Source Test Report

The Chemours Company, FC, LLC
22828 Highway 87W
Fayetteville, NC 28306

Source Tested: VEN Carbon Bed
Test Date: August 10 and 11, 2022

Project No. AST-2022-2899

Prepared By
Alliance Technical Group, LLC
6515A Basile Rowe
East Syracuse, NY 13057

Regulatory Information

Permit No. Title V Permit No. 03735T48

Source Information

Source Name
VEN Carbon Bed (Inlet / Outlet)

Target Parameter
HFPO-DA

Contact Information

Test Location
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22828 Highway 87W
Fayetteville, NC 28306

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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.

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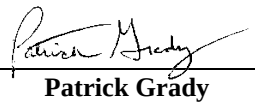

Patrick Grady
Alliance Technical Group, LLC

September 1, 2022
Date

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Introduction

1.0 Introduction

Alliance Technical Group, LLC (Alliance) was retained by The Chemours Company (Chemours) to conduct compliance testing at the Fayetteville Works facility in Fayetteville, North Carolina. The facility operates under Title V Permit No. 03735T48. Source emissions testing was conducted at the inlet and outlet of the Vinyl Ethers North (VEN) carbon bed. The testing was conducted to evaluate emissions of hexafluoro-propylene oxide-dimer acid (HFPO-DA).

1.1 Source and Control System Descriptions

VEN is part of the fluoromonomer area at the Fayetteville facility. This area produces fluorocarbon compounds used to produce Chemours products, such as Nafion® Krytox® and Viton®. Indoor air fugitive emissions from VEN are vented to a carbon bed which is then vented to atmosphere through the Division Stack. Process emissions from VEN are directed to a thermal oxidizer.

1.2 Project Team

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

Table 1-1: Project Team

Alliance Personnel	Patrick Grady Antonio Andersen Jeff Sheldon Samantha Waters

Summary of Results

2.0 Summary of Results

Alliance conducted compliance testing at the Fayetteville Works facility in Fayetteville, North Carolina on August 10 and 11, 2022. Testing consisted of determining the emission rates of HFPO-DA at the inlet and outlet of the VEN carbon bed.

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

Run Number	**Run 1**	**Run 2**	**Run 3**	**Average**
Date	**8/10/22**	**8/10/22**	**8/11/22**	**--**
HFPO-DA Data				
Outlet Emission Rate, lb/hr	2.2E-03	2.6E-03	2.8E-04	1.7E-03
Inlet Emission Rate, lb/hr	2.1E-02	2.2E-02	9.8E-03	1.7E-02
Reduction Efficiency, %	89.5	87.9	97.2	91.5

Testing Methodology

3.0 Testing Methodology

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

Table 3-1: Source Testing Methodology

Parameter	U.S. EPA Reference Test Methods	Notes/Remarks
Volumetric Flow Rate	1 & 2	Full Velocity Traverses
Moisture Content	4	Gravimetric Analysis
Hexafluoro-Propylene Oxide-Dimer Acid	Modified Method 0010	Isokinetic Sampling

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

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

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

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

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

3.3 Modified Method 0010 – Hexafluoro-Propylene Oxide-Dimer Acid

HFPO-DA emissions were evaluated in accordance with Modified Method 0010. Testing followed the submitted protocol in the execution of our onsite sampling and analysis activities. Modified Method 0010 procedure was followed as outlined in the protocol submitted to NC Division of Air Quality. Modified Method 0010 sampling and analysis procedures performed for this project are consistent with OTM-45, which was released by EPA in January 2021, subsequent to Chemours submittal of plans to DAQ.

The sample train consisted of a borosilicate glass nozzle attached directly to a heated borosilicate glass-lined probe. The probe was connected directly to a heated borosilicate glass filter holder containing a solvent-extracted glass fiber filter. In order to minimize possible thermal degradation of the HFPO-DA, the probe and particulate filter were heated to just above stack temperature to minimize water vapor condensation before the filter. The filter holder exit was connected to a water-cooled coil condenser followed by a water-cooled sorbent module containing approximately 40 grams of XAD-2 resin. The XAD-2 inlet temperature was monitored to ensure that the module is maintained at a temperature below 20°C.

The XAD-2 resin trap was followed by a condensate knockout impinger and a series of three impingers each containing 100-ml of high purity deionized water. The water impingers were followed by another condensate knockout impinger equipped with a second XAD-2 resin trap to account for any sample breakthrough. The final impinger contained approximately 250 grams of dry pre-weighed silica gel. The water impingers and condensate impingers were submerged in an ice bath through the duration of the testing. The water in the ice bath was also used to circulate around the coil condenser and the XAD-2 resin traps.

Exhaust gases were extracted from the sample locations isokinetically using a metering console equipped with a vacuum pump, a calibrated orifice, oil manometer and probe/filter heat controllers.

3.4 HFPO-DA Sample Train and Equipment Preparation

Prior to conducting the field work the following procedures were conducted to prepare the field sampling glassware and sample recovery tools.

1. Wash all glassware, brushes, and ancillary tools with low residue soap and hot water.
2. Rinse all glassware, brushes, and ancillary tools three (3) times with D.I. H_20.
3. Bake glassware (with the exception of probe liners) at 450˚C for approximately 2 hours, (XAD-2 resin tube glassware is cleaned by Eurofins/TestAmerica by this same procedure).
4. Solvent rinse three (3) times all glassware, brushes, and ancillary tools with the following sequence of solvents: acetone, methylene chloride, hexane, and methanol.
5. Clean glassware and tools will be sealed in plastic bags or aluminum foil for transport to the sampling site.
6. Squirt bottles will be new dedicated bottles of known history and dedicated to the D.I. Water and methanol/ammonium hydroxide (MeOH/ 5% NH_4OH) solvent contents. Squirt bottles will be labelled with the solvent content it contains.

3.5 HFPO-DA Sample Train Recovery

Following completion of each test run, the sample probe, nozzle and front-half of the filter holder were brushed and rinsed three times each with the MeOH/ 5% NH_4OH solution (Container #1). The glass fiber filter was removed from its housing and transferred to a polyethylene bottle (Container #2). Any particulate matter and filter fibers which adhered to the filter holder and gasket were also placed in Container #2. The XAD-2 resin trap was sealed, labelled and placed in an iced sample cooler. The back-half of the filter holder, coil condenser condensate trap and connecting glassware were rinsed with the same MeOH/ 5% NH_4OH solution and placed in Container #3.

The volume of water collected in all impingers was measured for moisture determinations and then placed in Container #4. All impingers and connecting glassware were then rinsed with the MeOH/ 5% NH_4OH solution and placed in Container #5. The second (breakthrough) XAD-2 resin trap was sealed, labelled and placed in an iced sample cooler. The contents of the fifth impinger were placed in its original container and weighed for moisture determinations.

Containers were sealed and labeled with the appropriate sample information. Samples remained chilled until analysis. HFPO-DA analysis was conducted using liquid chromatography/dual mass spectrometry (LC/MS/MS).

Appendix A

Location: Chemours Company - Fayetteville Works Facility, NC
Source: VEN Carbon Bed Inlet
Project No.: 2022-2899
Run No.: 1
Parameter: HFPO-DA

Meter Pressure (Pm), in. Hg

$$Pm = Pb + \frac{\Delta H}{13.6}$$

where,

Pb	30.02	= barometric pressure, in. Hg
ΔH	1.350	= pressure differential of orifice, in H_2O
Pm	30.12	= in. Hg

Absolute Stack Gas Pressure (Ps), in. Hg

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

where,

Pb	30.02	= barometric pressure, in. Hg
Pg	-3.20	= static pressure, in. H_2O
Ps	29.78	= in. Hg

Standard Meter Volume (Vmstd), dscf

$$Vmstd = \frac{17.636 \times Y \times Vm \times Pm}{Tm}$$

where,

Y	0.997	= meter correction factor
Vm	68.551	= meter volume, cf
Pm	30.12	= absolute meter pressure, in. Hg
Tm	561.3	= absolute meter temperature, ^oR
Vmstd	64.674	= dscf

Standard Wet Volume (Vwstd), scf

$$Vwstd = 0.04716 \times Vlc$$

where,

Vlc	47.1	= volume of H_2O collected, ml
Vwstd	2.221	= scf

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

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

where,

Ts	102.0	= stack temperature, °F
Ps	29.78	= absolute stack gas pressure, in. Hg
BWSsat	0.069	= dimensionless

Moisture Fraction (BWS), dimensionless (measured)

$$BWS = \frac{Vwstd}{(Vwstd + Vmstd)}$$

where,

Vwstd	2.221	= standard wet volume, scf
Vmstd	64.674	= standard meter volume, dscf
BWS	0.033	= dimensionless

Moisture Fraction (BWS), dimensionless

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

where,

BWSsat	0.069	= moisture fraction (theoretical at saturated conditions)
BWSmsd	0.033	= moisture fraction (measured)
BWS	0.033	

Location: Chemours Company - Fayetteville Works Facility, NC
Source: VEN Carbon Bed Inlet
Project No.: 2022-2899
Run No.: 1
Parameter: HFPO-DA

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	0.1	= carbon dioxide concentration, %
O_2	20.9	= oxygen concentration, %
Md	28.85	= lb/lb mol

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

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

where,

Md	28.85	= molecular weight (DRY), lb/lb mol
BWS	0.033	= moisture fraction, dimensionless
Ms	28.49	= 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	0.840	= pitot tube coefficient
$\Delta P^{1/2}$	0.620	= velocity head of stack gas, $(in.\ H_2O)^{1/2}$
Ts	561.7	= absolute stack temperature, °R
Ps	29.78	= absolute stack gas pressure, in. Hg
Ms	28.49	= molecular weight of stack gas, lb/lb mol
Vs	36.2	= ft/sec

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

$$Qa = 60 \times Vs \times As$$

where,

Vs	36.2	= stack gas velocity, ft/sec
As	7.07	= cross-sectional area of stack, ft^2
Qa	15,358	= acfm

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

$$Qs = 17.636 \times Qa \times (1 - BWS) \times \frac{Ps}{Ts}$$

where,

Qa	15,358	= average stack gas flow at stack conditions, acfm
BWS	0.033	= moisture fraction, dimensionless
Ps	29.78	= absolute stack gas pressure, in. Hg
Ts	561.7	= absolute stack temperature, °R
Qs	13,885	= dscfm

Dry Gas Meter Calibration Check (Yqa), dimensionless

$$Yqa = \frac{Y - \left(\frac{\Theta}{Vm}\sqrt{\frac{0.0319 \times Tm \times 29}{\Delta H@ \times \left(Pb + \frac{\Delta\,Havg.}{13.6}\right) \times Md}}\sqrt{\Delta H}\,avg.\right)}{Y} \times 100$$

where,

Y	0.997	= meter correction factor, dimensionless
Θ	96	= run time, min.
Vm	68.551	= total meter volume, dcf
Tm	561.3	= absolute meter temperature, °R
ΔH@	1.581	= orifice meter calibration coefficient, in. H_2O
Pb	30.02	= barometric pressure, in. Hg
ΔH avg	1.350	= average pressure differential of orifice, in H_2O
Md	28.85	= molecular weight (DRY), lb/lb mol
$(\Delta H)^{1/2}$	1.160	= average squareroot pressure differential of orifice, $(in.\ H2O)^{1/2}$
Yqa	-0.2	= dimensionless

Location:	**Chemours Company - Fayetteville Works Facility, NC**
Source:	**VEN Carbon Bed Inlet**
Project No.:	**2022-2899**
Run No.:	**1**
Parameter:	**HFPO-DA**

Volume of Nozzle (Vn), ft^3

$$\mathrm{Vn} = \frac{Ts}{Ps}\left(0.002669 \times Vlc + \frac{\mathrm{Vm} \times Pm \times Y}{Tm}\right)$$

where,

Ts	561.7	= absolute stack temperature, °R
Ps	29.78	= absolute stack gas pressure, in. Hg
Vlc	47.1	= volume of H_2O collected, ml
Vm	68.551	= meter volume, cf
Pm	30.12	= absolute meter pressure, in. Hg
Y	0.997	= meter correction factor, unitless
Tm	561.3	= absolute meter temperature, °R
Vn	71.530	= volume of nozzle, ft^3

Isokinetic Sampling Rate (I), %

$$\mathrm{I} = \left(\frac{\mathrm{Vn}}{\theta \times 60 \times \mathrm{An} \times Vs}\right) \times 100$$

where,

Vn	71.530	= nozzle volume, ft3
θ	96.0	= run time, minutes
An	0.00034	= area of nozzle, ft^2
Vs	36.2	= average velocity, ft/sec
I	100.6	= %

HFPO-DA Concentration (C), ng/dscm

$$C = \frac{M \times 35.313}{Vmstd}$$

where,

M	724,030	= HFPO-DA mass, ng
Vmstd	64.674	= standard meter volume, dscf
C_{NH3}	395350.31	= ng/dscm

HFPO-DA Emission Rate (ER), lb/hr

$$ER = \frac{M \times Qs \times 60}{Vmstd \times 4.54E + 11}$$

where,

M	724,030	= HFPO-DA mass, ng
Qs	13,885	= average stack gas flow at standard conditions, dscfm
Vmstd	64.674	= standard meter volume, dscf
ER	2.06E-02	= lb/hr

Appendix B

Emission Calculations

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Inlet
Project No. 2022-2899
Parameter HFPO-DA

Run Number		Run 1	Run 2	Run 3	Average
Date		8/10/22	8/10/22	8/11/22	--
Start Time		16:40	19:03	8:10	--
Stop Time		18:33	20:58	10:07	--
Run Time, min	(θ)	96.0	96.0	96.0	96.0
INPUT DATA					
Barometric Pressure, in. Hg	(Pb)	30.02	30.02	30.05	30.03
Meter Correction Factor	(Y)	0.997	0.997	0.997	0.997
Orifice Calibration Value	(ΔH @)	1.581	1.581	1.581	1.581
Meter Volume, ft^3	(Vm)	68.551	68.585	66.389	67.842
Meter Temperature, °F	(Tm)	101.7	98.1	88.1	95.9
Meter Temperature, °R	(Tm)	561.3	557.8	547.8	555.6
Meter Orifice Pressure, in. WC	(ΔH)	1.350	1.355	1.304	1.336
Volume H_2O Collected, mL	(Vlc)	47.1	60.7	52.4	53.4
Nozzle Diameter, in	(Dn)	0.250	0.250	0.250	0.250
Area of Nozzle, ft^2	(An)	0.0003	0.0003	0.0003	0.0003
FH HFPO-DA Mass, ng	$M_{(HFPODA)}$	2,750.0	5,200.0	123,000.0	43,650.0
BH HFPO-DA Mass, ng	$M_{(HFPODA)}$	608,000.0	745,000.0	189,000.0	514,000.0
Imp HFPO-DA Mass, ng	$M_{(HFPODA)}$	106,000.0	16,200.0	33,100.0	51,766.7
Breakthrough HFPO-DA Mass, ng	$M_{(HFPODA)}$	7,280.0	165.0	813.0	2,752.67
Total HFPO-DA Mass, ng	$M_{(HFPODA)}$	724,030.0	766,565.0	345,913.0	612,169.3
ISOKINETIC DATA					
Standard Meter Volume, ft^3	(Vmstd)	64.674	65.123	64.244	64.680
Standard Water Volume, ft^3	(Vwstd)	2.221	2.863	2.471	2.518
Moisture Fraction Measured	(BWSmsd)	0.033	0.042	0.037	0.037
Moisture Fraction @ Saturation	(BWSsat)	0.069	0.062	0.047	0.059
Moisture Fraction	(BWS)	0.033	0.042	0.037	0.037
Meter Pressure, in Hg	(Pm)	30.12	30.12	30.15	30.13
Volume at Nozzle, ft^3	(Vn)	71.530	71.188	69.714	70.81
Isokinetic Sampling Rate, (%)	(I)	100.6	100.6	100.7	100.6
DGM Calibration Check Value, (+/- 5%)	(Y_{qa})	-0.2	0.0	-0.4	-0.2
EMISSION CALCULATIONS					
HFPO-DA Concentration, ng/dscm	$C_{(HFPODA)}$	4.0E+05	4.2E+05	1.9E+05	3.3E+05
HFPO-DA Emission Rate, lb/hr	$ER_{(HFPODA)}$	2.1E-02	2.2E-02	9.8E-03	1.7E-02

Underlined values are non-detected reported as the reporting limit.

Volumetric Flow Rate Data

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Inlet
Project No. 2022-2899
Parameter HFPO-DA

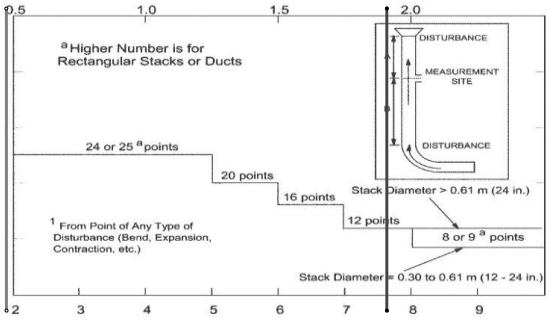
Run Number		Run 1	Run 2	Run 3	Average
Date		8/10/22	8/10/22	8/11/22	--
Start Time		16:40	19:03	8:10	--
Stop Time		18:33	20:58	10:07	--
Run Time, min		96.0	96.0	96.0	96.0
VELOCITY HEAD, in. WC					
Point 1		0.32	0.32	0.32	0.32
Point 2		0.32	0.32	0.35	0.33
Point 3		0.35	0.37	0.37	0.36
Point 4		0.37	0.37	0.37	0.37
Point 5		0.37	0.37	0.38	0.37
Point 6		0.37	0.38	0.38	0.38
Point 7		0.38	0.38	0.38	0.38
Point 8		0.39	0.38	0.38	0.38
Point 9		0.40	0.37	0.36	0.38
Point 10		0.41	0.37	0.36	0.38
Point 11		0.41	0.38	0.36	0.38
Point 12		0.41	0.38	0.36	0.38
Point 13		0.37	0.42	0.32	0.37
Point 14		0.40	0.42	0.32	0.38
Point 15		0.40	0.42	0.45	0.42
Point 16		0.41	0.45	0.45	0.44
Point 17		0.42	0.45	0.45	0.44
Point 18		0.42	0.45	0.45	0.44
Point 19		0.42	0.44	0.45	0.44
Point 20		0.41	0.39	0.34	0.38
Point 21		0.42	0.39	0.34	0.38
Point 22		0.43	0.37	0.34	0.38
Point 23		0.32	0.37	0.34	0.34
Point 24		0.32	0.35	0.34	0.34
CALCULATED DATA					
Square Root of ΔP, $(\text{in. WC})^{1/2}$	(ΔP)	0.620	0.622	0.610	0.617
Pitot Tube Coefficient	(Cp)	0.840	0.840	0.840	0.840
Barometric Pressure, in. Hg	(Pb)	30.02	30.02	30.05	30.03
Static Pressure, in. WC	(Pg)	-3.20	3.10	-3.40	-1.17
Stack Pressure, in. Hg	(Ps)	29.78	30.25	29.80	29.94
Stack Cross-sectional Area, ft^2	(As)	7.07	7.07	7.07	7.07
Temperature, °F	(Ts)	102.0	99.0	89.5	96.8
Temperature, °R	(Ts)	561.7	558.6	549.2	556.517
Moisture Fraction Measured	(BWSmsd)	0.033	0.042	0.037	0.037
Moisture Fraction @ Saturation	(BWSsat)	0.069	0.062	0.047	0.059
Moisture Fraction	(BWS)	0.033	0.042	0.037	0.037
O_2 Concentration, %	(O_2)	20.9	20.9	20.9	20.9
CO_2 Concentration, %	(CO_2)	0.1	0.1	0.1	0.1
Molecular Weight, lb/lb-mole (dry)	(Md)	28.85	28.85	28.85	28.85
Molecular Weight, lb/lb-mole (wet)	(Ms)	28.49	28.40	28.45	28.45
Velocity, ft/sec	(Vs)	36.2	36.0	35.3	35.8
VOLUMETRIC FLOW RATE					
At Stack Conditions, acfm	(Qa)	15,358	15,282	14,953	15,198
At Standard Conditions, dscfm	(Qs)	13,885	13,979	13,779	13,881

Method 1 Data

Location	**Chemours Company - Fayetteville Works Facility, NC**
Source	**VEN Carbon Bed Inlet**
Project No.	**2022-2899**
Date:	**08/09/22**

Stack Parameters

Duct Orientation:	Horizontal	
Duct Design:	Circular	
Distance from Far Wall to Outside of Port:	51.13	**in**
Nipple Length:	15.13	**in**
Depth of Duct:	36.00	**in**
Cross Sectional Area of Duct:	7.07	**ft²**
No. of Test Ports:	2	
Distance A:	5.7	**ft**
Distance A Duct Diameters:	1.9	**(must be > 0.5)**
Distance B:	5.7	**ft**
Distance B Duct Diameters:	1.9	**(must be > 2)**
Minimum Number of Traverse Points:	24	
Actual Number of Traverse Points:	24	
Number of Readings per Point:	1	
Measurer (Initial and Date):	JS-8/9/22	
Reviewer (Initial and Date):	AA-8/9/22	



CIRCULAR DUCT

LOCATION OF TRAVERSE POINTS

Number of traverse points on a diameter

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

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

Traverse Point	% of Diameter	Distance from inside wall	Distance from outside of port
1	2.1	1.00	16.13
2	6.7	2.41	17.54
3	11.8	4.25	19.37
4	17.7	6.37	21.50
5	25.0	9.00	24.13
6	35.6	12.82	27.94
7	64.4	23.18	38.31
8	75.0	27.00	42.13
9	82.3	29.63	44.75
10	88.2	31.75	46.88
11	93.3	33.59	48.71
12	97.9	35.00	50.13

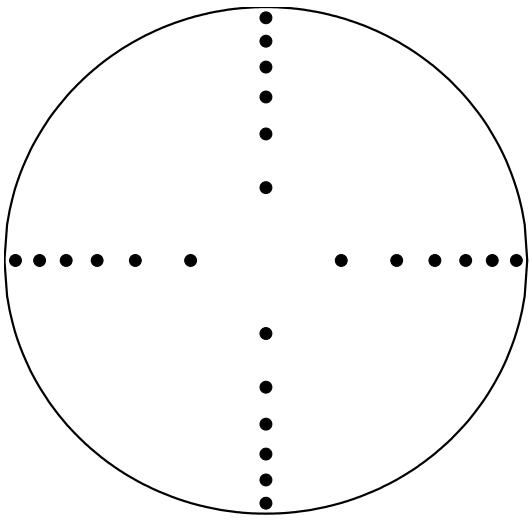
Stack Diagram

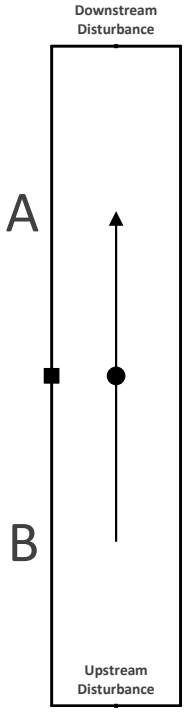
A = 5.7 ft.

B = 5.7 ft.

Depth of Duct = 36 in.

