Source Test Report

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

Source Tested: VEN Carbon Bed
Test Dates: November 16, 2022
Report Submittal Date: December 29, 2022

Project No. AST-2022-4108

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	*Target Parameter*
VEN Carbon Bed (Inlet / Outlet)	HFPO-DA

Contact Information

Test Location
The Chemours Company, FC, LLC
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.

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

Patrick Grady

December 29, 2022

Project Manager
Alliance Technical Group, LLC

Date

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attached documents and, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil and criminal penalties, including the possibility of fine or imprisonment or both, for submitting false, inaccurate or incomplete information.

Christel E. Compton
The Chemours Company, FC, LLC

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, North Carolina facility. The facility operates under Title V Permit No. 03735T48. 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

Facility Personnel	Eddie Vega Christel Compton
Regulatory Personnel	Gary Saunders Taijah Hamil
Alliance Personnel	Patrick Grady Antonio Anderson Jacob Cavallo Brian Goodhile Samantha Waters

Summary of Results

2.0 Summary of Results

Alliance conducted compliance testing at the Chemours facility in Fayetteville, North Carolina on November 16, 2022. Testing consisted of determining the emission rates of HFPO-DA at the exhaust of VEN Carbon Bed.

Table 2-1 provides a summary of the emission testing results. It should be noted that the carbon bed outlet emissions exceeded the inlet emission rates. No sampling issues occurred during the testing and the laboratory did not find any problems with the analytical data. At this point it is unknown why the outlet emissions exceeded the inlet emissions. Further discussion on the results can be found in the cover letter to this report as provided by Chemours.

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	11/16/22	11/16/22	11/16/22	--
HFPO-DA Data				
Outlet Emission Rate, lb/hr	3.6E-02	2.5E-02	5.0E-02	3.7E-02
Inlet Emission Rate, lb/hr	1.0E-02	1.0E-02	1.2E-02	1.1E-02

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: The Chemours Company - Fayetteville, NC
Source: VEN Carbon Bed Inlet
Project No.: 2022-4108
Run No.: 1
Parameter: HFPO-DA

Meter Pressure (Pm), in. Hg

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

where,

Pb	30.08	= barometric pressure, in. Hg
ΔH	1.808	= pressure differential of orifice, in H_2O
Pm	30.21	= in. Hg

Absolute Stack Gas Pressure (Ps), in. Hg

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

where,

Pb	30.08	= barometric pressure, in. Hg
Pg	-3.00	= static pressure, in. H_2O
Ps	29.86	= in. Hg

Standard Meter Volume (Vmstd), dscf

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

where,

Y	1.001	= meter correction factor
Vm	70.324	= meter volume, cf
Pm	30.21	= absolute meter pressure, in. Hg
Tm	518.8	= absolute meter temperature, °R
Vmstd	72.300	= dscf

Standard Wet Volume (Vwstd), scf

$$Vwstd = 0.04716 \times Vlc$$

where,

Vlc	27.5	= volume of H_2O collected, ml
Vwstd	1.297	= scf

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

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

where,

Ts	65.3	= stack temperature, °F
Ps	29.86	= absolute stack gas pressure, in. Hg
BWSsat	0.021	= dimensionless

Moisture Fraction (BWS), dimensionless (measured)

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

where,

Vwstd	1.297	= standard wet volume, scf
Vmstd	72.300	= standard meter volume, dscf
BWS	0.018	= dimensionless

Moisture Fraction (BWS), dimensionless

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

where,

BWSsat	0.021	= moisture fraction (theoretical at saturated conditions)
BWSmsd	0.018	= moisture fraction (measured)
BWS	0.018	

Location: The Chemours Company - Fayetteville, NC
Source: VEN Carbon Bed Inlet
Project No.: 2022-4108
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	0.018	= moisture fraction, dimensionless
Ms	28.66	= 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
$\Delta P^{1/2}$	0.612	= velocity head of stack gas, $(in.\ H_2O)^{1/2}$
Ts	525.0	= absolute stack temperature, °R
Ps	29.86	= absolute stack gas pressure, in. Hg
Ms	28.66	= molecular weight of stack gas, lb/lb mol
Vs	34.4	= ft/sec

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

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

where,

Vs	34.4	= stack gas velocity, ft/sec
As	7.07	= cross-sectional area of stack, ft^2
Qa	14,590	= acfm

