01	0.5427	0.737	29.6	28.71	0.30	28.73	28.61	28.58	40.84	311.35	
2/17/2023	5:50	9.72	-0.02	0.0560	0.237	60.5	28.71	0.50	28.75	28.39	28.34	13.58	97.27	15.24	0.00	0.5503	0.742	29.5	28.71	0.30	28.73	28.61	28.58	41.12	313.55	
2/17/2023	5:51	9.72	-0.02	0.0569	0.239	60.5	28.71	0.50	28.75	28.39	28.34	13.69	98.05	15.24	0.00	0.5435	0.737	29.5	28.71	0.30	28.73	28.61	28.58	40.86	311.63	
2/17/2023	5:52	9.72	-0.02	0.0555	0.236	60.4	28.71	0.50	28.75	28.39	28.34	13.52	96.84	15.23	0.00	0.5474	0.740	29.5	28.71	0.30	28.73	28.61	28.58	41.01	312.74	
2/17/2023	5:53	9.70	-0.02	0.0549	0.234	60.6	28.71	0.50	28.75	28.38	28.34	13.45	96.30	15.22	0.00	0.5532	0.744	29.5	28.71	0.30	28.73	28.61	28.58	41.23	314.38	
2/17/2023	5:54	9.68	-0.02	0.0542	0.233	60.5	28.71	0.50	28.75	28.38	28.34	13.36	95.71	15.20	0.00	0.5411	0.736	29.5	28.71	0.30	28.73	28.61	28.58	40.77	310.94	
2/17/2023	5:55	9.67	-0.02	0.0551	0.235	60.6	28.71	0.50	28.75	28.38	28.33	13.47	96.48	15.22	0.00	0.5389	0.734	29.6	28.71	0.30	28.73	28.61	28.58	40.69	310.29	
2/17/2023	5:56	9.66	-0.02	0.0534	0.231	60.7	28.71	0.50	28.75	28.38	28.33	13.26	94.96	15.23	0.00	0.5347	0.731	29.6	28.71	0.30	28.73	28.61	28.58	40.53	309.07	
2/17/2023	5:57	9.65	-0.02	0.0556	0.236	60.7	28.71	0.50	28.75	28.38	28.33	13.53	96.90	15.23	-0.01	0.5378	0.733	29.4	28.71	0.30	28.73	28.61	28.58	40.64	310.04	
2/17/2023	5:58	9.64	-0.02	0.0559	0.236	60.5	28.71	0.50	28.75	28.38	28.34	13.57	97.20	15.25	0.00	0.5354	0.732	29.2	28.71	0.30	28.73	28.61	28.58	40.55	309.37	
2/17/2023	5:59	9.65	-0.02	0.0540	0.232	60.5	28.71	0.50	28.75	28.38	28.33	13.34	95.52	15.26	0.00	0.5318	0.729	29.5	28.71	0.30	28.73	28.61	28.58	40.42	308.25	
2/17/2023	6:00	9.65	-0.02	0.0557	0.236	60.5	28.71	0.50	28.75	28.38	28.33	13.54	97.01	15.27	-0.01	0.5336	0.730	29.3	28.71	0.30	28.73	28.61	28.58	40.48	308.83	
2/17/2023	6:01	9.65	-0.02	0.0550	0.235	60.5	28.71	0.50	28.75	28.38	--	--	--	15.29	0.00	0.5482	0.740	29.3	28.71	0.30	28.73	28.61	--	--	--	
2/17/2023	6:02	9.65	-0.02	0.0560	0.237	60.4	28.71	0.50	28.75	28.38	28.33	13.58	97.28	15.33	0.00	0.5570	0.746	29.4	28.71	0.30	28.73	28.61	28.58	41.36	315.49	
2/17/2023	6:03	9.67	-0.02	0.0565	0.238	60.3	28.71	0.50	28.75	28.38	28.34	13.64	97.72	15.35	0.00	0.5414	0.736	29.4	28.71	0.30	28.73	28.61	28.58	40.77	311.04	
2/17/2023	6:04	9.69	-0.02	0.0562	0.237	60.3	28.71	0.50	28.75	28.38	28.34	13.60	97.46	15.36	0.00	0.5378	0.733	29.4	28.71	0.30	28.73	28.61	28.58	40.64	309.99	
2/17/2023	6:05	9.73	-0.02	0.0567	0.238	60.3	28.71	0.50	28.75	28.39	28.34	13.66	97.90	15.36	0.00	0.5487	0.741	29.1	28.71	0.30	28.73	28.61	28.58	41.04	313.22	
2/17/2023	6:06	9.76	-0.02	0.0567	0.238	60.2	28.71	0.50	28.75	28.39	28.34	13.66	97.90	15.33	0.00	0.5534	0.744	29.2	28.71	0.30	28.73	28.61	28.58	41.22	314.54	
2/17/2023	6:07	9.79	-0.02	0.0555	0.236	60.1	28.71	0.50	28.75	28.39	28.34	13.51	96.87	15.35	0.00	0.5520	0.743	29.1	28.71	0.30	28.73	28.61	28.58	41.16	314.18	
2/17/2023	6:08	9.83	-0.02	0.0553	0.235	60.0	28.71	0.50	28.75	28.39	28.34	13.49	96.70	15.33	-0.01	0.5436	0.737	29.0	28.71	0.30	28.73	28.61	28.58	40.84	311.82	
2/17/2023	6:09	9.84	-0.02	0.0544	0.233	59.9	28.71	0.50	28.75	28.39	28.34	13.38	95.91	15.33	-0.01	0.5347	0.731	29.0	28.71	0.30	28.73	28.61	28.58	40.51	309.26	
2/17/2023	6:10	9.82	-0.02	0.0543	0.233	59.9	28.71	0.50	28.75	28.39	28.34	13.36	95.82	15.32	0.00	0.5475	0.740	28.9	28.71	0.30	28.73	28.61	28.58	40.99	312.96	
2/17/2023	6:11	9.82	-0.02	0.0540	0.232	59.9	28.71	0.50	28.75	28.39	28.34	13.33	95.57	15.29	-0.01	0.5585	0.747	29.1	28.71	0.30	28.73	28.61	28.58	41.40	316.06	
2/17/2023	6:12	9.80	-0.02	0.0549	0.234	59.9	28.71	0.50	28.75	28.39	28.34	13.44	96.36	15.31	0.00	0.5565	0.746	29.0	28.71	0.30	28.73	28.61	28.58	41.32	315.50	
2/17/2023	6:13	9.78	-0.02	0.0548	0.234	59.8	28.71	0.50	28.75	28.39	28.34	13.42	96.28	15.30	0.00	0.5409	0.735	29.0	28.71	0.30	28.73	28.61	28.58	40.74	311.06	
2/17/2023	6:14	9.77	-0.02	0.0547	0.234	60.0	28.71	0.50	28.75	28.39	28.34	13.41	96.17	15.31	0.00	0.5459	0.739	29.0	28.71	0.30	28.73	28.61	28.58	40.93	312.49	
2/17/2023	6:15	9.75	-0.02	0.0546	0.234	59.8	28.71	0.50	28.75	28.39	28.34	13.40	96.09	15.32	-0.01	0.5422	0.736	29.0	28.71	0.30	28.73	28.61	28.58	40.79	311.45	
2/17/2023	6:16	9.73	-0.02	0.0555	0.236	59.9	28.71	0.50	28.75	28.39	28.34	13.51	96.89	15.31	0.00	0.5431	0.737	28.9	28.71	0.30	28.73	28.61	28.58	40.82	311.73	
2/17/2023	6:17	9.72	-0.02	0.0550	0.235	59.9	28.71	0.50	28.75	28.39	28.34	13.45	96.45	15.36	0.00	0.5325	0.730	29.0	28.71	0.30	28.73	28.61	28.59	40.42	308.63	
2/17/2023	6:18	9.70	-0.02	0.0557	0.236	59.8	28.71	0.50	28.75	28.38	28.34	13.53	97.07	15.38	0.00	0.5502	0.742	29.0	28.71	0.30	28.73	28.62	28.59	41.08	313.72	
2/17/2023	6:19	9.70	-0.02	0.0511	0.226	60.0	28.71	0.50	28.75	28.38	28.34	12.97	92.95	15.39	0.00	0.5508	0.742	28.8	28.71	0.30	28.73	28.62	28.59	41.10	313.95	
2/17/2023	6:20	9.67	-0.02	0.0037	0.061	60.0	28.71	0.50	28.75	28.38	28.34	3.49	25.02	15.39	-0.01	0.5491	0.741	29.1	28.71	0.30	28.73	28.61	28.58	41.05	313.37	
2/17/2023	6:21	9.66	-0.02	0.0024	0.049	60.0	28.71	0.50	28.75	28.38	28.33	2.81	20.15	15.35	-0.01	0.5525	0.743	29.0	28.71	0.30	28.73	28.61	28.58	41.18	314.36	
2/17/2023	6:22	9.64	-0.02	0.0013	0.036	59.9	28.71	0.50	28.75	28.38	28.33	2.07	14.83	15.37	0.00	0.5526	0.743	29.0	28.71	0.30	28.73	28.61	28.59	41.18	314.39	
2/17/2023	6:23	9.63	-0.02	0.0006	0.024	60.1	28.71	0.50	28.75	28.38	--	--	--	15.35	0.00	0.3931	0.627	29.0	28.71	0.30	28.73	28.61	28.59	34.73	265.19	
2/17/2023	6:24	9.62	-0.02	0.0002	0.014	60.2	28.71	0.50	28.75	28.38	28.33	0.81	5.81	15.36	0.00	0.3802	0.617	28.9	28.71	0.30	28.73	28.61	--	--	--	
2/17/2023	6:25	9.61	-0.02	0.0000	0.000	60.0	28.71	0.50	28.75	28.38	28.33	0.00	0.00	15.35	0.00	0.3747	0.612	28.6	28.71	0.30	28.73	28.61	28.59	33.89	259.00	
2/17/2023	6:26	9.63	-0.02	0.0001	0.010	59.9	28.71	0.50	28.75	28.38	28.33	0.57	4.11	15.38	0.00	0.3654	0.604	28.7	28.71	0.30	28.73	28.62	28.59	33.47	255.71	
2/17/2023	6:27	9.71	-0.02	0.0000	0.000	59.2	28.71	0.50	28.75	28.39	28.34	0.00	0.00	18.84	0.01	0.3584	0.599	28.5	28.71	0.30	28.73	28.76	28.73	33.06	252.70	
2/17/2023	6:28	9.64	-0.02	0.0000	0.000	57.6	28.71	0.50	28.75	28.38	28.33	0.00	0.00	19.74	0.01	0.3477	0.590	28.5	28.71	0.30	28.73	28.79	28.76	32.55	248.73	
2/17/2023	6:29	9.61	-0.02	0.0000	0.000	55.9	28.71	0.50	28.75	28.38	28.33	0.00	0.00	20.07	0.01	0.3488	0.591	28.2	28.71	0.30	28.73	28.80	28.77	32.58	249.16	
2/17/2023	6:30	9.58	-0.02	0.0008	0.028	54.0	28.71	0.50	28.75	28.38	28.33	1.61	11.70	20.36	0.01	0.3465	0.589	28.1	28.71	0.30	28.73	28.81	28.79	32.46	248.32	
2/17/2023	6:31	9.58	-0.02	0.0000	0.000	52.2	28.71	0.50	28.75	28.38	28.33	0.00	0.00	20.65	0.01	0.3515	0.593	28.0	28.71	0.30	28.73	28.83	28.80	32.69	250.08	
2/17/2023	6:32	9.58	-0.01	0.0001	0.010	50.6	28.71	0.50	28.75	28.38	28.33	0.57	4.15	20.87	0.01	0.3587	0.599	28.2	28.71	0.30	28.73	28.84	28.81	33.02	252.54	
2/17/2023	6:33	9.53	-0.01	0.0000	0.000	49.3	28.71	0.50	28.75	28.38	28.33	0.00	0.00	21.15	0.01	0.3565	0.597	28.1	28.71	0.30	28.73	28.85	28.82	32.91	251.73	
2/17/2023	6:34	9.50	-0.02	0.0000	0.000	48.0	28.71	0.50	28.75	28.38	28.33	0.00	0.00	21.32	0.01	0.3611	0.601	27.9	28.71	0.30	28.73	28.85	28.82	33.11	253.39	
2/17/2023	6:35	9.49	-0.02	0.0001	0.010	47.1	28.71	0.50	28.75	28.38	28.33	0.57	4.17	21.26	0.01	0.3571	0.598	27.9	28.71	0.30	28.73	28.85	28.82	32.93	251.99	
2/17/2023	6:36	9.47	-0.02	0.0001	0.010	45.8	28.71	0.50	28.75	28.38	28.33	0.57	4.17	20.99	0.01	0.3594	0.599	27.9	28.71	0.30	28.73	28.84	28.81	33.04	252.85	
2/17/2023	6:37	9.41	-0.02	0.0000	0.000	44.8	28.71	0.50	28.75	28.37	28.33	0.00	0.00	20.97	0.01	0.3579	0.598	27.9	28.71	0.30	28.73	28.84	28.81	32.97	252.34	
2/17/2023	6:38	9.55	-0.01	0.0001	0.010	43.6	28.71	0.50	28.75	28.38	28.34	0.56	4.18	20.93	0.01	0.3626	0.602	28.0	28.71	0.30	28.73	28.84	28.81	33.19	253.95	
2/17/2023	6:39	11.28	-0.01	0.0001	0.010	42.6	28.71	0.50	28.75	28.45	28.40	0.56	4.18	20.98	0.01	0.3808	0.617	28.0	28.71	0.30	28.73	28.84	28.81	34.01	260.23	
2/17/2023	6:40	13.07	-0.01	0.0002	0.014	41.7	28.71	0.50	28.75	28.52	28.47	0.79	5.91	20.97	0.01	0.3642	0.603	27.9	28.71	0.30	28.73	28.84	28.81	33.26	254.53	
2/17/2023	6:41	14.36	0.01	0.0007	0.026	40.9	28.71	0.50	28.75	28.58	28.52	1.48	11.05	20.98	0.01	0.3655	0.605	27.9	28.71	0.30	28.73	28.84	28.81	33.32	254.99	
2/17/2023	6:42	15.34	0.02	0.0000	0.000	40.2	28.71	0.50	28.75	28.62	28.57	0.00	0.00	20.99	0.01	0.3596	0.600	27.7	28.71	0.30	28.73	28.84	28.81	33.04	252.96	
2/17/2023	6:43	16.19	0.03	0.0000	0.000	39.2	28.71	0.50	28.75	28.65	28.60	0.00	0.00	20.93	0.01	0.3628	0.602	27.7	28.71	0.30	28.73	28.84	28.81	33.19	254.11	
2/17/2023	6:44	16.02	0.03	0.0000	0.000	38.9	28.71	0.50	28.75	28.65	28.60	0.00	0.00	20.98	0.01	0.3685	0.607	27.6	28.71	0.30	28.73	28.84	28.81	33.44	256.11	
2/17/2023	6:45	17.37	0.04	0.0001	0.010	38.0	28.71	0.50	28.75	28.70	--	--	--	21.00	0.01	0.3698	0.608	27.6	28.71	0.30	28.73	28.84	28.81	33.50	256.54	
2/17/2023	6:46	17.90	0.05	0.0000	0.000	37.4	28.71	0.50	28.75	28.72	28.67	0.00	0.00	21.02	0.02	0.3652	0.604	27.4	28.71	0.30	28.73	28.84	28.81	33.29	254.99	
2/17/2023	6:47	18.32	0.05	0.0001	0.010	36.8	28.71	0.50	28.75	28.74	28.69	0.56	4.18	21.07	0.02	0.3640	0.603	27.5	28.71	0.30	28.73	28.85	--	--	--	
2/17/2023	6:48	18.66	0.05	0.0001	0.010	36.3	28.71	0.50	28.75	28.75	28.70	0.56	4.18	21.12	0.01	0.3702	0.608	27.5	28.71	0.30	28.73	28.85	28.82	33.51	256.71	
2/17/2023	6:49	18.13	0.05	0.0001	0.010	35.7	28.71	0.50	28.75	28.73	28.68	0.56	4.19	21.13	0.01	0.3653	0.604	27.5	28.71	0.30	28.73	28.85	28.82	33.29	255.00	
2/17/2023	6:50	18.99	0.05	0.0000	0.000	35.3	28.71	0.50	28.75	28.77	28.72	0.00	0.00	21.20	0.01	0.3615	0.601	27.5	28.71	0.30	28.73	28.85	28.82	33.12	253.65	
2/17/2023	6:51	19.40	0.06	0.0000	0.000	34.6	28.71	0.50	28.75	28.79	28.73	0.00	0.00	21.21	0.02	0.3610	0.601	27.5	28.71	0.30	28.73	28.85	28.82	33.09	253.48	
2/17/2023	6:52	19.61	0.06	0.0000	0.000	34.1	28.71	0.50	28.75	28.79	28.74	0.00	0.00	21.25	0.01	0.3608	0.601	27.6	28.71	0.30	28.73	28.85	28.82	33.09	253.38	
2/17/2023	6:53	19.79	0.06	0.0001	0.010	33.6	28.71	0.50	28.75	28.80	28.75	0.55	4.19	21.27	0.02	0.3685	0.607	27.3	28.71	0.30	28.73	28.85	28.82	33.43	256.12	
2/17/2023	6:54	19.90	0.05	0.0001	0.010	33.2	28.71	0.50	28.75	28.80	28.76	0.55	4.19	21.28	0.01	0.3619	0.602	27.4	28.71	0.30	28.73	28.85	28.82	33.13	253.81	
2/17/2023	6:55	18.90	0.05	0.0001	0.010	32.8	28.71	0.50	28.75	28.76	28.71	0.55	4.20	21.32	0.02	0.3683	0.607	27.4	28.71	0.30	28.73	28.86	28.83	33.42	256.02	
2/17/2023	6:56	20.09	0.05	0.0001	0.010	32.4	28.71	0.50	28.75	28.81	28.76	0.55	4.19	21.34	0.02	0.3736	0.611	27.3	28.71	0.30	28.73	28.86	28.83	33.66	257.88	
2/17/2023	6:57	20.16	0.05	0.0001	0.010	32.4	28.71	0.50	28.75	28.81	28.76	0.55	4.19	21.35	0.02	0.3679	0.607	27.4	28.71	0.30	28.73	28.86	28.83	33.40	255.88	
2/17/2023	6:58	20.18	0.06	0.0001	0.010	32.6	28.71	0.50	28.75	28.82	28.76	0.55	4.19	21.37	0.02	0.3658	0.605	27.2	28.71	0.30	28.73	28.86	28.83	33.