Cross Sectional Area





Cyclonic Flow Check

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Inlet
Project No. 2022-2899
Date 08/09/22

Sample Point	Angle (ΔP=0)
1	10
2	10
3	12
4	8
5	8
6	10
7	10
8	14
9	10
10	10
11	8
12	8
13	8
14	6
15	10
16	10
17	10
18	8
19	8
20	10
21	8
22	8
23	6
24	6
Average	9

Method 4 Data

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Inlet
Project No. 2022-2899
Parameter HFPO-DA
Analysis Gravimetric

Run 1	**Date:**	8/10/22							
Impinger No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Total**
Contents	XAD Trap	Empty	H2O	H2O	H2O	Empty	XAD Trap	Silica	--
Initial Mass, g	298.9	531.7	750.7	755.2	748.6	514.9	305.8	855.4	4761.2
Final Mass, g	320.2	540	747.5	754.7	749.2	517.3	312.5	866.9	4808.3
Gain	21.3	8.3	-3.2	-0.5	0.6	2.4	6.7	11.5	47.1
Run 2	**Date:**	8/10/22							
Impinger No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Total**
Contents	XAD Trap	Empty	H2O	H2O	H2O	Empty	XAD Trap	Silica	--
Initial Mass, g	296.4	469.2	780.7	760.6	738.2	476.1	294.3	866.4	4681.9
Final Mass, g	322.7	477.5	780.6	758.8	738.6	477.6	308.6	878.2	4742.6
Gain	26.3	8.3	-0.1	-1.8	0.4	1.5	14.3	11.8	60.7
Run 3	**Date:**	8/11/22							
Impinger No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Total**
Contents	XAD Trap	Empty	H2O	H2O	H2O	Empty	XAD Trap	Silica	--
Initial Mass, g	313.0	532.4	766.9	768.6	748.6	515.2	314.8	829.9	4789.4
Final Mass, g	333.9	541.8	765.2	769.1	748.4	516.8	324.6	842	4841.8
Gain	20.9	9.4	-1.7	0.5	-0.2	1.6	9.8	12.1	52.4

Alliance SOURCE TESTING

Isokinetic Field Data

Location:	Chemours Company - Fayetteville Works Facility, N	**Start Time:**	16:40	**Source:**	VEN Carbon Bed Inlet
Date:	8/10/22 — Run 1 — VALID	**End Time:**	18:33	**Project No.:**	2022-2899 — **Parameter:** HFPO-DA

STACK DATA (EST)			EQUIPMENT			STACK DATA (EST)		FILTER NO.	STACK DATA (FINAL)		MOIST. DATA
Moisture:	2.0	% est.	Meter Box ID:	MB #4		Est. Tm:	100 °F		Pb:	30.02 in. Hg	Vlc (ml)
Barometric:	30.04	in. Hg	Y:	0.997		Est. Ts:	90 °F		Pg:	-3.20 in. WC	47.1
Static Press:	-8.60	in. WC	ΔH @ (in.WC):	1.581		Est. ΔP:	0.45 in. WC		O_2:	20.9 %	K-FACTOR
Stack Press:	29.41	in. Hg	Probe ID:	TC 7D		Est. Dn:	0.251 in.		CO_2:	0.1 %	3.545
CO_2:	0.1	%	Liner Material:	glass		Target Rate:	0.78 scfm			Check Pt. / Initial / Final / Corr.	
O_2:	20.9	%	Pitot ID:	P4-1		LEAK CHECK	Pre / Mid 1 / Mid 2 / Mid 3 / Post			Mid 1 (cf) 65.065 65.341 0.276	
N_2/CO:	79.0	%	Pitot Cp/Type:	0.840	S-type	Leak Rate (cfm):	0.000 / 0.001 / 0.001 / -- / 0.001			Mid 2 (cf) --	
Md:	28.85	lb/lb-mole	Nozzle ID:	GL-4	glass	Vacuum (in Hg):	6 / 10 / 10 / -- / 12			Mid 3 (cf) --	
Ms:	28.63	lb/lb-mole	Nozzle Dn (in.):	0.250		Pitot Tube:	Pass / -- / -- / -- / Pass			Mid-Point Leak Check Vol (cf): 0.276	

Sample Pt.	Sample Time (minutes) Begin	End	Dry Gas Meter Reading (ft^3)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F) DGM Average Amb.	Stack Amb.	Orifice Press. ΔH (in. WC) Ideal	Actual	Pump Vac (in. Hg)	Gas Temperatures (°F) Probe Amb.	Filter Amb.	Imp Exit Amb.	Aux Amb.	% ISO	Vs (fps)
A-1	0.00	4.00	31.212	0.32	101	102	1.11	1.15	4	105	106	65	66	103.4	33.18
2	4.00	8.00	33.900	0.32	100	102	1.11	1.10	4	105	105	65	56	102.1	33.18
3	8.00	12.00	36.550	0.35	100	102	1.22	1.20	4	105	105	65	57	101.3	34.70
4	12.00	16.00	39.300	0.37	101	102	1.29	1.30	4	105	105	65	55	100.2	35.67
5	16.00	20.00	42.100	0.37	101	102	1.29	1.30	5	105	105	59	54	107.3	35.67
6	20.00	24.00	45.100	0.37	101	102	1.29	1.30	5	105	105	59	54	100.2	35.67
7	24.00	28.00	47.900	0.38	101	102	1.32	1.30	5	105	105	59	55	95.3	36.15
8	28.00	32.00	50.600	0.39	102	102	1.36	1.35	5	105	105	57	53	104.4	36.63
9	32.00	36.00	53.600	0.40	102	102	1.39	1.40	5	105	105	57	53	92.8	37.09
10	36.00	40.00	56.300	0.41	102	102	1.43	1.45	5	105	105	57	53	101.8	37.55
11	40.00	44.00	59.300	0.41	102	102	1.43	1.45	5	105	105	60	54	98.4	37.55
12	44.00	48.00	62.200	0.41	102	102	1.43	1.45	5	105	105	60	54	97.2	37.55
B-1	48.00	52.00	65.065	0.37	101	103	1.28	1.30	6	106	110	65	52	105.1	35.71
2	52.00	56.00	68.000	0.40	101	102	1.39	1.40	6	105	110	62	51	103.3	37.09
3	56.00	60.00	71.000	0.40	101	102	1.39	1.40	6	106	107	61	52	101.5	37.09
4	60.00	64.00	73.950	0.41	101	102	1.43	1.45	6	101	105	61	50	98.6	37.55
5	64.00	68.00	76.850	0.42	101	102	1.46	1.50	7	103	104	61	48	100.8	38.01
6	68.00	72.00	79.850	0.42	101	102	1.46	1.50	7	103	105	61	49	95.8	38.01
7	72.00	76.00	82.700	0.42	101	102	1.46	1.50	7	106	106	62	50	104.2	38.01
8	76.00	80.00	85.800	0.41	102	102	1.43	1.40	7	107	106	62	49	98.4	37.55
9	80.00	84.00	88.700	0.42	102	102	1.46	1.50	7	107	105	63	49	100.6	38.01
10	84.00	88.00	91.700	0.43	104	102	1.50	1.50	7	108	105	63	49	99.1	38.46
11	88.00	92.00	94.700	0.32	105	102	1.12	1.10	7	108	105	63	50	99.3	33.18
12	92.00	96.00	97.300	0.32	105	102	1.12	1.10	7	108	105	63	50	104.6	33.18
	Final DGM:		100.039												

RESULTS	Run Time	Vm	ΔP	Tm	Ts	Max Vac	ΔH	%ISO	BWS	Y_{qa}
	96.0 min	68.551 ft^3	0.39 in. WC	101.7 °F	102.0 °F	7	1.350 in. WC	100.6	0.033	-0.2

Alliance SOURCE TESTING

Isokinetic Field Data

Location:	Chemours Company - Fayetteville Works Facility, N		**Start Time:**	19:03	**Source:**	VEN Carbon Bed Inlet	
Date:	8/10/22	Run 2 VALID	**End Time:**	20:58	**Project No.:**	2022-2899	**Parameter:** HFPO-DA

STACK DATA (EST)			EQUIPMENT			STACK DATA (EST)		FILTER NO.	STACK DATA (FINAL)		MOIST. DATA
Moisture:	2.0	% est.	Meter Box ID:	MB #4		Est. Tm:	102 °F		Pb:	30.02 in. Hg	Vlc (ml)
Barometric:	30.04	in. Hg	Y:	0.997		Est. Ts:	102 °F		Pg:	3.10 in. WC	60.7
Static Press:	-8.60	in. WC	ΔH @ (in.WC):	1.581		Est. ΔP:	0.39 in. WC		O_2:	20.9 %	K-FACTOR
Stack Press:	29.41	in. Hg	Probe ID:	TC 7D		Est. Dn:	0.262 in.		CO_2:	0.1 %	3.48
CO_2:	0.1	%	Liner Material:	glass		Target Rate:	0.78 scfm			Check Pt. Initial Final Corr.	
O_2:	20.9	%	Pitot ID:	P4-1		LEAK CHECK	Pre Mid 1 Mid 2 Mid 3 Post			Mid 1 (cf) 133.460 133.905 0.445	
N_2/CO:	79.0	%	Pitot Cp/Type:	0.840	S-type	Leak Rate (cfm):	0.001 0.001 0.001 0.002			Mid 2 (cf) --	
Md:	28.85	lb/lb-mole	Nozzle ID:	GL-4	glass	Vacuum (in Hg):	10 10 10 12			Mid 3 (cf) --	
Ms:	28.63	lb/lb-mole	Nozzle Dn (in.):	0.250		Pitot Tube:	Pass -- -- -- Pass			Mid-Point Leak Check Vol (cf): 0.445	

Sample Pt.	Sample Time (minutes) Begin	End	Dry Gas Meter Reading (ft^3)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F) DGM Average Amb. --	Stack Amb. --	Orifice Press. ΔH (in. WC) Ideal	Actual	Pump Vac (in. Hg)	Gas Temperatures (°F) Probe Amb. --	Filter Amb. --	Imp Exit Amb. --	Aux Amb. --	% ISO	Vs (fps)
A-1	0.00	4.00	100.146	0.32	97	100	1.11	1.10	4	104	109	64	51	102.6	33.12
2	4.00	8.00	102.800	0.32	97	100	1.11	1.10	4	104	109	64	51	104.4	33.12
3	8.00	12.00	105.500	0.37	97	100	1.28	1.30	4	108	104	54	48	104.3	35.61
4	12.00	16.00	108.400	0.37	97	100	1.28	1.30	4	105	104	54	48	100.7	35.61
5	16.00	20.00	111.200	0.37	97	100	1.28	1.30	4	109	105	54	47	97.1	35.61
6	20.00	24.00	113.900	0.38	97	100	1.32	1.30	4	104	105	54	46	106.5	36.09
7	24.00	28.00	116.900	0.38	97	100	1.32	1.30	4	106	105	54	46	95.8	36.09
8	28.00	32.00	119.600	0.38	97	100	1.32	1.30	4	108	105	54	46	106.5	36.09
9	32.00	36.00	122.600	0.37	97	100	1.28	1.30	4	108	105	54	46	93.5	35.61
10	36.00	40.00	125.200	0.37	97	100	1.28	1.30	4	107	105	54	46	100.7	35.61
11	40.00	44.00	128.000	0.38	98	100	1.32	1.30	4	107	105	54	48	102.8	36.09
12	44.00	48.00	130.900	0.38	98	100	1.32	1.30	4	108	105	54	48	90.7	36.09
B-1	48.00	52.00	133.460	0.42	99	97	1.47	1.50	4	108	105	54	48	105.4	37.84
2	52.00	56.00	136.600	0.42	99	98	1.47	1.50	4	108	105	54	46	97.4	37.87
3	56.00	60.00	139.500	0.42	99	98	1.47	1.42	4	108	105	54	42	100.8	37.87
4	60.00	64.00	142.500	0.45	100	98	1.57	1.60	5	106	105	54	42	107.0	39.20
5	64.00	68.00	145.800	0.45	99	98	1.57	1.60	5	99	104	54	46	97.4	39.20
6	68.00	72.00	148.800	0.45	99	98	1.57	1.60	5	99	104	54	46	97.4	39.20
7	72.00	76.00	151.800	0.44	99	98	1.53	1.55	5	99	104	54	46	98.5	38.76
8	76.00	80.00	154.800	0.39	99	98	1.36	1.35	5	99	103	54	46	101.1	36.50
9	80.00	84.00	157.700	0.39	99	98	1.36	1.35	5	99	103	54	46	104.6	36.50
10	84.00	88.00	160.700	0.37	99	98	1.29	1.30	5	99	103	54	46	96.6	35.55
11	88.00	92.00	163.400	0.37	99	98	1.29	1.30	5	99	103	54	46	100.2	35.55
12	92.00	96.00	166.200	0.35	98	98	1.22	1.25	5	99	103	54	46	109.7	34.57
	Final DGM:		169.176												

RESULTS	Run Time	Vm	ΔP	Tm	Ts	Max Vac	ΔH	%ISO	BWS	Y_{qa}
	96.0 min	68.585 ft^3	0.39 in. WC	98.1 °F	99.0 °F	5	1.355 in. WC	100.6	0.042	0.0

Alliance SOURCE TESTING

Isokinetic Field Data

Location:	Chemours Company - Fayetteville Works Facility, N		**Start Time:**	8:10	**Source:** VEN Carbon Bed Inlet
Date:	8/11/22	Run 3 VALID	**End Time:**	10:07	**Project No.:** 2022-2899 **Parameter:** HFPO-DA

STACK DATA (EST)			EQUIPMENT			STACK DATA (EST)			FILTER NO.	STACK DATA (FINAL)			MOIST. DATA
Moisture:	2.0	% est.	Meter Box ID:	MB #4		Est. Tm:	98	°F		Pb:	30.05	in. Hg	Vlc (ml)
Barometric:	30.04	in. Hg	Y:	0.997		Est. Ts:	99	°F		Pg:	-3.40	in. WC	52.4
Static Press:	-8.60	in. WC	ΔH @ (in.WC):	1.581		Est. ΔP:	0.39	in. WC		O_2:	20.9	%	K-FACTOR
Stack Press:	29.41	in. Hg	Probe ID:	TC 7D		Est. Dn:	0.262	in.		CO_2:	0.1	%	3.476
CO_2:	0.1	%	Liner Material:	glass		Target Rate:	0.78	scfm			Check Pt.	Initial	Final	Corr.
O_2:	20.9	%	Pitot ID:	P4-1		LEAK CHECK	Pre	Mid 1	Mid 2 / Mid 3	Post	Mid 1 (cf)	201.867	202.185	0.318
N_2/CO:	79.0	%	Pitot Cp/Type:	0.840	S-type	Leak Rate (cfm):	0.000		0.000	0.000	Mid 2 (cf)			--
Md:	28.85	lb/lb-mole	Nozzle ID:	GL-4	glass	Vacuum (in Hg):	5		8	8	Mid 3 (cf)			--
Ms:	28.63	lb/lb-mole	Nozzle Dn (in.):	0.250		Pitot Tube:	Pass	--	-- --	Pass	Mid-Point Leak Check Vol (cf):			0.318

Sample Pt.	Sample Time (minutes) Begin	End	Dry Gas Meter Reading (ft^3)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F) DGM Average Amb. --	Stack Amb. --	Orifice Press. ΔH (in. WC) Ideal	Actual	Pump Vac (in. Hg)	Gas Temperatures (°F) Probe Amb. --	Filter Amb. --	Imp Exit Amb. --	Aux Amb. --	% ISO	Vs (fps)
A-1	0.00	4.00	169.301	0.32	81	88	1.10	1.10	3	99	100	59	40	102.3	32.76
2	4.00	8.00	171.900	0.35	81	88	1.20	1.20	3	85	100	45	41	97.9	34.26
3	8.00	12.00	174.500	0.37	81	88	1.27	1.30	3	83	100	45	39	98.9	35.23
4	12.00	16.00	177.200	0.37	82	89	1.27	1.30	3	84	100	47	40	102.5	35.26
5	16.00	20.00	180.000	0.38	82	89	1.31	1.30	3	84	100	47	40	93.9	35.73
6	20.00	24.00	182.600	0.38	84	88	1.31	1.30	4	100	100	48	40	107.9	35.70
7	24.00	28.00	185.600	0.38	85	89	1.31	1.30	4	100	100	49	42	100.6	35.73
8	28.00	32.00	188.400	0.38	85	89	1.31	1.30	4	100	100	50	43	97.0	35.73
9	32.00	36.00	191.100	0.36	86	89	1.25	1.25	4	100	100	49	41	92.1	34.78
10	36.00	40.00	193.600	0.36	86	89	1.25	1.25	5	100	101	49	41	99.5	34.78
11	40.00	44.00	196.300	0.36	88	89	1.25	1.25	5	96	101	49	42	100.9	34.78
12	44.00	48.00	199.050	0.36	89	89	1.25	1.25	5	96	102	49	42	103.2	34.78
B-1	48.00	52.00	201.867	0.32	89	89	1.12	1.10	4	96	105	62	42	106.2	32.79
2	52.00	56.00	204.600	0.32	89	89	1.12	1.10	4	100	105	51	40	101.0	32.79
3	56.00	60.00	207.200	0.45	90	90	1.57	1.60	7	105	105	51	40	95.0	38.92
4	60.00	64.00	210.100	0.45	90	90	1.57	1.60	7	105	104	56	43	104.8	38.92
5	64.00	68.00	213.300	0.45	91	90	1.57	1.60	7	105	104	56	43	104.7	38.92
6	68.00	72.00	216.500	0.45	91	90	1.57	1.60	7	100	105	56	43	94.8	38.92
7	72.00	76.00	219.400	0.45	92	91	1.57	1.60	7	100	105	57	43	101.3	38.96
8	76.00	80.00	222.500	0.34	92	91	1.19	1.20	6	97	105	58	43	105.2	33.86
9	80.00	84.00	225.300	0.34	95	91	1.19	1.20	6	97	105	58	45	108.3	33.86
10	84.00	88.00	228.200	0.34	95	91	1.19	1.20	6	96	105	59	47	108.3	33.86
11	88.00	92.00	231.100	0.34	95	91	1.19	1.20	6	96	105	59	47	93.4	33.86
12	92.00	96.00	233.600	0.34	95	92	1.19	1.20	6	96	105	59	47	90.0	33.89
	Final DGM:		236.008												

RESULTS	Run Time		Vm		ΔP		Tm		Ts		Max Vac	ΔH		%ISO	BWS	Y_{qa}
	96.0	min	66.389	ft^3	0.37	in. WC	88.1	°F	89.5	°F	7	1.304	in. WC	100.7	0.037	-0.4

Emission Calculations

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Outlet
Project No. 2022-2899
Parameter HFPO-DA

Run Number		Run 1	Run 2	Run 3	Average
Date		8/10/22	8/10/22	8/11/22	--
Start Time		16:40	19:03	8:10	--
Stop Time		18:32	20:58	10:06	--
Run Time, min	(θ)	96.0	96.0	96.0	96.0
INPUT DATA					
Barometric Pressure, in. Hg	(Pb)	30.02	30.02	30.05	30.03
Meter Correction Factor	(Y)	1.001	1.001	1.001	1.001
Orifice Calibration Value	(ΔH @)	1.841	1.841	1.841	1.841
Meter Volume, ft^3	(Vm)	69.882	71.914	67.306	69.701
Meter Temperature, °F	(Tm)	100.9	101.8	94.3	99.0
Meter Temperature, °R	(Tm)	560.6	561.5	554.0	558.7
Meter Orifice Pressure, in. WC	(ΔH)	1.636	1.729	1.533	1.633
Volume H_2O Collected, mL	(Vlc)	37.8	52.7	87.9	59.5
Nozzle Diameter, in	(Dn)	0.249	0.249	0.249	0.249
Area of Nozzle, ft^2	(An)	0.0003	0.0003	0.0003	0.0003
FH HFPO-DA Mass, ng	$M_{(HFPODA)}$	76,900.0	78,100.0	10,000.0	55,000.0
BH HFPO-DA Mass, ng	$M_{(HFPODA)}$	156.0	14,300.0	173.0	4,876.3
Imp HFPO-DA Mass, ng	$M_{(HFPODA)}$	34.6	2,060.0	37.0	710.5
Breakthrough HFPO-DA Mass, ng	$M_{(HFPODA)}$	--	162.0	--	162.00
Total HFPO-DA Mass, ng	$M_{(HFPODA)}$	77,090.6	94,622.0	10,210.0	60,640.9
ISOKINETIC DATA					
Standard Meter Volume, ft^3	(Vmstd)	66.329	68.167	64.696	66.397
Standard Water Volume, ft^3	(Vwstd)	1.783	2.485	4.144	2.804
Moisture Fraction Measured	(BWSmsd)	0.026	0.035	0.060	0.041
Moisture Fraction @ Saturation	(BWSsat)	0.065	0.068	0.053	0.062
Moisture Fraction	(BWS)	0.026	0.035	0.053	0.038
Meter Pressure, in Hg	(Pm)	30.14	30.15	30.16	30.15
Volume at Nozzle, ft^3	(Vn)	71.589	74.521	71.445	72.52
Isokinetic Sampling Rate, (%)	(I)	102.6	103.6	105.6	103.9
DGM Calibration Check Value, (+/- 5%)	(Y_{qa})	2.3	2.0	2.5	2.3
EMISSION CALCULATIONS					
HFPO-DA Concentration, ng/dscm	$C_{(HFPODA)}$	4.1E+04	4.9E+04	5.6E+03	3.2E+04
HFPO-DA Emission Rate, lb/hr	$ER_{(HFPODA)}$	2.2E-03	2.6E-03	2.8E-04	1.7E-03
REDUCTION CALCULATIONS					
Inlet HFPO-DA Emission Rate, lb/hr	$RE_{(HFPODA)}$	2.1E-02	2.2E-02	9.8E-03	1.7E-02
HFPO-DA Reduction Efficiency, %	$RE_{(HFPODA)}$	89.5	87.9	97.2	91.5

Underlined values are non-detect and are reported as the reporting limit.

Volumetric Flow Rate Data

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Outlet
Project No. 2022-2899
Parameter HFPO-DA

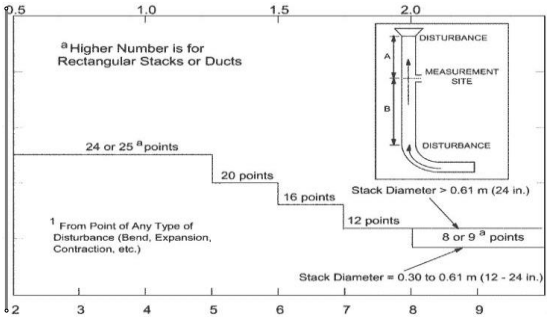
Run Number		Run 1	Run 2	Run 3	Average
Date		8/10/22	8/10/22	8/11/22	--
Start Time		16:40	19:03	8:10	--
Stop Time		18:32	20:58	10:06	--
Run Time, min		96.0	96.0	96.0	96.0
VELOCITY HEAD, in. WC					
Point 1		0.42	0.38	0.37	0.39
Point 2		0.42	0.38	0.39	0.40
Point 3		0.45	0.48	0.45	0.46
Point 4		0.45	0.47	0.47	0.46
Point 5		0.44	0.47	0.47	0.46
Point 6		0.39	0.47	0.43	0.43
Point 7		0.38	0.44	0.32	0.38
Point 8		0.30	0.29	0.28	0.29
Point 9		0.30	0.27	0.28	0.28
Point 10		0.30	0.27	0.27	0.28
Point 11		0.25	0.27	0.25	0.26
Point 12		0.25	0.27	0.27	0.26
Point 13		0.76	0.60	0.48	0.61
Point 14		0.74	0.60	0.48	0.61
Point 15		0.74	0.60	0.73	0.69
Point 16		0.65	0.75	0.71	0.70
Point 17		0.56	0.74	0.63	0.64
Point 18		0.50	0.52	0.49	0.50
Point 19		0.22	0.50	0.25	0.32
Point 20		0.22	0.50	0.21	0.31
Point 21		0.23	0.22	0.18	0.21
Point 22		0.22	0.20	0.18	0.20
Point 23		0.24	0.20	0.18	0.21
Point 24		0.20	0.21	0.18	0.20
CALCULATED DATA					
Square Root of ΔP, (in. WC)$^{1/2}$	(ΔP)	0.619	0.636	0.597	0.617
Pitot Tube Coefficient	(Cp)	0.840	0.840	0.840	0.840
Barometric Pressure, in. Hg	(Pb)	30.02	30.02	30.05	30.03
Static Pressure, in. WC	(Pg)	2.70	2.50	2.80	2.67
Stack Pressure, in. Hg	(Ps)	30.22	30.20	30.26	30.23
Stack Cross-sectional Area, ft^2	(As)	7.07	7.07	7.07	7.07
Temperature, °F	(Ts)	100.5	102.2	94.2	99.0
Temperature, °R	(Ts)	560.2	561.9	553.8	558.628
Moisture Fraction Measured	(BWSmsd)	0.026	0.035	0.060	0.041
Moisture Fraction @ Saturation	(BWSsat)	0.065	0.068	0.053	0.062
Moisture Fraction	(BWS)	0.026	0.035	0.053	0.038
O_2 Concentration, %	(O_2)	20.9	20.9	20.9	20.9
CO_2 Concentration, %	(CO_2)	0.1	0.1	0.1	0.1
Molecular Weight, lb/lb-mole (dry)	(Md)	28.85	28.85	28.85	28.85
Molecular Weight, lb/lb-mole (wet)	(Ms)	28.57	28.47	28.28	28.44
Velocity, ft/sec	(Vs)	35.8	36.9	34.5	35.7
VOLUMETRIC FLOW RATE					
At Stack Conditions, acfm	(Qa)	15,193	15,664	14,627	15,161
At Standard Conditions, dscfm	(Qs)	14,076	14,327	13,344	13,916

Method 1 Data

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Outlet
Project No. 2022-2899
Date: 08/09/22

Stack Parameters

Duct Orientation:	Horizontal	
Duct Design:	Circular	
Distance from Far Wall to Outside of Port:	51.13	in
Nipple Length:	15.13	in
Depth of Duct:	36.00	in
Cross Sectional Area of Duct:	7.07	ft^2
No. of Test Ports:	2	
Distance A:	4.8	ft
Distance A Duct Diameters:	4.8	(must be > 0.5)
Distance B:	5.7	ft
Distance B Duct Diameters:	1.9	(must be > 2)
Minimum Number of Traverse Points:	24	
Actual Number of Traverse Points:	24	
Number of Readings per Point:	1	
Measurer (Initial and Date):	JS-8/9/22	
Reviewer (Initial and Date):	AA-8/9/22	



CIRCULAR DUCT

LOCATION OF TRAVERSE POINTS

Number of traverse points on a diameter

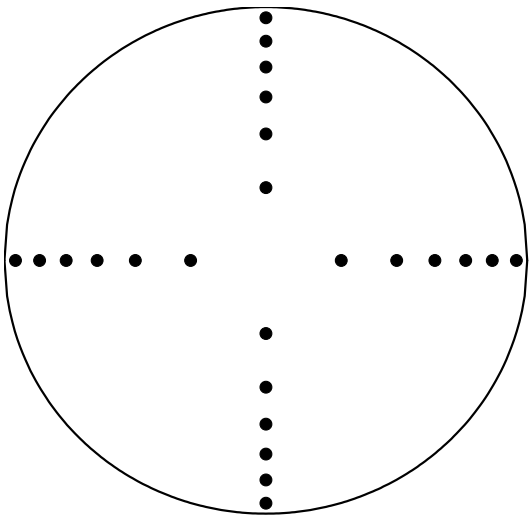
	2	3	4	5	6	7	8	9	10	11	12
1	14.6	--	6.7	--	4.4	--	3.2	--	2.6	--	2.1
2	85.4	--	25.0	--	14.6	--	10.5	--	8.2	--	6.7
3	--	--	75.0	--	29.6	--	19.4	--	14.6	--	11.8
4	--	--	93.3	--	70.4	--	32.3	--	22.6	--	17.7
5	--	--	--	--	85.4	--	67.7	--	34.2	--	25.0
6	--	--	--	--	95.6	--	80.6	--	65.8	--	35.6
7	--	--	--	--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

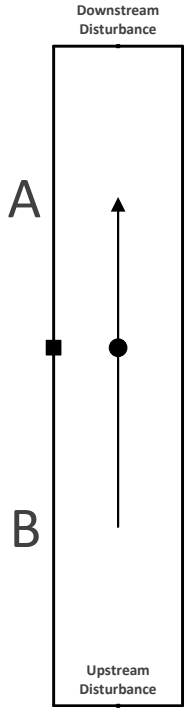
**Percent of stack diameter from inside wall to traverse point.*

Traverse Point	% of Diameter	Distance from inside wall	Distance from outside of port
1	2.1	1.00	16.13
2	6.7	2.41	17.54
3	11.8	4.25	19.37
4	17.7	6.37	21.50
5	25.0	9.00	24.13
6	35.6	12.82	27.94
7	64.4	23.18	38.31
8	75.0	27.00	42.13
9	82.3	29.63	44.75
10	88.2	31.75	46.88
11	93.3	33.59	48.71
12	97.9	35.00	50.13

Stack Diagram
A = 4.8 ft.
B = 5.7 ft.
Depth of Duct = 36 in.