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

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

where,

Qa	14,590	= average stack gas flow at stack conditions, acfm
BWS	0.018	= moisture fraction, dimensionless
Ps	29.86	= absolute stack gas pressure, in. Hg
Ts	525.0	= absolute stack temperature, °R
Qs	14,376	= 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	1.001	= meter correction factor, dimensionless
Θ	96	= run time, min.
Vm	70.324	= total meter volume, dcf
Tm	518.8	= absolute meter temperature, °R
ΔH@	1.841	= orifice meter calibration coefficient, in. H_2O
Pb	30.08	= barometric pressure, in. Hg
ΔH avg	1.808	= average pressure differential of orifice, in H_2O
Md	28.85	= molecular weight (DRY), lb/lb mol
$(\Delta H)^{1/2}$	1.334	= average squareroot pressure differential of orifice, $(in.\ H2O)^{1/2}$
Yqa	0.5	= dimensionless

Location: The Chemours Company - Fayetteville, NC
Source: VEN Carbon Bed Inlet
Project No.: 2022-4108
Run No.: 1
Parameter: HFPO-DA

Volume of Nozzle (Vn), ft^3

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

where,

Ts	525.0	= absolute stack temperature, °R
Ps	29.86	= absolute stack gas pressure, in. Hg
Vlc	27.5	= volume of H_2O collected, ml
Vm	70.324	= meter volume, cf
Pm	30.21	= absolute meter pressure, in. Hg
Y	1.001	= meter correction factor, unitless
Tm	518.8	= absolute meter temperature, °R
Vn	73.371	= volume of nozzle, ft^3

Isokinetic Sampling Rate (I), %

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

where,

Vn	73.371	= nozzle volume, ft3
θ	96.0	= run time, minutes
An	0.00037	= area of nozzle, ft^2
Vs	34.4	= average velocity, ft/sec
I	100.4	= %

HFPO-DA Concentration (C), ng/dscm

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

where,

M	398,260	= HFPO-DA mass, ng
Vmstd	72.300	= standard meter volume, dscf
C_{NH3}	1.9E+05	= ng/dscm

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

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

where,

FR	398,260	= HFPO-DA mass, ng
Qs	14,376	= average stack gas flow at standard conditions, dscfm
Vmstd	72.300	= standard meter volume, dscf
ER	1.0E-02	= lb/hr

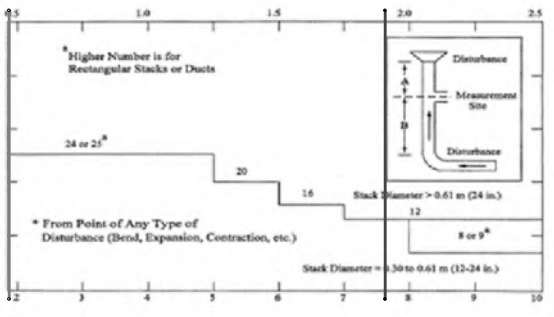
Appendix B

Method 1 Data

Location The Chemours Company - Fayetteville, NC
Source VEN Carbon Bed Inlet
Project No. 2022-4108
Date: 11/15/22

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:	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):	3AG 11/15/22	
Reviewer (Initial and Date):	AA 11/15/22	



CIRCULAR DUCT

LOCATION OF TRAVERSE POINTS

Number of traverse points on a diameter

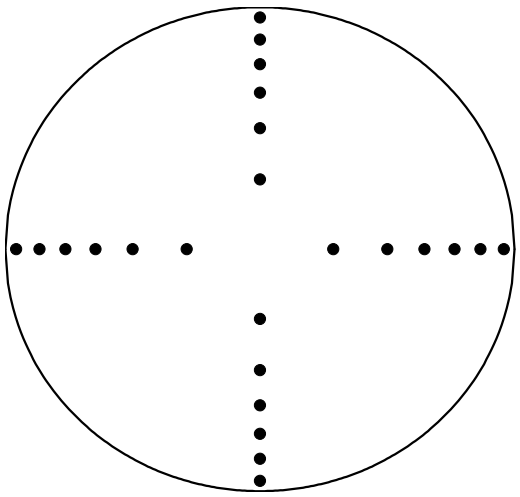
	2	3	4	5	6	7	8	9	10	11	12
1	14.6	--	6.7	--	4.4	--	3.2	--	2.6	--	2.1
2	85.4	--	25.0	--	14.6	--	10.5	--	8.2	--	6.7
3	--	--	75.0	--	29.6	--	19.4	--	14.6	--	11.8
4	--	--	93.3	--	70.4	--	32.3	--	22.6	--	17.7
5	--	--	--	--	85.4	--	67.7	--	34.2	--	25.0
6	--	--	--	--	95.6	--	80.6	--	65.8	--	35.6
7	--	--	--	--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