Alliance SOURCE TESTING

Run 1 - CEMS Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 2/13/2023 to 2/16/2023

Date	Time	Inlet O_2 - Inlet % dry	Inlet CO_2 - Inlet % dry	Inlet Delta P in. W.C.	Inlet Sq Rt Delta P	Inlet Temperature (°F)	Inlet Barometric in. Hg	Inlet Stack Pressure in. W.C.	Inlet Stack Pressure in. Hg	Inlet Molecular Weight Md	Inlet Molecular Weight Mw	Inlet Velocity ft/sec	Inlet Flow Rate (DSCFM)	Outlet O_2 - Outlet % dry	Outlet CO_2 - Outlet % dry	Outlet Delta P in. W.C.	Outlet Sq Rt Delta P	Outlet Temperature (°F)	Outlet Barometric in. Hg	Outlet Stack Pressure in. W.C.	Outlet Stack Pressure in. Hg	Outlet Molecular Weight Md	Outlet Molecular Weight Mw	Outlet Velocity ft/sec	Outlet Flow Rate (DSCFM)	Point in Process -
	Unit	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid	Valid
	Status																									
2/17/2023	7:23	19.85	0.11	0.0001	0.010	28.7	28.71	0.50	28.75	28.81	28.76	0.55	4.21	21.44	0.02	0.3712	0.609	27.1	28.71	0.30	28.73	28.86	28.83	33.54	257.11	
2/17/2023	7:24	19.50	0.11	0.0001	0.010	28.8	28.71	0.50	28.75	28.80	28.75	0.55	4.21	21.45	0.03	0.3788	0.615	27.1	28.71	0.30	28.73	28.86	28.83	33.88	259.72	
2/17/2023	7:25	20.24	0.12	0.0000	0.000	28.6	28.71	0.50	28.75	28.83	28.78	0.00	0.00	21.45	0.03	0.3698	0.608	27.1	28.71	0.30	28.73	28.86	28.83	33.47	256.62	
2/17/2023	7:26	20.27	0.12	0.0000	0.000	28.5	28.71	0.50	28.75	28.83	28.78	0.00	0.00	21.44	0.02	0.3787	0.615	27.1	28.71	0.30	28.73	28.86	28.83	33.87	259.69	
2/17/2023	7:27	20.29	0.12	0.0001	0.010	28.4	28.71	0.50	28.75	28.83	28.77	0.55	4.21	21.45	0.02	0.3757	0.613	27.0	28.71	0.30	28.73	28.86	28.83	33.74	258.68	
2/17/2023	7:28	19.25	0.11	0.0001	0.010	28.4	28.71	0.50	28.75	28.79	28.74	0.55	4.21	21.44	0.03	0.3740	0.612	27.1	28.71	0.30	28.73	28.86	28.83	33.66	258.07	
2/17/2023	7:29	20.05	0.12	0.0000	0.000	28.1	28.71	0.50	28.75	28.82	--	--	--	21.45	0.02	0.3751	0.612	27.1	28.71	0.30	28.73	28.86	28.83	33.71	258.43	
2/17/2023	7:30	20.27	0.12	0.0001	0.010	28.0	28.71	0.50	28.75	28.83	28.78	0.55	4.21	21.45	0.03	0.3649	0.604	27.1	28.71	0.30	28.73	28.86	28.83	33.25	254.90	
2/17/2023	7:31	20.29	0.12	0.0000	0.000	27.8	28.71	0.50	28.75	28.83	28.78	0.00	0.00	21.45	0.02	0.3810	0.617	27.0	28.71	0.30	28.73	28.86	28.83	33.98	260.49	
2/17/2023	7:32	20.30	0.12	0.0000	0.000	27.7	28.71	0.50	28.75	28.83	28.78	0.00	0.00	21.45	0.03	0.3746	0.612	27.3	28.71	0.30	28.73	28.86	28.83	33.70	258.22	
2/17/2023	7:33	19.13	0.12	0.0000	0.000	27.6	28.71	0.50	28.75	28.78	28.74	0.00	0.00	21.45	0.02	0.3715	0.610	27.1	28.71	0.30	28.73	28.86	28.83	33.55	257.19	
2/17/2023	7:34	20.19	0.13	0.0000	0.000	27.6	28.71	0.50	28.75	28.83	28.78	0.00	0.00	21.46	0.03	0.3663	0.605	27.2	28.71	0.30	28.73	28.86	--	--	--	
2/17/2023	7:35	20.29	0.13	0.0000	0.000	27.4	28.71	0.50	28.75	28.83	28.78	0.00	0.00	21.46	0.02	0.3699	0.608	27.0	28.71	0.30	28.73	28.86	28.83	33.48	256.66	
2/17/2023	7:36	20.31	0.13	0.0001	0.010	27.3	28.71	0.50	28.75	28.83	28.78	0.55	4.21	21.45	0.02	0.3750	0.612	27.2	28.71	0.30	28.73	28.86	28.83	33.71	258.38	
2/17/2023	7:37	20.25	0.13	0.0000	0.000	27.3	28.71	0.50	28.75	28.83	28.78	0.00	0.00	21.45	0.02	0.3670	0.606	27.2	28.71	0.30	28.73	28.86	28.83	33.35	255.61	
2/17/2023	7:38	19.06	0.12	0.0000	0.000	27.2	28.71	0.50	28.75	28.78	28.73	0.00	0.00	21.46	0.03	0.3692	0.608	29.5	28.71	0.30	28.73	28.86	28.83	33.53	255.77	
2/17/2023	7:39	20.27	0.13	0.0000	0.000	27.1	28.71	0.50	28.75	28.83	28.78	0.00	0.00	21.46	0.03	0.3672	0.606	27.4	28.71	0.30	28.73	28.86	28.83	33.37	255.63	
2/17/2023	7:40	20.28	0.13	0.0001	0.010	27.1	28.71	0.50	28.75	28.83	28.78	0.55	4.22	21.46	0.02	0.3690	0.607	27.4	28.71	0.30	28.73	28.86	28.83	33.45	256.26	
2/17/2023	7:41	20.19	0.13	0.0000	0.000	26.9	28.71	0.50	28.75	28.83	28.78	0.00	0.00	21.45	0.02	0.3664	0.605	27.5	28.71	0.30	28.73	28.86	28.83	33.33	255.34	
2/17/2023	7:42	18.93	0.12	0.0001	0.010	26.9	28.71	0.50	28.75	28.78	28.73	0.55	4.22	21.46	0.03	0.3662	0.605	27.6	28.71	0.30	28.73	28.86	28.83	33.33	255.23	
2/17/2023	7:43	19.77	0.12	0.0000	0.000	26.8	28.71	0.50	28.75	28.81	28.76	0.00	0.00	21.46	0.03	0.3628	0.602	27.4	28.71	0.30	28.73	28.86	28.83	33.17	254.08	
2/17/2023	7:44	20.24	0.13	0.0000	0.000	26.9	28.71	0.50	28.75	28.83	28.78	0.00	0.00	21.46	0.02	0.3647	0.604	27.4	28.71	0.30	28.73	28.86	28.83	33.25	254.76	
2/17/2023	7:45	20.29	0.13	0.0001	0.010	26.9	28.71	0.50	28.75	28.83	28.78	0.55	4.22	21.46	0.02	0.3595	0.600	27.4	28.71	0.30	28.73	28.86	28.83	33.01	252.94	
2/17/2023	7:46	20.32	0.13	0.0001	0.010	26.9	28.71	0.50	28.75	28.83	28.78	0.55	4.22	21.46	0.02	0.3644	0.604	27.4	28.71	0.30	28.73	28.86	28.83	33.24	254.66	
2/17/2023	7:47	18.81	0.12	0.0001	0.010	26.8	28.71	0.50	28.75	28.77	28.72	0.55	4.22	21.46	0.02	0.3619	0.602	27.4	28.71	0.30	28.73	28.86	28.83	33.12	253.79	
2/17/2023	7:48	20.01	0.13	0.0000	0.000	26.9	28.71	0.50	28.75	28.82	28.77	0.00	0.00	21.46	0.02	0.3577	0.598	27.4	28.71	0.30	28.73	28.86	28.83	32.93	252.30	
2/17/2023	7:49	20.32	0.13	0.0001	0.010	26.9	28.71	0.50	28.75	28.83	28.79	0.55	4.22	21.46	0.02	0.3625	0.602	27.5	28.71	0.30	28.73	28.86	28.83	33.16	253.97	
2/17/2023	7:50	20.36	0.13	0.0000	0.000	27.0	28.71	0.50	28.75	28.84	28.78	0.00	0.00	21.46	0.03	0.3562	0.597	27.4	28.71	0.30	28.73	28.86	28.83	32.86	251.77	
2/17/2023	7:51	20.38	0.13	0.0001	0.010	27.1	28.71	0.50	28.75	28.84	--	--	--	21.46	0.02	0.3600	0.600	27.5	28.71	0.30	28.73	28.86	28.83	33.04	253.08	
2/17/2023	7:52	18.78	0.12	0.0001	0.010	27.1	28.71	0.50	28.75	28.77	28.72	0.55	4.22	21.46	0.02	0.3729	0.611	27.6	28.71	0.30	28.73	28.86	28.83	33.63	257.55	
2/17/2023	7:53	20.00	0.13	0.0001	0.010	27.1	28.71	0.50	28.75	28.82	28.77	0.55	4.22	21.47	0.02	0.3615	0.601	27.6	28.71	0.30	28.73	28.86	28.83	33.11	253.58	
2/17/2023	7:54	20.34	0.13	0.0002	0.014	27.4	28.71	0.50	28.75	28.83	28.78	0.78	5.96	21.47	0.02	0.3537	0.595	27.7	28.71	0.30	28.73	28.86	28.83	32.76	250.79	
2/17/2023	7:55	20.37	0.13	0.0001	0.010	27.3	28.71	0.50	28.75	28.84	28.79	0.55	4.22	21.47	0.02	0.3478	0.590	30.3	28.71	0.30	28.73	28.86	28.83	32.57	248.04	
2/17/2023	7:56	20.38	0.13	0.0001	0.010	27.4	28.71	0.50	28.75	28.84	28.78	0.55	4.21	21.46	0.02	0.3551	0.596	31.0	28.71	0.30	28.73	28.86	28.83	32.93	250.45	
2/17/2023	7:57	18.77	0.12	0.0000	0.000	27.6	28.71	0.50	28.75	28.77	28.72	0.00	0.00	21.47	0.03	0.3736	0.611	30.7	28.71	0.30	28.73	28.86	28.83	33.77	256.96	
2/17/2023	7:58	20.21	0.13	0.0001	0.010	28.0	28.71	0.50	28.75	28.83	28.78	0.55	4.21	21.48	0.01	0.3578	0.598	28.0	28.71	0.30	28.73	28.86	--	--	--	
2/17/2023	7:59	20.36	0.13	0.0000	0.000	28.2	28.71	0.50	28.75	28.84	28.78	0.00	0.00	21.47	0.02	0.3513	0.593	27.9	28.71	0.30	28.73	28.86	28.83	32.65	249.91	
2/17/2023	8:00	20.38	0.13	0.0001	0.010	28.5	28.71	0.50	28.75	28.84	28.78	0.55	4.21	21.47	0.02	0.3533	0.594	28.0	28.71	0.30	28.73	28.86	28.83	32.75	250.60	
2/17/2023	8:01	20.39	0.13	0.0001	0.010	28.5	28.71	0.50	28.75	28.84	28.78	0.55	4.21	21.47	0.02	0.3493	0.591	27.9	28.71	0.30	28.73	28.86	28.83	32.56	249.19	
2/17/2023	8:02	18.67	0.11	0.0001	0.010	28.9	28.71	0.50	28.75	28.76	28.71	0.55	4.21	21.47	0.02	0.3471	0.589	28.0	28.71	0.30	28.73	28.86	28.83	32.46	248.38	
2/17/2023	8:03	20.14	0.13	0.0000	0.000	28.9	28.71	0.50	28.75	28.83	28.77	0.00	0.00	21.47	0.02	0.3439	0.586	28.1	28.71	0.30	28.73	28.86	28.83	32.31	247.21	
2/17/2023	8:04	20.34	0.13	0.0001	0.010	29.2	28.71	0.50	28.75	28.83	28.78	0.55	4.21	21.48	0.02	0.3476	0.590	28.1	28.71	0.30	28.73	28.86	28.83	32.49	248.55	
2/17/2023	8:05	20.36	0.13	0.0000	0.000	29.4	28.71	0.50	28.75	28.84	28.78	0.00	0.00	21.47	0.03	0.3461	0.588	28.2	28.71	0.30	28.73	28.86	28.84	32.42	247.97	
2/17/2023	8:06	20.37	0.14	0.0000	0.000	29.7	28.71	0.50	28.75	28.84	28.78	0.00	0.00	21.47	0.02	0.3477	0.590	28.2	28.71	0.30	28.73	28.86	28.83	32.49	248.56	
2/17/2023	8:07	18.84	0.13	0.0000	0.000	29.8	28.71	0.50	28.75	28.77	28.72	0.00	0.00	21.48	0.02	0.3421	0.585	30.7	28.71	0.30	28.73	28.86	28.83	32.31	245.92	
2/17/2023	8:08	20.26	0.14	0.0001	0.010	30.0	28.71	0.50	28.75	28.83	28.78	0.55	4.20	21.48	0.02	0.3458	0.588	29.9	28.71	0.30	28.73	28.86	28.83	32.46	247.46	
2/17/2023	8:09	20.36	0.15	0.0002	0.014	30.3	28.71	0.50	28.75	28.84	28.78	0.78	5.94	21.48	0.01	0.3378	0.581	28.4	28.71	0.30	28.73	28.86	28.83	32.04	244.96	
2/17/2023	8:10	20.38	0.15	0.0001	0.010	30.6	28.71	0.50	28.75	28.84	28.78	0.55	4.20	21.48	0.02	0.3441	0.587	28.3	28.71	0.30	28.73	28.86	28.83	32.33	247.23	
2/17/2023	8:11	20.04	0.14	0.0000	0.000	30.9	28.71	0.50	28.75	28.82	28.77	0.00	0.00	21.48	0.02	0.3491	0.591	28.3	28.71	0.30	28.73	28.86	28.83	32.56	249.03	
2/17/2023	8:12	18.79	0.13	0.0000	0.000	31.0	28.71	0.50	28.75	28.77	28.71	0.00	0.00	21.48	0.02	0.3416	0.584	28.3	28.71	0.30	28.73	28.86	28.83	32.21	246.34	
2/17/2023	8:13	20.19	0.14	0.0000	0.000	31.1	28.71	0.50	28.75	28.83	--	--	--	21.48	0.02	0.3433	0.586	28.4	28.71	0.30	28.73	28.86	28.84	32.29	246.94	
2/17/2023	8:14	20.32	0.15	0.0001	0.010	31.3	28.71	0.50	28.75	28.84	28.78	0.55	4.19	21.48	0.02	0.3477	0.590	28.4	28.71	0.30	28.73	28.86	28.83	32.50	248.51	
2/17/2023	8:15	20.37	0.15	0.0001	0.010	31.6	28.71	0.50	28.75	28.84	28.77	0.55	4.19	21.47	0.02	0.3502	0.592	28.4	28.71	0.30	28.73	28.86	28.83	32.62	249.40	
2/17/2023	8:16	18.82	0.14	0.0000	0.000	31.7	28.71	0.50	28.75	28.78	28.71	0.00	0.00	21.48	0.02	0.3468	0.589	28.5	28.71	0.30	28.73	28.86	28.84	32.46	248.17	
2/17/2023	8:17	20.10	0.15	0.0000	0.000	31.8	28.71	0.50	28.75	28.83	28.77	0.00	0.00	21.48	0.01	0.3399	0.583	28.6	28.71	0.30	28.73	28.86	28.83	32.14	245.67	
2/17/2023	8:18	20.37	0.15	0.0000	0.000	32.2	28.71	0.50	28.75	28.84	28.78	0.00	0.00	21.48	0.02	0.3399	0.583	28.7	28.71	0.30	28.73	28.86	28.83	32.14	245.64	
2/17/2023	8:19	20.41	0.16	0.0005	0.022	32.1	28.71	0.50	28.75	28.84	28.78	1.24	9.37	21.48	0.02	0.3387	0.582	28.6	28.71	0.30	28.73	28.86	28.83	32.08	245.22	
2/17/2023	8:20	20.38	0.16	0.0006	0.024	32.2	28.71	0.50	28.75	28.84	28.77	1.36	10.26	21.47	0.02	0.3387	0.582	28.7	28.71	0.30	28.73	28.86	28.83	32.09	245.20	
2/17/2023	8:21	18.51	0.15	0.0005	0.022	32.1	28.71	0.50	28.75	28.76	28.71	1.24	9.39	21.47	0.02	0.3333	0.577	28.7	28.71	0.30	28.73	28.86	--	--	--	
2/17/2023	8:22	20.32	0.16	0.0000	0.000	32.4	28.71	0.50	28.75	28.84	28.78	0.00	0.00	21.48	0.02	0.3321	0.576	28.7	28.71	0.30	28.73	28.86	28.84	31.77	242.80	
2/17/2023	8:23	20.40	0.16	0.0001	0.010	32.7	28.71	0.50	28.75	28.84	28.78	0.55	4.19	21.48	0.01	0.3352	0.579	28.8	28.71	0.30	28.73	28.86	28.83	31.93	243.90	
2/17/2023	8:24	20.28	0.16	0.0002	0.014	32.7	28.71	0.50	28.75	28.84	28.77	0.78	5.92	21.48	0.02	0.3317	0.576	28.8	28.71	0.30	28.73	28.86	28.83	31.76	242.62	
2/17/2023	8:25	18.68	0.14	0.0008	0.028	32.9	28.71	0.50	28.75	28.77	28.71	1.57	11.86	21.48	0.01	0.3247	0.570	29.0	28.71	0.30	28.73	28.86	28.83	31.43	240.00	
2/17/2023	8:26	19.65	0.15	0.0000	0.000	33.0	28.71	0.50	28.75	28.81	28.75	0.00	0.00	21.48	0.02	0.3297	0.574	29.0	28.71	0.30	28.73	28.86	28.84	31.67	241.84	
2/17/2023	8:27	20.31	0.16	0.0001	0.010	33.0	28.71	0.50	28.75	28.84	28.78	0.55	4.19	21.49	0.02	0.3308	0.575	29.1	28.71	0.30	28.73	28.86	28.84	31.72	242.24	
2/17/2023	8:28	20.37	0.16	0.0001	0.010	33.2	28.71	0.50	28.75	28.84	28.78	0.55	4.18	21.48	0.01	0.3252	0.570	28.9	28.71	0.30	28.73	28.86	28.83	31.45	240.23	
2/17/2023	8:29	20.38	0.16	0.0000	0.000	33.6	28.71	0.50	28.75	28.84	28.77	0.00	0.00	21.47	0.02	0.3315	0.576	29.3	28.71	0.30	28.73	28.86	28.84	31.76	242.45	
2/17/2023	8:30	18.31	0.15	0.0001	0.010	33.3	28.71	0.50	28.75	28.76	28.70	0.56	4.19	21.48	0.01	0.3266	0.571	33.8	28.71	0.30	28.73	28.86	28.83	31.67	239.55	
2/17/2023	8:31	20.02	0.15	0.0002	0.014	33.5	28.71	0.50	28.75	28.82	28.77	0.78	5.92	21.49	0.01	0.3319	0.576	31.7	28.71	0.30	28.73	28.86	28.83	31.86	242.00	
2/17/2023	8:32	20.27	0.15	0.0001	0.010	33.9	28.71	0.50	28.75	28.83	28.78	0.55	4.18	21.49	0.02	0.3243	0.569	29.3	28.71	0.30	28.73	28.86	28.84	31.42	239.79	
2/17/2023	8:33	20.39	0.16	0.0000	0.000	34.0	28.71	0.50	28.75	28.84	28.77	0.00	0.00	21.48	0.02	0.3250	0.570	29.4	28.71	0.30	28.73	28.86	28.84	31.45	240.03	
2/17/2023	8:34	18.61	0.15	0.0000	0.000	34.0	28.71	0.50	28.75	28.77	28.71	0.00	0.00	21.48	0.01	0.3166	0.563	29.4	28.71	0.30	28.73	28.86	28.83	31.05	236.91	
2/17/2023	8:35	20.24	0.16	0.0001	0.010	33.9	28.71	0.50	28.75	28.84	--	--	--	21.48	0.01	0.3197	0.565	31.4	28.71	0.30	28.73	28.86	28.83	31.26	237.60	
2/17/2023	8:36	20.30	0.15	0.0001	0.010	34.2	28.71	0.50	28.75	28.84	28.78	0.55	4.18	21.49	0.01	0.3189	0.565	30.3	28.71	0.30	28.73	28.86	28.83	31.18	237.57	
2/17/2023	8:37	20.31	0.16	0.0003	0.017	34.3	28.71	0.50	28.75	28.84	28.78	0.96	7.24	21.48	0.01	0.3181	0.564	29.4	28.71	0.30	28.73	28.86	28.83	31.12	237.48	
2/17/2023	8:38	18.59	0.14	0.0002	0.014	34.3	28.71	0.50	28.75	28.77	28.71	0.79	5.92	21.48	0.01	0.3149	0.561	29.4	28.71	0.30	28.73	28.86	28.83	30.96	236.27	
2/17/2023	8:39	20.33	0.15	0.0001	0.010	34.5	28.71	0.50	28.75	28.84	28.78	0.55	4.18	21.48	0.02	0.3190	0.565	29.5	28.71	0.30	28.73	28.86	28.84	31.16	237.80	
2/17/2023	8:40	20.08	0.15	0.0002	0.014	34.4	28.71	0.50	28.75	28.83	28.77	0.78	5.92	21.48	0.01	0.3217	0.567	29.6	28.71	0.30	28.73	28.86	28.83	31.30	238.76	
2/17/2023	8:41	18.64	0.14	0.0002	0.014	34.4	28.71	0.50	28.75	28.77	28.70	0.79	5.92	21.48	0.01	0.3153	0.562	29.7	28.71	0.30	28.73	28.86	28.83	30.99	236.37	
2/17/2023	8:42	20.30	0.15	0.0002	0.014	34.9	28.71	0.50	28.75	28.84	28.77	0.79	5.91	21.48	0.02	0.3135	0.560	29.5	28.71	0.30	28.73	28.86	28.84	30.90	235.73	
2/17/2023	8:43	20.36	0.15	0.0002	0.014	34.7	28.71	0.50	28.75	28.84	28.78	0.79	5.91	21.48	0.01	0.3127	0.559	29.5	28.71	0.30	28.73	28.86	28.83	30.86	235.43	
2/17/2023	8:44	20.36	0.15	0.0001	0.010	34.9	28.71	0.50	28.75	28.84	28.76	0.56	4.18	21.48	0.01	0.3127	0.559	29.8	28.71	0.30	28.73	28.86	--	--	--	
2/17/2023	8:45	19.99	0.14	0.0002	0.014	35.0	28.71	0.50	28.75	28.82	28.76	0.79	5.91	21.45	0.01	0.3102	0.557	29.7	28.71	0.30	28.73	28.86	28.83	30.74	234.45	
2/17/2023	8:46	20.21	0.11	0.0006	0.024	35.3	28.71	0.50	28.75	28.83	28.77	1.36	10.24	21.43	0.00	0.3085	0.555	29.9	28.71	0.30	28.73	28.86	28.83	30.66	233.77	
2/17/2023	8:47	20.40	0.12	0.0002	0.014	35.0	28.71	0.50	28.75	28.84	28.77	0.79	5.91	21.44	0.01	0.3101	0.557	30.2	28.71	0.30	28.73	28.86	28.83	30.75	234.29	
2/17/2023	8:48	20.39	0.13	0.0002	0.014	35.2	28.71	0.50	28.75	28.84	28.77	0.79	5.90	21.44	0.01	0.3139	0.560	30.0	28.71	0.30	28.73	28.86	28.83	30.93	235.76	
2/17/2023	8:49	20.24	0.13	0.0000	0.000	35.5	28.71	0.50	28.75	28.83	28.76	0.00	0.00	21.44	0.01	0.3063	0.553	30.0	28.71	0.30	28.73	28.86	28.83	30.55	232.91	
2/17/2023	8:50	20.31	0.12	0.0003	0.017	35.7	28.71	0.50	28.75	28.83	28.76	0.96	7.22	21.43	0.01	0.3076	0.555	30.2	28.71	0.30	28.73	28.86	28.83	30.63	233.35	
2/17/2023	8:51	20.34	0.12	0.0002	0.014	35.9	28.71	0.50	28.75	28.83	28.76	0.79	5.90	21.42	0.01	0.2978	0.546	30.8	28.71	0.30	28.73	28.86	28.83	30.15	229.47	
2/17/2023	8:52	20.50	0.12	0.0001	0.010	35.7	28.71	0.50	28.75	28.84	28.76	0.56	4.17	21.42	0.01	0.3069	0.554	29.9	28.71	0.30	28.73	28.86	28.83	30.58	233.14	
2/17/2023	8:53	20.53	0.11	0.0001	0.010	36.0	28.71	0.50	28.75	28.84	28.76	0.56	4.17	21.42	0.01	0.3042	0.552	30.1	28.71	0.30	28.73	28.86	28.83	30.45	232.07	
2/17/2023	8:54	20.57	0.09	0.0010	0.032	36.1	28.71	0.50	28.75	28.84	28.76	1.76	13.18	21.41	0.01	0.3017	0.549	30.2	28.71	0.30	28.73	28.86	28.83	30.33	231.10	
2/17/2023	8:55	20.12	0.09	0.0001	0.010	36.0	28.71	0.50	28.75	28.82	28.74	0.56	4.17	21.44	0.01	0.3050	0.552	30.9	28.71	0.30	28.73	28.86	28.83	30.52	232.19	
2/17/2023	8:56	20.33	0.09	0.0001	0.010	36.1	28.71	0.50	28.75	28.83	28.75	0.56	4.17	21.44	0.01	0.3092	0