Cross Sectional Area





Cyclonic Flow Check

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Outlet
Project No. 2022-2899
Date 08/09/22

Sample Point	Angle (ΔP=0)
1	12
2	10
3	8
4	8
5	10
6	12
7	12
8	8
9	10
10	10
11	10
12	8
13	10
14	15
15	15
16	12
17	12
18	15
19	8
20	8
21	10
22	4
23	6
24	6
Average	10

Method 4 Data

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Outlet
Project No. 2022-2899
Parameter HFPO-DA
Analysis Gravimetric

Run 1	**Date:**	8/10/22							
Impinger No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Total**
Contents	XAD Trap	Empty	H2O	H2O	H2O	Empty	XAD Trap	Silica	--
Initial Mass, g	316.1	506.6	754.4	756.8	752.4	477.4	319.9	859.4	4743.0
Final Mass, g	334	516	749.6	756.2	752.8	475.2	323.3	873.7	4780.8
Gain	17.9	9.4	-4.8	-0.6	0.4	-2.2	3.4	14.3	37.8
Run 2	**Date:**	8/10/22							
Impinger No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Total**
Contents	XAD Trap	Empty	H2O	H2O	H2O	Empty	XAD Trap	Silica	--
Initial Mass, g	332.2	499.3	756.1	788.6	755.4	467.5	386.9	858	4844.0
Final Mass, g	354	505.8	755.7	786.2	755.4	469.2	398.7	871.7	4896.7
Gain	21.8	6.5	-0.4	-2.4	0.0	1.7	11.8	13.7	52.7
Run 3	**Date:**	8/11/22							
Impinger No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Total**
Contents	XAD Trap	Empty	H2O	H2O	H2O	Empty	XAD Trap	Silica	--
Initial Mass, g	302.5	508.1	757.8	767.5	752.6	478.5	269.9	844.8	4681.7
Final Mass, g	325.1	518	757.1	768.4	752.8	480.8	310.6	856.8	4769.6
Gain	22.6	9.9	-0.7	0.9	0.2	2.3	40.7	12.0	87.9

Alliance SOURCE TESTING

Isokinetic Field Data

Location:	Chemours Company - Fayetteville Works Facility, N	**Start Time:**	16:40	**Source:**	VEN Carbon Bed Outlet
Date:	8/10/22 — Run 1 — VALID	**End Time:**	18:32	**Project No.:**	2022-2899 — **Parameter:** HFPO-DA

STACK DATA (EST)			EQUIPMENT			STACK DATA (EST)			FILTER NO.	STACK DATA (FINAL)			MOIST. DATA
Moisture:	2.0	% est.	Meter Box ID:	MB7		Est. Tm:	110	°F		Pb:	30.02	in. Hg	Vlc (ml)
Barometric:	30.02	in. Hg	Y:	1.001		Est. Ts:	90	°F		Pg:	2.70	in. WC	37.8
Static Press:	2.80	in. WC	ΔH @ (in.WC):	1.841		Est. ΔP:	0.44	in. WC		O_2:	20.9	%	K-FACTOR
Stack Press:	30.23	in. Hg	Probe ID:	TC-5D		Est. Dn:	0.249	in.		CO_2:	0.1	%	4.250
CO_2:	0.1	%	Liner Material:	glass		Target Rate:	0.78	scfm			Check Pt.	Initial	Final / Corr.
O_2:	20.9	%	Pitot ID:	P4-2		LEAK CHECK	Pre	Mid 1	Mid 2 / Mid 3	Post	Mid 1 (cf)	292.541	292.664 / 0.123
N_2/CO:	79.0	%	Pitot Cp/Type:	0.840	S-type	Leak Rate (cfm):	0.000	0.000	0.000	0.000	Mid 2 (cf)		--
Md:	28.85	lb/lb-mole	Nozzle ID:	GL-3	glass	Vacuum (in Hg):	15	15	15	15	Mid 3 (cf)		--
Ms:	28.63	lb/lb-mole	Nozzle Dn (in.):	0.249		Pitot Tube:	Pass	--	-- / --	Pass	Mid-Point Leak Check Vol (cf):		0.123

Sample Pt.	Sample Time (minutes) Begin	End	Dry Gas Meter Reading (ft^3)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F) DGM Average Amb. 100	Stack Amb. 98	Orifice Press. ΔH (in. WC) Ideal	Actual	Pump Vac (in. Hg)	Gas Temperatures (°F) Probe Amb. 100	Filter Amb. 104	Imp Exit Amb.	Aux Amb.	% ISO	Vs (fps)
A-1	0.00	4.00	258.651	0.42	100	98	1.73	1.70	6	103	103	55	53	102.1	37.36
2	4.00	8.00	261.700	0.42	100	98	1.73	1.70	6	103	103	55	51	97.1	37.36
3	8.00	12.00	264.600	0.45	100	98	1.85	1.90	6	103	103	56	51	103.5	38.67
4	12.00	16.00	267.800	0.45	100	98	1.85	1.90	6	105	103	56	49	100.3	38.67
5	16.00	20.00	270.900	0.44	100	98	1.81	1.80	7	105	103	57	49	101.4	38.24
6	20.00	24.00	274.000	0.39	101	98	1.61	1.60	6	103	103	58	50	104.0	36.00
7	24.00	28.00	277.000	0.38	102	98	1.57	1.60	6	103	104	58	53	101.7	35.53
8	28.00	32.00	279.900	0.30	102	98	1.24	1.20	6	103	104	60	55	102.5	31.57
9	32.00	36.00	282.500	0.30	102	99	1.24	1.20	6	103	103	61	56	106.5	31.60
10	36.00	40.00	285.200	0.30	102	99	1.24	1.20	6	103	103	62	58	98.6	31.60
11	40.00	44.00	287.700	0.25	104	99	1.04	1.00	6	102	103	62	58	103.3	28.85
12	44.00	48.00	290.100	0.25	104	99	1.04	1.00	5	103	103	62	59	105.1	28.85
B-1	48.00	52.00	292.541	0.76	100	100	3.11	3.10	9	103	103	58	50	101.5	50.34
2	52.00	56.00	296.600	0.74	100	100	3.03	3.00	9	103	103	58	50	98.6	49.68
3	56.00	60.00	300.490	0.74	101	102	3.02	3.00	10	104	103	56	46	103.9	49.76
4	60.00	64.00	304.590	0.65	100	103	2.65	2.60	10	106	103	54	46	103.2	46.68
5	64.00	68.00	308.400	0.56	100	103	2.28	2.30	10	105	103	50	45	103.5	43.33
6	68.00	72.00	311.950	0.50	100	104	2.04	2.00	9	103	103	50	47	101.9	40.98
7	72.00	76.00	315.250	0.22	100	104	0.90	0.90	6	103	103	49	46	104.0	27.18
8	76.00	80.00	317.490	0.22	100	104	0.90	0.90	6	103	104	50	47	104.9	27.18
9	80.00	84.00	319.750	0.23	101	103	0.94	0.94	6	103	102	50	47	102.8	27.77
10	84.00	88.00	322.020	0.22	101	103	0.90	0.90	6	103	103	49	47	103.2	27.16
11	88.00	92.00	324.250	0.24	101	103	0.98	1.00	6	103	104	49	47	99.7	28.37
12	92.00	96.00	326.500	0.20	101	103	0.82	0.82	6	103	104	49	48	104.7	25.89
	Final DGM:		328.656												

RESULTS	Run Time		Vm		ΔP		Tm		Ts		Max Vac	ΔH		%ISO	BWS	Y_{qa}
	96.0	min	69.882	ft^3	0.40	in. WC	100.9	°F	100.5	°F	10	1.636	in. WC	102.6	0.026	2.3

Alliance SOURCE TESTING

Isokinetic Field Data

Location:	Chemours Company - Fayetteville Works Facility, N		**Start Time:**	19:03	**Source:**	VEN Carbon Bed Outlet	
Date:	8/10/22	Run 2 VALID	**End Time:**	20:58	**Project No.:**	2022-2899	**Parameter:** HFPO-DA

STACK DATA (EST)			EQUIPMENT			STACK DATA (EST)		FILTER NO.	STACK DATA (FINAL)		MOIST. DATA
Moisture:	2.0	% est.	Meter Box ID:	MB7		Est. Tm:	101 °F		Pb:	30.02 in. Hg	Vlc (ml)
Barometric:	30.02	in. Hg	Y:	1.001		Est. Ts:	101 °F		Pg:	2.50 in. WC	52.7
Static Press:	2.80	in. WC	ΔH @ (in.WC):	1.841		Est. ΔP:	0.40 in. WC		O_2:	20.9 %	K-FACTOR
Stack Press:	30.23	in. Hg	Probe ID:	TC-5D		Est. Dn:	0.258 in.		CO_2:	0.1 %	4.10
CO_2:	0.1	%	Liner Material:	glass		Target Rate:	0.78 scfm			Check Pt. / Initial / Final / Corr.	
O_2:	20.9	%	Pitot ID:	P4-2		LEAK CHECK:	Pre / Mid 1 / Mid 2 / Mid 3 / Post			Mid 1 (cf) 363.422 363.581 0.159	
N_2/CO:	79.0	%	Pitot Cp/Type:	0.840	S-type	Leak Rate (cfm):	0.000 / 0.000 / 0.000 / 0.000			Mid 2 (cf) --	
Md:	28.85	lb/lb-mole	Nozzle ID:	GL-3	glass	Vacuum (in Hg):	15 / 15 / 15 / 15			Mid 3 (cf) --	
Ms:	28.63	lb/lb-mole	Nozzle Dn (in.):	0.249		Pitot Tube:	Pass / -- / -- / -- / Pass			Mid-Point Leak Check Vol (cf): 0.159	

Sample Pt.	Sample Time (minutes) Begin	End	Dry Gas Meter Reading (ft^3)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F) DGM Average Amb. --	Stack Amb. --	Orifice Press. ΔH (in. WC) Ideal	Actual	Pump Vac (in. Hg)	Gas Temperatures (°F) Probe Amb. --	Filter Amb. --	Imp Exit Amb. --	Aux Amb. --	% ISO	Vs (fps)
A-1	0.00	4.00	328.988	0.38	102	102	1.56	1.60	4	103	103	61	58	95.4	35.66
2	4.00	8.00	331.700	0.38	102	102	1.56	1.60	4	103	102	62	58	102.0	35.66
3	8.00	12.00	334.600	0.48	102	102	1.97	2.00	6	103	104	56	50	103.7	40.08
4	12.00	16.00	337.910	0.47	101	102	1.92	1.90	6	103	102	54	48	98.0	39.66
5	16.00	20.00	341.000	0.47	101	102	1.92	1.90	6	103	103	54	49	101.5	39.66
6	20.00	24.00	344.200	0.47	104	102	1.93	1.90	6	103	103	55	50	102.5	39.66
7	24.00	28.00	347.450	0.44	103	102	1.81	1.80	6	103	103	54	51	106.1	38.37
8	28.00	32.00	350.700	0.29	102	101	1.19	1.20	4	103	104	55	51	108.6	31.13
9	32.00	36.00	353.400	0.27	102	101	1.11	1.10	4	103	103	56	52	104.1	30.03
10	36.00	40.00	355.900	0.27	102	102	1.11	1.10	4	104	104	58	54	104.2	30.06
11	40.00	44.00	358.400	0.27	102	102	1.11	1.10	4	103	104	58	54	104.2	30.06
12	44.00	48.00	360.900	0.27	102	102	1.11	1.10	4	103	103	58	55	105.2	30.06
B-1	48.00	52.00	363.422	0.60	101	102	2.45	2.50	7	103	105	60	55	103.4	44.81
2	52.00	56.00	367.100	0.60	101	102	2.45	2.50	7	103	103	60	50	106.8	44.81
3	56.00	60.00	370.900	0.60	101	102	2.45	2.50	7	103	103	60	50	95.6	44.81
4	60.00	64.00	374.300	0.75	101	103	3.06	3.10	10	105	105	59	49	100.8	50.14
5	64.00	68.00	378.300	0.74	101	103	3.02	3.00	10	105	106	59	49	106.6	49.81
6	68.00	72.00	382.500	0.52	101	103	2.12	2.10	7	105	105	58	49	99.7	41.75
7	72.00	76.00	385.800	0.50	102	102	2.05	2.00	7	105	106	58	50	101.3	40.91
8	76.00	80.00	389.100	0.50	102	102	2.05	2.00	7	105	105	58	51	98.3	40.91
9	80.00	84.00	392.300	0.22	102	103	0.90	1.00	4	105	105	61	49	106.3	27.16
10	84.00	88.00	394.600	0.20	102	103	0.82	0.82	4	105	105	62	48	101.8	25.89
11	88.00	92.00	396.700	0.20	102	103	0.82	0.82	4	105	105	63	50	106.6	25.89
12	92.00	96.00	398.900	0.21	102	103	0.86	0.86	4	105	105	63	50	102.2	26.53
	Final DGM:		401.061												

RESULTS	Run Time	Vm	ΔP	Tm	Ts	Max Vac	ΔH	%ISO	BWS	Y_{qa}
	96.0 min	71.914 ft^3	0.42 in. WC	101.8 °F	102.2 °F	10	1.729 in. WC	103.6	0.035	2.0

Alliance SOURCE TESTING

Isokinetic Field Data

Location:	Chemours Company - Fayetteville Works Facility, N		**Start Time:**	8:10	**Source:**	VEN Carbon Bed Outlet	
Date:	8/11/22	Run 3 VALID	**End Time:**	10:06	**Project No.:**	2022-2899	**Parameter:** HFPO-DA

STACK DATA (EST)			EQUIPMENT			STACK DATA (EST)		FILTER NO.	STACK DATA (FINAL)		MOIST. DATA
Moisture:	2.0	% est.	Meter Box ID:	MB7		Est. Tm:	102 °F		Pb:	30.05 in. Hg	Vlc (ml)
Barometric:	30.02	in. Hg	Y:	1.001		Est. Ts:	102 °F		Pg:	2.80 in. WC	87.9
Static Press:	2.80	in. WC	ΔH @ (in.WC):	1.841		Est. ΔP:	0.42 in. WC		O_2:	20.9 %	K-FACTOR
Stack Press:	30.23	in. Hg	Probe ID:	TC-5D		Est. Dn:	0.255 in.		CO_2:	0.1 %	4.098
CO_2:	0.1	%	Liner Material:	glass		Target Rate:	0.78 scfm			Check Pt. / Initial / Final / Corr.	
O_2:	20.9	%	Pitot ID:	P4-2		LEAK CHECK	Pre / Mid 1 / Mid 2 / Mid 3 / Post			Mid 1 (cf) 435.174 435.386 0.212	
N_2/CO:	79.0	%	Pitot Cp/Type:	0.840	S-type	Leak Rate (cfm):	0.000 / 0.000 / 0.000 / 0.000			Mid 2 (cf) --	
Md:	28.85	lb/lb-mole	Nozzle ID:	GL-3	glass	Vacuum (in Hg):	15 / 10 / 15 / 15			Mid 3 (cf) --	
Ms:	28.63	lb/lb-mole	Nozzle Dn (in.):	0.249		Pitot Tube:	Pass / -- / -- / -- / Pass			Mid-Point Leak Check Vol (cf): 0.212	

Sample Pt.	Sample Time (minutes) Begin	End	Dry Gas Meter Reading (ft^3)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F) DGM Average Amb. --	Stack Amb. --	Orifice Press. ΔH (in. WC) Ideal	Actual	Pump Vac (in. Hg)	Gas Temperatures (°F) Probe Amb. --	Filter Amb. --	Imp Exit Amb. --	Aux Amb. --	% ISO	Vs (fps)
A-1	0.00	4.00	401.861	0.37	81	93	1.49	1.50	4	105	106	58	48	104.3	34.91
2	4.00	8.00	404.700	0.39	85	92	1.58	1.60	5	105	104	58	44	102.9	35.80
3	8.00	12.00	407.600	0.45	87	93	1.83	1.80	5	105	105	53	43	98.9	38.49
4	12.00	16.00	410.600	0.47	89	94	1.91	1.90	5	105	105	50	43	106.2	39.38
5	16.00	20.00	413.900	0.47	90	94	1.91	1.90	5	105	105	48	43	102.8	39.38
6	20.00	24.00	417.100	0.43	91	94	1.75	1.80	5	105	105	47	43	103.9	37.66
7	24.00	28.00	420.200	0.32	91	94	1.31	1.30	4	105	105	48	43	104.8	32.49
8	28.00	32.00	422.900	0.28	92	94	1.15	1.20	4	105	104	49	43	103.5	30.39
9	32.00	36.00	425.400	0.28	92	94	1.15	1.20	4	105	105	48	43	104.7	30.39
10	36.00	40.00	427.930	0.27	92	94	1.11	1.10	4	105	104	48	43	104.1	29.84
11	40.00	44.00	430.400	0.25	92	94	1.02	1.00	3	105	105	49	43	105.1	28.72
12	44.00	48.00	432.800	0.27	92	94	1.11	1.10	3	105	105	49	44	100.1	29.84
B-1	48.00	52.00	435.174	0.48	90	93	1.96	2.00	6	105	107	52	50	108.8	39.76
2	52.00	56.00	438.600	0.48	90	93	1.96	2.00	7	105	104	44	43	101.7	39.76
3	56.00	60.00	441.800	0.73	93	93	2.99	3.00	10	105	105	44	42	100.2	49.03
4	60.00	64.00	445.700	0.71	95	93	2.91	2.90	10	105	104	47	44	101.2	48.35
5	64.00	68.00	449.600	0.63	101	95	2.61	2.60	9	105	104	48	45	100.9	45.63
6	68.00	72.00	453.300	0.49	102	95	2.03	2.00	9	105	106	50	46	101.7	40.24
7	72.00	76.00	456.600	0.25	102	95	1.04	1.00	5	105	105	50	46	99.0	28.74
8	76.00	80.00	458.900	0.21	102	95	0.87	0.88	5	105	105	50	46	108.0	26.34
9	80.00	84.00	461.200	0.18	102	95	0.75	0.75	4	105	104	51	45	101.4	24.39
10	84.00	88.00	463.200	0.18	104	96	0.75	0.75	4	105	105	51	46	101.1	24.41
11	88.00	92.00	465.200	0.18	104	96	0.75	0.75	4	105	106	52	46	106.2	24.41
12	92.00	96.00	467.300	0.18	104	97	0.75	0.75	4	105	105	52	46	105.2	24.43
	Final DGM:		469.379												

RESULTS	Run Time		Vm		ΔP		Tm		Ts		Max Vac	ΔH		%ISO	BWS	Y_{qa}
	96.0	min	67.306	ft^3	0.37	in. WC	94.3	°F	94.2	°F	10	1.533	in. WC	105.6	0.053	2.5

Appendix C

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Tel: (865)291-3000

Laboratory Job ID: 140-28458-1
Client Project/Site: VEN Carbon Bed Inlet

For:
The Chemours Company FC, LLC
c/o AECOM
Sabre Building, Suite 300
4051 Ogletown Road
Newark, Delaware 19713

Attn: Michael Aucoin

Authorized for release by:
8/25/2022 10:04:08 AM

Courtney Adkins, Project Manager II
(865)291-3019
Courtney.Adkins@et.eurofinsus.com

Table of Contents

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 140-28458-1

Laboratory: Eurofins Knoxville

Narrative

Job Narrative
140-28458-1

Receipt

The samples were received on 8/12/2022 2:30 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.7º C.

LCMS

Method 537 (modified): The following samples were reported with elevated reporting limits for all analytes: T-2335,T-2336,T-2605 VEN CB INLET R1 OTM-45 FH (140-28458-3), T-2342,T-2343,T-2613 VEN CB INLET R2 OTM-45 FH (140-28458-9) and T-2349,T-2350,T-2621 VEN CB INLET R3 OTM-45 FH (140-28458-15). The sample was analyzed at a dilution based on screening results.

Method 537 (modified): The required dilution factor for the following samples were higher than could be achieved by "in vial" dilution, as it would dilute out the Isotope Dilution Analytes (IDA): T-2335,T-2336,T-2605 VEN CB INLET R1 OTM-45 FH (140-28458-3), T-2342,T-2343,T-2613 VEN CB INLET R2 OTM-45 FH (140-28458-9) and T-2349,T-2350,T-2621 VEN CB INLET R3 OTM-45 FH (140-28458-15). As such, the dilution was achieved by taking a subsample of the undiluted extract, adding sufficient solvent, and re-spiking the extract with IDA.

Method 537 (modified): The following samples were reported with elevated reporting limits for all analytes: T-2337,T-2338,T-2340 VEN CB INLET R1 OTM-45 BH (140-28458-4) and T-2351,T-2352,T-2354 VEN CB INLET R3 OTM-45 BH (140-28458-16). The sample was analyzed at a dilution based on screening results.

Method 537 (modified): The required dilution factor for the following samples were higher than could be achieved by "in vial" dilution, as it would dilute out the Isotope Dilution Analytes (IDA): T-2337,T-2338,T-2340 VEN CB INLET R1 OTM-45 BH (140-28458-4) and T-2351,T-2352,T-2354 VEN CB INLET R3 OTM-45 BH (140-28458-16). As such, the dilution was achieved by taking a subsample of the undiluted extract, adding sufficient solvent, and re-spiking the extract with IDA.

Method 537 (modified): The following samples were reported with elevated reporting limits for all analytes: T-2341 VEN CB INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-28458-6), T-2344,T-2345,T-2347 VEN CB INLET R2 OTM-45 BH (140-28458-10) and T-2355 VEN CB INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-28458-18). The sample was analyzed at a dilution based on screening results.

Method 537 (modified): Results for sample T-2355 VEN CB INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-28458-18) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Method 537 (modified): The required dilution factor for the following samples were higher than could be achieved by "in vial" dilution, as it would dilute out the Isotope Dilution Analytes (IDA): T-2341 VEN CB INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-28458-6) and T-2344,T-2345,T-2347 VEN CB INLET R2 OTM-45 BH (140-28458-10). As such, the dilution was achieved by taking a subsample of the undiluted extract, adding sufficient solvent, and re-spiking the extract with IDA.

Method 537 (modified): The following samples were reported with elevated reporting limits for all analytes: T-2339 VEN CB INLET R1 OTM-45 IMPINGERS 1,2&3 CONDENSATE (140-28458-5), T-2346 VEN CB INLET R2 OTM-45 IMPINGERS 1,2&3 CONDENSATE (140-28458-11) and T-2353 VEN CB INLET R3 OTM-45 IMPINGERS 1,2&3 CONDENSATE (140-28458-17). The sample was analyzed at a dilution based on screening results.