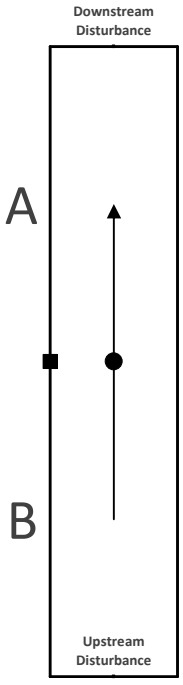
**Percent of stack diameter from inside wall to traverse point.*

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	19.38
4	17.7	6.37	21.50
5	25.0	9.00	24.13
6	35.6	12.82	27.95
7	64.4	23.18	38.31
8	75.0	27.00	42.13
9	82.3	29.63	44.76
10	88.2	31.75	46.88
11	93.3	33.59	48.72
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





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Method 2 Data

Location The Chemours Company - Fayetteville, NC
Source VEN Carbon Bed Inlet
Project No. 2022-4108
Date 11/15/22

Saturation Moisture Content Check	Traverse Point	Δ P (in. WC)	Ts (°F)
Stack Temperature (Ts): 75.0 °F		0.36	75
Moisture Fraction @ Sat.: 0.029			
Stack Parameters			
Pitot Tube ID#:			
Pitot Tube Coefficient (Cp): 0.840			
Barometric Pressure (Pb): 30.23 in. Hg			
Static Pressure(Pg): -3.50 in. WC			
Stack Pressure (Ps): 29.97 in. Hg			

Square Root of ΔP, (in. W.C.) $^{1/2}$	0.600
Average ΔP, (in. W.C.)	0.36
Average Temperature (Ts), °F	75.0
Average Temperature (Ts), °R	534.7
Moisture (BWS), %	2.0
O_2 Concentration, %	20.9
CO_2 Concentration, %	0.1
Molecular Weight (Md), lb/lb-mole (dry)	28.85
Molecular Weight (Ms), lb/lb-mole (wet)	28.63
Velocity (Vs), ft/sec	34.0
VFR at stack conditions (Qa), acfm	14,423
VFR at standard conditions (Qs), dscfm	13,974

Cyclonic Flow Check

Location The Chemours Company - Fayetteville, NC
Source VEN Carbon Bed Inlet
Project No. 2022-4108
Date 11/15/22

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

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Emission Calculations

Location The Chemours Company - Fayetteville, NC
Source VEN Carbon Bed Inlet
Project No. 2022-4108
Parameter HFPO-DA