Appendix C: QA/QC Data

Alliance SOURCE TESTING

QA Data

Location BCP Ingredients - Verona, MO
Source Ethylene Oxide Scrubber
Project No. 2023-0231

Parameter	O_2 - Inlet	CO_2 - Inlet	O_2 - Outlet	CO_2 - Outlet
Make	CAI	CAI	Servomex	Servomex
Model	600	600	1440	1440
S/N	F05003-M	F05003-M	1420C-9	1415C-3
Operating Range	25	25	25	25
Cylinder ID				
Zero	NA	NA	NA	NA
Low	NA	NA	NA	NA
Mid	CC726226	CC726226	CC726226	CC726226
High	EB0049417	EB0049417	EB0049417	EB0049417
Cylinder Certifed Values				
Zero	NA	NA	NA	NA
Low	NA	NA	NA	NA
Mid	10	9.99	10	9.99
High	20	19.6	20	19.6
Cylinder Expiration Date				
Zero	NA	NA	NA	NA
Low	NA	NA	NA	NA
Mid	8/17/29	8/17/29	8/17/29	8/17/29
High	4/24/30	4/24/30	4/24/30	4/24/30

Alliance SOURCE TESTING

Calibration Data

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231
Date: 7/12/22

Parameter	O_2 - Inlet	CO_2 - Inlet	O_2 - Outlet	CO_2 - Outlet
Desired Span	20.0	19.6	20.00	19.60
Low Range Gas				
Low	NA	NA	NA	NA
High	NA	NA	NA	NA
Mid Range Gas				
Low	8.0	7.8	8.00	7.84
High	12.0	11.8	12.00	11.76
High Range Gas				
Low	NA	NA	NA	NA
High	NA	NA	NA	NA
Actual Concentration (% or ppm)				
Zero	0.0	0.0	0.00	0.00
Low	NA	NA	NA	NA
Mid	10.0	10.0	10.00	9.99
High	20.0	19.6	20.00	19.60
Upscale Calibration Gas (C_{MA})	Mid	Mid	Mid	Mid
Instrument Response (% or ppm)				
Zero	0.0	0.1	-0.01	-0.01
Low	NA	NA	NA	NA
Mid	10.1	9.9	10.11	9.96
High	20.0	19.6	20.00	19.60
Performance (% of Span or Cal. Gas Conc.)				
Zero	0.0	0.3	0.05	0.05
Low	NA	NA	NA	NA
Mid	0.4	0.5	0.55	0.15
High	0.1	0.1	0.00	0.00
Status				
Zero	PASS	PASS	PASS	PASS
Low	NA	NA	NA	NA
Mid	PASS	PASS	PASS	PASS
High	PASS	PASS	PASS	PASS

Alliance SOURCE TESTING

Bias/Drift Determinations

Location: BCP Ingredients - Verona, MO
Source: Ethylene Oxide Scrubber
Project No.: 2023-0231

Parameter	O_2 - Inlet	O_2 - Outlet
Run 1 Date 7/12/22		
Span Value	20.0	20.0
Initial Instrument Zero Cal Response	0.0	0.0
Initial Instrument Upscale Cal Response	10.1	10.1
Pretest System Zero Response	0.1	0.0
Posttest System Zero Response	0.0	0.1
Pretest System Upscale Response	10.0	9.9
Posttest System Upscale Response	9.9	10.1
Bias (%)		
Pretest Zero	0.4	-0.1
Posttest Zero	-0.1	0.6
Pretest Span	-0.4	-1.0
Posttest Span	-1.1	-0.2
Drift (%)		
Zero	-0.4	0.7
Mid	-0.7	0.8

Red Ball Technical Gas Service
555 Craig Kennedy Way
Shreveport, LA 71107
800-551-8150
PGVP Vendor ID # G12021

PJLA Calibration and Testing
Accreditation #62754

EPA PROTOCOL GAS CERTIFICATE OF ANALYSIS

Cylinder Number:	CC726226	**Certification Date**:	08/19/2021
Product ID Number:	124300	**Expiration Date:**	08/17/2029
Cylinder Pressure:	1900 PSIG	**MFG Facility:**	- Shreveport - LA
COA #	CC726226.20210722-0	**Lot Number:**	CC726226.20210722
Customer PO. NO.:		**Tracking Number:**	098854134
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	**9.99 %**	±0.09 %	NDIR	08/04/2021
Oxygen	**10.00 %**	±0.09 %	MPA	08/19/2021
Nitrogen	Balance			

Analytical Measurement Data Available Online.

Reference Standard(s)

Serial Number	Lot	Expiration	Type	Balance	Component	Concentration	Uncertainty(%)	NIST Reference
EB0016208	EB0016208.20180323	07/15/2026	GMIS	N2	CO2	14.9 %	0.777	101001
EB0046512	EB0046512.20190408	12/03/2027	GMIS	N2	O2	9.31 %	0.254	2659a
EB0078072	EB0078072.20180504	07/21/2026	GMIS	N2	O2	24 %	0.497	071001
EB0087520	EB0087520.20191025	03/08/2029	GMIS	N2	CO2	9.48 %	0.331	C1847810.03

Analytical Instrumentation

Component	Principle	Make	Model	Serial	MPC Date
CO2	NDIR	Thermo	410i	1162980025	08/03/2021
O2	MPA	Thermo	410i	1162980025	07/28/2021

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.

Amisha Jewitt
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 # G12022

PJLA Calibration and Testing
Accreditation #62754

EPA PROTOCOL GAS CERTIFICATE OF ANALYSIS

Cylinder Number:	EB0049417	**Certification Date**:	04/26/2022
Product ID Number:	124240	**Expiration Date:**	04/24/2030
Cylinder Pressure:	1900 PSIG	**MFG Facility:**	- Shreveport - LA
COA #	EB0049417.20220411-0	**Lot Number:**	EB0049417.20220411
Customer PO. NO.:		**Tracking Number:**	073561514
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	**19.6 %**	±0.13 %	NDIR	04/26/2022
Oxygen	**20.0 %**	±0.13 %	MPA	04/19/2022
Nitrogen	Balance			

Analytical Measurement Data Available Online.

Reference Standard(s)

Serial Number	Lot	Expiration	Type	Balance	Component	Concentration	Uncertainty(%)	NIST Reference
D044201	D044201	01/11/2027	PRM	N2	CO2	25.015 %	0.099	C2190301.03
EB0078072	EB0078072.20180504	07/21/2026	GMIS	N2	O2	24 %	0.497	071001
EB0087558	EB0087558.20201022	03/08/2029	GMIS	N2	CO2	19.46 %	0.191	C1847810.03

Analytical Instrumentation

Component	Principle	Make	Model	Serial	MPC Date
O2	MPA	Thermo	410i	1162980025	04/12/2022
CO2	NDIR	Thermo	410i	1162980025	04/07/2022

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.

Anthony Cyr
Assistant Operations Manager
Assay Laboratory: Red Ball TGS
Version 02-J, Revised on 2018-09-17

Location BCP Ingredients - Verona, MO
Source Ethylene Oxide Scrubber
Project No. 2023-0231

Date	Pitot ID	Evidence of damage?	Evidence of mis-alignment?	Calibration or Repair required?	
2/13/23	Pt-606-2	no	no	no	
2/13/23	Pt-606-3	no	no	no	
Date	**Barometric Pressure**	**Evidence of damage?**	**Reading Verified**	**Calibration or Repair required?**	**Weather Station Location**
2/13/23	Weather Station	NA	NA	NA	Springfield, MO

Location	BCP Ingredients - Verona, MO
Source(s)	Ethylene Oxide Scrubber Inlet
Project No.	AST-2023-0231
Date(s)	2/12/2023
Ethylene Cylinder ID	CC19112
Concentration (ppmv)	102.0
Instrument Inlet	MKS 4 (Serial #016758067)

CTS 1	98.71
CTS 2	98.60
CTS 3	101.65
CTS 4	98.41
CTS 5	99.20
CTS 6	98.49

CTS 7	--
CTS 8	--
CTS 9	--
CTS 10	--
CTS 11	--
CTS 12	--

AVERAGE	99.18
MAX	101.65
deviation	2.48
MIN	98.41
deviation	0.77

Greatest Deviation from average 2.50%

Agreement with Assumed Pathlength 97.23%

within 5% no correction required

CTS 1

Date	Time	File	Temperature (C	Pressure	Ethylene
2/12/23	17:55:56	INLET_0037.LAB	192.7	0.962	98.54
2/12/23	17:56:59	INLET_0038.LAB	192.7	0.962	98.70
2/12/23	17:58:02	INLET_0039.LAB	192.7	0.962	98.89

CTS 2

Date	Time	File	Temperature (C	Pressure	Ethylene
2/13/23	8:04:40	INLET_0380.LAB	192.4	0.965	98.79
2/13/23	8:05:43	INLET_0381.LAB	192.4	0.965	98.56
2/13/23	8:06:45	INLET_0382.LAB	192.4	0.965	98.46

CTS 3

Date	Time	File	Temperature (C	Pressure	Ethylene
2/14/23	9:17:57	INLET_1818.LAB	174.0	0.947	101.38
2/14/23	9:18:59	INLET_1819.LAB	172.8	0.947	101.86
2/14/23	9:20:02	INLET_1820.LAB	171.5	0.947	101.72

CTS 4

Date	Time	File	Temperature (C	Pressure	Ethylene
2/15/23	9:12:41	INLET_3175.LAB	192.3	0.961	98.43
2/15/23	9:13:44	INLET_3176.LAB	192.3	0.961	98.34
2/15/23	9:14:47	INLET_3177.LAB	192.3	0.961	98.46

CTS 5

Date	Time	File	Temperature (C	Pressure	Ethylene
2/16/23	8:44:06	INLET_4520.LAB	192.2	0.962	99.13
2/16/23	8:45:09	INLET_4521.LAB	192.2	0.962	99.25
2/16/23	8:46:12	INLET_4522.LAB	192.2	0.962	99.22

CTS 6

Date	Time	File	Temperature (C	Pressure	Ethylene
2/17/23	9:37:31	INLET_5943.LAB	192.3	0.977	98.51
2/17/23	9:38:34	INLET_5944.LAB	192.3	0.977	98.48
2/17/23	9:39:37	INLET_5945.LAB	192.2	0.977	98.48

CTS 7

Date	Time	File	Temperature (C	Pressure	Ethylene

CTS 8

Date	Time	File	Temperature (C	Pressure	Ethylene

CTS 9

Date	Time	File	Temperature (C	Pressure	Ethylene

CTS 10

Date	Time	File	Temperature (C	Pressure	Ethylene

CTS 11

Date	Time	File	Temperature (C	Pressure	Ethylene

CTS 12

Date	Time	File	Temperature (C	Pressure	Ethylene

Location	BCP Ingredients - Verona, MO
Source	Ethylene Oxide Scrubber Inlet
Project No.	AST-2023-0231
Date	1/23/2023

Spike Cylinder ID		RR04485	Component
Spike Gas concentration		503	Ethylene Oxide
Tracer Cylinder ID		RR04485	Component
Tracer Gas concentration		10.00	SF6
Instrument ID	Inlet	MKS 4 (Serial #016758067)	

Direct Spike Values

Date	Time	File	Temperature (C)	Pressure	Spike (ppm)	Tracer (ppm)
02/12/23	19:09:44	INLET_0103.LAI	192.5	1.004	469.10	8.737
02/12/23	19:10:47	INLET_0104.LAI	192.4	1.004	469.33	8.733
02/12/23	19:11:50	INLET_0105.LAI	192.4	1.004	469.14	8.739
02/12/23	19:12:52	INLET_0106.LAI	192.5	1.004	469.18	8.731
02/12/23	19:13:55	INLET_0107.LAI	192.5	1.004	468.88	8.728
02/12/23	19:14:58	INLET_0108.LAI	192.5	1.004	469.17	8.730
02/12/23	19:16:01	INLET_0109.LAI	192.5	1.004	469.04	8.727
				Average	**469.12**	**8.732**

Native Values

Date	Time	File	Temperature (C)	Pressure	Spike (ppm)	Tracer (ppm)
02/12/23	20:00:23	INLET_0150.LAI	188.1	0.934	0.40	0.001
02/12/23	20:01:26	INLET_0151.LAI	190.6	0.935	3.50	0.003
02/12/23	20:02:28	INLET_0152.LAI	191.9	0.935	1.50	0.002
02/12/23	20:03:31	INLET_0153.LAI	192.3	0.935	2.04	0.001
02/12/23	20:04:34	INLET_0154.LAI	192.2	0.935	2.11	0.000
02/12/23	20:05:37	INLET_0155.LAI	192.0	0.934	0.26	0.002
02/12/23	20:06:40	INLET_0156.LAI	191.8	0.935	3.46	0.000
				Average	**1.89**	**0.001**

Spiked values

Date	Time	File	Temperature (C)	Pressure	Spike (ppm)	Tracer (ppm)
02/12/23	20:12:57	INLET_0162.LAI	191.8	0.935	28.67	0.576
02/12/23	20:14:00	INLET_0163.LAI	191.7	0.935	30.17	0.576
02/12/23	20:15:03	INLET_0164.LAI	191.8	0.935	29.23	0.574
02/12/23	20:16:05	INLET_0165.LAI	191.8	0.935	31.86	0.575
02/12/23	20:17:08	INLET_0166.LAI	191.8	0.935	31.56	0.576
02/12/23	20:18:11	INLET_0167.LAI	191.8	0.935	30.94	0.574
02/12/23	20:19:14	INLET_0168.LAI	191.8	0.935	32.50	0.575
				Average	**30.71**	**0.575**