Method 537 (modified): Results for samples T-2339 VEN CB INLET R1 OTM-45 IMPINGERS 1,2&3 CONDENSATE (140-28458-5), T-2346 VEN CB INLET R2 OTM-45 IMPINGERS 1,2&3 CONDENSATE (140-28458-11) and T-2353 VEN CB INLET R3 OTM-45 IMPINGERS 1,2&3 CONDENSATE (140-28458-17) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Job ID: 140-28458-1 (Continued)

Laboratory: Eurofins Knoxville (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

Total Particulates: The measurement of the mass of particulate matter trapped by the particulate filter and probe rinse derived from an M-5 sampling train was performed using SOP number KNOX-WC-0006 (based on EPA Methods 0050 and 5). Microfiber filters and 150 mL beakers are carefully inspected and tare weighed to constant weight. After sample collection, the filters are dried, and then carefully weighed to constant weight to determine the mass of particulate matter trapped on the filters. The acetone probe rinse solution is evaporated to dryness, and then weighed to constant weight to determine the total particulate mass collected in the rinse. The total particulate mass collected by an M-5 train is the sum of the particulate filter and the acetone probe rinse residue weights.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client: The Chemours Company FC, LLC
Project/Site: VEN Carbon Bed Inlet

Job ID: 140-28458-1

Client Sample ID: T-2335 VEN CB INLET R1 OTM-45 PARTICULATE FILTER

Lab Sample ID: 140-28458-1

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	ND		0.500	0.500	mg/sample			08/12/22 16:26	1

Client Sample ID: T-2605 VEN CB INLET R1 OTM-45 ACETONE RINSE

Lab Sample ID: 140-28458-2

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	0.990		0.500	0.500	mg/sample			08/12/22 16:26	1

Client Sample ID: T-2335,T-2336,T-2605 VEN CB INLET R1 OTM-45 FH

Lab Sample ID: 140-28458-3

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	2.75		0.500	0.470	ug/Sample		08/17/22 09:35	08/22/22 13:00	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*92*		*25 - 150*	*08/17/22 09:35*	*08/22/22 13:00*	*1*

Client Sample ID: T-2337,T-2338,T-2340 VEN CB INLET R1 OTM-45 BH

Lab Sample ID: 140-28458-4

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	608		100	55.0	ug/Sample		08/13/22 08:42	08/19/22 11:55	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*116*		*25 - 150*	*08/13/22 08:42*	*08/19/22 11:55*	*1*

Client Sample ID: T-2339 VEN CB INLET R1 OTM-45 IMPINGERS 1,2&3 CONDENSATE

Lab Sample ID: 140-28458-5

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	106		1.65	0.660	ug/Sample		08/15/22 12:57	08/16/22 15:33	20

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*101*		*25 - 150*	*08/15/22 12:57*	*08/16/22 15:33*	*20*

Client Sample ID: T-2341 VEN CB INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-28458-6

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	7.28		2.00	1.10	ug/Sample		08/13/22 08:42	08/23/22 18:14	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*103*		*25 - 150*	*08/13/22 08:42*	*08/23/22 18:14*	*1*

Client Sample ID: T-2342 VEN CB INLET R2 OTM-45 PARTICULATE FILTER

Lab Sample ID: 140-28458-7

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	ND		0.500	0.500	mg/sample			08/12/22 16:26	1

Client Sample ID: T-2613 VEN CB INLET R2 OTM-45 ACETONE RINSE

Lab Sample ID: 140-28458-8

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	1.39		0.500	0.500	mg/sample			08/12/22 16:26	1

Client Sample ID: T-2342,T-2343,T-2613 VEN CB INLET R2 OTM-45 FH

Lab Sample ID: 140-28458-9

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	5.20		0.500	0.470	ug/Sample		08/17/22 09:35	08/22/22 13:09	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*90*		*25 - 150*	*08/17/22 09:35*	*08/22/22 13:09*	*1*

Client Sample ID: T-2344,T-2345,T-2347 VEN CB INLET R2 OTM-45 BH

Lab Sample ID: 140-28458-10

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	745		100	55.0	ug/Sample		08/13/22 08:42	08/23/22 18:22	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*86*		*25 - 150*	*08/13/22 08:42*	*08/23/22 18:22*	*1*

Client Sample ID: T-2346 VEN CB INLET R2 OTM-45 IMPINGERS 1,2&3 CONDENSATE

Lab Sample ID: 140-28458-11

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	16.2		0.155	0.0620	ug/Sample		08/15/22 12:57	08/16/22 15:42	2

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*88*		*25 - 150*	*08/15/22 12:57*	*08/16/22 15:42*	*2*

Client Sample ID: T-2348 VEN CB INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-28458-12

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.165		0.0200	0.0110	ug/Sample		08/13/22 08:42	08/19/22 12:39	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*91*		*25 - 150*	*08/13/22 08:42*	*08/19/22 12:39*	*1*

Client Sample ID: T-2349 VEN CB INLET R3 OTM-45 PARTICULATE FILTER

Lab Sample ID: 140-28458-13

Date Collected: 08/11/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	0.510		0.500	0.500	mg/sample			08/12/22 16:26	1

Client Sample ID: T-2621 VEN CB INLET R3 OTM-45 ACETONE RINSE

Lab Sample ID: 140-28458-14

Date Collected: 08/11/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	0.700		0.500	0.500	mg/sample			08/12/22 16:26	1

Client Sample ID: T-2349,T-2350,T-2621 VEN CB INLET R3 OTM-45 FH

Lab Sample ID: 140-28458-15

Date Collected: 08/11/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	123		5.00	4.70	ug/Sample		08/17/22 09:35	08/22/22 13:18	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*100*		*25 - 150*	*08/17/22 09:35*	*08/22/22 13:18*	*1*

Client: The Chemours Company FC, LLC
Project/Site: VEN Carbon Bed Inlet

Job ID: 140-28458-1

Client Sample ID: T-2351,T-2352,T-2354 VEN CB INLET R3 OTM-45 BH

Lab Sample ID: 140-28458-16

Date Collected: 08/11/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	189		50.0	27.5	ug/Sample		08/13/22 08:42	08/19/22 12:57	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*95*		*25 - 150*	*08/13/22 08:42*	*08/19/22 12:57*	*1*

Client Sample ID: T-2353 VEN CB INLET R3 OTM-45 IMPINGERS 1,2&3 CONDENSATE

Lab Sample ID: 140-28458-17

Date Collected: 08/11/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	33.1		0.862	0.345	ug/Sample		08/15/22 12:57	08/16/22 15:50	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*92*		*25 - 150*	*08/15/22 12:57*	*08/16/22 15:50*	*10*

Client Sample ID: T-2355 VEN CB INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-28458-18

Date Collected: 08/11/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.813		0.200	0.110	ug/Sample		08/13/22 08:42	08/23/22 19:08	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*97*		*25 - 150*	*08/13/22 08:42*	*08/23/22 19:08*	*10*

Default Detection Limits

Client: The Chemours Company FC, LLC
Project/Site: VEN Carbon Bed Inlet

Job ID: 140-28458-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Prep: None

Analyte	RL	MDL	Units
HFPO-DA	0.0200	0.0110	ug/Sample
HFPO-DA	0.00500	0.00470	ug/Sample

Method: 537 (modified) - Fluorinated Alkyl Substances

Prep: PFAS Prep

Analyte	RL	MDL	Units
HFPO-DA	0.000500	0.000200	ug/Sample

General Chemistry

Analyte	RL	MDL	Units
Particulates, Total	0.500	0.500	mg/sample

Isotope Dilution Summary

Client: The Chemours Company FC, LLC
Project/Site: VEN Carbon Bed Inlet

Job ID: 140-28458-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Air

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	HFPODA (25-150)
140-28458-3	T-2335,T-2336,T-2605 VEN CB	92
140-28458-4	T-2337,T-2338,T-2340 VEN CB INLET R1 OTM-45 BH	116
140-28458-5	T-2339 VEN CB INLET R1 OTM-45 IMPINGERS 1,2&3 CONDENSATE	101
140-28458-6	T-2341 VEN CB INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	103
140-28458-9	T-2342,T-2343,T-2613 VEN CB INLET R2 OTM-45 FH	90
140-28458-10	T-2344,T-2345,T-2347 VEN CB INLET R2 OTM-45 BH	86
140-28458-11	T-2346 VEN CB INLET R2 OTM-45 IMPINGERS 1,2&3 CONDENSATE	88
140-28458-12	T-2348 VEN CB INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	91
140-28458-15	T-2349,T-2350,T-2621 VEN CB INLET R3 OTM-45 FH	100
140-28458-16	T-2351,T-2352,T-2354 VEN CB INLET R3 OTM-45 BH	95
140-28458-17	T-2353 VEN CB INLET R3 OTM-45 IMPINGERS 1,2&3 CONDENSATE	92
140-28458-18	T-2355 VEN CB INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	97
LCS 140-64283/2-B	Lab Control Sample	93
LCS 140-64324/2-A	Lab Control Sample	95
LCS 140-64388/2-B	Lab Control Sample	83
LCSD 140-64283/3-B	Lab Control Sample Dup	90
LCSD 140-64324/3-A	Lab Control Sample Dup	94
LCSD 140-64388/3-B	Lab Control Sample Dup	86
MB 140-64283/14-B	Method Blank	96
MB 140-64283/1-B	Method Blank	98
MB 140-64324/1-A	Method Blank	104
MB 140-64388/1-B	Method Blank	82

Surrogate Legend

HFPODA = 13C3 HFPO-DA

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 140-64283/14-B
Matrix: Air
Analysis Batch: 64471

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64283

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		08/13/22 08:42	08/19/22 12:48	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*96*		*25 - 150*	*08/13/22 08:42*	*08/19/22 12:48*	*1*

Lab Sample ID: MB 140-64283/1-B
Matrix: Air
Analysis Batch: 64471

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64283

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		08/13/22 08:42	08/19/22 10:36	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*98*		*25 - 150*	*08/13/22 08:42*	*08/19/22 10:36*	*1*

Lab Sample ID: LCS 140-64283/2-B
Matrix: Air
Analysis Batch: 64471

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 64283

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0200	0.02356		ug/Sample		118	60 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*93*		*25 - 150*

Lab Sample ID: LCSD 140-64283/3-B
Matrix: Air
Analysis Batch: 64471

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 64283

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0200	0.02367		ug/Sample		118	60 - 140	0	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*90*		*25 - 150*

Lab Sample ID: MB 140-64324/1-A
Matrix: Air
Analysis Batch: 64360

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64324

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		08/15/22 12:57	08/16/22 12:18	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*104*		*25 - 150*	*08/15/22 12:57*	*08/16/22 12:18*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 140-64324/2-A
Matrix: Air
Analysis Batch: 64360

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 64324

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0100	0.01046		ug/Sample		105	60 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*95*		*25 - 150*

Lab Sample ID: LCSD 140-64324/3-A
Matrix: Air
Analysis Batch: 64360

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 64324

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0100	0.01020		ug/Sample		102	60 - 140	2	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*94*		*25 - 150*

Lab Sample ID: MB 140-64388/1-B
Matrix: Air
Analysis Batch: 64501

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64388

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		08/17/22 09:35	08/22/22 12:07	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*82*		*25 - 150*	*08/17/22 09:35*	*08/22/22 12:07*	*1*

Lab Sample ID: LCS 140-64388/2-B
Matrix: Air
Analysis Batch: 64501

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 64388

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0200	0.02329		ug/Sample		116	60 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*83*		*25 - 150*

Lab Sample ID: LCSD 140-64388/3-B
Matrix: Air
Analysis Batch: 64501

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 64388

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0200	0.02524		ug/Sample		126	60 - 140	8	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*86*		*25 - 150*

QC Association Summary

Client: The Chemours Company FC, LLC
Project/Site: VEN Carbon Bed Inlet

Job ID: 140-28458-1

LCMS

Prep Batch: 64283

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28458-4	T-2337,T-2338,T-2340 VEN CB INLET R1 OTM-	Total/NA	Air	None	
140-28458-6	T-2341 VEN CB INLET R1 OTM-45 BREAKTHR(	Total/NA	Air	None	
140-28458-10	T-2344,T-2345,T-2347 VEN CB INLET R2 OTM-	Total/NA	Air	None	
140-28458-12	T-2348 VEN CB INLET R2 OTM-45 BREAKTHR(	Total/NA	Air	None	
140-28458-16	T-2351,T-2352,T-2354 VEN CB INLET R3 OTM-	Total/NA	Air	None	
140-28458-18	T-2355 VEN CB INLET R3 OTM-45 BREAKTHR(	Total/NA	Air	None	
MB 140-64283/14-B	Method Blank	Total/NA	Air	None	
MB 140-64283/1-B	Method Blank	Total/NA	Air	None	
LCS 140-64283/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-64283/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Cleanup Batch: 64299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28458-4	T-2337,T-2338,T-2340 VEN CB INLET R1 OTM-	Total/NA	Air	Split	64283
140-28458-6	T-2341 VEN CB INLET R1 OTM-45 BREAKTHR(	Total/NA	Air	Split	64283
140-28458-10	T-2344,T-2345,T-2347 VEN CB INLET R2 OTM-	Total/NA	Air	Split	64283
140-28458-12	T-2348 VEN CB INLET R2 OTM-45 BREAKTHR(	Total/NA	Air	Split	64283
140-28458-16	T-2351,T-2352,T-2354 VEN CB INLET R3 OTM-	Total/NA	Air	Split	64283
140-28458-18	T-2355 VEN CB INLET R3 OTM-45 BREAKTHR(	Total/NA	Air	Split	64283
MB 140-64283/14-B	Method Blank	Total/NA	Air	Split	64283
MB 140-64283/1-B	Method Blank	Total/NA	Air	Split	64283
LCS 140-64283/2-B	Lab Control Sample	Total/NA	Air	Split	64283
LCSD 140-64283/3-B	Lab Control Sample Dup	Total/NA	Air	Split	64283

Prep Batch: 64324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28458-5	T-2339 VEN CB INLET R1 OTM-45 IMPINGERS	Total/NA	Air	PFAS Prep	
140-28458-11	T-2346 VEN CB INLET R2 OTM-45 IMPINGERS	Total/NA	Air	PFAS Prep	
140-28458-17	T-2353 VEN CB INLET R3 OTM-45 IMPINGERS	Total/NA	Air	PFAS Prep	
MB 140-64324/1-A	Method Blank	Total/NA	Air	PFAS Prep	
LCS 140-64324/2-A	Lab Control Sample	Total/NA	Air	PFAS Prep	
LCSD 140-64324/3-A	Lab Control Sample Dup	Total/NA	Air	PFAS Prep	

Analysis Batch: 64360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28458-5	T-2339 VEN CB INLET R1 OTM-45 IMPINGERS	Total/NA	Air	537 (modified)	64324
140-28458-11	T-2346 VEN CB INLET R2 OTM-45 IMPINGERS	Total/NA	Air	537 (modified)	64324
140-28458-17	T-2353 VEN CB INLET R3 OTM-45 IMPINGERS	Total/NA	Air	537 (modified)	64324
MB 140-64324/1-A	Method Blank	Total/NA	Air	537 (modified)	64324
LCS 140-64324/2-A	Lab Control Sample	Total/NA	Air	537 (modified)	64324
LCSD 140-64324/3-A	Lab Control Sample Dup	Total/NA	Air	537 (modified)	64324

Prep Batch: 64388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28458-3	T-2335,T-2336,T-2605 VEN CB INLET R1 OTM-	Total/NA	Air	None	
140-28458-9	T-2342,T-2343,T-2613 VEN CB INLET R2 OTM-	Total/NA	Air	None	
140-28458-15	T-2349,T-2350,T-2621 VEN CB INLET R3 OTM-	Total/NA	Air	None	
MB 140-64388/1-B	Method Blank	Total/NA	Air	None	
LCS 140-64388/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-64388/3-B	Lab Control Sample Dup	Total/NA	Air	None	

LCMS

Cleanup Batch: 64426

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28458-3	T-2335,T-2336,T-2605 VEN CB INLET R1 OTM-	Total/NA	Air	Split	64388
140-28458-9	T-2342,T-2343,T-2613 VEN CB INLET R2 OTM-	Total/NA	Air	Split	64388
140-28458-15	T-2349,T-2350,T-2621 VEN CB INLET R3 OTM-	Total/NA	Air	Split	64388
MB 140-64388/1-B	Method Blank	Total/NA	Air	Split	64388
LCS 140-64388/2-B	Lab Control Sample	Total/NA	Air	Split	64388
LCSD 140-64388/3-B	Lab Control Sample Dup	Total/NA	Air	Split	64388

Analysis Batch: 64471

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28458-4	T-2337,T-2338,T-2340 VEN CB INLET R1 OTM-	Total/NA	Air	537 (modified)	64477
140-28458-12	T-2348 VEN CB INLET R2 OTM-45 BREAKTHR(	Total/NA	Air	537 (modified)	64299
140-28458-16	T-2351,T-2352,T-2354 VEN CB INLET R3 OTM-	Total/NA	Air	537 (modified)	64477
MB 140-64283/14-B	Method Blank	Total/NA	Air	537 (modified)	64299
MB 140-64283/1-B	Method Blank	Total/NA	Air	537 (modified)	64299
LCS 140-64283/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	64299
LCSD 140-64283/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	64299

Cleanup Batch: 64477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28458-4	T-2337,T-2338,T-2340 VEN CB INLET R1 OTM-	Total/NA	Air	Dilution	64299
140-28458-6	T-2341 VEN CB INLET R1 OTM-45 BREAKTHR(	Total/NA	Air	Dilution	64299
140-28458-10	T-2344,T-2345,T-2347 VEN CB INLET R2 OTM-	Total/NA	Air	Dilution	64299
140-28458-16	T-2351,T-2352,T-2354 VEN CB INLET R3 OTM-	Total/NA	Air	Dilution	64299

Cleanup Batch: 64490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28458-3	T-2335,T-2336,T-2605 VEN CB INLET R1 OTM-	Total/NA	Air	Dilution	64426
140-28458-9	T-2342,T-2343,T-2613 VEN CB INLET R2 OTM-	Total/NA	Air	Dilution	64426
140-28458-15	T-2349,T-2350,T-2621 VEN CB INLET R3 OTM-	Total/NA	Air	Dilution	64426

Analysis Batch: 64501

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28458-3	T-2335,T-2336,T-2605 VEN CB INLET R1 OTM-	Total/NA	Air	537 (modified)	64490
140-28458-9	T-2342,T-2343,T-2613 VEN CB INLET R2 OTM-	Total/NA	Air	537 (modified)	64490
140-28458-15	T-2349,T-2350,T-2621 VEN CB INLET R3 OTM-	Total/NA	Air	537 (modified)	64490
MB 140-64388/1-B	Method Blank	Total/NA	Air	537 (modified)	64426
LCS 140-64388/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	64426
LCSD 140-64388/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	64426

Analysis Batch: 64559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28458-6	T-2341 VEN CB INLET R1 OTM-45 BREAKTHR(	Total/NA	Air	537 (modified)	64477
140-28458-10	T-2344,T-2345,T-2347 VEN CB INLET R2 OTM-	Total/NA	Air	537 (modified)	64477
140-28458-18	T-2355 VEN CB INLET R3 OTM-45 BREAKTHR(	Total/NA	Air	537 (modified)	64299

General Chemistry

Analysis Batch: 64320

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28458-1	T-2335 VEN CB INLET R1 OTM-45 PARTICULAT	Total/NA	Air	5	
140-28458-2	T-2605 VEN CB INLET R1 OTM-45 ACETONE R	Total/NA	Air	5	

General Chemistry (Continued)

Analysis Batch: 64320 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28458-7	T-2342 VEN CB INLET R2 OTM-45 PARTICULAT	Total/NA	Air	5	
140-28458-8	T-2613 VEN CB INLET R2 OTM-45 ACETONE R	Total/NA	Air	5	
140-28458-13	T-2349 VEN CB INLET R3 OTM-45 PARTICULAT	Total/NA	Air	5	
140-28458-14	T-2621 VEN CB INLET R3 OTM-45 ACETONE R	Total/NA	Air	5	

Client Sample ID: T-2335 VEN CB INLET R1 OTM-45 PARTICULATE FILTER

Lab Sample ID: 140-28458-1

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			64320	08/12/22 16:26	SJF	EET KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-2605 VEN CB INLET R1 OTM-45 ACETONE RINSE

Lab Sample ID: 140-28458-2

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			64320	08/12/22 16:26	SJF	EET KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-2335,T-2336,T-2605 VEN CB INLET R1 OTM-45 FH

Lab Sample ID: 140-28458-3

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	66 mL	64388	08/17/22 09:35	CAC	EET KNX
Total/NA	Cleanup	Split			33 mL	10 mL	64426	08/18/22 08:20	ACW	EET KNX
Total/NA	Cleanup	Dilution			100 uL	10000 uL	64490	08/21/22 10:15	JRC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64501	08/22/22 13:00	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: T-2337,T-2338,T-2340 VEN CB INLET R1 OTM-45 BH

Lab Sample ID: 140-28458-4

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64283	08/13/22 08:42	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64299	08/15/22 08:07	ACW	EET KNX
Total/NA	Cleanup	Dilution			2 uL	10000 uL	64477	08/19/22 10:23	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64471	08/19/22 11:55	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: T-2339 VEN CB INLET R1 OTM-45 IMPINGERS 1,2&3 CONDENSATE

Lab Sample ID: 140-28458-5

Date Collected: 08/10/22 00:00
Matrix: Air
Date Received: 08/12/22 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			0.00606 Sample	10 mL	64324	08/15/22 12:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		20	1 mL	1 mL	64360	08/16/22 15:33	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: T-2341 VEN CB INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-28458-6

Date Collected: 08/10/22 00:00
Matrix: Air
Date Received: 08/12/22 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64283	08/13/22 08:42	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64299	08/15/22 08:07	ACW	EET KNX
Total/NA	Cleanup	Dilution			100 uL	10000 uL	64477	08/19/22 10:23	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64559	08/23/22 18:14	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: T-2342 VEN CB INLET R2 OTM-45 PARTICULATE FILTER

Lab Sample ID: 140-28458-7

Date Collected: 08/10/22 00:00
Matrix: Air
Date Received: 08/12/22 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			64320	08/12/22 16:26	SJF	EET KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-2613 VEN CB INLET R2 OTM-45 ACETONE RINSE

Lab Sample ID: 140-28458-8

Date Collected: 08/10/22 00:00
Matrix: Air
Date Received: 08/12/22 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			64320	08/12/22 16:26	SJF	EET KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-2342,T-2343,T-2613 VEN CB INLET R2 OTM-45 FH

Lab Sample ID: 140-28458-9

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	64388	08/17/22 09:35	CAC	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	64426	08/18/22 08:20	ACW	EET KNX
Total/NA	Cleanup	Dilution			100 uL	10000 uL	64490	08/21/22 10:15	JRC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64501	08/22/22 13:09	JRC	EET KNX

Instrument ID: LCA

Client Sample ID: T-2344,T-2345,T-2347 VEN CB INLET R2 OTM-45 BH

Lab Sample ID: 140-28458-10

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64283	08/13/22 08:42	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64299	08/15/22 08:07	ACW	EET KNX
Total/NA	Cleanup	Dilution			2 uL	10000 uL	64477	08/19/22 10:23	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64559	08/23/22 18:22	JRC	EET KNX

Instrument ID: LCA

Client Sample ID: T-2346 VEN CB INLET R2 OTM-45 IMPINGERS 1,2&3 CONDENSATE

Lab Sample ID: 140-28458-11

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			0.00645 Sample	10 mL	64324	08/15/22 12:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		2	1 mL	1 mL	64360	08/16/22 15:42	CAC	EET KNX

Instrument ID: LCA

Client Sample ID: T-2348 VEN CB INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-28458-12

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64283	08/13/22 08:42	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64299	08/15/22 08:07	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64471	08/19/22 12:39	JRC	EET KNX

Instrument ID: LCA

Client: The Chemours Company FC, LLC
Project/Site: VEN Carbon Bed Inlet

Job ID: 140-28458-1

Client Sample ID: T-2349 VEN CB INLET R3 OTM-45 PARTICULATE FILTER

Lab Sample ID: 140-28458-13

Date Collected: 08/11/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			64320	08/12/22 16:26	SJF	EET KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-2621 VEN CB INLET R3 OTM-45 ACETONE RINSE

Lab Sample ID: 140-28458-14

Date Collected: 08/11/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			64320	08/12/22 16:26	SJF	EET KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-2349,T-2350,T-2621 VEN CB INLET R3 OTM-45 FH

Lab Sample ID: 140-28458-15

Date Collected: 08/11/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	70 mL	64388	08/17/22 09:35	CAC	EET KNX
Total/NA	Cleanup	Split			35 mL	10 mL	64426	08/18/22 08:20	ACW	EET KNX
Total/NA	Cleanup	Dilution			10 uL	10000 uL	64490	08/21/22 10:15	JRC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64501	08/22/22 13:18	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: T-2351,T-2352,T-2354 VEN CB INLET R3 OTM-45 BH

Lab Sample ID: 140-28458-16

Date Collected: 08/11/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64283	08/13/22 08:42	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64299	08/15/22 08:07	ACW	EET KNX
Total/NA	Cleanup	Dilution			4 uL	10000 uL	64477	08/19/22 10:23	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64471	08/19/22 12:57	JRC	EET KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: VEN Carbon Bed Inlet

Job ID: 140-28458-1

Client Sample ID: T-2353 VEN CB INLET R3 OTM-45 IMPINGERS 1,2&3 CONDENSATE

Lab Sample ID: 140-28458-17

Date Collected: 08/11/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			0.00580 Sample	10 mL	64324	08/15/22 12:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		10	1 mL	1 mL	64360	08/16/22 15:50	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: T-2355 VEN CB INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-28458-18

Date Collected: 08/11/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64283	08/13/22 08:42	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64299	08/15/22 08:07	ACW	EET KNX
Total/NA	Analysis	537 (modified)		10	1 mL	1 mL	64559	08/23/22 19:08	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank

Lab Sample ID: MB 140-64283/14-B

Date Collected: N/A
Date Received: N/A

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64283	08/13/22 08:42	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64299	08/15/22 08:07	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64471	08/19/22 12:48	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank

Lab Sample ID: MB 140-64283/1-B

Date Collected: N/A
Date Received: N/A

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64283	08/13/22 08:42	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64299	08/15/22 08:07	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64471	08/19/22 10:36	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank

Lab Sample ID: MB 140-64324/1-A

Date Collected: N/A
Date Received: N/A

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			1 Sample	10 mL	64324	08/15/22 12:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64360	08/16/22 12:18	CAC	EET KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: VEN Carbon Bed Inlet

Job ID: 140-28458-1

Client Sample ID: Method Blank
Lab Sample ID: MB 140-64388/1-B

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	64388	08/17/22 09:35	CAC	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	64426	08/18/22 08:20	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64501	08/22/22 12:07	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-64283/2-B

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64283	08/13/22 08:42	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64299	08/15/22 08:07	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64471	08/19/22 10:45	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-64324/2-A

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			1 Sample	10 mL	64324	08/15/22 12:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64360	08/16/22 12:27	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-64388/2-B

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	64388	08/17/22 09:35	CAC	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	64426	08/18/22 08:20	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64501	08/22/22 12:16	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-64283/3-B

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64283	08/13/22 08:42	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64299	08/15/22 08:07	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64471	08/19/22 10:54	JRC	EET KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: VEN Carbon Bed Inlet

Job ID: 140-28458-1

Client Sample ID: Lab Control Sample Dup
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCSD 140-64324/3-A
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			1 Sample	10 mL	64324	08/15/22 12:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64360	08/16/22 12:35	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCSD 140-64388/3-B
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	64388	08/17/22 09:35	CAC	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	64426	08/18/22 08:20	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64501	08/22/22 12:25	JRC	EET KNX
	Instrument ID: LCA									

Laboratory References:

EET KNX = Eurofins Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: The Chemours Company FC, LLC
Job ID: 140-28458-1
Project/Site: VEN Carbon Bed Inlet

Laboratory: Eurofins Knoxville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-25
ANAB	Dept. of Energy	L2311.01	02-13-25
ANAB	ISO/IEC 17025	L2311	02-13-25
Arkansas DEQ	State	88-0688	06-16-23
California	State	2423	06-30-22 *
Colorado	State	TN00009	02-28-23
Connecticut	State	PH-0223	09-30-23
Florida	NELAP	E87177	06-30-23
Georgia (DW)	State	906	12-11-22
Hawaii	State	NA	12-11-22
Kansas	NELAP	E-10349	10-31-22
Kentucky (DW)	State	90101	12-31-22
Louisiana	NELAP	83979	06-30-23
Louisiana (All)	NELAP	83979	06-30-23
Louisiana (DW)	State	LA019	12-31-22
Maryland	State	277	03-31-23
Michigan	State	9933	12-11-22
Nevada	State	TN00009	07-31-23
New Hampshire	NELAP	299919	01-17-23
New Jersey	NELAP	TN001	06-30-23
New York	NELAP	10781	03-31-23
North Carolina (DW)	State	21705	07-31-23
North Carolina (WW/SW)	State	64	12-31-22
Ohio VAP	State	CL0059	06-02-23
Oklahoma	State	9415	08-31-22
Oregon	NELAP	TNI0189	12-31-22
Pennsylvania	NELAP	68-00576	12-31-22
Tennessee	State	02014	12-11-22
Texas	NELAP	T104704380-21-16	08-31-22
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-19-00236	12-31-22
Utah	NELAP	TN00009	07-31-22 *
Virginia	NELAP	460176	09-14-22
Washington	State	C593	01-19-23
West Virginia (DW)	State	9955C	12-31-22
West Virginia DEP	State	345	04-30-23
Wisconsin	State	998044300	08-31-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: The Chemours Company FC, LLC
Project/Site: VEN Carbon Bed Inlet

Job ID: 140-28458-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	EET KNX
5	Particulates	EPA	EET KNX
Dilution	Dilution and Re-fortification of Standards	None	EET KNX
None	Leaching Procedure	TAL SOP	EET KNX
None	Leaching Procedure for Filter	TAL SOP	EET KNX
PFAS Prep	Preparation, Direct Inject PFAS	TAL-SAC	EET KNX
Split	Source Air Split	None	EET KNX

Protocol References:

EPA = US Environmental Protection Agency
None = None
TAL SOP = TestAmerica Laboratories, Standard Operating Procedure
TAL-SAC = Eurofins Sacramento, Facility Standard Operating Procedure.

Laboratory References:

EET KNX = Eurofins Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: The Chemours Company FC, LLC
Project/Site: VEN Carbon Bed Inlet

Job ID: 140-28458-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-28458-1	T-2335 VEN CB INLET R1 OTM-45 PARTICULATE FILTER	Air	08/10/22 00:00	08/12/22 14:30
140-28458-2	T-2605 VEN CB INLET R1 OTM-45 ACETONE RINSE	Air	08/10/22 00:00	08/12/22 14:30
140-28458-3	T-2335,T-2336,T-2605 VEN CB INLET R1 OTM-45 FH	Air	08/10/22 00:00	08/12/22 14:30
140-28458-4	T-2337,T-2338,T-2340 VEN CB INLET R1 OTM-45 BH	Air	08/10/22 00:00	08/12/22 14:30
140-28458-5	T-2339 VEN CB INLET R1 OTM-45 IMPINGERS 1,2&3 CONDENSATE	Air	08/10/22 00:00	08/12/22 14:30
140-28458-6	T-2341 VEN CB INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	08/10/22 00:00	08/12/22 14:30
140-28458-7	T-2342 VEN CB INLET R2 OTM-45 PARTICULATE FILTER	Air	08/10/22 00:00	08/12/22 14:30
140-28458-8	T-2613 VEN CB INLET R2 OTM-45 ACETONE RINSE	Air	08/10/22 00:00	08/12/22 14:30
140-28458-9	T-2342,T-2343,T-2613 VEN CB INLET R2 OTM-45 FH	Air	08/10/22 00:00	08/12/22 14:30
140-28458-10	T-2344,T-2345,T-2347 VEN CB INLET R2 OTM-45 BH	Air	08/10/22 00:00	08/12/22 14:30
140-28458-11	T-2346 VEN CB INLET R2 OTM-45 IMPINGERS 1,2&3 CONDENSATE	Air	08/10/22 00:00	08/12/22 14:30
140-28458-12	T-2348 VEN CB INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	08/10/22 00:00	08/12/22 14:30
140-28458-13	T-2349 VEN CB INLET R3 OTM-45 PARTICULATE FILTER	Air	08/11/22 00:00	08/12/22 14:30
140-28458-14	T-2621 VEN CB INLET R3 OTM-45 ACETONE RINSE	Air	08/11/22 00:00	08/12/22 14:30
140-28458-15	T-2349,T-2350,T-2621 VEN CB INLET R3 OTM-45 FH	Air	08/11/22 00:00	08/12/22 14:30
140-28458-16	T-2351,T-2352,T-2354 VEN CB INLET R3 OTM-45 BH	Air	08/11/22 00:00	08/12/22 14:30
140-28458-17	T-2353 VEN CB INLET R3 OTM-45 IMPINGERS 1,2&3 CONDENSATE	Air	08/11/22 00:00	08/12/22 14:30
140-28458-18	T-2355 VEN CB INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	08/11/22 00:00	08/12/22 14:30

Request for Analysis/Chain-of-Custody – RFA/COC #001
The Chemours Company – Fayetteville NC
VEN Carbon Bed Inlet

eurofins | Environment Testing TestAmerica

Project Identification:	Chemours Emissions Test
Client Name:	Chemours Company
Client Contact:	Christel Compton (910) 678-1213
TestAmerica Contact:	Courtney Adkins (865) 291-3019
TestAmerica Project Manager:	Billy Anderson (865) 291-3080

Laboratory Deliverable Turnaround Requirements:	
Analytical Due Date: (Review-Released Data)	21 Days from Lab Receipt
Data Package Due Date:	28 Days from Lab Receipt

Analytical Testing QC Requirements:
The Legend for Project-Specific Quality Control Testing is designated in the "QC" column as follows: "BT" = Blank Train, "RB" = Reagent Blank, "MS" = Matrix Spike, "MSD" = Matrix Spike Duplicate, "DUP" = Duplicate, "PB" = Proof Blank, "TB" = Trip Blank

Laboratory Destination:	TestAmerica Laboratories, Inc. 5815 Middlebrook Pike Knoxville, TN 37921
Lab Phone Number:	865.291.3000
Courier:	Hand Deliver

Project Deliverables:
Report analytical results on TALS Reports and in data packages. Include "Field Sample Number", "Sample Type", and "Run Number" on all TALS Reports.

Analytical Parameter:	Holding Time Requirements:
HFPO-DA (CAS No. 13252-13-6)	14 Days to Extraction; 40 Days to Analysis

140-28458 Chain of Custody

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require-ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-2335 VEN CB INLET R1 OTM-45 Particulate Filter (Combine with *T-2336*)	1	8/10/22		125 mL HDPE Wide-Mouth Bottle	**Particulate Filter (82.6 mm Whatman Glass Microfiber)** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using method 8321A-HFPO.
T-2336 VEN CB INLET R1 OTM-45 FH of Filter Holder & Probe Methanol Rinse (Combine with *T-2335*)	1	8/10/22		125 mL HDPE Wide-Mouth Bottle	**Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the Particulate Filter extraction.
T-2337 VEN CB INLET R1 OTM-45 XAD-2 Resin Tube	1	8/10/22		XAD-2 Resin Tube	**XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using method 8321A-HFPO.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require -ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-2338 VEN CB INLET R1 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *T-2337*)	1	8/10/22		125 mL HDPE Wide-Mouth Bottle	**Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction.
T-2339 VEN CB INLET R1 OTM-45 Impingers 1,2 & 3 Condensate	1	8/10/22		500 mL HDPE Wide-Mouth Bottle	**Impinger #1, #2 & #3 Condensate** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Analyze the sample for HFPO-DA.
T-2340 VEN CB INLET R1 OTM-45 Impinger Glassware MeOH Rinse (Combine with *T-2337*)	1	8/10/22		250 mL HDPE Wide-Mouth Bottle	**Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the XAD-2 Resin Extraction.
T-2341 VEN CB INLET R1 OTM-45 Breakthrough XAD-2 Resin Tube	1	8/10/22		XAD-2 Resin Tube	**Breakthrough XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using method 8321A-HFPO.
T-2342 VEN CB INLET R2 OTM-45 Particulate Filter (Combine with *T-2343*)	2	8/11/22		125 mL HDPE Wide-Mouth Bottle	**Particulate Filter (82.6 mm Whatman Glass Microfiber)** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using method 8321A-HFPO.
T-2343 VEN CB INLET R2 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with *T-2342*)	2	8/11/22		125 mL HDPE Wide-Mouth Bottle	**Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the Particulate Filter extraction.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require -ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-2344 VEN CB INLET R2 OTM-45 XAD-2 Resin Tube	2	8/10/22		XAD-2 Resin Tube	**XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using method 8321A-HFPO. Analyze.
T-2345 VEN CB INLET R2 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *T-2344*)	2	8/10/22		125 mL HDPE Wide-Mouth Bottle	**Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction.
T-2346 VEN CB INLET R2 OTM-45 Impingers 1,2 & 3 Condensate	2	8/10/22		500 mL HDPE Wide-Mouth Bottle	**Impinger #1, #2 & #3 Condensate** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Analyze the sample for HFPO-DA.
T-2347 VEN CB INLET R2 OTM-45 Impinger Glassware MeOH Rinse (Combine with *T-2344*)	2	8/10/22		250 mL HDPE Wide-Mouth Bottle	**Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the XAD-2 Resin Extraction.
T-2348 VEN CB INLET R2 OTM-45 Breakthrough XAD-2 Resin Tube	2	8/10/22		XAD-2 Resin Tube	**Breakthrough XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using method 8321A-HFPO.
T-2349 VEN CB INLET R3 OTM-45 Particulate Filter (Combine with *T-2350*)	3	8/11/22		125 mL HDPE Wide-Mouth Bottle	**Particulate Filter (82.6 mm Whatman Glass Microfiber)** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using method 8321A-HFPO.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require-ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-2350 VEN CB INLET R3 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with *T-2349*)	3	8/11/22		125 mL HDPE Wide-Mouth Bottle	**Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the Particulate Filter extraction.
T-2351 VEN CB INLET R3 OTM-45 XAD-2 Resin Tube	3	8/11/22		XAD-2 Resin Tube	**XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using method 8321A-HFPO.
T-2352 VEN CB INLET R3 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *T-2351*)	3	8/11/22		125 mL HDPE Wide-Mouth Bottle	**Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction. Analyze for HFPO-DA using method 8321A-HFPO.
T-2353 VEN CB INLET R3 OTM-45 Impingers 1,2 & 3 Condensate	3	8/11/22		500 mL HDPE Wide-Mouth Bottle	**Impinger #1, #2 & #3 Condensate** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Analyze the sample for HFPO-DA.
T-2354 VEN CB INLET R3 OTM-45 Impinger Glassware MeOH Rinse (Combine with *T-2351*)	3	8/11/22		250 mL HDPE Wide-Mouth Bottle	**Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the XAD-2 Resin Extraction.
T-2355 VEN CB INLET R3 OTM-45 Breakthrough XAD-2 Resin Tube	3	8/11/22		XAD-2 Resin Tube	**Breakthrough XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using method 8321A-HFPO.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require-ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
~~T-2356~~ VEN CB INLET ~~R4 OTM-45 Particulate Filter~~ Front Half R1 ~~(Combine with T-2357)~~ Acetone Rinse T-2605	~~4~~ 1	8/10/22		125 ~~mL~~ HDPE Wide-Mouth Bottle Narrow Amber Bottle	**Particulate Filter (82.6 mm Whatman Glass Microfiber)** Acetone Rinse ~~OTM-45 Train~~ ~~HFPO-DA Analysis~~	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using method 8321A-HFPO.
~~T-2357~~ VEN CB INLET ~~R4 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse~~ FH Acetone Rinse R2 ~~(Combine with T-2356)~~ T-2693	~~4~~ 2	8/10/22		125 ~~mL~~ HDPE Wide-Mouth Bottle Narrow Amber Bottle	**Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse** Acetone ~~OTM-45 Train~~ Rinse HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the Particulate Filter extraction.
~~T-2358~~ VEN CB INLET ~~R4 OTM-45 XAD-2 Resin Tube~~ R3 Front-Half Acetone Rinse T-2621	~~4~~ 3	8/11/22		XAD-2 ~~Resin~~ Tube Narrow Amber Bottle	**~~XAD-2 Resin Tube~~** ~~OTM-45 Train~~ ~~HFPO-DA Analysis~~ Acetone Rinse	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using method 8321A-HFPO.
T-2359 VEN CB INLET R4 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *T-2358*)	4			125 mL HDPE Wide-Mouth Bottle	**Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction. Analyze for HFPO-DA using method 8321A-HFPO.
T-2360 VEN CB INLET R4 OTM-45 Impingers 1,2 & 3 Condensate	4			500 mL HDPE Wide-Mouth Bottle	**Impinger #1, ~~#2 & #3~~ Condensate** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Analyze the sample for HFPO-DA.
T-2361 VEN CB INLET R4 OTM-45 Impinger Glassware MeOH Rinse (Combine with *T-2358*)	4			250 mL HDPE Wide-Mouth Bottle	**Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the XAD-2 Resin Extraction.

Sample Receipt Log and Condition of the Samples Upon Receipt:

Please fill in the following information:	Comments (Please write "NONE" if no comment applicable)
(1) Record the identities of any samples that were listed on the RFA but were not found in the sample shipment.	NONE
(2) Record the sample shipping cooler temperature of all coolers transporting samples listed on this RFA:	RT 1.6 / CT 1.7°C
(3) Record any apparent sample loss/breakage.	NONE
(4) Record any unidentified samples transported with this shipment of samples:	NONE
(5) Indicate if all samples were received according to the project's required specifications (i.e. no nonconformances):	HAND DELIVERED, NO CUSTODY SEALS

Custody Transfer:

	Name	Company	Date/Time
Relinquished By:	Patrick Gray	Alliance	8/11/22/1830
Accepted By:	Don Gold	ETA KNOX	8/11/22 1830
Relinquished By:	Don Gold	ETA KNOX	8/12/22 1430
Accepted By:	Ryan Lanier	ETA KNX	8-12-22 14:30
Relinquished By:			
Accepted By:			
Relinquished By:			
Accepted By:			

Loc: 140
28458

EUROFINS/TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓			☐ Containers, Broken
2. Were ambient air containers received intact?			✓	☐ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			✓	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : SC73 Correction factor: +0.1°C	✓			☐ Cooler Out of Temp, Client Contacted, Proceed/Cancel ☐ Cooler Out of Temp, Same Day Receipt
5. Were all of the sample containers received intact?	✓			☐ Containers, Broken
6. Were samples received in appropriate containers?	✓			☐ Containers, Improper; Client Contacted; Proceed/Cancel
7. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ COC & Samples Do Not Match ☐ COC Incorrect/Incomplete ☐ COC Not Received
8. Were all of the samples listed on the COC received?	✓			☐ Sample Received, Not on COC ☐ Sample on COC, Not Received
9. Is the date/time of sample collection noted?	✓			☐ COC; No Date/Time; Client Contacted
10. Was the sampler identified on the COC?			✓	☐ Sampler Not Listed on COC
11. Is the client and project name/# identified?	✓			☐ COC Incorrect/Incomplete
12. Are tests/parameters listed for each sample?	✓			☐ COC No tests on COC
13. Is the matrix of the samples noted?	✓			☐ COC Incorrect/Incomplete
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ COC Incorrect/Incomplete
15. Were samples received within holding time?	✓			☐ Holding Time - Receipt
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ pH Adjusted, pH Included (See box 16A) ☐ Incorrect Preservative
17. Were VOA samples received without headspace?			✓	☐ Headspace (VOA only)
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: ______			✓	☐ Residual Chlorine
19. For 1613B water samples is pH<9?			✓	☐ If no, notify lab to adjust
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: ______ PM Instructions: ______

Sample Receiving Associate: [signature] Date: 8-12-22

QA026R32.doc, 062719

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ANALYTICAL REPORT

Eurofins Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Tel: (865)291-3000

Laboratory Job ID: 140-28459-1
Client Project/Site: VEN Carbon Bed Outlet

For:
The Chemours Company FC, LLC
c/o AECOM
Sabre Building, Suite 300
4051 Ogletown Road
Newark, Delaware 19713

Attn: Michael Aucoin

Authorized for release by:
8/25/2022 10:05:25 AM

Courtney Adkins, Project Manager II
(865)291-3019
Courtney.Adkins@et.eurofinsus.com

Table of Contents

Definitions/Glossary

Client: The Chemours Company FC, LLC
Project/Site: VEN Carbon Bed Outlet

Job ID: 140-28459-1

Qualifiers

LCMS

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 140-28459-1

Laboratory: Eurofins Knoxville

Narrative

Job Narrative
140-28459-1

Receipt

The samples were received on 8/12/2022 2:30 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.0º C.

LCMS

Method 537 (modified): The following samples were reported with elevated reporting limits for all analytes: T-2363,T-2364,T-2629 VEN CB OUTLET R1 OTM-45 FH (140-28459-3), T-2370,T-2371,T-2637 VEN CB OUTLET R2 OTM-45 FH (140-28459-9) and T-2377,T-2378,T-2645 VEN CB OUTLET R3 OTM-45 FH (140-28459-15). The sample was analyzed at a dilution based on screening results.

Method 537 (modified): The required dilution factor for the following samples were higher than could be achieved by "in vial" dilution, as it would dilute out the Isotope Dilution Analytes (IDA): T-2363,T-2364,T-2629 VEN CB OUTLET R1 OTM-45 FH (140-28459-3), T-2370,T-2371,T-2637 VEN CB OUTLET R2 OTM-45 FH (140-28459-9) and T-2377,T-2378,T-2645 VEN CB OUTLET R3 OTM-45 FH (140-28459-15). As such, the dilution was achieved by taking a subsample of the undiluted extract, adding sufficient solvent, and re-spiking the extract with IDA.

Method 537 (modified): The following samples were reported with elevated reporting limits for all analytes: T-2372,T-2373,T-2375 VEN CB OUTLET R2 OTM-45 BH (140-28459-10). The sample was analyzed at a dilution based on screening results.

Method 537 (modified): The required dilution factor for the following samples were higher than could be achieved by "in vial" dilution, as it would dilute out the Isotope Dilution Analytes (IDA): T-2372,T-2373,T-2375 VEN CB OUTLET R2 OTM-45 BH (140-28459-10). As such, the dilution was achieved by taking a subsample of the undiluted extract, adding sufficient solvent, and re-spiking the extract with IDA.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

Total Particulates: The measurement of the mass of particulate matter trapped by the particulate filter and probe rinse derived from an M-5 sampling train was performed using SOP number KNOX-WC-0006 (based on EPA Methods 0050 and 5). Microfiber filters and 150 mL beakers are carefully inspected and tare weighed to constant weight. After sample collection, the filters are dried, and then carefully weighed to constant weight to determine the mass of particulate matter trapped on the filters. The acetone probe rinse solution is evaporated to dryness, and then weighed to constant weight to determine the total particulate mass collected in the rinse. The total particulate mass collected by an M-5 train is the sum of the particulate filter and the acetone probe rinse residue weights.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client: The Chemours Company FC, LLC
Project/Site: VEN Carbon Bed Outlet

Job ID: 140-28459-1

Client Sample ID: T-2363 VEN CB OUTLET R1 OTM-45 PARTICULATE FILTER

Lab Sample ID: 140-28459-1

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	ND		0.500	0.500	mg/sample			08/12/22 16:26	1

Client Sample ID: T-2629 VEN CB OUTLET R1 OTM-45 ACETONE RINSE

Lab Sample ID: 140-28459-2

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	0.905		0.500	0.500	mg/sample			08/12/22 16:26	1

Client Sample ID: T-2363,T-2364,T-2629 VEN CB OUTLET R1 OTM-45 FH

Lab Sample ID: 140-28459-3

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	76.9		5.00	4.70	ug/Sample		08/17/22 09:35	08/22/22 13:27	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*97*		*25 - 150*	*08/17/22 09:35*	*08/22/22 13:27*	*1*

Client Sample ID: T-2365,T-2366,T-2368 VEN CB OUTLET R1 OTM-45 BH

Lab Sample ID: 140-28459-4

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.156		0.0200	0.0110	ug/Sample		08/13/22 08:42	08/19/22 13:15	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*85*		*25 - 150*	*08/13/22 08:42*	*08/19/22 13:15*	*1*

Client Sample ID: T-2367 VEN CB OUTLET R1 OTM-45 IMPINGERS 1,2&3 CONDENSATE

Lab Sample ID: 140-28459-5

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.0346	J	0.0775	0.0310	ug/Sample		08/15/22 12:57	08/16/22 13:37	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*90*		*25 - 150*	*08/15/22 12:57*	*08/16/22 13:37*	*1*

Client Sample ID: T-2369 VEN CB OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-28459-6

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		08/13/22 08:42	08/19/22 13:24	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*86*		*25 - 150*	*08/13/22 08:42*	*08/19/22 13:24*	*1*

Client Sample ID: T-2370 VEN CB OUTLET R2 OTM-45 PARTICULATE FILTER

Lab Sample ID: 140-28459-7

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	ND		0.500	0.500	mg/sample			08/12/22 16:26	1

Client Sample ID: T-2637 VEN CB OUTLET R2 OTM-45 ACETONE RINSE

Lab Sample ID: 140-28459-8

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	ND		0.500	0.500	mg/sample			08/12/22 16:26	1

Client Sample ID: T-2370,T-2371,T-2637 VEN CB OUTLET R2 OTM-45 FH

Lab Sample ID: 140-28459-9

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	78.1		5.00	4.70	ug/Sample		08/17/22 09:35	08/22/22 13:53	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*101*		*25 - 150*	*08/17/22 09:35*	*08/22/22 13:53*	*1*

Client Sample ID: T-2372,T-2373,T-2375 VEN CB OUTLET R2 OTM-45 BH

Lab Sample ID: 140-28459-10

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	14.3		10.0	5.50	ug/Sample		08/13/22 08:50	08/23/22 15:39	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*95*		*25 - 150*	*08/13/22 08:50*	*08/23/22 15:39*	*1*

Client Sample ID: T-2374 VEN CB OUTLET R2 OTM-45 IMPINGERS 1,2&3 CONDENSATE

Lab Sample ID: 140-28459-11

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	2.06		0.0762	0.0305	ug/Sample		08/15/22 12:57	08/16/22 14:04	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*94*		*25 - 150*	*08/15/22 12:57*	*08/16/22 14:04*	*1*

Client Sample ID: T-2376 VEN CB OUTLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-28459-12

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.162		0.0200	0.0110	ug/Sample		08/13/22 08:50	08/19/22 13:41	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*80*		*25 - 150*	*08/13/22 08:50*	*08/19/22 13:41*	*1*

Client Sample ID: T-2377 VEN CB OUTLET R3 OTM-45 PARTICULATE FILTER

Lab Sample ID: 140-28459-13

Date Collected: 08/11/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	ND		0.500	0.500	mg/sample			08/12/22 16:26	1

Client Sample ID: T-2645 VEN CB OUTLET R3 OTM-45 ACETONE RINSE

Lab Sample ID: 140-28459-14

Date Collected: 08/11/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	ND		0.500	0.500	mg/sample			08/12/22 16:26	1

Client Sample ID: T-2377,T-2378,T-2645 VEN CB OUTLET R3 OTM-45 FH

Lab Sample ID: 140-28459-15

Date Collected: 08/11/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	10.0		0.500	0.470	ug/Sample		08/17/22 09:35	08/22/22 14:02	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*101*		*25 - 150*	*08/17/22 09:35*	*08/22/22 14:02*	*1*

Client: The Chemours Company FC, LLC
Project/Site: VEN Carbon Bed Outlet

Job ID: 140-28459-1

Client Sample ID: T-2379,T-2380,T-2382 VEN CB OUTLET R3 OTM-45 BH

Lab Sample ID: 140-28459-16

Date Collected: 08/11/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.173		0.0200	0.0110	ug/Sample		08/13/22 08:50	08/19/22 14:08	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*105*		*25 - 150*	*08/13/22 08:50*	*08/19/22 14:08*	*1*

Client Sample ID: T-2381 VEN CB OUTLET R3 OTM-45 IMPINGERS 1,2&3 CONDENSATE

Lab Sample ID: 140-28459-17

Date Collected: 08/11/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.0370	J	0.0813	0.0325	ug/Sample		08/15/22 12:57	08/16/22 14:12	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*108*		*25 - 150*	*08/15/22 12:57*	*08/16/22 14:12*	*1*

Client Sample ID: T-2383 VEN CB OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-28459-18

Date Collected: 08/11/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		08/13/22 08:50	08/19/22 14:16	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*80*		*25 - 150*	*08/13/22 08:50*	*08/19/22 14:16*	*1*

Default Detection Limits

Client: The Chemours Company FC, LLC
Job ID: 140-28459-1
Project/Site: VEN Carbon Bed Outlet

Method: 537 (modified) - Fluorinated Alkyl Substances

Prep: None

Analyte	RL	MDL	Units
HFPO-DA	0.0200	0.0110	ug/Sample
HFPO-DA	0.00500	0.00470	ug/Sample

Method: 537 (modified) - Fluorinated Alkyl Substances

Prep: PFAS Prep

Analyte	RL	MDL	Units
HFPO-DA	0.000500	0.000200	ug/Sample

General Chemistry

Analyte	RL	MDL	Units
Particulates, Total	0.500	0.500	mg/sample

Isotope Dilution Summary

Client: The Chemours Company FC, LLC
Project/Site: VEN Carbon Bed Outlet

Job ID: 140-28459-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Air

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HFPODA (25-150)						
140-28459-3	T-2363,T-2364,T-2629 VEN CB	97						
140-28459-4	T-2365,T-2366,T-2368 VEN CB OUTLET R1 OTM-45 BH	85						
140-28459-5	T-2367 VEN CB OUTLET R1 OTM-45 IMPINGERS 1,2&3 CONDENSATE	90						
140-28459-6	T-2369 VEN CB OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	86						
140-28459-9	T-2370,T-2371,T-2637 VEN CB OUTLET R2 OTM-45 FH	101						
140-28459-10	T-2372,T-2373,T-2375 VEN CB OUTLET R2 OTM-45 BH	95						
140-28459-11	T-2374 VEN CB OUTLET R2 OTM-45 IMPINGERS 1,2&3 CONDENSATE	94						
140-28459-12	T-2376 VEN CB OUTLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	80						
140-28459-15	T-2377,T-2378,T-2645 VEN CB OUTLET R3 OTM-45 FH	101						
140-28459-16	T-2379,T-2380,T-2382 VEN CB OUTLET R3 OTM-45 BH	105						
140-28459-17	T-2381 VEN CB OUTLET R3 OTM-45 IMPINGERS 1,2&3 CONDENSATE	108						
140-28459-18	T-2383 VEN CB OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	80						
LCS 140-64283/2-B	Lab Control Sample	93						
LCS 140-64324/2-A	Lab Control Sample	95						
LCS 140-64388/2-B	Lab Control Sample	83						
LCSD 140-64283/3-B	Lab Control Sample Dup	90						
LCSD 140-64324/3-A	Lab Control Sample Dup	94						
LCSD 140-64388/3-B	Lab Control Sample Dup	86						
MB 140-64283/14-B	Method Blank	96						
MB 140-64283/1-B	Method Blank	98						
MB 140-64324/1-A	Method Blank	104						
MB 140-64388/1-B	Method Blank	82						

Surrogate Legend

HFPODA = 13C3 HFPO-DA

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 140-64283/14-B
Matrix: Air
Analysis Batch: 64471