Dilution Factor

6.6%

Calculated Spike

32.60

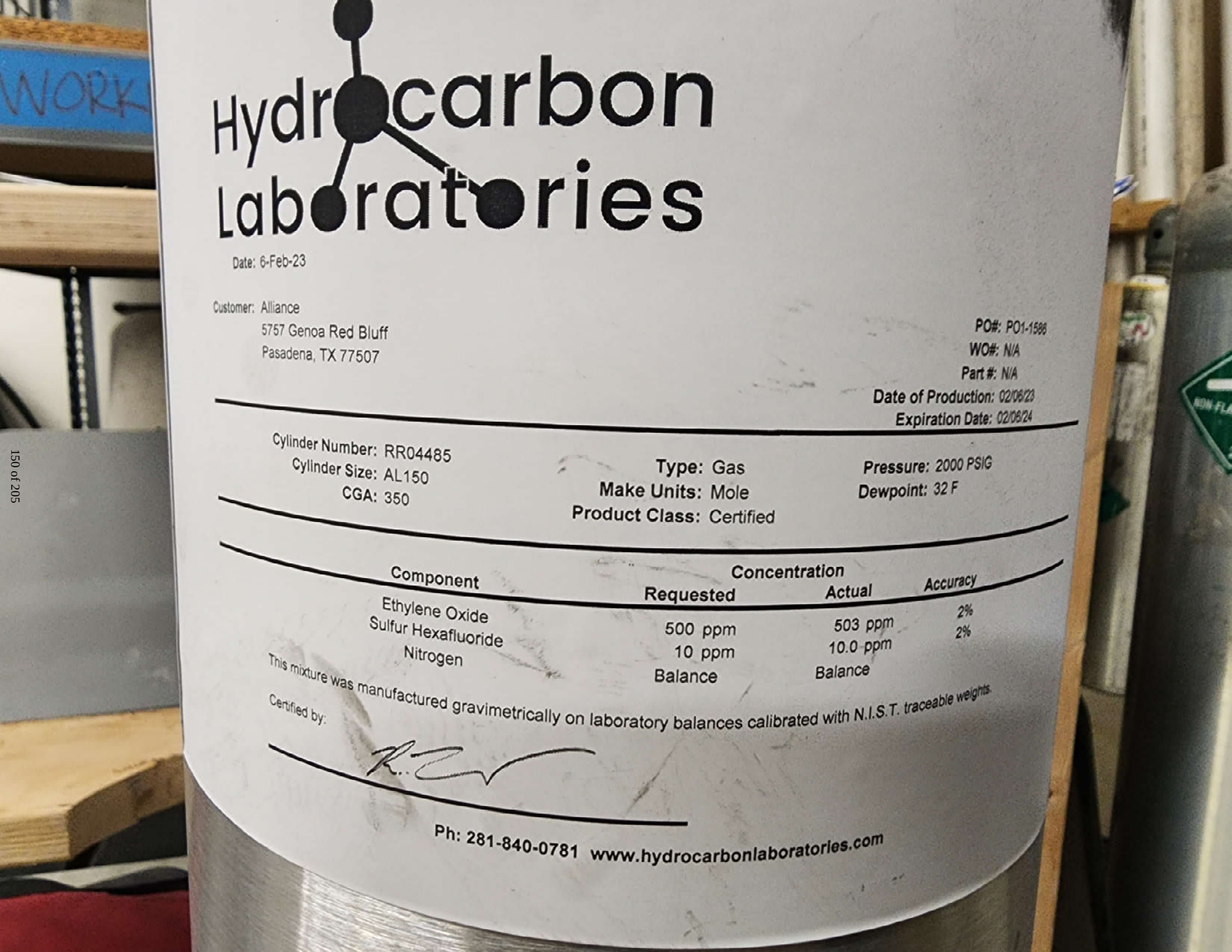
Spike Recovery

94.21%

Location	BCP Ingredients - Verona, MO
Project No.	AST-2023-0231
Instrument	MKS 4 (Serial #016758067)

Summary of Spikes

Source	Ethylene Oxide Scrubber Inlet
Date	1/23/23
Time	20:12
Analyte	Ethylene Oxide
Direct	469.12
Native	1.89
Spiked	30.71
Dilution	6.6%
Recovery	94%
Result	PASS



Hydrocarbon Laboratories

Date: 6-Feb-23

Customer: Alliance
5757 Genoa Red Bluff
Pasadena, TX 77507

PO#: PO1-1586
WO#: N/A
Part #: N/A
Date of Production: 02/06/23
Expiration Date: 02/06/24

Cylinder Number: RR04485
Cylinder Size: AL150
CGA: 350

Type: Gas
Make Units: Mole
Product Class: Certified

Pressure: 2000 PSIG
Dewpoint: 32 F

Component	Concentration Requested	Concentration Actual	Accuracy
Ethylene Oxide	500 ppm	503 ppm	2%
Sulfur Hexafluoride	10 ppm	10.0 ppm	2%
Nitrogen	Balance	Balance	

This mixture was manufactured gravimetrically on laboratory balances calibrated with N.I.S.T. traceable weights.

Certified by:

Ph: 281-840-0781 www.hydrocarbonlaboratories.com

RED BALL TECHNICAL GAS SERVICES

ilac-MRA

PJLA Calibration and Testing Accreditation #112095

Red Ball Technical Gas Service
5807 Northdale St.
Houston, TX 77087
713-645-5886

Certificate of Analysis
Certified Standard

ALLIANCE HIAWATHA IOWA /
1355 SHERMAN RD STE 20
HIAWATHA, IA 52233

Cylinder Size: 1-150
Valve Outlet: CGA 350
Cylinder No.: CC719112
Bar Code No.: 098506282

Blend Type: GAS MOL
Pressure: 1800 psia
Volume: 125.0 cf
Dew Point: 0 C

PO No.: PO1-899
Sales Order: 1100445
Blend No.: PN2021-215-0024
RBTGS Part No.: 124838
Lot No.: HP2211231112

Analysis Date: November 28, 2022
Date Issued: November 28, 2022
Expiration Date: November 28, 2024

Component	CAS No.	Requested Concentration		Certified Concentration Mol	Weight	Volume	Units	Analytical Uncertainty ±	Analytical Principle
Ethylene	74-85-1	100	ppm	102	102	102	ppm	2%	B
Nitrogen	7727-37-9		Balance				Balance		

Key to Analytical Principle:

A Gas Chromatograph with Flame Photometric Detector
B Gas Chromatograph with Flame Ionization Detector
C Flame Ionization with Methanizer
D Gas Chromatograph with Thermal Conductivity Detector
E Gas Chromatograph with Pulsed Discharge Helium Ionization Detector
F Electrolytic Hygrometer
G Electrochemical Oxygen Analyzer
H Paramagnetic Oxygen Analyzer
I Total Sulfur Analyzer - MWDXRF
J Infrared - NDIR
K Coulometric Titration
L Detector Tube
M Gravimetric
N Total Hydrocarbon Analyzer - FID

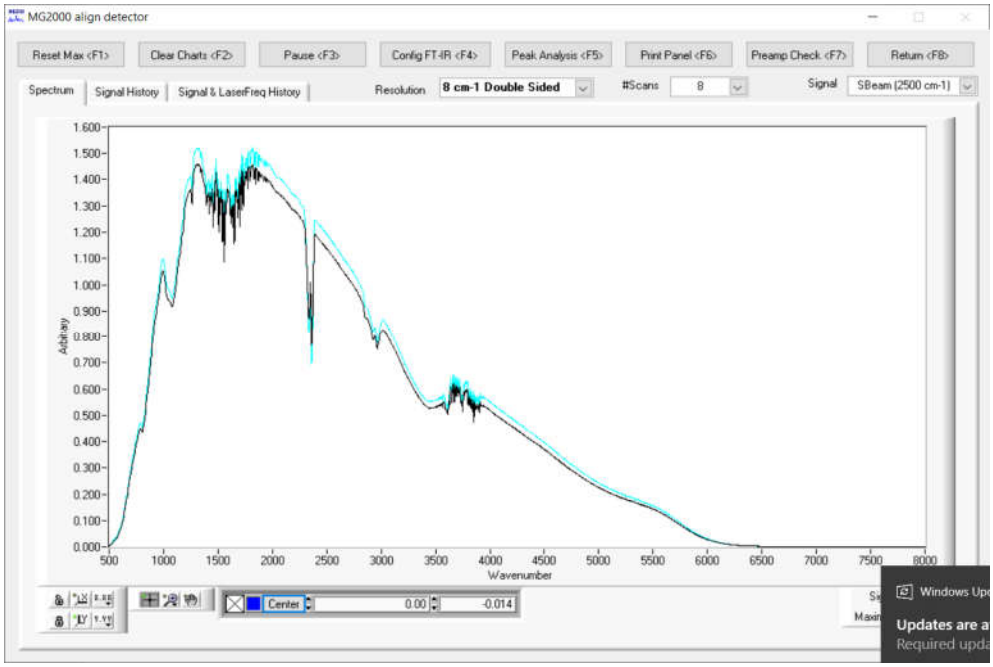
Authorized By: **Hulan Washington, Analytical Chemist**
Assay Laboratory, Red Ball TGS-Houston

N.I.S.T. Traceability Statement

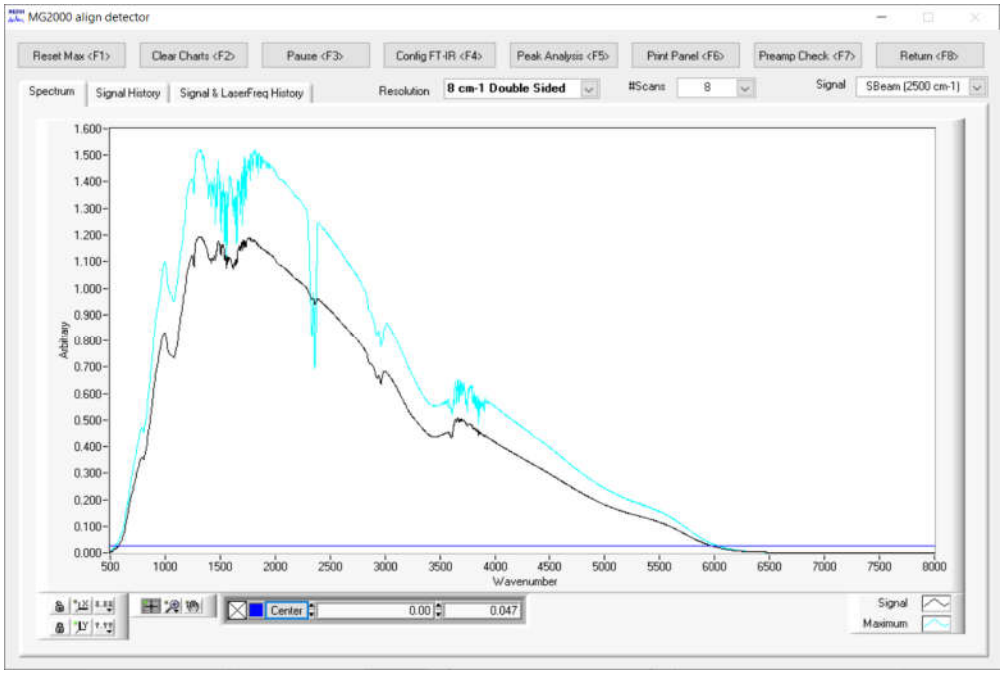
The results published on this certificate apply only to the items described and shall not be reproduced other than in full, without written approval from Red Ball Technical Gas Services. The stability of this mixture cannot be guaranteed if the pressure falls below ten percent of the original certified pressure and/or beyond the expiration date. The concentration may vary with changes in temperature and pressure. Store mixture above the specified dew point. This blend was gravimetrically produced at a minimum of ±1% accuracy to the above specified dew point. The scales used have weekly calibration checks for process control purposes. All scales are calibrated annually with N.I.S.T. traceable weights and performed to NIST Handbook 44, Section N by Nicol Scales. • Best measurement of uncertainty calculated using a coverage factor of K=2. This provides a confidence level of 95%. NIST Test No's: 148544, 148545, 148759, 148549, 148548, 148550, 148546 • Using Standards 2K7Z, 4VBJ, 4VBB, 4VBC, 4VBD, 4VBE, 4VBF • License No 717525

This product was manufactured in the United States of America.

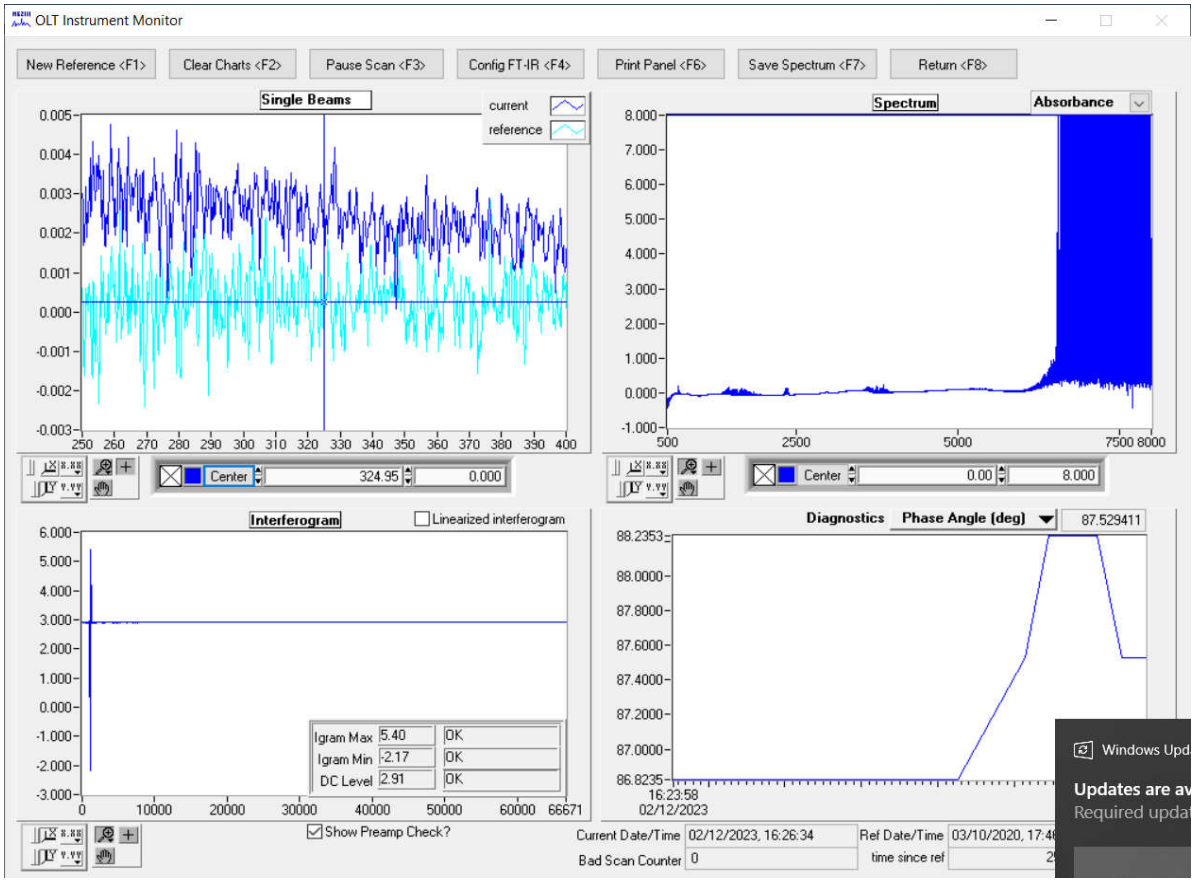
Location	BCP Ingredients - Verona, MO
Source(s)	Ethylene Oxide Scrubber Inlet
Project No.	AST-2023-0231
Health Check Parameter	MKS - Single Beam (Pre-Test)
Instrument ID	MKS 4 (Serial #016758067)
Date	2/13/2023



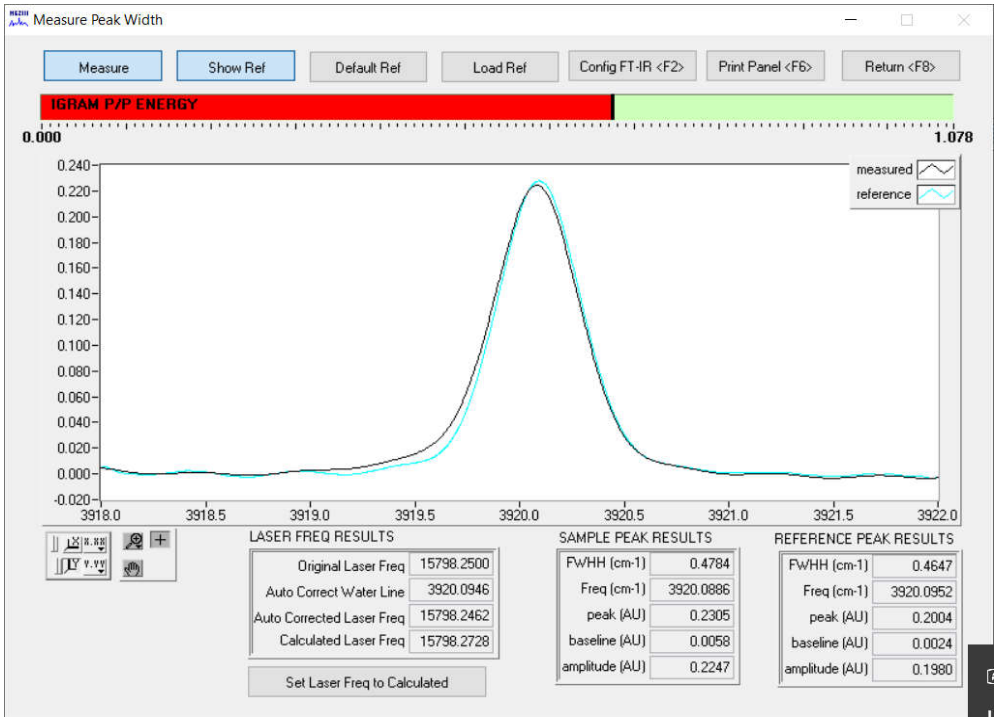
Location	BCP Ingredients - Verona, MO
Source(s)	Ethylene Oxide Scrubber Inlet
Project No.	AST-2023-0231
Health Check Parameter	MKS - Single Beam (Post-Test)
Instrument ID	MKS 4 (Serial #016758067)
Date	2/17/2023



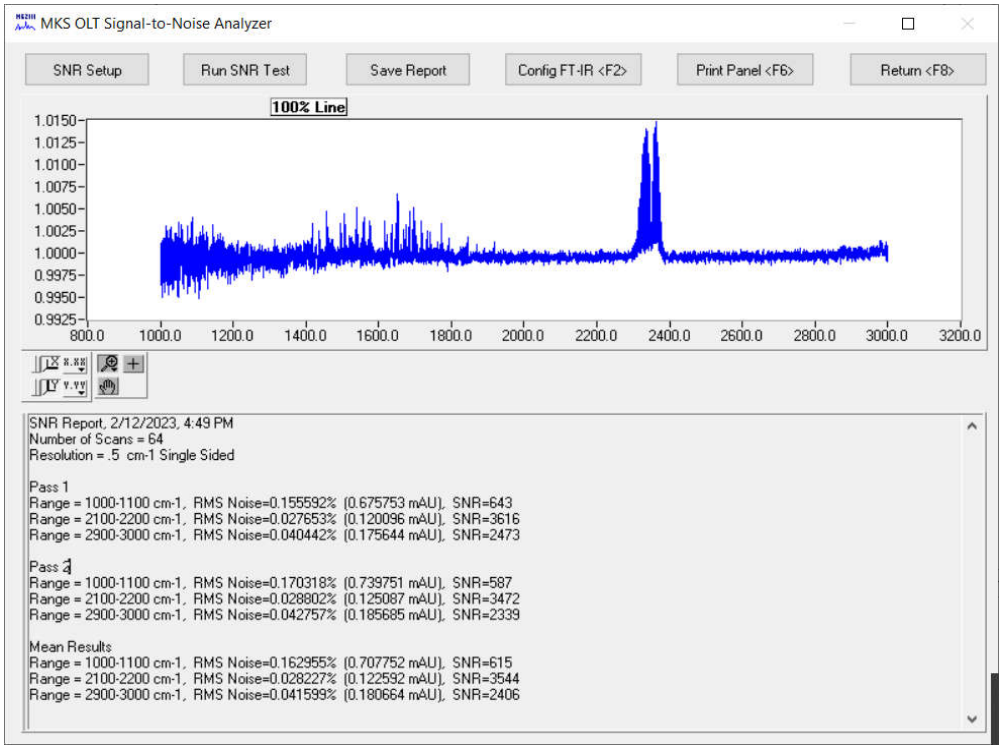
Location	BCP Ingredients - Verona, MO
Source(s)	Ethylene Oxide Scrubber Inlet
Project No.	AST-2023-0231
Health Check Parameter	MKS - Detector Linearity
Instrument ID	MKS 4 (Serial #016758067)
Date	2/13/2023



Location	BCP Ingredients - Verona, MO
Source(s)	Ethylene Oxide Scrubber Inlet
Project No.	AST-2023-0231
Health Check Parameter	MKS - Peak Analysis
Instrument ID	MKS 4 (Serial #016758067)
Date	2/13/2023



Location	BCP Ingredients - Verona, MO
Source(s)	Ethylene Oxide Scrubber Inlet
Project No.	AST-2023-0231
Health Check Parameter	MKS - Signal to Noise Ratio
Instrument ID	MKS 4 (Serial #016758067)
Date	2/13/2023



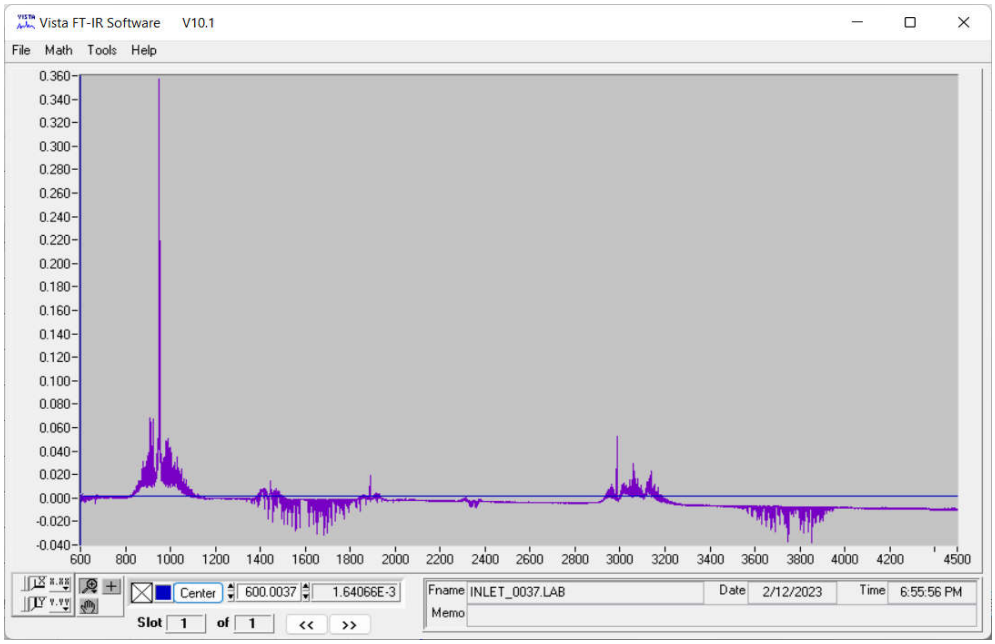
Location	BCP Ingredients - Verona, MO
Source(s)	Ethylene Oxide Scrubber Inlet
Project No.	AST-2023-0231
Health Check Parameter	MKS - Analysis Validation Utility
Instrument ID	MKS 4 (Serial #016758067)
Date	2/13/2023

Analysis Validation Report

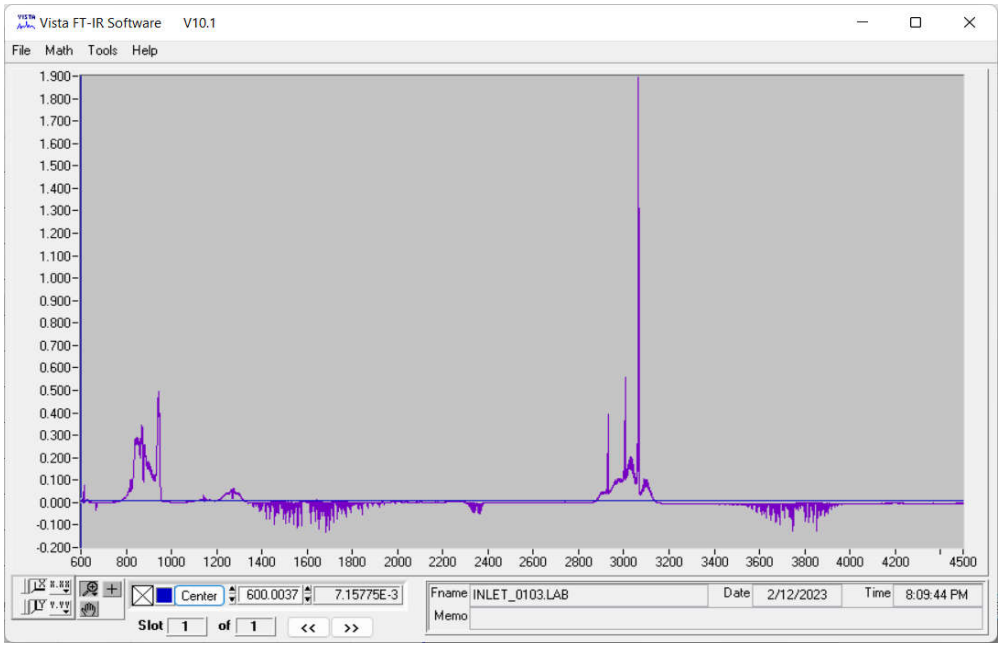
Recipe path: C:\OLT\RECIPES\BCP.MGRCP - MODIFIED

Gas calibration Name	Conc	MDC3	MDC2	MDC1	MAU	FMU*R	OCU	~ DL
ACETYLENE 191C	0.83	3.71	0.12	0.39	0.47	4.46	4.46	0.13
CO PPM 191C (1OF2)	-0.65	19.23	0.13	0.23	0.49	41.54	41.54	0.2
CO% 191C (2OF2)	0	0.06	0	0	0	0.13	0.13	0
CO2% 191C	0.08	5.44	-	0.02	0.02	7.45	7.45	-
ETHYLENE 191C	57.8	161.35	0.05	0.19	0.33	286.23	286.23	0.11
ETHYLENE OXIDE (100-TMW	210.18	-	0.08	0.08	0.14	-	0.14	0.31
H2O% (40) 191C	5.78	33.61	-	0.01	0.02	67.65	67.65	-
HBR (100) 180C	51.52	62.68	0.11	0.72	1.46	127.38	127.38	0.5
HCN (100) 191C	0.25	2.33	0.12	0.36	0.62	3.98	3.98	0.17
MEOH 191C	-6.49	19.38	0.1	0.14	0.16	22.32	22.32	0.31
SF6 191C	-3.49	3.41	0	0	0.01	4.31	4.31	0.01
SO2 (5000) 191C	2402.53	1274.29	1.32	1.08	1.14	1348.7	1348.7	4.47
SO3 191C	-1.03	0.45	0.47	0.06	0.06	0.49	0.49	0.73

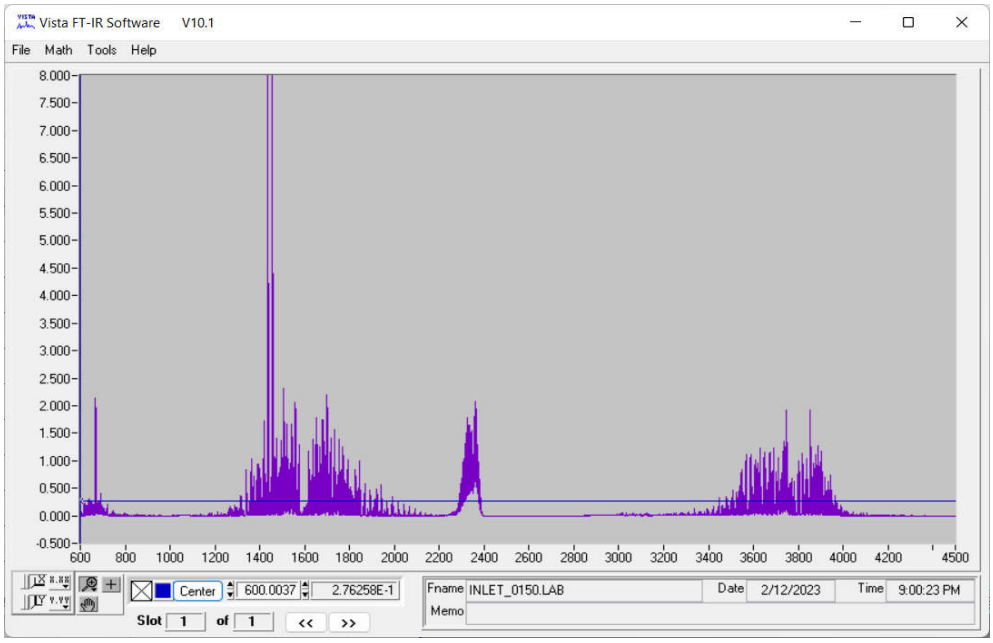
Location	BCP Ingredients - Verona, MO
Source(s)	Ethylene Oxide Scrubber Inlet
Project No.	AST-2023-0231
Spectra (CTS)	INLET_0037.LAB
Date	2/12/2023
Time	17:55



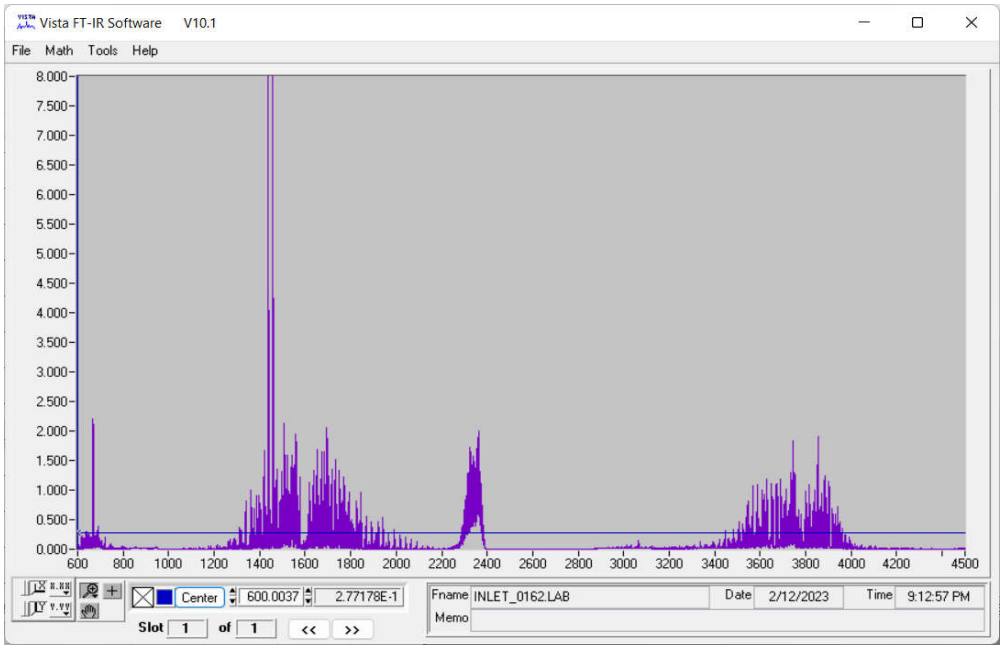
Location	BCP Ingredients - Verona, MO
Source(s)	Ethylene Oxide Scrubber Inlet
Project No.	AST-2023-0231
Spectra (Analyte Direct)	INLET_0103.LAB
Date	2/12/2023
Time	19:09



Location	BCP Ingredients - Verona, MO
Source(s)	Ethylene Oxide Scrubber Inlet
Project No.	AST-2023-0231
Spectra (Native)	INLET_0150.LAB
Date	2/12/2023
Time	20:00



Location	BCP Ingredients - Verona, MO
Source(s)	Ethylene Oxide Scrubber Inlet
Project No.	AST-2023-0231
Spectra (Spike)	INLET_0162.LAB
Date	2/12/2023
Time	20:12



Location	BCP Ingredients - Verona, MO
Source(s)	Ethylene Oxide Scrubber Outlet
Project No.	23-0231
Date(s)	2/12/2023
Ethylene Cylinder ID	CC719112
Concentration (ppmv)	102.0
Instrument Outlet	MKS 9 (Serial #017193157)

CTS 1	97.75	CTS 7	--	AVERAGE	97.18	Greatest Deviation from average	
CTS 2	97.70	CTS 8	--	MAX	97.75		0.58%
CTS 3	96.70	CTS 9	--	deviation	0.57		
CTS 4	96.73	CTS 10	--	MIN	96.67	Agreement with Assumed Pathlength	
CTS 5	97.54	CTS 11	--	deviation	0.51		95.28%
CTS 6	96.67	CTS 12	--				within 5% no correction required

CTS 1

Date	Time	File	Temperature (C	Pressure	Ethylene
2/12/23	17:48:06	OUTLET_0044.LA	150.3	0.985	97.67
2/12/23	17:49:08	OUTLET_0045.LA	150.3	0.985	97.82
2/12/23	17:50:11	OUTLET_0046.LA	150.4	0.985	97.76

CTS 2

Date	Time	File	Temperature (C	Pressure	Ethylene
2/13/23	8:07:05	OUTLET_0397.LA	150.2	0.990	97.62
2/13/23	8:08:07	OUTLET_0398.LA	150.2	0.990	97.74
2/13/23	8:09:10	OUTLET_0399.LA	150.1	0.990	97.74

CTS 3

Date	Time	File	Temperature (C	Pressure	Ethylene
2/14/23	9:20:11	OUTLET_1838.LA	149.9	0.974	96.77
2/14/23	9:21:14	OUTLET_1839.LA	149.9	0.974	96.75
2/14/23	9:22:17	OUTLET_1840.LA	149.9	0.974	96.58

CTS 4

Date	Time	File	Temperature (C	Pressure	Ethylene
2/15/23	9:17:20	OUTLET_2213.LA	150.1	0.986	96.85
2/15/23	9:18:22	OUTLET_2214.LA	150.1	0.986	96.80
2/15/23	9:19:25	OUTLET_2215.LA	150.1	0.986	96.55

CTS 5

Date	Time	File	Temperature (C	Pressure	Ethylene
2/16/23	8:36:52	OUTLET_3549.LA	150.1	0.988	98.92
2/16/23	8:37:55	OUTLET_3550.LA	150.0	0.988	96.91
2/16/23	8:38:58	OUTLET_3551.LA	150.0	0.988	96.81

CTS 6

Date	Time	File	Temperature (C	Pressure	Ethylene
2/17/23	9:21:31	OUTLET_4967.LA	150.1	1.004	96.40
2/17/23	9:22:34	OUTLET_4968.LA	150.2	1.004	96.81
2/17/23	9:23:37	OUTLET_4969.LA	150.2	1.004	96.81

CTS 7

Date	Time	File	Temperature (C	Pressure	Ethylene

CTS 8

Date	Time	File	Temperature (C	Pressure	Ethylene

CTS 9

Date	Time	File	Temperature (C	Pressure	Ethylene

CTS 10

Date	Time	File	Temperature (C	Pressure	Ethylene

CTS 11

Date	Time	File	Temperature (C	Pressure	Ethylene

CTS 12

Date	Time	File	Temperature (C	Pressure	Ethylene

Location	BCP Ingredients - Verona, MO
Source	Ethylene Oxide Scrubber Outlet
Project No.	23-0231
Date	2/12/2023

Spike Cylinder ID		RR04540	Component
Spike Gas concentration		100	Ethylene Oxide
Tracer Cylinder ID		RR04540	Component
Tracer Gas concentration		10.00	SF6
Instrument ID	Outlet	MKS 9 (Serial #017193157)	

Direct Spike Values

Date	Time	File	Temperature (C)	Pressure	Spike (ppm)	Tracer (ppm)
02/12/23	18:18:36	OUTLET_0068.LAI	150.1	1.057	98.20	13.657
02/12/23	18:19:39	OUTLET_0069.LAI	150.1	1.057	98.25	13.640
02/12/23	18:20:42	OUTLET_0070.LAI	150.1	1.057	98.44	13.656
02/12/23	18:21:44	OUTLET_0071.LAI	150.1	1.057	98.14	13.632
02/12/23	18:22:47	OUTLET_0072.LAI	150.1	1.057	98.19	13.657
02/12/23	18:23:50	OUTLET_0073.LAI	150.1	1.057	98.13	13.668
02/12/23	18:24:52	OUTLET_0074.LAI	150.1	1.057	98.18	13.650
				Average	**98.22**	**13.651**

Native Values

Date	Time	File	Temperature (C)	Pressure	Spike (ppm)	Tracer (ppm)
02/12/23	19:17:07	OUTLET_0124.LAI	150.1	0.971	0.16	0.032
02/12/23	19:18:10	OUTLET_0125.LAI	150.1	0.971	0.15	0.015
02/12/23	19:19:13	OUTLET_0126.LAI	150.1	0.971	0.28	0.020
02/12/23	19:20:15	OUTLET_0127.LAI	150.1	0.971	0.17	0.019
02/12/23	19:21:18	OUTLET_0128.LAI	150.1	0.971	0.10	0.018
02/12/23	19:22:20	OUTLET_0129.LAI	150.1	0.971	0.13	0.014
02/12/23	19:23:23	OUTLET_0130.LAI	150.2	0.971	0.00	0.015
				Average	**0.14**	**0.019**

Spiked values

Date	Time	File	Temperature (C)	Pressure	Spike (ppm)	Tracer (ppm)
02/12/23	19:34:52	OUTLET_0141.LAI	150.1	0.965	8.88	1.281
02/12/23	19:35:55	OUTLET_0142.LAI	150.1	0.963	8.31	1.196
02/12/23	19:36:58	OUTLET_0143.LAI	150.1	0.963	8.14	1.195
02/12/23	19:38:01	OUTLET_0144.LAI	150.1	0.963	8.19	1.194
02/12/23	19:39:03	OUTLET_0145.LAI	150.0	0.963	8.22	1.195
02/12/23	19:40:06	OUTLET_0146.LAI	150.1	0.963	8.25	1.195
02/12/23	19:41:08	OUTLET_0147.LAI	150.1	0.963	8.29	1.207
				Average	**8.32**	**1.209**