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64283

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		08/13/22 08:42	08/19/22 12:48	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*96*		*25 - 150*	*08/13/22 08:42*	*08/19/22 12:48*	*1*

Lab Sample ID: MB 140-64283/1-B
Matrix: Air
Analysis Batch: 64471

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64283

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		08/13/22 08:42	08/19/22 10:36	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*98*		*25 - 150*	*08/13/22 08:42*	*08/19/22 10:36*	*1*

Lab Sample ID: LCS 140-64283/2-B
Matrix: Air
Analysis Batch: 64471

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 64283

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0200	0.02356		ug/Sample		118	60 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*93*		*25 - 150*

Lab Sample ID: LCSD 140-64283/3-B
Matrix: Air
Analysis Batch: 64471

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 64283

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0200	0.02367		ug/Sample		118	60 - 140	0	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*90*		*25 - 150*

Lab Sample ID: MB 140-64324/1-A
Matrix: Air
Analysis Batch: 64360

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64324

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		08/15/22 12:57	08/16/22 12:18	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*104*		*25 - 150*	*08/15/22 12:57*	*08/16/22 12:18*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 140-64324/2-A
Matrix: Air
Analysis Batch: 64360

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 64324

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0100	0.01046		ug/Sample		105	60 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*95*		*25 - 150*

Lab Sample ID: LCSD 140-64324/3-A
Matrix: Air
Analysis Batch: 64360

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 64324

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0100	0.01020		ug/Sample		102	60 - 140	2	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*94*		*25 - 150*

Lab Sample ID: MB 140-64388/1-B
Matrix: Air
Analysis Batch: 64501

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64388

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		08/17/22 09:35	08/22/22 12:07	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*82*		*25 - 150*	*08/17/22 09:35*	*08/22/22 12:07*	*1*

Lab Sample ID: LCS 140-64388/2-B
Matrix: Air
Analysis Batch: 64501

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 64388

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0200	0.02329		ug/Sample		116	60 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*83*		*25 - 150*

Lab Sample ID: LCSD 140-64388/3-B
Matrix: Air
Analysis Batch: 64501

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 64388

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0200	0.02524		ug/Sample		126	60 - 140	8	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*86*		*25 - 150*

LCMS

Prep Batch: 64283

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28459-4	T-2365,T-2366,T-2368 VEN CB OUTLET R1 OTM	Total/NA	Air	None	
140-28459-6	T-2369 VEN CB OUTLET R1 OTM-45 BREAKTH	Total/NA	Air	None	
140-28459-10	T-2372,T-2373,T-2375 VEN CB OUTLET R2 OTM	Total/NA	Air	None	
140-28459-12	T-2376 VEN CB OUTLET R2 OTM-45 BREAKTH	Total/NA	Air	None	
140-28459-16	T-2379,T-2380,T-2382 VEN CB OUTLET R3 OTM	Total/NA	Air	None	
140-28459-18	T-2383 VEN CB OUTLET R3 OTM-45 BREAKTH	Total/NA	Air	None	
MB 140-64283/14-B	Method Blank	Total/NA	Air	None	
MB 140-64283/1-B	Method Blank	Total/NA	Air	None	
LCS 140-64283/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-64283/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Cleanup Batch: 64299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28459-4	T-2365,T-2366,T-2368 VEN CB OUTLET R1 OTM	Total/NA	Air	Split	64283
140-28459-6	T-2369 VEN CB OUTLET R1 OTM-45 BREAKTH	Total/NA	Air	Split	64283
140-28459-10	T-2372,T-2373,T-2375 VEN CB OUTLET R2 OTM	Total/NA	Air	Split	64283
140-28459-12	T-2376 VEN CB OUTLET R2 OTM-45 BREAKTH	Total/NA	Air	Split	64283
140-28459-16	T-2379,T-2380,T-2382 VEN CB OUTLET R3 OTM	Total/NA	Air	Split	64283
140-28459-18	T-2383 VEN CB OUTLET R3 OTM-45 BREAKTH	Total/NA	Air	Split	64283
MB 140-64283/14-B	Method Blank	Total/NA	Air	Split	64283
MB 140-64283/1-B	Method Blank	Total/NA	Air	Split	64283
LCS 140-64283/2-B	Lab Control Sample	Total/NA	Air	Split	64283
LCSD 140-64283/3-B	Lab Control Sample Dup	Total/NA	Air	Split	64283

Prep Batch: 64324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28459-5	T-2367 VEN CB OUTLET R1 OTM-45 IMPINGER	Total/NA	Air	PFAS Prep	
140-28459-11	T-2374 VEN CB OUTLET R2 OTM-45 IMPINGER	Total/NA	Air	PFAS Prep	
140-28459-17	T-2381 VEN CB OUTLET R3 OTM-45 IMPINGER	Total/NA	Air	PFAS Prep	
MB 140-64324/1-A	Method Blank	Total/NA	Air	PFAS Prep	
LCS 140-64324/2-A	Lab Control Sample	Total/NA	Air	PFAS Prep	
LCSD 140-64324/3-A	Lab Control Sample Dup	Total/NA	Air	PFAS Prep	

Analysis Batch: 64360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28459-5	T-2367 VEN CB OUTLET R1 OTM-45 IMPINGER	Total/NA	Air	537 (modified)	64324
140-28459-11	T-2374 VEN CB OUTLET R2 OTM-45 IMPINGER	Total/NA	Air	537 (modified)	64324
140-28459-17	T-2381 VEN CB OUTLET R3 OTM-45 IMPINGER	Total/NA	Air	537 (modified)	64324
MB 140-64324/1-A	Method Blank	Total/NA	Air	537 (modified)	64324
LCS 140-64324/2-A	Lab Control Sample	Total/NA	Air	537 (modified)	64324
LCSD 140-64324/3-A	Lab Control Sample Dup	Total/NA	Air	537 (modified)	64324

Prep Batch: 64388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28459-3	T-2363,T-2364,T-2629 VEN CB OUTLET R1 OTM	Total/NA	Air	None	
140-28459-9	T-2370,T-2371,T-2637 VEN CB OUTLET R2 OTM	Total/NA	Air	None	
140-28459-15	T-2377,T-2378,T-2645 VEN CB OUTLET R3 OTM	Total/NA	Air	None	
MB 140-64388/1-B	Method Blank	Total/NA	Air	None	
LCS 140-64388/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-64388/3-B	Lab Control Sample Dup	Total/NA	Air	None	

LCMS

Cleanup Batch: 64426

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28459-3	T-2363,T-2364,T-2629 VEN CB OUTLET R1 OTM	Total/NA	Air	Split	64388
140-28459-9	T-2370,T-2371,T-2637 VEN CB OUTLET R2 OTM	Total/NA	Air	Split	64388
140-28459-15	T-2377,T-2378,T-2645 VEN CB OUTLET R3 OTM	Total/NA	Air	Split	64388
MB 140-64388/1-B	Method Blank	Total/NA	Air	Split	64388
LCS 140-64388/2-B	Lab Control Sample	Total/NA	Air	Split	64388
LCSD 140-64388/3-B	Lab Control Sample Dup	Total/NA	Air	Split	64388

Analysis Batch: 64471

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28459-4	T-2365,T-2366,T-2368 VEN CB OUTLET R1 OTM	Total/NA	Air	537 (modified)	64299
140-28459-6	T-2369 VEN CB OUTLET R1 OTM-45 BREAKTH	Total/NA	Air	537 (modified)	64299
140-28459-12	T-2376 VEN CB OUTLET R2 OTM-45 BREAKTH	Total/NA	Air	537 (modified)	64299
140-28459-16	T-2379,T-2380,T-2382 VEN CB OUTLET R3 OTM	Total/NA	Air	537 (modified)	64299
140-28459-18	T-2383 VEN CB OUTLET R3 OTM-45 BREAKTH	Total/NA	Air	537 (modified)	64299
MB 140-64283/14-B	Method Blank	Total/NA	Air	537 (modified)	64299
MB 140-64283/1-B	Method Blank	Total/NA	Air	537 (modified)	64299
LCS 140-64283/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	64299
LCSD 140-64283/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	64299

Cleanup Batch: 64477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28459-10	T-2372,T-2373,T-2375 VEN CB OUTLET R2 OTM	Total/NA	Air	Dilution	64299

Cleanup Batch: 64490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28459-3	T-2363,T-2364,T-2629 VEN CB OUTLET R1 OTM	Total/NA	Air	Dilution	64426
140-28459-9	T-2370,T-2371,T-2637 VEN CB OUTLET R2 OTM	Total/NA	Air	Dilution	64426
140-28459-15	T-2377,T-2378,T-2645 VEN CB OUTLET R3 OTM	Total/NA	Air	Dilution	64426

Analysis Batch: 64501

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28459-3	T-2363,T-2364,T-2629 VEN CB OUTLET R1 OTM	Total/NA	Air	537 (modified)	64490
140-28459-9	T-2370,T-2371,T-2637 VEN CB OUTLET R2 OTM	Total/NA	Air	537 (modified)	64490
140-28459-15	T-2377,T-2378,T-2645 VEN CB OUTLET R3 OTM	Total/NA	Air	537 (modified)	64490
MB 140-64388/1-B	Method Blank	Total/NA	Air	537 (modified)	64426
LCS 140-64388/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	64426
LCSD 140-64388/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	64426

Analysis Batch: 64559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28459-10	T-2372,T-2373,T-2375 VEN CB OUTLET R2 OTM	Total/NA	Air	537 (modified)	64477

General Chemistry

Analysis Batch: 64320

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28459-1	T-2363 VEN CB OUTLET R1 OTM-45 PARTICUL	Total/NA	Air	5	
140-28459-2	T-2629 VEN CB OUTLET R1 OTM-45 ACETONE	Total/NA	Air	5	
140-28459-7	T-2370 VEN CB OUTLET R2 OTM-45 PARTICUL	Total/NA	Air	5	
140-28459-8	T-2637 VEN CB OUTLET R2 OTM-45 ACETONE	Total/NA	Air	5	
140-28459-13	T-2377 VEN CB OUTLET R3 OTM-45 PARTICUL	Total/NA	Air	5	

General Chemistry (Continued)

Analysis Batch: 64320 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28459-14	T-2645 VEN CB OUTLET R3 OTM-45 ACETONE	Total/NA	Air	5	

Client Sample ID: T-2363 VEN CB OUTLET R1 OTM-45 PARTICULATE FILTER

Lab Sample ID: 140-28459-1

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			64320	08/12/22 16:26	SJF	EET KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-2629 VEN CB OUTLET R1 OTM-45 ACETONE RINSE

Lab Sample ID: 140-28459-2

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			64320	08/12/22 16:26	SJF	EET KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-2363,T-2364,T-2629 VEN CB OUTLET R1 OTM-45 FH

Lab Sample ID: 140-28459-3

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	56 mL	64388	08/17/22 09:35	CAC	EET KNX
Total/NA	Cleanup	Split			28 mL	10 mL	64426	08/18/22 08:20	ACW	EET KNX
Total/NA	Cleanup	Dilution			10 uL	10000 uL	64490	08/21/22 10:15	JRC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64501	08/22/22 13:27	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: T-2365,T-2366,T-2368 VEN CB OUTLET R1 OTM-45 BH

Lab Sample ID: 140-28459-4

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64283	08/13/22 08:42	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64299	08/15/22 08:07	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64471	08/19/22 13:15	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: T-2367 VEN CB OUTLET R1 OTM-45 IMPINGERS 1,2&3 CONDENSATE

Lab Sample ID: 140-28459-5

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			0.00645 Sample	10 mL	64324	08/15/22 12:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64360	08/16/22 13:37	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: T-2369 VEN CB OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-28459-6

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64283	08/13/22 08:42	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64299	08/15/22 08:07	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64471	08/19/22 13:24	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: T-2370 VEN CB OUTLET R2 OTM-45 PARTICULATE FILTER

Lab Sample ID: 140-28459-7

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			64320	08/12/22 16:26	SJF	EET KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-2637 VEN CB OUTLET R2 OTM-45 ACETONE RINSE

Lab Sample ID: 140-28459-8

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			64320	08/12/22 16:26	SJF	EET KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-2370,T-2371,T-2637 VEN CB OUTLET R2 OTM-45 FH

Lab Sample ID: 140-28459-9

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	60 mL	64388	08/17/22 09:35	CAC	EET KNX
Total/NA	Cleanup	Split			30 mL	10 mL	64426	08/18/22 08:20	ACW	EET KNX
Total/NA	Cleanup	Dilution			10 uL	10000 uL	64490	08/21/22 10:15	JRC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64501	08/22/22 13:53	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: T-2372,T-2373,T-2375 VEN CB OUTLET R2 OTM-45 BH

Lab Sample ID: 140-28459-10

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64283	08/13/22 08:50	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64299	08/15/22 08:07	ACW	EET KNX
Total/NA	Cleanup	Dilution			20 uL	10000 uL	64477	08/19/22 10:23	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64559	08/23/22 15:39	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: T-2374 VEN CB OUTLET R2 OTM-45 IMPINGERS 1,2&3 CONDENSATE

Lab Sample ID: 140-28459-11

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			0.00656 Sample	10 mL	64324	08/15/22 12:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64360	08/16/22 14:04	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: T-2376 VEN CB OUTLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-28459-12

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64283	08/13/22 08:50	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64299	08/15/22 08:07	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64471	08/19/22 13:41	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: T-2377 VEN CB OUTLET R3 OTM-45 PARTICULATE FILTER

Lab Sample ID: 140-28459-13

Date Collected: 08/11/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			64320	08/12/22 16:26	SJF	EET KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-2645 VEN CB OUTLET R3 OTM-45 ACETONE RINSE

Lab Sample ID: 140-28459-14

Date Collected: 08/11/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			64320	08/12/22 16:26	SJF	EET KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-2377,T-2378,T-2645 VEN CB OUTLET R3 OTM-45 FH

Lab Sample ID: 140-28459-15

Date Collected: 08/11/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	64 mL	64388	08/17/22 09:35	CAC	EET KNX
Total/NA	Cleanup	Split			32 mL	10 mL	64426	08/18/22 08:20	ACW	EET KNX
Total/NA	Cleanup	Dilution			100 uL	10000 uL	64490	08/21/22 10:15	JRC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64501	08/22/22 14:02	JRC	EET KNX

Instrument ID: LCA

Client Sample ID: T-2379,T-2380,T-2382 VEN CB OUTLET R3 OTM-45 BH

Lab Sample ID: 140-28459-16

Date Collected: 08/11/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64283	08/13/22 08:50	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64299	08/15/22 08:07	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64471	08/19/22 14:08	JRC	EET KNX

Instrument ID: LCA

Client Sample ID: T-2381 VEN CB OUTLET R3 OTM-45 IMPINGERS 1,2&3 CONDENSATE

Lab Sample ID: 140-28459-17

Date Collected: 08/11/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			0.00615 Sample	10 mL	64324	08/15/22 12:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64360	08/16/22 14:12	CAC	EET KNX

Instrument ID: LCA

Client Sample ID: T-2383 VEN CB OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-28459-18

Date Collected: 08/11/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64283	08/13/22 08:50	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64299	08/15/22 08:07	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64471	08/19/22 14:16	JRC	EET KNX

Instrument ID: LCA

Client Sample ID: Method Blank
Lab Sample ID: MB 140-64283/14-B

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64283	08/13/22 08:42	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64299	08/15/22 08:07	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64471	08/19/22 12:48	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-64283/1-B

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64283	08/13/22 08:42	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64299	08/15/22 08:07	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64471	08/19/22 10:36	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-64324/1-A

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			1 Sample	10 mL	64324	08/15/22 12:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64360	08/16/22 12:18	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-64388/1-B

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	64388	08/17/22 09:35	CAC	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	64426	08/18/22 08:20	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64501	08/22/22 12:07	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-64283/2-B

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64283	08/13/22 08:42	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64299	08/15/22 08:07	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64471	08/19/22 10:45	JRC	EET KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: VEN Carbon Bed Outlet

Job ID: 140-28459-1

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-64324/2-A
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			1 Sample	10 mL	64324	08/15/22 12:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64360	08/16/22 12:27	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-64388/2-B
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	64388	08/17/22 09:35	CAC	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	64426	08/18/22 08:20	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64501	08/22/22 12:16	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-64283/3-B
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64283	08/13/22 08:42	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64299	08/15/22 08:07	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64471	08/19/22 10:54	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-64324/3-A
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			1 Sample	10 mL	64324	08/15/22 12:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64360	08/16/22 12:35	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-64388/3-B
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	64388	08/17/22 09:35	CAC	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	64426	08/18/22 08:20	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64501	08/22/22 12:25	JRC	EET KNX
	Instrument ID: LCA									

Laboratory References:
EET KNX = Eurofins Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: The Chemours Company FC, LLC
Job ID: 140-28459-1
Project/Site: VEN Carbon Bed Outlet

Laboratory: Eurofins Knoxville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-25
ANAB	Dept. of Energy	L2311.01	02-13-25
ANAB	ISO/IEC 17025	L2311	02-13-25
Arkansas DEQ	State	88-0688	06-16-23
California	State	2423	06-30-22 *
Colorado	State	TN00009	02-28-23
Connecticut	State	PH-0223	09-30-23
Florida	NELAP	E87177	06-30-23
Georgia (DW)	State	906	12-11-22
Hawaii	State	NA	12-11-22
Kansas	NELAP	E-10349	10-31-22
Kentucky (DW)	State	90101	12-31-22
Louisiana	NELAP	83979	06-30-23
Louisiana (All)	NELAP	83979	06-30-23
Louisiana (DW)	State	LA019	12-31-22
Maryland	State	277	03-31-23
Michigan	State	9933	12-11-22
Nevada	State	TN00009	07-31-23
New Hampshire	NELAP	299919	01-17-23
New Jersey	NELAP	TN001	06-30-23
New York	NELAP	10781	03-31-23
North Carolina (DW)	State	21705	07-31-23
North Carolina (WW/SW)	State	64	12-31-22
Ohio VAP	State	CL0059	06-02-23
Oklahoma	State	9415	08-31-22
Oregon	NELAP	TNI0189	12-31-22
Pennsylvania	NELAP	68-00576	12-31-22
Tennessee	State	02014	12-11-22
Texas	NELAP	T104704380-21-16	08-31-22
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-19-00236	12-31-22
Utah	NELAP	TN00009	07-31-22 *
Virginia	NELAP	460176	09-14-22
Washington	State	C593	01-19-23
West Virginia (DW)	State	9955C	12-31-22
West Virginia DEP	State	345	04-30-23
Wisconsin	State	998044300	08-31-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: The Chemours Company FC, LLC
Project/Site: VEN Carbon Bed Outlet

Job ID: 140-28459-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	EET KNX
5	Particulates	EPA	EET KNX
Dilution	Dilution and Re-fortification of Standards	None	EET KNX
None	Leaching Procedure	TAL SOP	EET KNX
None	Leaching Procedure for Filter	TAL SOP	EET KNX
PFAS Prep	Preparation, Direct Inject PFAS	TAL-SAC	EET KNX
Split	Source Air Split	None	EET KNX

Protocol References:

EPA = US Environmental Protection Agency
None = None
TAL SOP = TestAmerica Laboratories, Standard Operating Procedure
TAL-SAC = Eurofins Sacramento, Facility Standard Operating Procedure.

Laboratory References:

EET KNX = Eurofins Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: The Chemours Company FC, LLC
Project/Site: VEN Carbon Bed Outlet

Job ID: 140-28459-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-28459-1	T-2363 VEN CB OUTLET R1 OTM-45 PARTICULATE FILTER	Air	08/10/22 00:00	08/12/22 14:30
140-28459-2	T-2629 VEN CB OUTLET R1 OTM-45 ACETONE RINSE	Air	08/10/22 00:00	08/12/22 14:30
140-28459-3	T-2363,T-2364,T-2629 VEN CB OUTLET R1 OTM-45 FH	Air	08/10/22 00:00	08/12/22 14:30
140-28459-4	T-2365,T-2366,T-2368 VEN CB OUTLET R1 OTM-45 BH	Air	08/10/22 00:00	08/12/22 14:30
140-28459-5	T-2367 VEN CB OUTLET R1 OTM-45 IMPINGERS 1,2&3 CONDENSATE	Air	08/10/22 00:00	08/12/22 14:30
140-28459-6	T-2369 VEN CB OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	08/10/22 00:00	08/12/22 14:30
140-28459-7	T-2370 VEN CB OUTLET R2 OTM-45 PARTICULATE FILTER	Air	08/10/22 00:00	08/12/22 14:30
140-28459-8	T-2637 VEN CB OUTLET R2 OTM-45 ACETONE RINSE	Air	08/10/22 00:00	08/12/22 14:30
140-28459-9	T-2370,T-2371,T-2637 VEN CB OUTLET R2 OTM-45 FH	Air	08/10/22 00:00	08/12/22 14:30
140-28459-10	T-2372,T-2373,T-2375 VEN CB OUTLET R2 OTM-45 BH	Air	08/10/22 00:00	08/12/22 14:30
140-28459-11	T-2374 VEN CB OUTLET R2 OTM-45 IMPINGERS 1,2&3 CONDENSATE	Air	08/10/22 00:00	08/12/22 14:30
140-28459-12	T-2376 VEN CB OUTLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	08/10/22 00:00	08/12/22 14:30
140-28459-13	T-2377 VEN CB OUTLET R3 OTM-45 PARTICULATE FILTER	Air	08/11/22 00:00	08/12/22 14:30
140-28459-14	T-2645 VEN CB OUTLET R3 OTM-45 ACETONE RINSE	Air	08/11/22 00:00	08/12/22 14:30
140-28459-15	T-2377,T-2378,T-2645 VEN CB OUTLET R3 OTM-45 FH	Air	08/11/22 00:00	08/12/22 14:30
140-28459-16	T-2379,T-2380,T-2382 VEN CB OUTLET R3 OTM-45 BH	Air	08/11/22 00:00	08/12/22 14:30
140-28459-17	T-2381 VEN CB OUTLET R3 OTM-45 IMPINGERS 1,2&3 CONDENSATE	Air	08/11/22 00:00	08/12/22 14:30
140-28459-18	T-2383 VEN CB OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	08/11/22 00:00	08/12/22 14:30

Request for Analysis/Chain-of-Custody – RFA/COC #002
The Chemours Company – Fayetteville NC
VEN Carbon Bed Outlet

eurofins | Environment Testing TestAmerica

Project Identification:	Chemours Emissions Test
Client Name:	The Chemours Company FC, LLC
Client Contact:	Ms. Christel Compton Office: (910) 678-1213 Cell: (910) 975-3386
TestAmerica Project Manager:	Ms. Courtney Adkins Office: (865) 291-3019
TestAmerica Program Manager:	Mr. Billy Anderson Office: (865) 291-3080 Cell: (865) 206-9004

Analytical Testing QC Requirements:
The Legend for Project-Specific Quality Control Testing is designated in the "QC" column as follows: "BT" = Blank Train, "RB" = Reagent Blank, "MS" = Matrix Spike, "MSD" = Matrix Spike Duplicate, "DUP" = Duplicate, "PB" = Proof Blank, "TB" = Trip Blank

Laboratory Deliverable Turnaround Requirements:	
Analytical Due Date: (Review-Released Data)	21 Days from Lab Receipt
Data Package Due Date:	28 Days from Lab Receipt

Laboratory Destination:	Eurofins TestAmerica 5815 Middlebrook Pike Knoxville, TN
Lab Phone Number:	(865) 291-3000
Courier:	Hand Deliver

Project Deliverables:
Report analytical results on TALS Report form Std_Tal_L4. Include "Field Sample Num ... ll TALS Reports.