Dilution Factor

8.7%

Calculated Spike

8.69

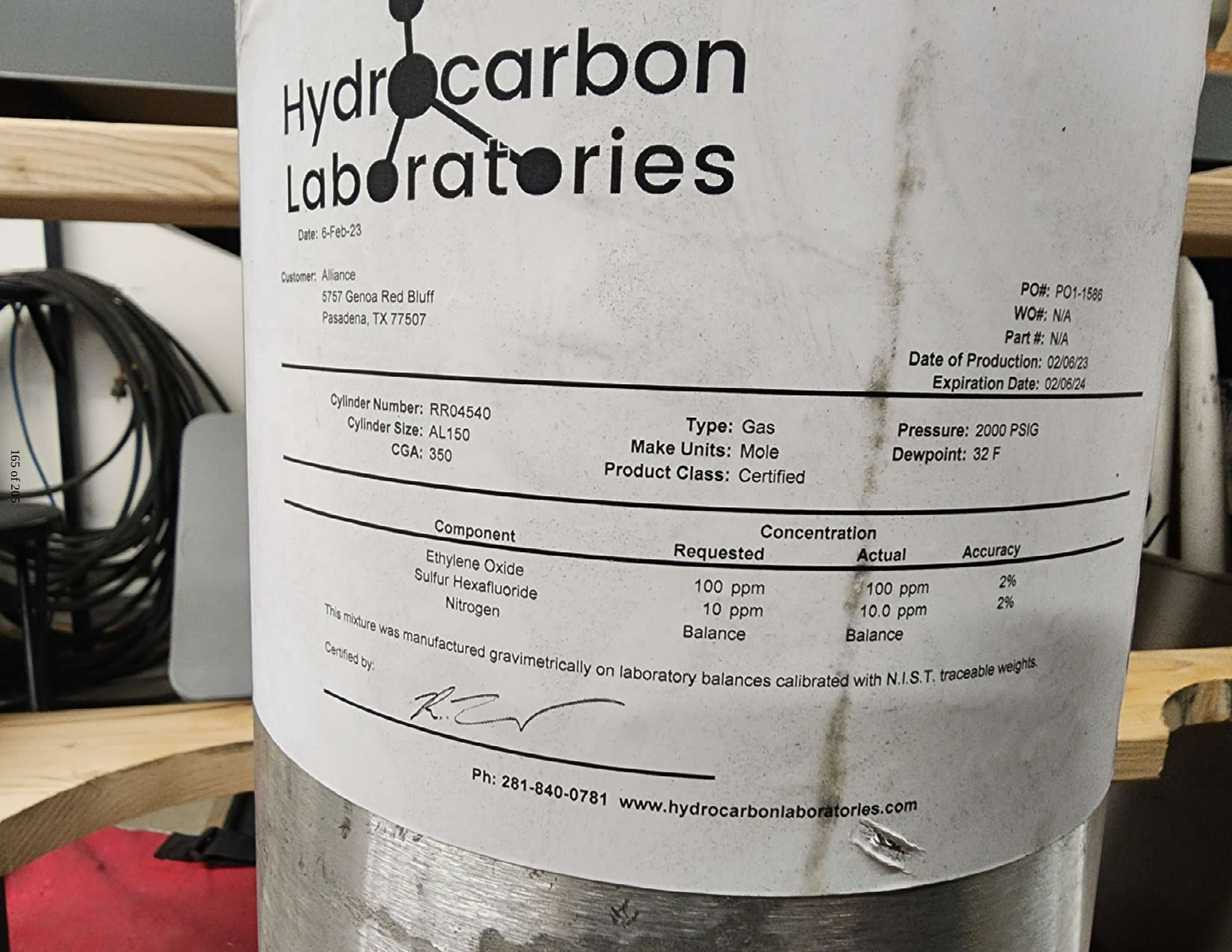
Spike Recovery

95.79%

Location	BCP Ingredients - Verona, MO
Project No.	23-0231
Instrument	MKS 9 (Serial #017193157)

Summary of Spikes

Source	Ethylene Oxide Scrubber Outlet
Date	2/12/23
Time	19:34
Analyte	Ethylene Oxide
Direct	98.22
Native	0.14
Spiked	8.32
Dilution	8.7%
Recovery	96%
Result	PASS



Hydrocarbon Laboratories

Date: 6-Feb-23

Customer: Alliance
5757 Genoa Red Bluff
Pasadena, TX 77507

PO#: PO1-1586
WO#: N/A
Part #: N/A
Date of Production: 02/06/23
Expiration Date: 02/06/24

Cylinder Number: RR04540
Cylinder Size: AL150
CGA: 350

Type: Gas
Make Units: Mole
Product Class: Certified

Pressure: 2000 PSIG
Dewpoint: 32 F

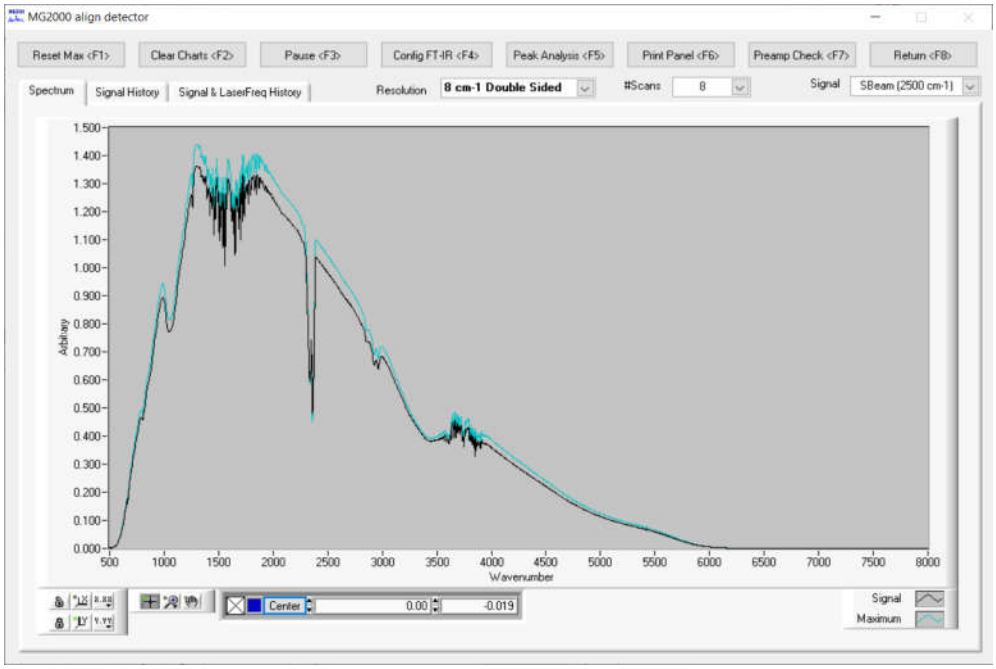
Component	Concentration Requested	Concentration Actual	Accuracy
Ethylene Oxide	100 ppm	100 ppm	2%
Sulfur Hexafluoride	10 ppm	10.0 ppm	2%
Nitrogen	Balance	Balance	

This mixture was manufactured gravimetrically on laboratory balances calibrated with N.I.S.T. traceable weights.

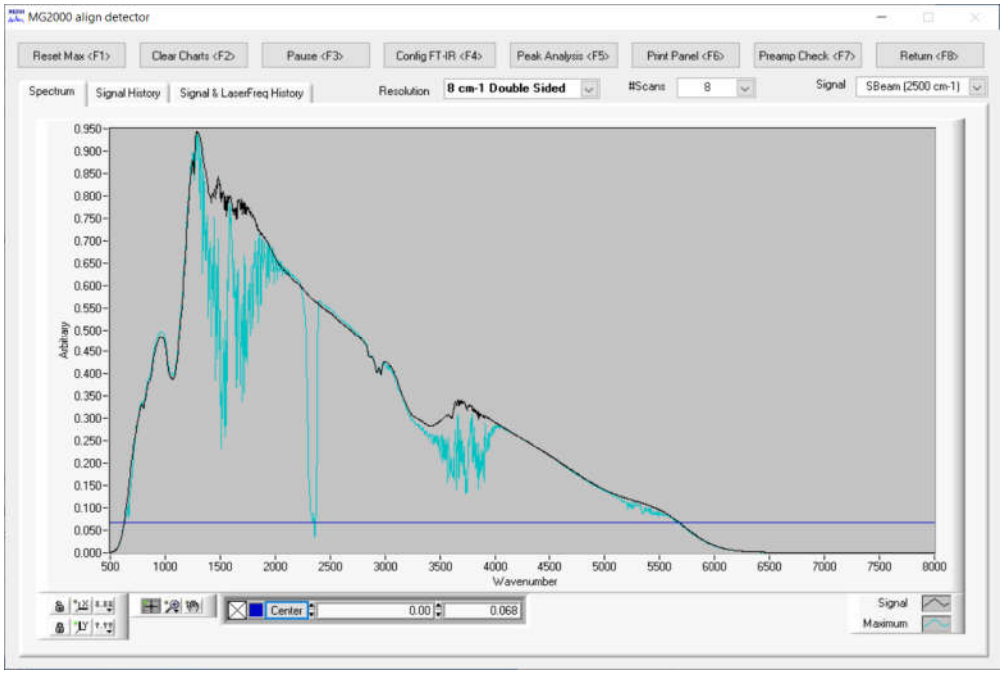
Certified by:

Ph: 281-840-0781 www.hydrocarbonlaboratories.com

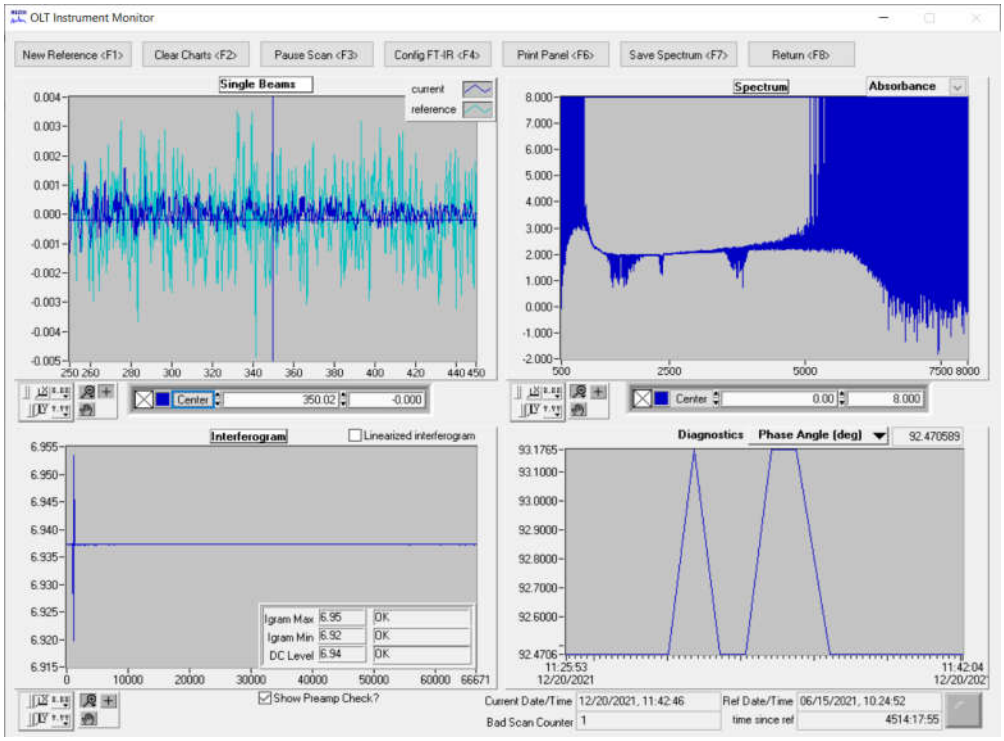
Location	BCP Ingredients - Verona, MO
Source(s)	Ethylene Oxide Scrubber Outlet
Project No.	23-0231
Health Check Parameter	MKS - Single Beam (Pre-Test)
Instrument ID	MKS 9 (Serial #017193157)
Date	2/12/2023



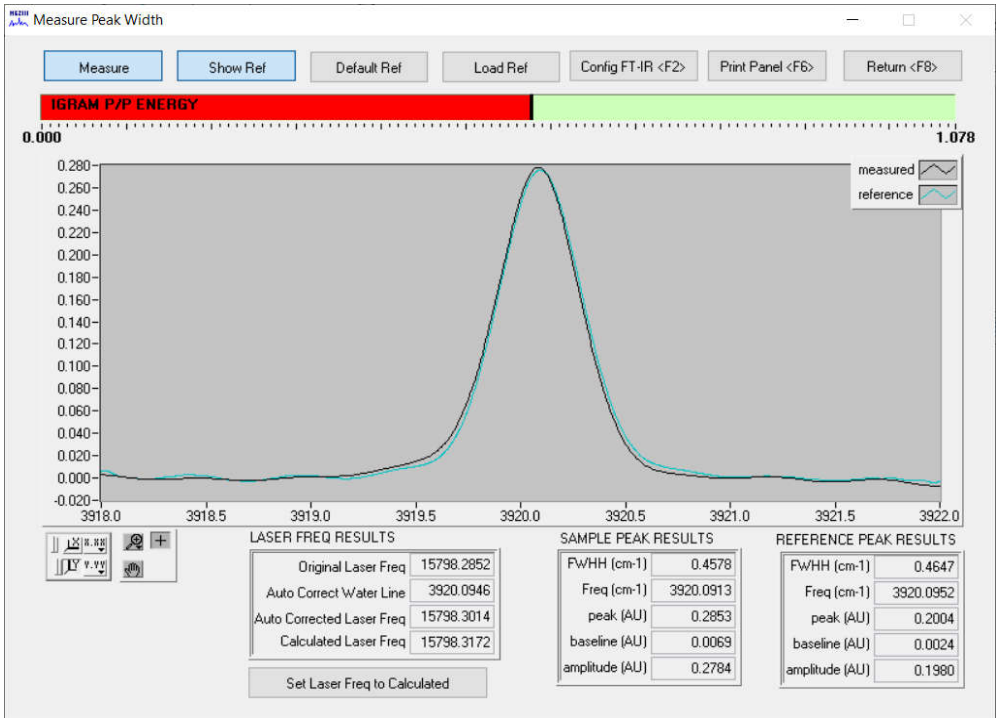
Location	BCP Ingredients - Verona, MO
Source(s)	Ethylene Oxide Scrubber Outlet
Project No.	23-0231
Health Check Parameter	MKS - Single Beam (Post-Test)
Instrument ID	MKS 9 (Serial #017193157)
Date	2/12/2023



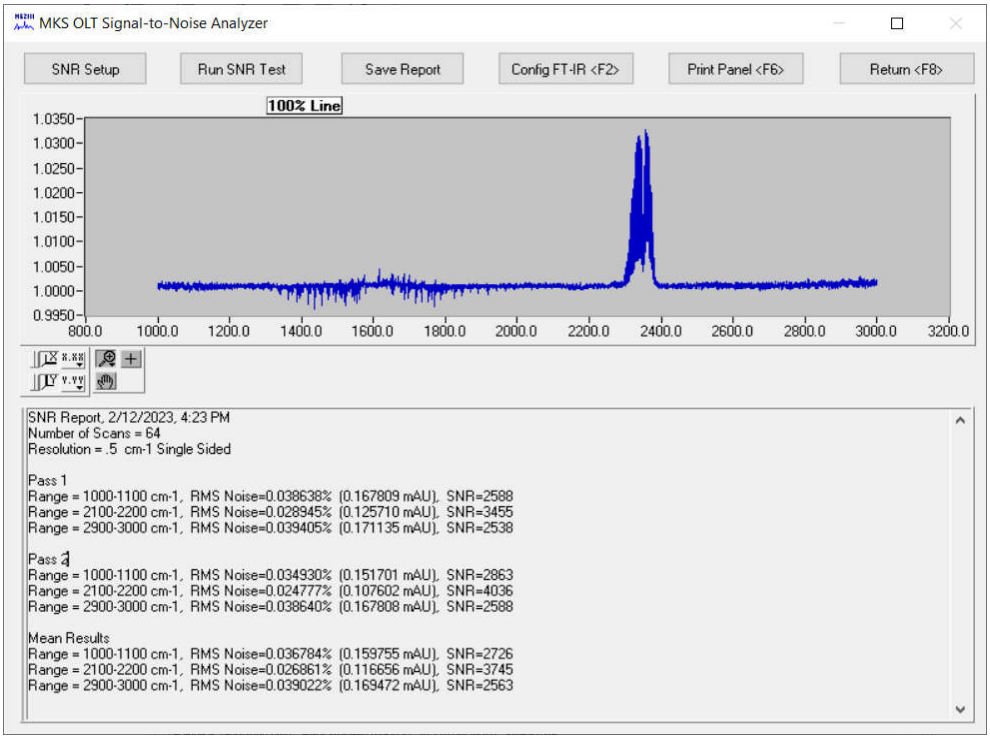
Location	BCP Ingredients - Verona, MO
Source(s)	Ethylene Oxide Scrubber Outlet
Project No.	23-0231
Health Check Parameter	MKS - Detector Linearity
Instrument ID	MKS 9 (Serial #017193157)
Date	2/12/2023



Location	BCP Ingredients - Verona, MO
Source(s)	Ethylene Oxide Scrubber Outlet
Project No.	23-0231
Health Check Parameter	MKS - Peak Analysis
Instrument ID	MKS 9 (Serial #017193157)
Date	2/12/2023



Location	BCP Ingredients - Verona, MO
Source(s)	Ethylene Oxide Scrubber Outlet
Project No.	23-0231
Health Check Parameter	MKS - Signal to Noise Ratio
Instrument ID	MKS 9 (Serial #017193157)
Date	2/12/2023

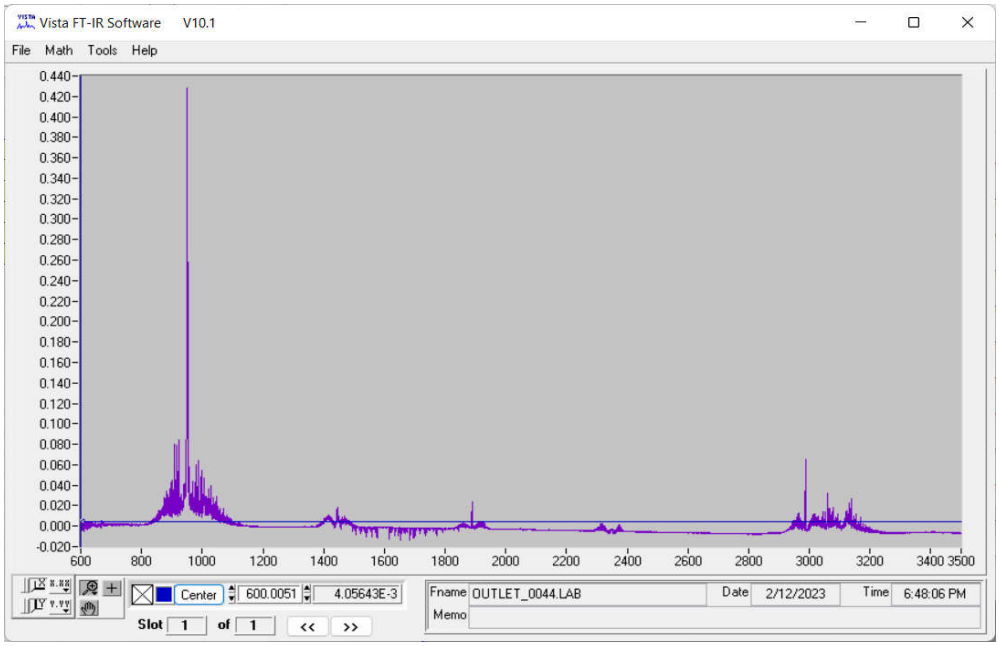


Location	BCP Ingredients - Verona, MO
Source(s)	Ethylene Oxide Scrubber Outlet
Project No.	23-0231
Health Check Parameter	MKS - Analysis Validation Utility
Instrument ID	MKS 9 (Serial #017193157)
Date	2/12/2023