Analytical Parameter:	Holding Time Requirements:
HFPO-DA (CAS No. 13252-13-6)	14 Days to Extraction; 40 Days to Analysis

140-28459 Chain of Custody

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require-ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-2363 VEN CB OUTLET R1 OTM-45 Filter (Combine with *T-2364*)	1	8/10/22		125 mL HDPE Wide-Mouth Bottle	**Particulate Filter (82.6 mm Whatman Glass Microfiber)** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using Method 8321A-HFPO.
T-2364 VEN CB OUTLET R1 OTM-45 FH of Filter Holder & Probe Methanol Rinse (Combine with *T-2363*)	1	8/10/22		125 mL HDPE Wide-Mouth Bottle	**Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the Particulate Filter extraction.
T-2365 VEN CB OUTLET R1 OTM-45 XAD-2 Resin Tube	1	8/10/22		XAD-2 Resin Tube	**XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using Method 8321A-HFPO.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require-ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-2366 VEN CB OUTLET R1 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *T-2365*)	1	8/10/22		125 mL HDPE Wide-Mouth Bottle	**Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction. Analyze for HFPO-DA using Method 8321A-HFPO.
T-2367 VEN CB OUTLET R1 OTM-45 Impingers 1,2 & 3 Condensate	1	8/10/22		500 mL HDPE Wide-Mouth Bottle	**Impinger #1, #2 & #3 Condensate** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Analyze the sample for HFPO-DA.
T-2368 VEN CB OUTLET R1 OTM-45 Impinger Glassware MeOH Rinse (Combine with *T-2365*)	1	8/10/22		250 mL HDPE Wide-Mouth Bottle	**Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the XAD-2 Resin Extraction.
T-2369 VEN CB OUTLET R1 OTM-45 Breakthrough XAD-2 Resin Tube	1	8/10/22		XAD-2 Resin Tube	**Breakthrough XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using Method 8321A-HFPO.
T-2370 VEN CB OUTLET R2 OTM-45 Filter (Combine with *T-2371*)	2	8/10/22		125 mL HDPE Wide-Mouth Bottle	**Particulate Filter (82.6 mm Whatman Glass Microfiber)** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using Method 8321A-HFPO.
T-2371 VEN CB OUTLET R2 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with *T-2370*)	2	8/10/22		125 mL HDPE Wide-Mouth Bottle	**Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the Particulate Filter extraction.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require -ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-2372 VEN CB OUTLET R2 OTM-45 XAD-2 Resin Tube	2	8/10/22		XAD-2 Resin Tube	**XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using Method 8321A-HFPO.
T-2373 VEN CB OUTLET R2 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *T-2372*)	2	8/10/22		125 mL HDPE Wide-Mouth Bottle	**Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction. Analyze for HFPO-DA using Method 8321A-HFPO.
T-2374 VEN CB OUTLET R2 OTM-45 Impingers 1,2 & 3 Condensate	2	8/10/22		500 mL HDPE Wide-Mouth Bottle	**Impinger #1, #2 & #3 Condensate** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Analyze the sample for HFPO-DA.
T-2375 VEN CB OUTLET R2 OTM-45 Impinger Glassware MeOH Rinse (Combine with *T-2372*)	2	8/10/22		250 mL HDPE Wide-Mouth Bottle	**Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the XAD-2 Resin Extraction.
T-2376 VEN CB OUTLET R2 OTM-45 Breakthrough XAD-2 Resin Tube	2	8/10/22		XAD-2 Resin Tube	**Breakthrough XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using Method 8321A-HFPO.
T-2377 VEN CB OUTLET R3 OTM-45 Filter (Combine with *T-2378*)	3	8/11/22		125 mL HDPE Wide-Mouth Bottle	**Particulate Filter (82.6 mm Whatman Glass Microfiber)** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using Method 8321A-HFPO.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require -ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-2378 VEN CB OUTLET R3 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with *T-2377*)	3	8/11/22		125 mL HDPE Wide-Mouth Bottle	**Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the Particulate Filter extraction.
T-2379 VEN CB OUTLET R3 OTM-45 XAD-2 Resin Tube	3	8/11/22		XAD-2 Resin Tube	**XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using Method 8321A-HFPO.
T-2380 VEN CB OUTLET R3 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *T-2379*)	3	8/11/22		125 mL HDPE Wide-Mouth Bottle	**Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction. Analyze for HFPO-DA using Method 8321A-HFPO.
T-2381 VEN CB OUTLET R3 OTM-45 Impingers 1,2 & 3 Condensate	3	8/11/22		500 mL HDPE Wide-Mouth Bottle	**Impinger #1, #2 & #3 Condensate** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Analyze the sample for HFPO-DA.
T-2382 VEN CB OUTLET R3 OTM-45 Impinger Glassware MeOH Rinse (Combine with *T-2379*)	3	8/11/22		250 mL HDPE Wide-Mouth Bottle	**Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the XAD-2 Resin Extraction.
T-2383 VEN CB OUTLET R3 OTM-45 Breakthrough XAD-2 Resin Tube	3	8/11/22		XAD-2 Resin Tube	**Breakthrough XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using Method 8321A-HFPO.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require -ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
~~T-2384~~ VEN CB OUTLET ~~R4 OTM-45 Filter~~ FH Acetone Rinse (~~Combine with~~ R1 ~~T-2385~~) T-2629	1	8/10/22		125 mL HDPE Wide-Mouth Bottle Narrow Amber Bottle	**Particulate Filter (82.6 mm Whatman Glass Microfiber)** Acetone Rinse ~~OTM-45~~ Train ~~HFPO-DA Analysis~~	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using Method 8321A-HFPO.
~~T-2385~~ VEN CB OUTLET ~~R4 OTM-45 Front Half of Filter Holder & Probe Methanol~~ Rinse R2 FH Acetone Rinse (~~Combine with T-2384~~) T-2637	2	8/10/22		125 mL HDPE Wide-Mouth Bottle Narrow Amber Bottle	**Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse** Acetone ~~OTM-45 Train~~ Rinse ~~HFPO-DA Analysis~~	**Knoxville**: Use this solvent sample in the Particulate Filter extraction.
~~T-2386~~ VEN CB OUTLET ~~R4 OTM-45 XAD-2 Resin Tube~~ FH Acetone Rinse R3 T-2645	3	8/11/22		XAD-2 Resin Tube Narrow Amber Bottle	**XAD-2 Resin Tube** ~~OTM-45 Train~~ ~~HFPO-DA Analysis~~ Acetone Rinse	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using Method 8321A-HFPO.
T-2387 VEN CB OUTLET R4 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *T-2386*)	4			125 mL HDPE Wide-Mouth Bottle	**Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction. Analyze for HFPO-DA using Method 8321A-HFPO.
T-2388 VEN CB OUTLET R4 OTM-45 Impingers 1,2 & 3 Condensate	4			500 mL HDPE Wide-Mouth Bottle	**Impinger #1, #2 & #3 Condensate** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Analyze the sample for HFPO-DA.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require-ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-2389 VEN CB OUTLET R4 OTM-45 Impinger Glassware MeOH Rinse (Combine with *T-2386*)	4			250 mL HDPE Wide-Mouth Bottle	**Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the XAD-2 Resin Extraction.
T-2390 VEN CB OUTLET R4 OTM-45 Breakthrough XAD-2 Resin Tube	4			XAD-2 Resin Tube	**Breakthrough XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using Method 8321A-HFPO.

Sample Receipt Log and Condition of the Samples Upon Receipt:

Please fill in the following information:	Comments (Please write "NONE" if no comment applicable)
(1) Record the identities of any samples that were listed on the RFA but were not found in the sample shipment.	NONE
(2) Record the sample shipping cooler temperature of all coolers transporting samples listed on this RFA:	RT 0.9 /CT 1.0°c
(3) Record any apparent sample loss/breakage.	NONE
(4) Record any unidentified samples transported with this shipment of samples:	NONE
(5) Indicate if all samples were received according to the project's required specifications (i.e. no nonconformances):	NONE

Custody Transfer:

	Name	Company	Date/Time
Relinquished By:	Patrick Gray	Alliance	8/11/22/1830
Accepted By:	Doug Cahill	ETA KNOX	8/11/22 1830
Relinquished By:	Doug Cahill	ETA KNOX	8/12/22 1430
Accepted By:	Reynolds Inman	ETA KNX	8-12-22 14:30
Relinquished By:			
Accepted By:			
Relinquished By:			
Accepted By:			

EUROFINS/TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓			☐ **Containers, Broken**
2. Were ambient air containers received intact?			✓	☐ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			✓	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : SC73 Correction factor: +0.1°C	✓			☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	✓			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	✓			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	✓			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	✓			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?			✓	☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	✓			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	✓			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	✓			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	✓			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			✓	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			✓	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			✓	☐ If no, notify lab to adjust
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: _____ PM Instructions: _____

Sample Receiving Associate: _____ Date: 8-12-22

QA026R32.doc, 062719

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ANALYTICAL REPORT

Eurofins Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Tel: (865)291-3000

Laboratory Job ID: 140-28460-1
Client Project/Site: Carbon Bed Field QC

For:
The Chemours Company FC, LLC
c/o AECOM
Sabre Building, Suite 300
4051 Ogletown Road
Newark, Delaware 19713

Attn: Michael Aucoin

Authorized for release by:
8/25/2022 10:06:36 AM

Courtney Adkins, Project Manager II
(865)291-3019
Courtney.Adkins@et.eurofinsus.com

Table of Contents

Definitions/Glossary

Client: The Chemours Company FC, LLC
Project/Site: Carbon Bed Field QC

Job ID: 140-28460-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 140-28460-1

Laboratory: Eurofins Knoxville

Narrative

Job Narrative
140-28460-1

Receipt

The samples were received on 8/12/2022 2:30 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.2º C.

LCMS

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

Total Particulates: The measurement of the mass of particulate matter trapped by the particulate filter and probe rinse derived from an M-5 sampling train was performed using SOP number KNOX-WC-0006 (based on EPA Methods 0050 and 5). Microfiber filters and 150 mL beakers are carefully inspected and tare weighed to constant weight. After sample collection, the filters are dried, and then carefully weighed to constant weight to determine the mass of particulate matter trapped on the filters. The acetone probe rinse solution is evaporated to dryness, and then weighed to constant weight to determine the total particulate mass collected in the rinse. The total particulate mass collected by an M-5 train is the sum of the particulate filter and the acetone probe rinse residue weights.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample ID: T-2391,T-2392 QC OTM-45 FH PBT

Lab Sample ID: 140-28460-1

Date Collected: 08/10/22 00:00
Matrix: Air
Date Received: 08/12/22 14:30
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.00847		0.00500	0.00470	ug/Sample		08/17/22 09:35	08/22/22 14:19	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*81*		*25 - 150*	*08/17/22 09:35*	*08/22/22 14:19*	*1*

Client Sample ID: T-2393,T-2394,2396 QC OTM-45 BH PBT

Lab Sample ID: 140-28460-2

Date Collected: 08/10/22 00:00
Matrix: Air
Date Received: 08/12/22 14:30
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		08/13/22 08:48	08/23/22 16:52	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*89*		*25 - 150*	*08/13/22 08:48*	*08/23/22 16:52*	*1*

Client Sample ID: T-2395 QC OTM-45 IMPINGERS 1,2&3 CONDENSATE PBT

Lab Sample ID: 140-28460-3

Date Collected: 08/10/22 00:00
Matrix: Air
Date Received: 08/12/22 14:30
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		08/15/22 12:57	08/16/22 14:21	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*91*		*25 - 150*	*08/15/22 12:57*	*08/16/22 14:21*	*1*

Client Sample ID: T-2397 QC OTM-45 IMPINGERS BREAKTHROUGH XAD-2 RESIN TUBE PBT

Lab Sample ID: 140-28460-4

Date Collected: 08/10/22 00:00
Matrix: Air
Date Received: 08/12/22 14:30
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		08/13/22 08:48	08/23/22 17:01	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*96*		*25 - 150*	*08/13/22 08:48*	*08/23/22 17:01*	*1*

Client Sample ID: T-2398 QC OTM-45 DI WATER RB

Lab Sample ID: 140-28460-5

Date Collected: 08/10/22 00:00
Matrix: Air
Date Received: 08/12/22 14:30
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		08/15/22 12:57	08/16/22 14:39	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*93*		*25 - 150*	*08/15/22 12:57*	*08/16/22 14:39*	*1*

Client Sample ID: T-2399 QC OTM-45 MEOH WITH 55 NH4OH RB

Lab Sample ID: 140-28460-6

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		08/13/22 08:48	08/23/22 17:12	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*84*		*25 - 150*	*08/13/22 08:48*	*08/23/22 17:12*	*1*

Client Sample ID: T-2400,T-2401 QC OTM-45 FH FBT

Lab Sample ID: 140-28460-7

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	**0.00640**		0.00494	0.00464	ug/Sample		08/17/22 09:35	08/22/22 14:28	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*84*		*25 - 150*	*08/17/22 09:35*	*08/22/22 14:28*	*1*

Client Sample ID: T-2402,T-2403,T-2405 QC OTM-45 BH FBT

Lab Sample ID: 140-28460-8

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		08/13/22 08:48	08/23/22 17:21	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*87*		*25 - 150*	*08/13/22 08:48*	*08/23/22 17:21*	*1*

Client Sample ID: T-2404 QC OTM-45 IMPINGERS 1,2&3 CONDENSATE FBT

Lab Sample ID: 140-28460-9

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		08/15/22 12:57	08/16/22 14:48	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*104*		*25 - 150*	*08/15/22 12:57*	*08/16/22 14:48*	*1*

Client Sample ID: T-2406 QC OTM-45 IMPINGERS BREAKTHROUGH XAD-2 RESIN TUBE FBT

Lab Sample ID: 140-28460-10

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		08/13/22 08:48	08/23/22 17:29	1

Client: The Chemours Company FC, LLC
Project/Site: Carbon Bed Field QC

Job ID: 140-28460-1

Client Sample ID: T-2406 QC OTM-45 IMPINGERS BREAKTHROUGH XAD-2 RESIN TUBE FBT

Lab Sample ID: 140-28460-10

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	86		25 - 150	08/13/22 08:48	08/23/22 17:29	1

Client Sample ID: T-2688 REAGENT BLANK ACETONE

Lab Sample ID: 140-28460-11

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	0.585		0.500	0.500	mg/sample			08/12/22 16:26	1

Client Sample ID: T-2249 OTM-45 MEDIA CHECK XAD

Lab Sample ID: 140-28460-12

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		08/13/22 08:48	08/23/22 17:38	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	86		25 - 150	08/13/22 08:48	08/23/22 17:38	1

Client Sample ID: T-2248 OTM-45 MEDIA CHECK FILTER

Lab Sample ID: 140-28460-13

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.0110		0.00500	0.00470	ug/Sample		08/17/22 09:43	08/22/22 14:37	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	83		25 - 150	08/17/22 09:43	08/22/22 14:37	1

Default Detection Limits

Client: The Chemours Company FC, LLC
Project/Site: Carbon Bed Field QC

Job ID: 140-28460-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Prep: None

Analyte	RL	MDL	Units
HFPO-DA	0.00500	0.00470	ug/Sample
HFPO-DA	0.0200	0.0110	ug/Sample

Method: 537 (modified) - Fluorinated Alkyl Substances

Prep: PFAS Prep

Analyte	RL	MDL	Units
HFPO-DA	0.000500	0.000200	ug/Sample

General Chemistry

Analyte	RL	MDL	Units
Particulates, Total	0.500	0.500	mg/sample

Isotope Dilution Summary

Client: The Chemours Company FC, LLC
Project/Site: Carbon Bed Field QC

Job ID: 140-28460-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Air

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HFPODA (25-150)						
140-28460-1	T-2391,T-2392 QC OTM-45 FH	81						
140-28460-2	T-2393,T-2394,2396 QC OTM-45 BH PBT	89						
140-28460-3	T-2395 QC OTM-45 IMPINGERS 1,2&3 CONDENSATE PBT	91						
140-28460-4	T-2397 QC OTM-45 IMPINGERS BREAKTHROUGH XAD-2 RESI TUBE PBT	96						
140-28460-5	T-2398 QC OTM-45 DI WATER RB	93						
140-28460-6	T-2399 QC OTM-45 MEOH WITH 55 NH4OH RB	84						
140-28460-7	T-2400,T-2401 QC OTM-45 FH FBT	84						
140-28460-8	T-2402,T-2403,T-2405 QC OTM-45 BH FBT	87						
140-28460-9	T-2404 QC OTM-45 IMPINGERS 1,2&3 CONDENSATE FBT	104						
140-28460-10	T-2406 QC OTM-45 IMPINGERS BREAKTHROUGH XAD-2 RESI TUBE FBT	86						
140-28460-12	T-2249 OTM-45 MEDIA CHECK XAD	86						
140-28460-13	T-2248 OTM-45 MEDIA CHECK FILTER	83						
LCS 140-64284/2-B	Lab Control Sample	94						
LCS 140-64324/2-A	Lab Control Sample	95						
LCS 140-64388/2-B	Lab Control Sample	83						
LCSD 140-64284/3-B	Lab Control Sample Dup	110						
LCSD 140-64324/3-A	Lab Control Sample Dup	94						
LCSD 140-64388/3-B	Lab Control Sample Dup	86						
MB 140-64284/1-B	Method Blank	79						
MB 140-64324/14-A	Method Blank	96						
MB 140-64324/1-A	Method Blank	104						
MB 140-64388/14-B	Method Blank	82						
MB 140-64388/1-B	Method Blank	82						

Surrogate Legend

HFPODA = 13C3 HFPO-DA

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 140-64284/1-B
Matrix: Air
Analysis Batch: 64559

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64284

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		08/13/22 08:48	08/23/22 16:17	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*79*		*25 - 150*	*08/13/22 08:48*	*08/23/22 16:17*	*1*

Lab Sample ID: LCS 140-64284/2-B
Matrix: Air
Analysis Batch: 64559

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 64284

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0200	0.02124		ug/Sample		106	60 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*94*		*25 - 150*

Lab Sample ID: LCSD 140-64284/3-B
Matrix: Air
Analysis Batch: 64559

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 64284

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0200	0.02457		ug/Sample		123	60 - 140	15	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*110*		*25 - 150*

Lab Sample ID: MB 140-64324/14-A
Matrix: Air
Analysis Batch: 64360

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64324

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		08/15/22 12:57	08/16/22 14:30	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*96*		*25 - 150*	*08/15/22 12:57*	*08/16/22 14:30*	*1*

Lab Sample ID: MB 140-64324/1-A
Matrix: Air
Analysis Batch: 64360

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64324

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		08/15/22 12:57	08/16/22 12:18	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*104*		*25 - 150*	*08/15/22 12:57*	*08/16/22 12:18*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 140-64324/2-A
Matrix: Air
Analysis Batch: 64360

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 64324

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0100	0.01046		ug/Sample		105	60 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*95*		*25 - 150*

Lab Sample ID: LCSD 140-64324/3-A
Matrix: Air
Analysis Batch: 64360

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 64324

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0100	0.01020		ug/Sample		102	60 - 140	2	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*94*		*25 - 150*

Lab Sample ID: MB 140-64388/14-B
Matrix: Air
Analysis Batch: 64501

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64388

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		08/17/22 09:35	08/22/22 14:10	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*82*		*25 - 150*	*08/17/22 09:35*	*08/22/22 14:10*	*1*

Lab Sample ID: MB 140-64388/1-B
Matrix: Air
Analysis Batch: 64501

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64388

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		08/17/22 09:35	08/22/22 12:07	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*82*		*25 - 150*	*08/17/22 09:35*	*08/22/22 12:07*	*1*

Lab Sample ID: LCS 140-64388/2-B
Matrix: Air
Analysis Batch: 64501

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 64388

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0200	0.02329		ug/Sample		116	60 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*83*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 140-64388/3-B
Matrix: Air
Analysis Batch: 64501

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 64388

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0200	0.02524		ug/Sample		126	60 - 140	8	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*86*		*25 - 150*

LCMS

Prep Batch: 64284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28460-2	T-2393,T-2394,2396 QC OTM-45 BH PBT	Total/NA	Air	None	
140-28460-4	T-2397 QC OTM-45 IMPINGERS BREAKTHROU	Total/NA	Air	None	
140-28460-6	T-2399 QC OTM-45 MEOH WITH 55 NH4OH RB	Total/NA	Air	None	
140-28460-8	T-2402,T-2403,T-2405 QC OTM-45 BH FBT	Total/NA	Air	None	
140-28460-10	T-2406 QC OTM-45 IMPINGERS BREAKTHROU	Total/NA	Air	None	
140-28460-12	T-2249 OTM-45 MEDIA CHECK XAD	Total/NA	Air	None	
MB 140-64284/1-B	Method Blank	Total/NA	Air	None	
LCS 140-64284/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-64284/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Prep Batch: 64324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28460-3	T-2395 QC OTM-45 IMPINGERS 1,2&3 CONDEI	Total/NA	Air	PFAS Prep	
140-28460-5	T-2398 QC OTM-45 DI WATER RB	Total/NA	Air	PFAS Prep	
140-28460-9	T-2404 QC OTM-45 IMPINGERS 1,2&3 CONDEI	Total/NA	Air	PFAS Prep	
MB 140-64324/14-A	Method Blank	Total/NA	Air	PFAS Prep	
MB 140-64324/1-A	Method Blank	Total/NA	Air	PFAS Prep	
LCS 140-64324/2-A	Lab Control Sample	Total/NA	Air	PFAS Prep	
LCSD 140-64324/3-A	Lab Control Sample Dup	Total/NA	Air	PFAS Prep	

Analysis Batch: 64360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28460-3	T-2395 QC OTM-45 IMPINGERS 1,2&3 CONDEI	Total/NA	Air	537 (modified)	64324
140-28460-5	T-2398 QC OTM-45 DI WATER RB	Total/NA	Air	537 (modified)	64324
140-28460-9	T-2404 QC OTM-45 IMPINGERS 1,2&3 CONDEI	Total/NA	Air	537 (modified)	64324
MB 140-64324/14-A	Method Blank	Total/NA	Air	537 (modified)	64324
MB 140-64324/1-A	Method Blank	Total/NA	Air	537 (modified)	64324
LCS 140-64324/2-A	Lab Control Sample	Total/NA	Air	537 (modified)	64324
LCSD 140-64324/3-A	Lab Control Sample Dup	Total/NA	Air	537 (modified)	64324

Cleanup Batch: 64385

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28460-2	T-2393,T-2394,2396 QC OTM-45 BH PBT	Total/NA	Air	Split	64284
140-28460-4	T-2397 QC OTM-45 IMPINGERS BREAKTHROU	Total/NA	Air	Split	64284
140-28460-6	T-2399 QC OTM-45 MEOH WITH 55 NH4OH RB	Total/NA	Air	Split	64284
140-28460-8	T-2402,T-2403,T-2405 QC OTM-45 BH FBT	Total/NA	Air	Split	64284
140-28460-10	T-2406 QC OTM-45 IMPINGERS BREAKTHROU	Total/NA	Air	Split	64284
140-28460-12	T-2249 OTM-45 MEDIA CHECK XAD	Total/NA	Air	Split	64284
MB 140-64284/1-B	Method Blank	Total/NA	Air	Split	64284
LCS 140-64284/2-B	Lab Control Sample	Total/NA	Air	Split	64284
LCSD 140-64284/3-B	Lab Control Sample Dup	Total/NA	Air	Split	64284

Prep Batch: 64388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28460-1	T-2391,T-2392 QC OTM-45 FH PBT	Total/NA	Air	None	
140-28460-7	T-2400,T-2401 QC OTM-45 FH FBT	Total/NA	Air	None	
140-28460-13	T-2248 OTM-45 MEDIA CHECK FILTER	Total/NA	Air	None	
MB 140-64388/14-B	Method Blank	Total/NA	Air	None	
MB 140-64388/1-B	Method Blank	Total/NA	Air	None	
LCS 140-64388/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-64388/3-B	Lab Control Sample Dup	Total/NA	Air	None	

QC Association Summary

Client: The Chemours Company FC, LLC
Project/Site: Carbon Bed Field QC

Job ID: 140-28460-1

LCMS

Cleanup Batch: 64426

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28460-1	T-2391,T-2392 QC OTM-45 FH PBT	Total/NA	Air	Split	64388
140-28460-7	T-2400,T-2401 QC OTM-45 FH FBT	Total/NA	Air	Split	64388
140-28460-13	T-2248 OTM-45 MEDIA CHECK FILTER	Total/NA	Air	Split	64388
MB 140-64388/14-B	Method Blank	Total/NA	Air	Split	64388
MB 140-64388/1-B	Method Blank	Total/NA	Air	Split	64388
LCS 140-64388/2-B	Lab Control Sample	Total/NA	Air	Split	64388
LCSD 140-64388/3-B	Lab Control Sample Dup	Total/NA	Air	Split	64388

Analysis Batch: 64501

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28460-1	T-2391,T-2392 QC OTM-45 FH PBT	Total/NA	Air	537 (modified)	64426
140-28460-7	T-2400,T-2401 QC OTM-45 FH FBT	Total/NA	Air	537 (modified)	64426
140-28460-13	T-2248 OTM-45 MEDIA CHECK FILTER	Total/NA	Air	537 (modified)	64426
MB 140-64388/14-B	Method Blank	Total/NA	Air	537 (modified)	64426
MB 140-64388/1-B	Method Blank	Total/NA	Air	537 (modified)	64426
LCS 140-64388/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	64426
LCSD 140-64388/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	64426

Analysis Batch: 64559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28460-2	T-2393,T-2394,2396 QC OTM-45 BH PBT	Total/NA	Air	537 (modified)	64385
140-28460-4	T-2397 QC OTM-45 IMPINGERS BREAKTHROU	Total/NA	Air	537 (modified)	64385
140-28460-6	T-2399 QC OTM-45 MEOH WITH 55 NH4OH RB	Total/NA	Air	537 (modified)	64385
140-28460-8	T-2402,T-2403,T-2405 QC OTM-45 BH FBT	Total/NA	Air	537 (modified)	64385
140-28460-10	T-2406 QC OTM-45 IMPINGERS BREAKTHROU	Total/NA	Air	537 (modified)	64385
140-28460-12	T-2249 OTM-45 MEDIA CHECK XAD	Total/NA	Air	537 (modified)	64385
MB 140-64284/1-B	Method Blank	Total/NA	Air	537 (modified)	64385
LCS 140-64284/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	64385
LCSD 140-64284/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	64385

General Chemistry

Analysis Batch: 64320

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28460-11	T-2688 REAGENT BLANK ACETONE	Total/NA	Air	5	

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: Carbon Bed Field QC

Job ID: 140-28460-1

Client Sample ID: T-2391,T-2392 QC OTM-45 FH PBT
Lab Sample ID: 140-28460-1
Date Collected: 08/10/22 00:00
Matrix: Air
Date Received: 08/12/22 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	64 mL	64388	08/17/22 09:35	CAC	EET KNX
Total/NA	Cleanup	Split			32 mL	10 mL	64426	08/18/22 08:20	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64501	08/22/22 14:19	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: T-2393,T-2394,2396 QC OTM-45 BH PBT
Lab Sample ID: 140-28460-2
Date Collected: 08/10/22 00:00
Matrix: Air
Date Received: 08/12/22 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64284	08/13/22 08:48	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64385	08/17/22 08:17	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64559	08/23/22 16:52	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: T-2395 QC OTM-45 IMPINGERS 1,2&3 CONDENSATE PBT
Lab Sample ID: 140-28460-3
Date Collected: 08/10/22 00:00
Matrix: Air
Date Received: 08/12/22 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			1 Sample	10 mL	64324	08/15/22 12:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64360	08/16/22 14:21	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: T-2397 QC OTM-45 IMPINGERS BREAKTHROUGH XAD-2 RESIN TUBE PBT
Lab Sample ID: 140-28460-4
Date Collected: 08/10/22 00:00
Matrix: Air
Date Received: 08/12/22 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64284	08/13/22 08:48	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64385	08/17/22 08:17	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64559	08/23/22 17:01	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: T-2398 QC OTM-45 DI WATER RB
Lab Sample ID: 140-28460-5
Date Collected: 08/10/22 00:00
Matrix: Air
Date Received: 08/12/22 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			1 Sample	10 mL	64324	08/15/22 12:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64360	08/16/22 14:39	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: T-2399 QC OTM-45 MEOH WITH 55 NH4OH RB

Lab Sample ID: 140-28460-6

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	64284	08/13/22 08:48	CAC	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	64385	08/17/22 08:17	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64559	08/23/22 17:12	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: T-2400,T-2401 QC OTM-45 FH FBT

Lab Sample ID: 140-28460-7

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	79 mL	64388	08/17/22 09:35	CAC	EET KNX
Total/NA	Cleanup	Split			40 mL	10 mL	64426	08/18/22 08:20	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64501	08/22/22 14:28	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: T-2402,T-2403,T-2405 QC OTM-45 BH FBT