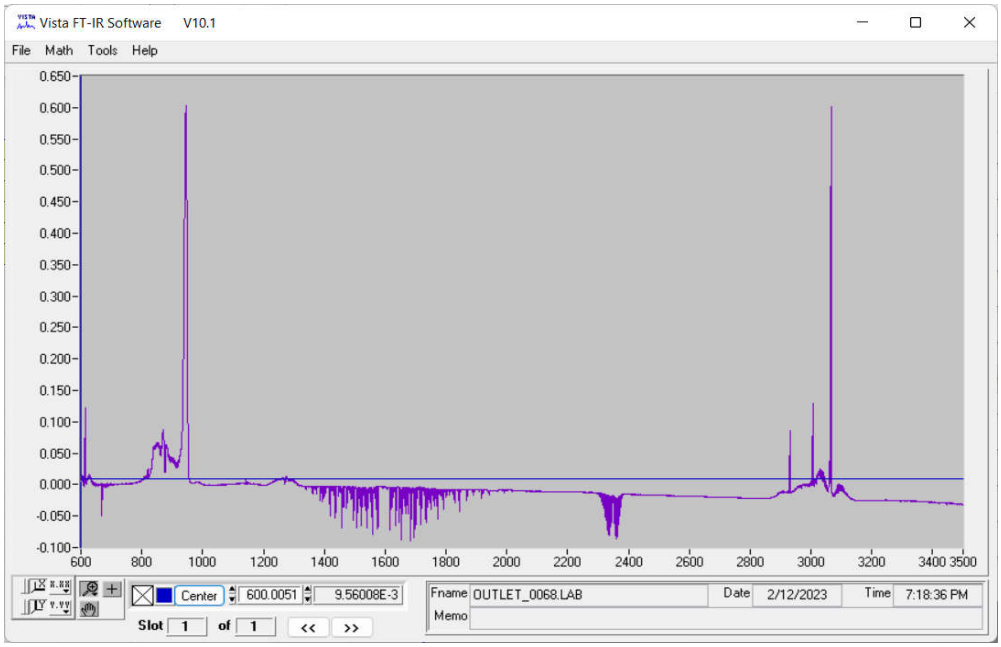
Analysis Validation Report

Gas calibration Name	Conc	MDC3	MDC2	MDC1	MAU	FMU*R	OCU	~ DL
ACETYLENE 191C	-0.05	1.2	0.12	0.39	0.47	1.44	1.44	0.13
CO PPM 191C (1OF2)	0.25	0.48	0.13	0.18	0.39	1.03	1.03	0.2
CO% 191C (2OF2)	0	0	0	0	0	0	0	0
CO2% 191C	0.02	0.05	-	0.01	0.02	0.07	0.07	-
ETHYLENE 191C	-0.65	2.18	0.05	0.2	0.34	3.79	3.79	0.11
ETHYLENE OXIDE (100-TMV	49.54	7.46	0.08	0.09	0.16	13.03	13.03	0.31
H2O% (40) 191C	0.68	0.17	-	0.01	0.02	0.34	0.34	-
HBR (100) 180C	-0.21	3.25	0.11	0.7	1.43	6.6	6.6	0.5
HCN (100) 191C	-0.09	1.64	0.12	0.42	0.71	2.81	2.81	0.17
MEOH 191C	0	0.77	0.1	0.17	0.19	0.88	0.88	0.31
SF6 191C	-0.02	0.04	0	0.01	0.01	0.06	0.06	0.01
SO2 (5000) 191C	15.4	15.61	1.32	1.24	1.32	16.54	16.54	4.47
SO3 191C	-0.57	0.37	0.47	0.03	0.03	0.4	0.4	0.73

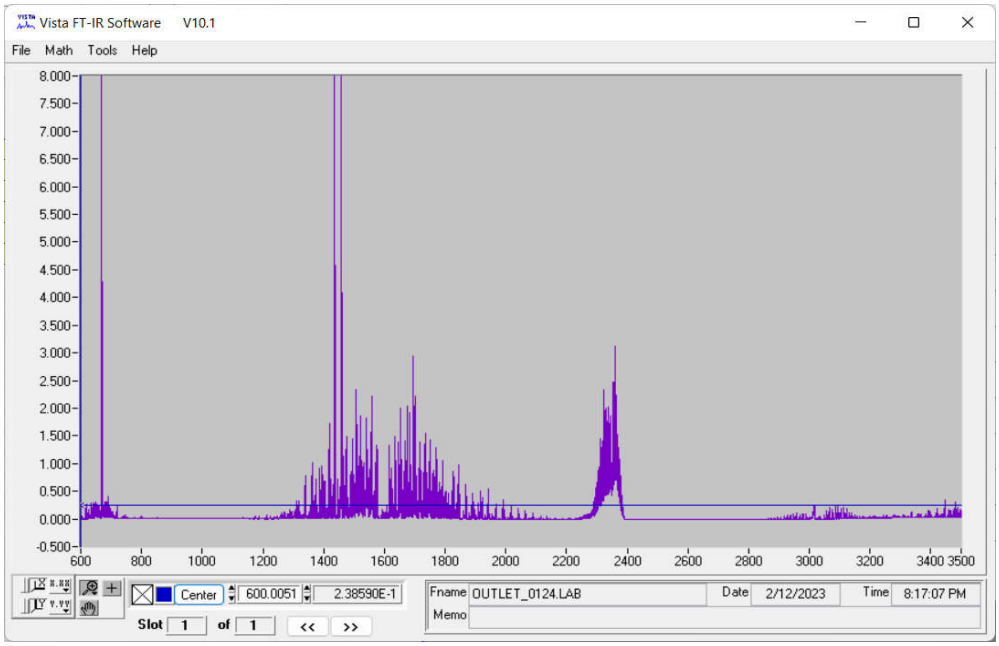
Location	BCP Ingredients - Verona, MO
Source(s)	Ethylene Oxide Scrubber Outlet
Project No.	23-0231
Spectra (CTS)	OUTLET_0044.LAB
Date	2/12/2023
Time	17:48



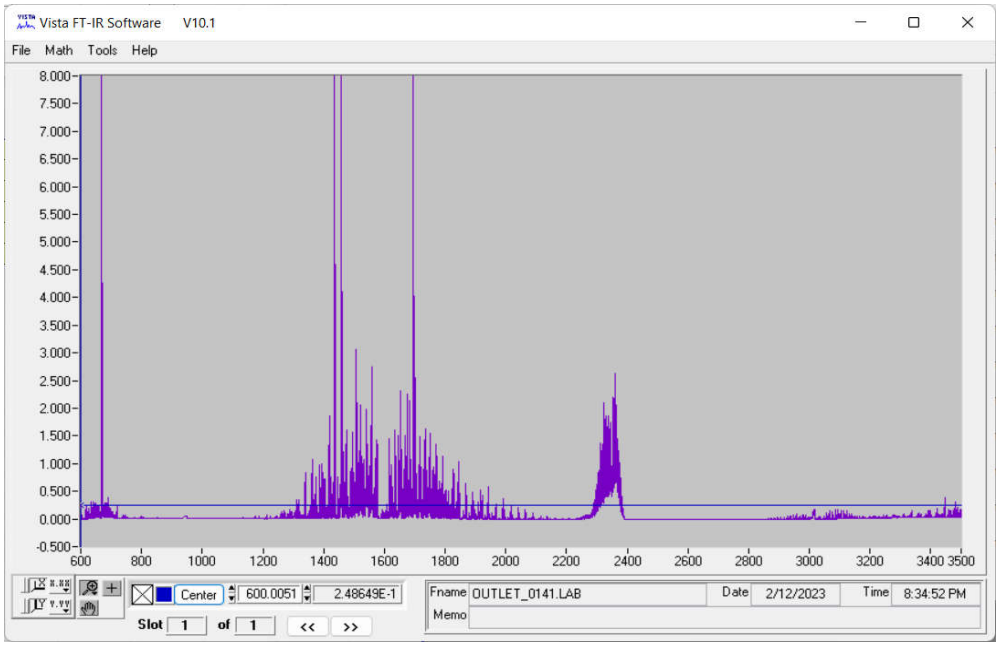
Location	BCP Ingredients - Verona, MO
Source(s)	Ethylene Oxide Scrubber Outlet
Project No.	23-0231
Spectra (Analyte Direct)	OUTLET_0068.LAB
Date	2/12/2023
Time	18:18



Location	BCP Ingredients - Verona, MO
Source(s)	Ethylene Oxide Scrubber Outlet
Project No.	23-0231
Spectra (Native)	OUTLET_0124.LAB
Date	2/12/2023
Time	19:17



Location	BCP Ingredients - Verona, MO
Source(s)	Ethylene Oxide Scrubber Outlet
Project No.	23-0231
Spectra (Spike)	OUTLET_0141.LAB
Date	2/12/2023
Time	19:34



Appendix D: Process Op./Venting Log

EO Venting to Scrubber Record

V25 Data – Record every time the Low Pressure (LP)/High Pressure (HP) Tank is vented to the scrubber.

Date	Initials	Time	Ambient Temp during Vent Down (F)	V25 LP/HP Tank Pressure before Venting (PSIG)	V25 LP Tank Vent Open Time	V25 LP Tank Vent Closed Time	V25 LP/HP Tank Vent Pressure after Venting (PSIG)	Comments
2/13	MG	9:55	44.6	33 LP/56 HP	9:57	10:04	15 LP/ 56 HP	Vented from HP for 7 mins
2/14	MG	11:32	49.8	58 HP/15 LP	11:32	11:39	13 LP/ 56 HP	Vented from HP for 5 of the 7 mins
2/14	MG	13:22	47	58 HP/16 LP	13:23	13:30	14 LP/ 55 HP	High pressure vent for 5 of the 7 mins
2/15	ST	NA	NA	NA	1:57 (est)	2:03 (est)	NA	SPT added this event to log on 3/7/23; operators missed recording this vent when it occurred; verified by supervisor that operator stated he missed logging event
2/16	MG	12:03	28	21 LP	12:03	12:10	14 LP	Vented from LP for 7 mins

V25 Reclaim Drum Transfer

Date: __2/15_____ No. Drums Transferred: ____8____ Ambient Temp: ___57F_____

Drum Number	Initials	Drum Weight (lbs)	Start Time	End Time	Comments
1059	MG	650	12:15	13:00	
2219	MG	646	12:15	13:00	
1306	MG	645	12:15	13:00	
0682	MG	648	12:15	13:00	
1595	MG	546	14:05	14:45	
2334	MG	668	14:05	14:45	
0503	MG	646	14:05	14:45	
0333	MG	648	14:05	14:45	

V10 Data – Record during every batch when SS2501 is vented to scrubber.

Date	Ambient Temp during Vent Down (F)	V10 SS2501 Start Pressure (PSIG)	V10 SS2501 Vent Open Time	V10 SS2501 Vent Closed Time	V10 SS2501 End Pressure (PSIG)	Comments
2/13	40.8	-2.98	9:09	14:28	3.1	Started at 55 ppm TMA; vent opened 40%; Vessel temp at start=52C
2/15	45	-0.4	2:50	6:41	2.7	Start at 14 ppm TMA
2/17	25	-1.1	2:30	6:22	3.4	Start at 128 ppm TMA; vent opened 40%

Railcar Data – Record during each disconnection of railcar.

Date	Initials	Ambient Temperature at time of R/C Venting (F)	EO R/C Nitrogen Pressure (PSIG)	EO R/C Scrubber Vent Open Time	EO R/C Scrubber Vent Closed Time	Comments
2/13	EA	62.1	50	14:35	14:55	T-9 Partial railcar to V25; had to vent down twice due to the way the liquid hose was hooked up to the railcar
2/14	EA	51.6	50	6:57	7:03	T-9A Empty
2/14	CD	55	51	18:40	18:45	T-9 Empty; V-25 car was disconnected
2/14	CD	52	56	23:10	23:20	T-9 Full; new V-25 car was sampled
2/16	EA	??	??	14:45	15:05	Partial railcar at T-9 spot; Operator missed adding this event to log; unload was witnessed by SPT and added by SPT on 3/7/2023 to this log; timing is estimated based on stack test inlet flows and O2 readings
2/16	CD	27	56	17:30	17:35	Pressure check after hook-up; de-pressure nitrogen to scrubber
2/16	CD	24	58	22:00	22:05	Stopped first pumping and blew back lines to railcar and vent lines to scrubber

V8 Data

EO Header Tank – Record once per day

Date	Initials	Time	Ambient Temperature (F)	V8 EO Header – Storage Tank Pressure (PSIG)	EO Flow to Rxn Loop (lbs/min)	Comments
2/13	EA	0810	37.2	39.11	45	
2/14	EA	1025	51.6	38.59	45	
2/14	CD	1910	55.0	38.18	45	
2/15	EA	1305	55.2	33.77	40	Reclaiming needs the EO flow down to 40 lbs/min to work correctly
2/16	EA	0825	32.4	39.16	40	
2/17	EA	0815	27.0	39.33	40	

GL750 – Record during EO addition to GL750

Date	Initials	Time	Ambient Temperature (F)	GL750 EO Addition Valve Open Time	GL 750 EO Addition Valve Closed Time	Comments
2/15	EA	13:10	55.2	13:05	13:10	EO addition was only 2 mins (timer is mins but operator shut off EO flow at 13:07)

EO Scrubber – Record data below once per shift and take a sample of scrubber solution twice per day

Date	Initials	Time	Scrubber Level (Inches)	Scrubber Acid Circulation Flow (GPH)	Comments
2/13	TA	0740	Marked on tank	400	Operators will measure level from mark on tank
2/13	TA	1600	+1 inch	400	
2/14	CD	0000	+1.125 inches	400	
2/14	TA	0730	+1.125 inches	400	
2/15	RG	0000	+1.125 inches	400	
2/15	TA	0735	+1.25 inches	400	
2/16	CD	0000	+1.25 inches	400	
2/16	TA	0735	+1.25 inches	400	
2/17	CD	0000	+1.25 inches	400	
2/17	TA	0730	+1.25 inches	400	

Scrubber Sample – once per day

Date	Initials of person taking sample	Time when sample was taken	pH	%H2SO4	% Glycol	SG	Comments
2/13	TA	7:40	0.3	8.5	11.8	1.108	
2/14	TA	7:30	0.3	8.41	23.8	1.105	
2/15	TA	7:40	0.1	8.9	22.4	1.11	
2/16	TA	7:45	0.1	8.14	20.6	1.106	
2/17	TA	7:25	0.1	8.05	NA	1.106	

Appendix E: SSTP

Site Specific
Voluntary Performance Test Plan

BCP Ingredients
299 Extension St
Verona, MO 65769

Prepared For:
BCP Ingredients

Source to be Tested: Ethylene Oxide Scrubber

Project No. AST-2022-4380

Prepared By
Alliance Technical Group, LLC
1355 Sherman Road, Suite 300
Hiawatha, IA 52233

Source Information

Source Name	*Test Locations*	*Target Parameter*
Ethylene Oxide (EtO) Scrubber	Inlet and Outlet	Ethylene Oxide

Contact Information

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TABLE OF CONTENTS

1.0 Introduction 1-1
1.1 Project Team 1-1
1.2 Safety Requirements 1-1
2.0 Summary of Test Program 2-1
2.1 Presurvey Summary 2-1
2.2 General Description 2-2
2.3 Process/Control System Parameters to be Monitored and Recorded 2-2
2.4 Proposed Test Schedule 2-2
2.5 Test Report 2-2
3.0 Testing Methodology 3-1
3.1 U.S. EPA Reference Test Methods 1A and 2 – Sampling/Traverse Points and Volumetric Flow Rate 3-1
3.2 U.S. EPA Reference Test Method 3A – Oxygen 3-1
3.3 U.S. EPA Reference Test Method 320 – Carbon Dioxide, Moisture and Ethylene Oxide 3-2
3.4 Quality Assurance/Quality Control – U.S. EPA Reference Test Method 3A 3-2
3.5 Quality Assurance/Quality Control – U.S. EPA Reference Method 320 3-3
4.0 Quality Assurance Program 4-1
4.1 Equipment 4-1
4.2 Field Sampling 4-2
4.3 Analytical Laboratory 4-2

LIST OF TABLES

Table 1-1: Project Team 1-1
Table 2-1: Program Outline and Tentative Test Schedule 2-2
Table 3-1: Source Testing Methodology 3-1

LIST OF APPENDICES

Appendix A: Process Block Diagram and Typical Process Timeline .....
Appendix B: Proposed EO Process Venting Scrubber Record .....
Appendix C: Scrubber Inlet and Outlet Pictures .....

1.0 Introduction

Alliance Technical Group, LLC (Alliance) was retained by BCP Ingredients (BCP) to conduct voluntary performance testing at the facility located in Verona, Missouri. Testing will be conducted to determine the emission rate of ethylene oxide at the inlet and exhaust of the EtO scrubber over a 96-hour (4-day) period. Measurements made during this time will be used in conjunction with facility operational information to determine EtO emissions during normal operations.

This testing is being performed voluntarily by BCP. BCP is voluntarily coordinating this testing with the U.S. Environmental Protection Agency (EPA) and the Missouri Department of Natural Resources (MDNR).

1.1 Project Team

Personnel planned to be involved in this project are identified in the following table.

Table 1-1: Project Team

BCP Personnel	Shawn Thomas
Regulatory Agency	EPA and MDNR
Alliance Personnel	Josh Bowling Dan Despen James Holder other field personnel assigned at time of testing event

1.2 Safety Requirements

Testing personnel will undergo site-specific safety training for all applicable areas upon arrival at the site. Alliance personnel will have current OSHA or MSHA safety training and be equipped with hard hats, safety glasses with side shields, steel-toed safety shoes, hearing protection, fire resistant clothing, and fall protection (including shock corded lanyards and full-body harnesses). Alliance personnel will conduct themselves in a manner consistent with Client and Alliance's safety policies.

A Job Safety Analysis (JSA) will be completed daily by the Alliance Field Team Leader.

Alliance will utilize a full face supplied air respirator and packing gland system when accessing the sampling ports.

2.0 Summary of Test Program

BCP is voluntarily conducting a performance test program to determine the emission rate of ethylene oxide at the inlet and exhaust of the EtO Scrubber.

2.1 Presurvey Summary

On August 17, 2022, AST performed a voluntary Presurvey Test to gather information on the conditions and parameters present at the EtO Scrubber and to guide preparation of this Performance Test Plan. Following is a summary of the key information gathered during the Presurvey Test that has guided the procedures for this Performance Test Plan:

- During the Presurvey Test, discernable emissions of EtO were observed in the exhaust of the EtO Scrubber only related to the discharge of pure EtO from the repackaging (V-25) and railcar unloading areas.
- During these events, EtO was the predominant (nearly exclusive) constituent observed in the exhaust from the EtO Scrubber.

In addition, during a subsequent voluntary testing event (September 2022) and associated discussions, additional valuable information and understanding was obtained to guide the design of subsequent data collection. Refer also to the typical process timeline (See Appendix A) and the distances between the various processes and the scrubber (see Block Diagram, Appendix A). Through review and consideration of the understandings gained it was determined that an extended duration performance test was best suited to accurately represent the EtO Scrubber emissions. Therefore, this Performance Test Plan has been designed to observe and measure outlet emission rate of EtO at the exhaust of the scrubber over a 96-hour period. There are four potential sources of emissions to the EtO Scrubber at the BCP facility:

1. The Aqueous Choline Chloride process (V-8). This is a closed, continuous chemical reaction process. The process is connected to the EtO Scrubber header by a vent from the final product storage vessel. As a continuous process, this potential source represents the baseline condition for the EtO Scrubber.
2. The Choline Bitartrate process (V-10). This is a relatively small batch chemical reaction process. This reaction process is closed until the reaction is complete, at which time the reaction vessel is vented to the EtO Scrubber header.
3. The EtO Repackaging operation (V-25). In this operation, pure EtO is transferred from bulk storage to consumer containers for use in medical sterilization and related processes. Emissions from this process are captured locally and vented to the EtO Scrubber header periodically. (Typically, once per operating shift.)
4. The EtO Railcar Unloading operation. Pure EtO is transferred from railcars to bulk storage tanks at this location. At the end of unloading, transfer lines are purged with nitrogen. The purge vapors are discharged to the EtO Scrubber header.

2.2 General Description

All testing will be performed in accordance with specifications stipulated in U.S. EPA Reference Test Methods 1A, 2, 3A, and 320. Table 2-1 presents an outline and tentative schedule for the emissions testing program. The following is a summary of the test objectives.

- Testing is being performed voluntarily by BCP.
- Emissions testing will be conducted on the inlet and exhaust of the EtO Scrubber.
- Performance testing will be conducted continuously over a 96 hour period. All parameters will be logged in one (1) minute intervals throughout the testing. Daily calibrations and background checks will be conducted and excluded from the final averages. Velocity and temperature measurements will be measured at a single point from the Scrubber Inlet and the Scrubber Outlet locations and logged at one (1) minute intervals.

2.3 Process/Control System Parameters to be Monitored and Recorded

BCP personnel will collect operational and parametric data during the testing. The relevant measurements, observations and records that will be collected during the testing program will vary for the Operating Condition being tested. Among the data collected are:

- Throughput for reaction processes.
- Volume for repackaging operations.
- Volume for railcar unloading operations.
- Parameters for scrubber operation, such as flow rate.

Reference Appendix B for a proposed record of valve events to be monitored and recorded during the performance testing.

2.4 Proposed Test Schedule

Table 2-1 presents an outline and tentative schedule for the emissions testing program.

Table 2-1: Program Outline and Tentative Test Schedule

<table>
<tr><th>Testing Location</th><th>Parameter</th><th>US EPA Method</th><th>No. of Runs</th><th>Run Duration</th><th>Est. Onsite Time</th></tr>
<tr><td colspan="6">DAY 1</td></tr>
<tr><td colspan="5">Equipment Setup & Pretest QA/QC Checks & FTIR Validation Study</td><td>8 hr</td></tr>
<tr><td colspan="6">DAYS 2 - 4</td></tr>
<tr><td rowspan="3">EtO Scrubber Outlet and Inlet</td><td>VFR</td><td>1A-2A</td><td rowspan="3">1</td><td rowspan="3">96 hr (Continuous Monitoring)</td><td rowspan="3">8 hr / day</td></tr>
<tr><td>O_2</td><td>3A</td></tr>
<tr><td>CO_2, Moisture, EtO</td><td>320</td></tr>
</table>

2.5 Test Report

The final test report will be provided to BCP Ingredients within 60 days of the completion of the performance test and will include the following information.

- *Introduction* – Brief discussion of project scope of work and activities.
- *Results and Discussion* – A summary of test results and process/control system operational data with comparison to regulatory requirements or vendor guarantees along with a description of process conditions and/or testing deviations that may have affected the testing results.
- *Methodology* – A description of the sampling and analytical methodologies.
- *Sample Calculations* – Example calculations for each target parameter.
- *Field Data* – Copies of actual handwritten or electronic field data sheets.
- *Quality Control Data* – Copies of all instrument calibration data and/or calibration gas certificates.
- *Process Operating/Control System Data* – Process operating and control system data (as provided by BCP Ingredients) to support the test results.

3.0 Testing Methodology

This section provides a description of the sampling and analytical procedures for each test method that will be employed during the test program. All equipment, procedures and quality assurance measures necessary for the completion of the test program meet or exceed the specifications of each relevant test method. The emission testing program will be conducted in accordance with the test methods listed in Table 3-1.

Table 3-1: Source Testing Methodology

Parameter	U.S. EPA Reference Test Methods	Notes/Remarks
Volumetric Flow Rate	1A & 2A	--
Oxygen	3A	Instrumental Analysis
Carbon Dioxide, Moisture Content & Ethylene Oxide	320	FTIR

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

Please refer to Appendix C for pictures of the scrubber inlet and outlet test ports.

Due to the inherent safety risk of ethylene oxide exposure, Alliance will utilize a supplied air respirator (SAR) system to access sampling locations. Furthermore, the port will be equipped with a 2" ball valve and connections capable of sealing the probe in a stationary position throughout the duration of the test program.

Differential Pressure ("WC) will be continuously measured and recorded from a single point using an S type pitot tube and a Shortridge model ADM-880C digital multimeter. Stack temperature will be continuously measured and recorded from a single point using a K-type thermocouple and data acquisition system (DAS). Velocity measurements will be recorded in ~1-minute increments to coincide with gas pollutant measurements.

Gas concentration, differential pressure and temperature measurements will be sampled from a custom probe containing an S-type Pitot tube, thermocouple, and gas sampling tube enclosed in a 1" over sheath, allowing entry into the sample location while sufficiently sealing the entry point to limit exposure to the gas stream.

The scrubber flow profile is intermittent as a result of process induced purge and blowdown events. Because of this, the duration of the sampling program, the small duct diameters, and safety considerations, full velocity traverses will not be performed. Instead, continuous velocity readings will be obtained to better characterize the gas and flow profile, lag time, and specific process induced ethylene oxide emissions over the course of normal operations.

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

The oxygen (O_2) testing will be conducted in accordance with U.S. EPA Reference Test Method 3A. Data will be collected online and reported in one-minute averages. The sampling system will consist of a stainless-steel probe, heated Teflon sample line(s), gas conditioning system and the identified gas analyzer. The gas conditioning system will be a non-contact condenser used to remove moisture from the stack gas. The quality control measures are described in Section 3.4.

3.3 U.S. EPA Reference Test Method 320 – Carbon Dioxide, Moisture and Ethylene Oxide

The concentrations of carbon dioxide and ethylene oxide, and moisture content will be determined in accordance with U.S. EPA Reference Test Method 320. Each source gas stream will be extracted at a constant rate through a heated probe, heated filter and heated sample line and analyzed with a MKS MultiGas 2030 or CAI 600 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 will be selected from the spectra library and incorporated into the analytical method. The signal amplitude, linearity, and signal to noise ratio will be measured and recorded to document analyzer performance. A leak check will be performed on the sample cell. The instrument path length will be verified using ethylene as the Calibration Transfer Standard. Dynamic spiking will be 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 3.5.

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

Cylinder calibration gases will meet EPA Protocol 1 (+/- 2%) standards. Copies of all calibration gas certificates will be included in the Quality Assurance/Quality Control Appendix of the report.

Low Level gas will be introduced directly to the analyzer. After adjusting the analyzer to the Low Level gas concentration and once the analyzer reading is stable, the analyzer value will be recorded. This process will be repeated for the High Level gas. For the Calibration Error Test, Low, Mid, and High Level calibration gases will be sequentially introduced directly to the analyzer. The Calibration Error for each gas must be within 2.0 percent of the Calibration Span or 0.5% absolute difference.

High or Mid Level gas (whichever is closer to the stack gas concentration) will be 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 will be recorded. The analyzer reading will be observed until it reaches a stable value, and this value will be recorded. Next, Low Level gas will be 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) will be recorded. If the Low Level gas is zero gas, the acceptable response must be 5.0 percent of the upscale gas concentration or 0.5% (whichever was less restrictive). The analyzer reading will be observed until it reaches a stable value and this value will be recorded. The measurement system response time and initial system bias will be determined from these data. The System Bias for each gas must be within 5.0 percent of the Calibration Span or 0.5% absolute difference.

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

The Drift between pre- and post-run System Bias must be within 3 percent of the Calibration Span or 0.5% absolute difference or the Calibration Error Test and System Bias must be repeated.

A Data Acquisition System with battery backup will be used to record the instrument response in one (1) minute averages. The data will be continuously stored as a *.CSV file in Excel format on the hard drive of a computer. At

the completion of testing, the data will also be saved to the Alliance server. All data will be reviewed by the Field Team Leader before leaving the facility. Once arriving at Alliance's office, all written and electronic data will be relinquished to the report coordinator and then a final review will be performed by the Project Manager.

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

EPA Protocol 1 Calibration Gases – Cylinder calibration gases used will meet EPA Protocol 1 (+/- 2%) standards or will be certified standards.

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

Following the zero gas checks, room air will be pulled through the sample chamber and the line width and resolution will be verified to be at 1879 cm-1, the peak position will be entered and the FWHH will be recorded (screenshot). Following these checks, another background spectra will be recorded and the calibration transfer standard (CTS) will be introduced directly to the instrument sample port. The CTS instrument recovery will be recorded and the instrument mechanical response time will be measured.

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

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

4.0 Quality Assurance Program

Alliance follows the procedures outlined in the Quality Assurance/Quality Control Management Plan to ensure the continuous production of useful and valid data throughout the course of this test program. The QC checks and procedures described in this section represent an integral part of the overall sampling and analytical scheme. Adherence to prescribed procedures is quite often the most applicable QC check.

4.1 Equipment

Field test equipment is assigned a unique, permanent identification number. Prior to mobilizing for the test program, equipment is inspected before being packed to detect equipment problems prior to arriving on site. This minimizes lost time on the job site due to equipment failure. Occasional equipment failure in the field is unavoidable despite the most rigorous inspection and maintenance procedures. Therefore, replacements for critical equipment or components are brought to the job site. Equipment returning from the field is inspected before it is returned to storage. During the course of these inspections, items are cleaned, repaired, reconditioned and recalibrated where necessary.

Calibrations are conducted in a manner, and at a frequency, which meets or exceeds U.S. EPA specifications. The calibration procedures outlined in the U.S. EPA Methods, and those recommended within the Quality Assurance Handbook for Air Pollution Measurement Systems: Volume III (EPA-600/R-94/038c, September 1994) are utilized. When these methods are inapplicable, methods such as those prescribed by the American Society for Testing and Materials (ASTM) or other nationally recognized agency may be used. Data obtained during calibrations is checked for completeness and accuracy. Copies of calibration forms are included in the report.

The following sections elaborate on the calibration procedures followed by Alliance for these items of equipment.

- Dry Gas Meter and Orifice. A full meter calibration using critical orifices as the calibration standard is conducted at least semi-annually, more frequently if required. The meter calibration procedure determines the meter correction factor (Y) and the meter's orifice pressure differential (ΔH@). Alliance uses approved Alternative Method 009 as a post-test calibration check to ensure that the correction factor has not changed more than 5% since the last full meter calibration. This check is performed after each test series.
- Pitot Tubes and Manometers. Type-S pitot tubes that meet the geometric criteria required by U.S. EPA Reference Test Method 2 are assigned a coefficient of 0.84 unless a specific coefficient has been determined from a wind tunnel calibration. If a specific coefficient from a wind tunnel calibration has been obtained that coefficient will be used in lieu of 0.84. Standard pitot tubes that meet the geometric criteria required by U.S. EPA Reference Test Method 2 are assigned a coefficient of 0.99. Any pitot tubes not meeting the appropriate geometric criteria are discarded and replaced. Manometers are verified to be level and zeroed prior to each test run and do not require further calibration.
- Temperature Measuring Devices. All thermocouple sensors mounted in Dry Gas Meter Consoles are calibrated semi-annually with a NIST-traceable thermocouple calibrator (temperature simulator) and verified during field use using a second NIST-traceable meter. NIST-traceable thermocouple calibrators are calibrated annually by an outside laboratory.
- Nozzles. Nozzles are measured three (3) times prior to initiating sampling with a caliper. The maximum difference between any two (2) dimensions is 0.004 in.

- Digital Calipers. Calipers are calibrated annually by Alliance by using gage blocks that are calibrated annually by an outside laboratory.
- Barometer. The barometric pressure is obtained from a nationally recognized agency or a calibrated barometer. Calibrated barometers are checked prior to each field trip against a mercury barometer. The barometer is acceptable if the values agree within ± 2 percent absolute. Barometers not meeting this requirement are adjusted or taken out of service.
- Balances and Weights. Balances are calibrated annually by an outside laboratory. A functional check is conducted on the balance each day it is use in the field using a calibration weight. Weights are re-certified every two (2) years by an outside laboratory or internally. If conducted internally, they are weighed on a NIST traceable balance. If the weight does not meet the expected criteria, they are replaced.
- Other Equipment. A mass flow controller calibration is conducted on each Environics system annually following the procedures in the Manufacturer's Operation manual. A methane/ethane penetration factor check is conducted on the total hydrocarbon analyzers equipped with non-methane cutters every six (6) months following the procedures in 40 CFR 60, Subpart JJJJ. Other equipment such as probes, umbilical lines, cold boxes, etc. are routinely maintained and inspected to ensure that they are in good working order. They are repaired or replaced as needed.

4.2 Field Sampling

Field sampling will be done in accordance with the Standard Operating Procedures (SOP) for the applicable test method(s). General QC measures for the test program include:

- Cleaned glassware and sample train components will be sealed until assembly.
- Sample trains will be leak checked before and after each test run.
- Appropriate probe, filter and impinger temperatures will be maintained.
- The sampling port will be sealed to prevent air from leaking from the port.
- Dry gas meter, ΔP, ΔH, temperature and pump vacuum data will be recorded during each sample point.
- An isokinetic sampling rate of 90-110% will be maintained, as applicable.
- All raw data will be maintained in organized manner.
- All raw data will be reviewed on a daily basis for completeness and acceptability.

4.3 Analytical Laboratory

Analytical laboratory selection for sample analyses is based on the capabilities, certifications and accreditations that the laboratory possesses. An approved analytical laboratory subcontractor list is maintained with a copy of the certificate and analyte list as evidence of compliance. Alliance assumes responsibility to the client for the subcontractor's work. Alliance maintains a verifiable copy of the results with chain of custody documentation.

Appendix A

Process Block Diagram
And
Typical Process Timeline

Process Block Diagram

Diagram Sent Separately as Confidential Business Information

Timeline of EO Source Events

1. **Railcar Disconnection and Line Clearing with Nitrogen to Scrubber** – The 12-month rolling average number of EO railcars unloaded is 170. In addition, based on operations, EO railcars must be disconnected prior to being completely empty, so on average there are about 225 disconnects annually. Therefore, about every day and a half a railcar is disconnected. First, the liquid EO in the transfer line is cleared back into the railcar using nitrogen. Then the transfer line (now containing mostly nitrogen with trace EO) is cleared to the EO scrubber. Each blowdown event lasts about 10 - 15 minutes. Operators use a dead-man style valve (a valve design that requires someone to hold it open to vent) to send nitrogen through the piping network and clear it to the EO scrubber.
2. **V25 Differential Pressure System to Scrubber** – The pressure in the Differential Pressure System is opened once or twice per day in general (less during winter months and more in summer months). This is the driving force to fill drums and the differential must be adjusted from time to time. The EO vapor is sent to the EO scrubber and the venting lasts about 5 minutes for each event.
3. **GL750 EO Adjustment** – This EO source is rarely active. This ¼ inch tubing is manually opened by operators during times when trimethylamine (TMA) is above specification in the final product. The EO will be bled into the GL750 tank for only a minute or two to react with excess TMA. This happens once to twice per month.
4. **V8 EO Header Tank Level Control** – EO level is controlled in the V8 EO Header Tank with a control valve that vents pressure to the EO scrubber from time to time. This is considered a source that is part of the baseline. The control valve is not monitored and can be open at any time to the scrubber. It vents only small amounts at a time and closes off as the level in the header is corrected. This is more or less a constant flow to the EO scrubber.
5. **V10 GL2001 Reactor and Receiver** – These two vessels manufacture CBT (choline bitartrate). The vessels are vented down to the EO scrubber after the CBT batch is complete. A combination of residual H2O, TMA, EO and nitrogen is sent to the EO scrubber every 18 hours in this manner. The valve to the scrubber is open for about 4 hours at the end of the batch (trace amounts of EO in this point in the reaction).

Appendix B

Proposed EO Process
Venting Scrubber Record

Proposed EO Process Venting Scrubber Record

EO Venting to Scrubber Record

Date	V25 LP Tank Vent Open Time	V25 LP Tank Vent Closed Time	V10 GL2500 Vent Open Time	V10 GL2500 Vent Closed Time	EO R/C Vent Open Time	EO R/C Vent Closed Time	Baseline EO Header Vent	GL750 EO Addition Valve Open Time	GL 750 EO Addition Valve Closed Time

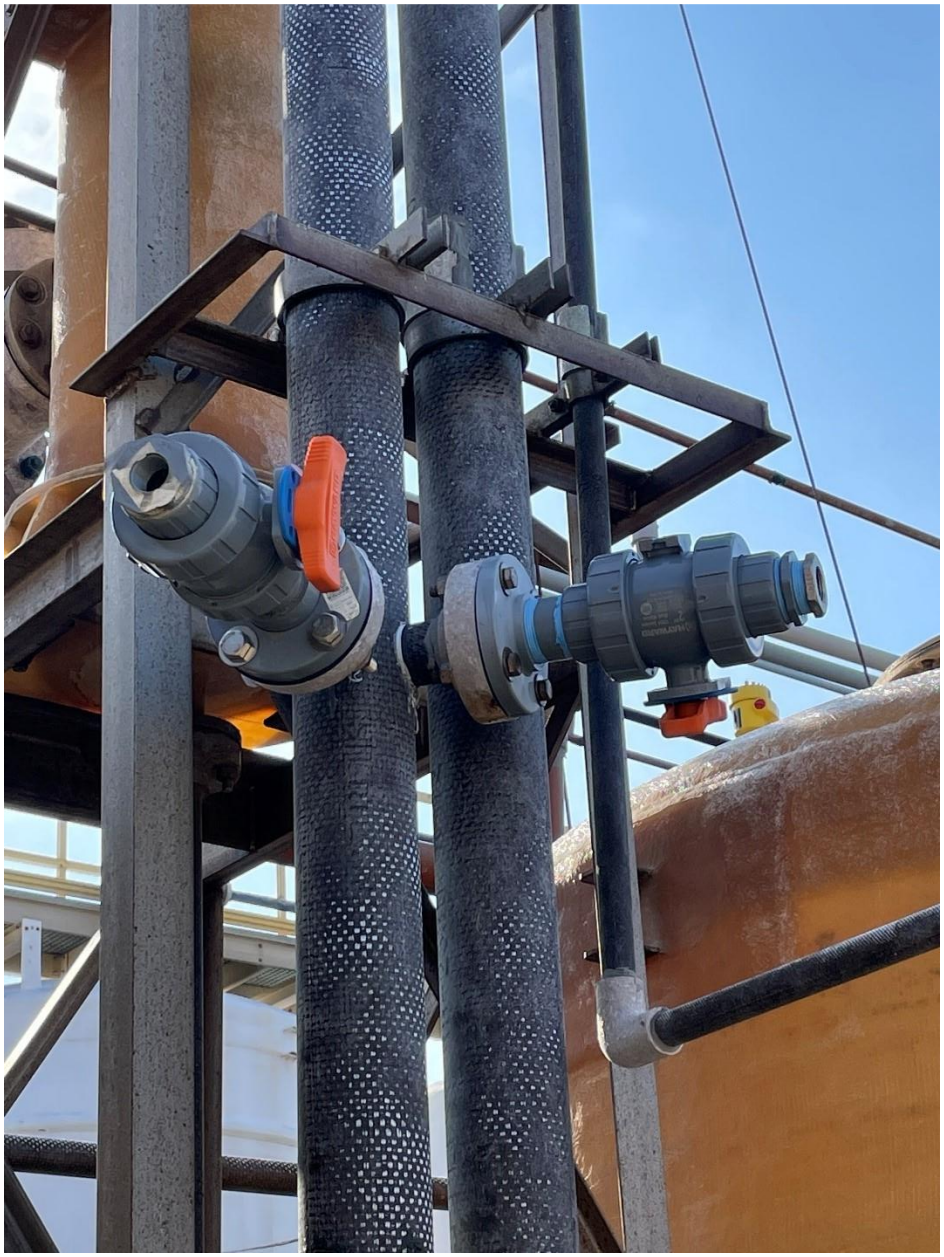
Warning: Never walk away from an open EO valve to scrubber; always remain with valve until closed.

Appendix C

Scrubber Inlet and Outlet Test Port Pictures

Scrubber Inlet Test Port

Scrubber Outlet Test Ports



Last Page of Report