Lab Sample ID: 140-28460-8

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64284	08/13/22 08:48	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64385	08/17/22 08:17	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64559	08/23/22 17:21	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: T-2404 QC OTM-45 IMPINGERS 1,2&3 CONDENSATE FBT

Lab Sample ID: 140-28460-9

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			1 Sample	10 mL	64324	08/15/22 12:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64360	08/16/22 14:48	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: T-2406 QC OTM-45 IMPINGERS BREAKTHROUGH XAD-2 RESIN TUBE FBT

Lab Sample ID: 140-28460-10

Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64284	08/13/22 08:48	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64385	08/17/22 08:17	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64559	08/23/22 17:29	JRC	EET KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: Carbon Bed Field QC

Job ID: 140-28460-1

Client Sample ID: T-2688 REAGENT BLANK ACETONE

Lab Sample ID: 140-28460-11
Matrix: Air
Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			64320	08/12/22 16:26	SJF	EET KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-2249 OTM-45 MEDIA CHECK XAD

Lab Sample ID: 140-28460-12
Matrix: Air
Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64284	08/13/22 08:48	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64385	08/17/22 08:17	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64559	08/23/22 17:38	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: T-2248 OTM-45 MEDIA CHECK FILTER

Lab Sample ID: 140-28460-13
Matrix: Air
Date Collected: 08/10/22 00:00
Date Received: 08/12/22 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	64388	08/17/22 09:43	CAC	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	64426	08/18/22 08:20	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64501	08/22/22 14:37	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank

Lab Sample ID: MB 140-64284/1-B
Matrix: Air
Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64284	08/13/22 08:48	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64385	08/17/22 08:17	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64559	08/23/22 16:17	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank

Lab Sample ID: MB 140-64324/14-A
Matrix: Air
Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			1 Sample	10 mL	64324	08/15/22 12:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64360	08/16/22 14:30	CAC	EET KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: Carbon Bed Field QC

Job ID: 140-28460-1

Client Sample ID: Method Blank
Lab Sample ID: MB 140-64324/1-A
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			1 Sample	10 mL	64324	08/15/22 12:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64360	08/16/22 12:18	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-64388/14-B
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	64388	08/17/22 09:35	CAC	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	64426	08/18/22 08:20	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64501	08/22/22 14:10	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-64388/1-B
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	64388	08/17/22 09:35	CAC	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	64426	08/18/22 08:20	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64501	08/22/22 12:07	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-64284/2-B
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64284	08/13/22 08:48	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64385	08/17/22 08:17	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64559	08/23/22 16:33	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-64324/2-A
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			1 Sample	10 mL	64324	08/15/22 12:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64360	08/16/22 12:27	CAC	EET KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: Carbon Bed Field QC

Job ID: 140-28460-1

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-64388/2-B
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	64388	08/17/22 09:35	CAC	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	64426	08/18/22 08:20	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64501	08/22/22 12:16	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-64284/3-B
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	64284	08/13/22 08:48	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	64385	08/17/22 08:17	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64559	08/23/22 16:43	JRC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-64324/3-A
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			1 Sample	10 mL	64324	08/15/22 12:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64360	08/16/22 12:35	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-64388/3-B
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	64388	08/17/22 09:35	CAC	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	64426	08/18/22 08:20	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	64501	08/22/22 12:25	JRC	EET KNX
	Instrument ID: LCA									

Laboratory References:
EET KNX = Eurofins Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: The Chemours Company FC, LLC
Job ID: 140-28460-1
Project/Site: Carbon Bed Field QC

Laboratory: Eurofins Knoxville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-25
ANAB	Dept. of Energy	L2311.01	02-13-25
ANAB	ISO/IEC 17025	L2311	02-13-25
Arkansas DEQ	State	88-0688	06-16-23
California	State	2423	06-30-22 *
Colorado	State	TN00009	02-28-23
Connecticut	State	PH-0223	09-30-23
Florida	NELAP	E87177	06-30-23
Georgia (DW)	State	906	12-11-22
Hawaii	State	NA	12-11-22
Kansas	NELAP	E-10349	10-31-22
Kentucky (DW)	State	90101	12-31-22
Louisiana	NELAP	83979	06-30-23
Louisiana (All)	NELAP	83979	06-30-23
Louisiana (DW)	State	LA019	12-31-22
Maryland	State	277	03-31-23
Michigan	State	9933	12-11-22
Nevada	State	TN00009	07-31-23
New Hampshire	NELAP	299919	01-17-23
New Jersey	NELAP	TN001	06-30-23
New York	NELAP	10781	03-31-23
North Carolina (DW)	State	21705	07-31-23
North Carolina (WW/SW)	State	64	12-31-22
Ohio VAP	State	CL0059	06-02-23
Oklahoma	State	9415	08-31-22
Oregon	NELAP	TNI0189	12-31-22
Pennsylvania	NELAP	68-00576	12-31-22
Tennessee	State	02014	12-11-22
Texas	NELAP	T104704380-21-16	08-31-22
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-19-00236	12-31-22
Utah	NELAP	TN00009	07-31-22 *
Virginia	NELAP	460176	09-14-22
Washington	State	C593	01-19-23
West Virginia (DW)	State	9955C	12-31-22
West Virginia DEP	State	345	04-30-23
Wisconsin	State	998044300	08-31-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: The Chemours Company FC, LLC
Project/Site: Carbon Bed Field QC

Job ID: 140-28460-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	EET KNX
5	Particulates	EPA	EET KNX
None	Leaching Procedure	TAL SOP	EET KNX
None	Leaching Procedure for Filter	TAL SOP	EET KNX
PFAS Prep	Preparation, Direct Inject PFAS	TAL-SAC	EET KNX
Split	Source Air Split	None	EET KNX

Protocol References:

EPA = US Environmental Protection Agency
None = None
TAL SOP = TestAmerica Laboratories, Standard Operating Procedure
TAL-SAC = Eurofins Sacramento, Facility Standard Operating Procedure.

Laboratory References:

EET KNX = Eurofins Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: The Chemours Company FC, LLC
Project/Site: Carbon Bed Field QC

Job ID: 140-28460-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-28460-1	T-2391,T-2392 QC OTM-45 FH PBT	Air	08/10/22 00:00	08/12/22 14:30
140-28460-2	T-2393,T-2394,2396 QC OTM-45 BH PBT	Air	08/10/22 00:00	08/12/22 14:30
140-28460-3	T-2395 QC OTM-45 IMPINGERS 1,2&3 CONDENSATE PBT	Air	08/10/22 00:00	08/12/22 14:30
140-28460-4	T-2397 QC OTM-45 IMPINGERS BREAKTHROUGH XAD-2 RESIN TUBE PBT	Air	08/10/22 00:00	08/12/22 14:30
140-28460-5	T-2398 QC OTM-45 DI WATER RB	Air	08/10/22 00:00	08/12/22 14:30
140-28460-6	T-2399 QC OTM-45 MEOH WITH 55 NH4OH RB	Air	08/10/22 00:00	08/12/22 14:30
140-28460-7	T-2400,T-2401 QC OTM-45 FH FBT	Air	08/10/22 00:00	08/12/22 14:30
140-28460-8	T-2402,T-2403,T-2405 QC OTM-45 BH FBT	Air	08/10/22 00:00	08/12/22 14:30
140-28460-9	T-2404 QC OTM-45 IMPINGERS 1,2&3 CONDENSATE FBT	Air	08/10/22 00:00	08/12/22 14:30
140-28460-10	T-2406 QC OTM-45 IMPINGERS BREAKTHROUGH XAD-2 RESIN TUBE FBT	Air	08/10/22 00:00	08/12/22 14:30
140-28460-11	T-2688 REAGENT BLANK ACETONE	Air	08/10/22 00:00	08/12/22 14:30
140-28460-12	T-2249 OTM-45 MEDIA CHECK XAD	Air	08/10/22 00:00	08/12/22 14:30
140-28460-13	T-2248 OTM-45 MEDIA CHECK FILTER	Air	08/10/22 00:00	08/12/22 14:30

Request for Analysis/Chain-of-Custody – RFA/COC #003
The Chemours Company – Fayetteville NC
Carbon Bed Field QC Samples

eurofins | Environment Testing America

Project Identification:	Chemours Emissions Test
Client Name:	The Chemours Company FC, LLC
Client Contact:	Christel Compton Office: (910) 678-1213 Cell: (910) 975-3386
TestAmerica Project Manager:	Courtney Adkins Office: (865) 291-3019
TestAmerica Program Manager:	Billy Anderson Office: (865) 291-3080 Cell: (865) 206-9004

Analytical Testing QC Requirements:
The Legend for ProjecB- Specific Quality Control Testing is designated in the "QC" column as follows: "BT" = Blank Train, "RB" = Reagent Blank, "MS" = Matrix Spike, "MSD" = Matrix Spike Duplicate, "DUP" = Duplicate, "PB" = Proof Blank, "TB" = Trip Blank

Laboratory Deliverable Turnaround Requirements:	
Analytical Due Date: (Review-Released Data)	21 Days from Lab Receipt
Data Package Due Date:	28 Days from Lab Receipt

Laboratory Destination:	Eurofins TestAmerica 5815 Middlebrook Pike Knoxville, TN 37921
Lab Phone Number:	865.291.3000
Courier:	Hand Deliver

Project Deliverables:
Report analytical results on TALS Report form Std_Tal_L4. Include "Field Sample Num
Reports.

ıll TALS

Analytical Parameter:	Holding Time Requirements:
HFPO-DA (CAS No. 13252-13-6) & PFOA (CAS No. 335-67-1)	14 Days to Extraction; 40 Days to Analysi

140-28460 Chain of Custody

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require-ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-2391 QC OTM-45 Filter PBT (Combine with *T-2392*)	QC	8/10/22	Proof Blank Train	250 mL HDPE Wide-Mouth Bottle	**Particulate Filter (82.6 mm Whatman Glass Microfiber)** OTM-45 Proof Blank Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front- Half Probe Rinse to assist the solvent extraction of the Filter sample. Analyze for HFPO-DA.
T-2392 QC OTM-45 FH of Filter Holder & Probe MeOH Rinse PBT (Combine with *T-2391*)	QC	8/10/22	Proof Blank Train	250 mL HDPE Wide-Mouth Bottle	**Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Proof Blank Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the Filter extraction.
T-2393 QC OTM-45 XAD-2 Resin Tube PBT	QC	8/10/22	Proof Blank Train	XAD-2 Resin Tube	**XAD-2 Resin Tube** OTM-45 Proof Blank Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require-ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-2394 QC OTM-45 BH of Filter Holder & Coil Condenser MeOH Rinse PBT (Combine with *T-2393*)	QC	8/10/22	Proof Blank Train	250 mL HDPE Wide-Mouth Bottle	**Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Proof Blank Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction. Analyze for HFPO-DA.
T-2395 QC OTM-45 Impingers 1,2 & 3 Condensate PBT	QC	8/10/22	Proof Blank Train	1 Liter HDPE Wide-Mouth Bottle	**Impinger #1, #2 & #3 Condensate** OTM-45 Proof Blank Train HFPO-DA Analysis	**Knoxville**: Analyze for HFPO-DA.
T-2396 QC OTM-45 Impinger Glassware MeOH Rinse PBT (Combine with *T-2393)*	QC	8/10/22	Proof Blank Train	250 mL HDPE Wide-Mouth Bottle	**Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Proof Blank Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the XAD-2 Resin Extraction.
T-2397 QC OTM-45 Breakthrough XAD-2 Resin Tube PBT	QC	8/10/22	Proof Blank Train	XAD-2 Resin Tube	**Breakthrough XAD-2 Resin Tube** OTM-45 Proof Blank Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA.
T-2398 QC OTM-45 DI Water RB	QC	8/10/22	Reagent Blank	250 mL HDPE Wide-Mouth Bottle	**Deionized (DI) Water Reagent Blank** OTM-45 Reagent Blank HFPO-DA Analysis	**Knoxville**: Analyze for HFPO-DA.
T-2399 QC OTM-45 MeOH with 5% NH_4OH RB	QC	8/10/22	Reagent Blank	250 mL HDPE Wide-Mouth Bottle	**Methanol with 5% NH_4OH Reagent Blank** OTM-45 Reagent Blank HFPO-DA Analysis	**Knoxville**: Analyze for HFPO-DA.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require-ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-2400 QC OTM-45 Filter BT (Combine with *T-2401*)	QC	8/10/22	Field Blank Train	250 mL HDPE Wide-Mouth Bottle	**Particulate Filter (82.6 mm Whatman Glass Microfiber)** OTM-45 Field Blank Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front- Half Probe Rinse to assist the solvent extraction of the Filter sample. Analyze for HFPO-DA.
T-2401 QC OTM-45 FH of Filter Holder & Probe MeOH Rinse BT (Combine with *T-2400*)	QC	8/10/22	Field Blank Train	250 mL HDPE Wide-Mouth Bottle	**Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Field Blank Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the Filter extraction.
T-2402 QC OTM-45 XAD-2 Resin Tube BT	QC	8/10/22	Field Blank Train	XAD-2 Resin Tube	**XAD-2 Resin Tube** OTM-45 Field Blank Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA.
T-2403 QC OTM-45 BH of Filter Holder & Coil Condenser MeOH Rinse BT (Combine with *T-2402*)	QC	8/10/22	Field Blank Train	250 mL HDPE Wide-Mouth Bottle	**Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Field Blank Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction. Analyze for HFPO-DA.
T-2404 QC OTM-45 Impingers 1,2 & 3 Condensate BT	QC	8/10/22	Field Blank Train	1 Liter HDPE Wide-Mouth Bottle	**Impinger #1, #2 & #3 Condensate** OTM-45 Field Blank Train HFPO-DA Analysis	**Knoxville**: Analyze for HFPO-DA.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require-ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-2405 QC OTM-45 Impinger Glassware MeOH Rinse BT (Combine with *T-2402)*	QC	8/10/22	Field Blank Train	250 mL HDPE Wide-Mouth Bottle	**Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Field Blank Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the XAD-2 Resin Extraction.
T-2406 QC OTM-45 Breakthrough XAD-2 Resin Tube BT	QC	8/10/22	Field Blank Train	XAD-2 Resin Tube	**Breakthrough XAD-2 Resin Tube** OTM-45 Field Blank Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA.
T-2688	QC	8/10/22	Reagent Blank	Acetone		

Sample Receipt Log and Condition of the Samples Upon Receipt:

Please fill in the following information:	Comments (Please write "NONE" if no comment applicable)
(1) Record the identities of any samples that were listed on the RFA but were not found in the sample shipment.	NONE
(2) Record the sample shipping cooler temperature of all coolers transporting samples listed on this RFA:	RT 2.1 / CT 2.2
(3) Record any aQ2rent sample loss/breakage.	NONE
(4) Record any unidentified samples transported with this shipment of samples:	NONE
(5) Indicate if all samples were received according to the project's required specifications (i.e. no nonconformances):	NONE

Custody Transfer:

	Name	Company	Date/Time
Relinquished By:	[signature]	Alliance	8/11/22/1830
Accepted By:	[signature]	ETA KNOX	8/11/22 1830
Relinquished By:	[signature]	ETA KNOX	8/12/22 1430
Accepted By:	[signature]	ETA KNX	8-12-22 14:30
Relinquished By:			
Accepted By:			
Relinquished By:			
Accepted By:			

EUROFINS/TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number: _____

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓		✓	☐ **Containers, Broken**
2. Were ambient air containers received intact?			✓	☐ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			✓	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : SG23 Correction factor: +0.1C	✓			☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	✓			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	✓			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	✓			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	✓			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?			✓	☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	✓			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	✓			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	✓			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	✓			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			✓	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			✓	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			✓	☐ If no, notify lab to adjust
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: _____ **Date:** _____

pH test strip lot number: _____

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: _____ PM Instructions: _____

Sample Receiving Associate: _____ Date: 8-12-22

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Appendix D

QA/QC Data

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Inlet
Project No. 2022-2899
Parameter HFPO-DA

Date	Nozzle ID	Nozzle Diameter (in.) #1	#2	#3	Dn (Average)	Difference	Criteria	Material
8/9/22	GL-4	0.250	0.250	0.250	0.250	0.000	≤ 0.004 in.	glass

Date	Pitot ID	Evidence of damage?	Evidence of mis-alignment?	Calibration or Repair required?
8/9/22	P4-1	no	no	no

Date	Probe or Thermocouple ID	Reference Temp. (°F)	Indicated Temp. (°F)	Difference	Criteria	Probe Length
8/10/22	TC 7D	98.0	98.0	0.0%	± 1.5 % (absolute)	5 '

Field Balance Check

Date	08/10/22	08/11/22				
Balance ID:	MyWeigh 5500	MyWeigh 5500				
Test Weight ID:	SYR-1	SYR-1				
Certified Weight (g):	1000.0	1000.0				
Measured Weight (g):	999.8	1000.0				
Weight Difference (g):	0.2	0.0	--	--	--	--

Date	Barometric Pressure	Evidence of damage?	Reading Verified	Calibration or Repair required?	Weather Station Location
8/10/22	Weather Station	NA	NA	NA	Fayetteville, NC

Date	Meter Box ID	Positive Pressure Leak Check
8/10/22	MB #4	Pass

Reagent	Lot#	Field Prep performed	Field Lot	Date	By
DiH2O	TA/Eurofins	No	NA	NA	NA
Methanol/Ammonia Mix	TA/Eurofins	No	NA	NA	NA

Equipment Detail - Dry Gas Meter

Console ID: 4
Meter S/N: 3477777
Critical Orifice S/N: 1393

Calibration Detail

Initial Barometric Pressure, in. Hg	(Pb_I)	30.07					
Final Barometric Pressure, in. Hg	(Pb_F)	30.07					
Average Barometric Pressure, in. Hg	(Pb)	30.07					
Critifcal Orifice ID	(Y)	11	11	18	18	31	31
K' Factor, $ft^3 \cdot R^{1/2}$ / in. WC·min	(K')	0.3060	0.306	0.4961	0.4961	0.8358	0.8358
Vacuum Pressure, in. Hg	(V_P)	23.5	23.5	21.0	21.0	17.0	17.0
Initial DGM Volume, ft^3	(Vm_I)	763.145	769.214	775.302	785.163	803.252	819.496
Final DGM Volume, ft^3	(Vm_F)	769.214	775.302	785.163	795.034	819.496	835.760
Total DGM Volume, ft^3	(Vm)	6.069	6.088	9.861	9.871	16.244	16.264
Ambient Temperature, °F	(Ta)	77	78	78	78	77	79
Initial DGM Temperature, °F	(Tm_I)	77	78	78	79	77	79
Final DGM Temperature, °F	(Tm_F)	78	79	79	80	79	81
Average DGM Temperature, °F	(Tm)	77	79	79	80	78	80
Elapsed Time	(Θ)	15.00	15.00	15.00	15.00	15.00	15.00
Meter Orifice Pressure, in. WC	(ΔH)	0.43	0.43	1.20	1.20	3.40	3.40
Standard Meter volume, ft^3	(Vmstd)	6.0018	6.0066	9.7474	9.7392	16.1580	16.1180
Standard Critical Orifice Volume, ft^3	(Vcr)	5.9606	5.9522	9.650	9.650	16.2729	16.2427
Meter Correction Factor	(Y)	0.993	0.991	0.990	0.991	1.007	1.008
Tolerance	--	0.003	0.006	0.007	0.006	0.010	0.011
Orifice Calibration Value	(ΔH @)	1.515	1.516	1.612	1.609	1.616	1.616
Tolerance	--	0.066	0.065	0.031	0.028	0.036	0.036
Orifice Cal Check	--	1.53		1.69		1.72	
Meter Correction Factor	**(Y)**	**0.997**					
Orifice Calibration Value	**(ΔH @)**	**1.581**					
Positive Pressure Leak Check		**Yes**					

Equipment Detail - Thermocouple Sensor

Reference Calibrator Make: Altek
Reference Calibrator Model: Series 22
Reference Calibrator S/N: 8475031

Calibration Detail

Reference Temp.		Display Temp.		Accuracy	Difference
°F	°R	°F	°R	%	°F
0	460	0	460	0.0	0
100	560	99	559	0.2	1
200	660	198	658	0.3	2
300	760	297	757	0.4	3
400	860	398	858	0.2	2
500	960	496	956	0.4	4
600	1,060	596	1,056	0.4	4
700	1,160	697	1,157	0.3	3
800	1,260	797	1,257	0.2	3
900	1,360	896	1,356	0.3	4
1,000	1,460	995	1,455	0.3	5
1,100	1,560	1,097	1,557	0.2	3
1,200	1,660	1,195	1,655	0.3	5

Personnel

Calibration By: Jacob Cavallo
Calibration Date: 7/20/2022
Expiration Date: 1/20/2023

QA/QC Data

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Outlet
Project No. 2022-2899
Parameter HFPO-DA

Date	Nozzle ID	Nozzle Diameter (in.) #1	#2	#3	Dn (Average)	Difference	Criteria	Material
8/9/22	GL-3	0.248	0.250	0.250	0.249	0.002	≤ 0.004 in.	glass

Date	Pitot ID	Evidence of damage?	Evidence of mis-alignment?	Calibration or Repair required?
8/10/22	P4-2	no	no	no

Date	Probe or Thermocouple ID	Reference Temp. (°F)	Indicated Temp. (°F)	Difference	Criteria	Probe Length
8/10/22	TC-5D	98.0	97.0	0.2%	± 1.5 % (absolute)	5 '

Field Balance Check

Date	08/10/22	08/11/22				
Balance ID:	MyWeigh 5500	MyWeigh 5500				
Test Weight ID:	SYR-1	SYR-1				
Certified Weight (g):	1000.0	1000.0				
Measured Weight (g):	999.8	999.8				
Weight Difference (g):	0.2	0.2	--	--	--	--

Date	Barometric Pressure	Evidence of damage?	Reading Verified	Calibration or Repair required?	Weather Station Location
8/10/22	Weather Station	NA	NA	NA	Fayetteville, NC

Date	Meter Box ID	Positive Pressure Leak Check
8/10/22	MB7	Pass

Reagent	Lot#	Field Prep performed	Field Lot	Date	By
DiH2O	TA/Eurofins	No	NA	NA	NA
Methanol/Ammonia Mix	TA/Eurofins	No	NA	NA	NA

Equipment Detail - Dry Gas Meter

Console ID: 6
Meter S/N: 2355
Critical Orifice S/N: 1393

Calibration Detail

Initial Barometric Pressure, in. Hg	(Pb_I)	30.07					
Final Barometric Pressure, in. Hg	(Pb_F)	30.07					
Average Barometric Pressure, in. Hg	(Pb)	30.07					
Critifcal Orifice ID	(Y)	11	11	18	18	31	31
K' Factor, $ft^3 \cdot R^{1/2}$ / in. WC·min	(K')	0.3060	0.306	0.4961	0.4961	0.8358	0.8358
Vacuum Pressure, in. Hg	(V_P)	22.5	22.5	20.0	20.0	16.0	16.0
Initial DGM Volume, ft^3	(Vm_I)	975.311	991.147	981.359	930.841	0.002	16.132
Final DGM Volume, ft^3	(Vm_F)	981.359	997.245	991.147	940.602	16.132	32.328
Total DGM Volume, ft^3	(Vm)	6.048	6.098	9.788	9.761	16.130	16.196
Ambient Temperature, °F	(Ta)	76	75	76	76	75	74
Initial DGM Temperature, °F	(Tm_I)	78	75	78	76	77	76
Final DGM Temperature, °F	(Tm_F)	78	77	79	77	79	77
Average DGM Temperature, °F	(Tm)	78	76	79	77	78	77
Elapsed Time	(Θ)	15.00	15.00	15.00	15.00	15.00	15.00
Meter Orifice Pressure, in. WC	(ΔH)	0.51	0.51	1.40	1.40	3.90	3.90
Standard Meter volume, ft^3	(Vmstd)	5.9738	6.0457	9.6800	9.6893	16.0641	16.1750
Standard Critical Orifice Volume, ft^3	(Vcr)	5.9633	5.9689	9.6680	9.6680	16.3033	16.3186
Meter Correction Factor	(Y)	0.998	0.987	0.999	0.998	1.015	1.009
Tolerance	--	0.003	0.014	0.002	0.003	0.014	0.008
Orifice Calibration Value	(ΔH @)	1.793	1.796	1.875	1.882	1.849	1.851
Tolerance	--	0.048	0.045	0.034	0.041	0.008	0.010
Orifice Cal Check	--	1.89		1.34		1.93	
Meter Correction Factor	**(Y)**	**1.001**					
Orifice Calibration Value	**(ΔH @)**	**1.841**					
Positive Pressure Leak Check		**Yes**					

Equipment Detail - Thermocouple Sensor

Reference Calibrator Make: Altek
Reference Calibrator Model: Series 22
Reference Calibrator S/N: 8475031

Calibration Detail

Reference Temp.		Display Temp.		Accuracy	Difference
°F	°R	°F	°R	%	°F
0	460	0	460	0.0	0
100	560	99	559	0.2	1
200	660	198	658	0.3	2
300	760	297	757	0.4	3
400	860	398	858	0.2	2
500	960	496	956	0.4	4
600	1,060	596	1,056	0.4	4
700	1,160	697	1,157	0.3	3
800	1,260	797	1,257	0.2	3
900	1,360	896	1,356	0.3	4
1,000	1,460	995	1,455	0.3	5
1,100	1,560	1,097	1,557	0.2	3
1,200	1,660	1,195	1,655	0.3	5

Personnel

Calibration By: Jacob Cavallo
Calibration Date: 7/14/2022
Expiration Date: 1/14/2022

Appendix E

VEN Operating Data

Date	8/10/2022											
Time	1600			1700			1800			1900		2000
Stack Testing				Run 1: 1640-1832						Run 2: 1903-2058		
VEN Product	PSEPVE											
VEN Precursor												
VEN Condensation (HFPO)												
VEN ABR												
VEN Refining												
Stripper Column Vent												

Date	8/11/2022								
Time	800			900			1000		
Stack Testing		Run 3: 810-1006							
VEN Product	PSEPVE								
VEN Precursor									
VEN Condensation (HFPO)									
VEN ABR									
VEN Refining									
Stripper Column Vent									

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