Run Number		Run 1	Run 2	Run 3	Average
Date		11/16/22	11/16/22	11/16/22	--
Start Time		8:20	10:50	13:30	--
Stop Time		10:15	12:51	15:22	--
Run Time, min		96.0	96.0	96.0	96.0
VELOCITY HEAD, in. WC					
Point 1		0.22	0.20	0.20	0.21
Point 2		0.29	0.23	0.24	0.25
Point 3		0.28	0.25	0.28	0.27
Point 4		0.29	0.26	0.28	0.28
Point 5		0.31	0.26	0.28	0.28
Point 6		0.33	0.28	0.32	0.31
Point 7		0.42	0.36	0.46	0.41
Point 8		0.48	0.38	0.48	0.45
Point 9		0.48	0.42	0.46	0.45
Point 10		0.46	0.43	0.47	0.45
Point 11		0.46	0.48	0.45	0.46
Point 12		0.45	0.46	0.48	0.46
Point 13		0.19	0.18	0.21	0.19
Point 14		0.23	0.29	0.24	0.25
Point 15		0.35	0.33	0.33	0.34
Point 16		0.40	0.36	0.38	0.38
Point 17		0.45	0.42	0.44	0.44
Point 18		0.50	0.45	0.48	0.48
Point 19		0.47	0.44	0.44	0.45
Point 20		0.44	0.40	0.42	0.42
Point 21		0.42	0.39	0.39	0.40
Point 22		0.42	0.38	0.38	0.39
Point 23		0.40	0.37	0.38	0.38
Point 24		0.38	0.37	0.37	0.37
CALCULATED DATA					
Square Root of ΔP, $(\text{in. WC})^{1/2}$	(ΔP)	0.612	0.587	0.603	0.600
Pitot Tube Coefficient	(Cp)	0.840	0.840	0.840	0.840
Barometric Pressure, in. Hg	(Pb)	30.08	30.08	30.08	30.08
Static Pressure, in. WC	(Pg)	-3.00	-3.20	-3.20	-3.13
Stack Pressure, in. Hg	(Ps)	29.86	29.84	29.84	29.85
Stack Cross-sectional Area, ft^2	(As)	7.07	7.07	7.07	7.07
Temperature, °F	(Ts)	65.3	71.3	74.6	70.4
Temperature, °R	(Ts)	525.0	531.0	534.3	530.087
Moisture Fraction Measured	(BWSmsd)	0.018	0.024	0.019	0.020
Moisture Fraction @ Saturation	(BWSsat)	0.021	0.026	0.029	0.025
Moisture Fraction	(BWS)	0.018	0.024	0.019	0.020
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)	28.66	28.59	28.64	28.63
Velocity, ft/sec	(Vs)	34.4	33.2	34.2	33.9
VOLUMETRIC FLOW RATE					
At Stack Conditions, acfm	(Qa)	14,590	14,091	14,507	14,396
At Standard Conditions, dscfm	(Qs)	14,376	13,632	14,019	14,009

Method 3 Data

Location The Chemours Company - Fayetteville, NC
Source VEN Carbon Bed Inlet
Project No. 2022-4108

Analysis Type	Assumed Ambient

The remaining consistuent is assumed to be nitrogen.

Method 4 Data

Location The Chemours Company - Fayetteville, NC
Source VEN Carbon Bed Inlet
Project No. 2022-4108
Parameter HFPO-DA
Analysis Gravimetric

Run 1	**Date:**	11/16/22							
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	388.0	475.8	774.8	739.4	742.1	531.5	295.4	820.3	4767.3
Final Mass, g	395.4	477.2	772.9	739.8	743.5	532.5	299.6	833.9	4794.8
Gain	7.4	1.4	-1.9	0.4	1.4	1.0	4.2	13.6	27.5
Run 2	**Date:**	11/16/22							
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	337.8	467.2	748.1	784.6	755.6	476.5	296.5	818.7	4685.0
Final Mass, g	350.3	467.5	746.2	784.2	755.9	478.1	305.9	832.8	4720.9
Gain	12.5	0.3	-1.9	-0.4	0.3	1.6	9.4	14.1	35.9
Run 3	**Date:**	11/16/22							
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	314.4	490.7	718.6	595.6	723.1	492.1	280.6	819.6	4434.7
Final Mass, g	325.9	491.5	717.8	596.1	724.6	493.3	281.9	832.4	4463.5
Gain	11.5	0.8	-0.8	0.5	1.5	1.2	1.3	12.8	28.8

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Emission Calculations

Location The Chemours Company - Fayetteville, NC
Source VEN Carbon Bed Inlet
Project No. 2022-4108
Parameter HFPO-DA

Run Number		Run 1	Run 2	Run 3	Average
Date		11/16/22	11/16/22	11/16/22	--
Start Time		8:20	10:50	13:30	--
Stop Time		10:15	12:51	15:22	--
Run Time, min	(θ)	96.0	96.0	96.0	96.0
INPUT DATA					
Barometric Pressure, in. Hg	(Pb)	30.08	30.08	30.08	30.08
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)	70.324	67.893	69.282	69.166
Meter Temperature, °F	(Tm)	59.1	66.6	71.4	65.7
Meter Temperature, °R	(Tm)	518.8	526.3	531.1	525.4
Meter Orifice Pressure, in. WC	(ΔH)	1.808	1.669	1.760	1.746
Volume H_2O Collected, mL	(Vlc)	27.5	35.9	28.8	30.7
Nozzle Diameter, in	(Dn)	0.260	0.260	0.260	0.260
Area of Nozzle, ft^2	(An)	0.0004	0.0004	0.0004	0.0004
FH HFPO-DA Mass, ng	$M_{(HFPODA)}$	321,000.0	311,000.0	350,000.0	327333.33
BH HFPO-DA Mass, ng	$M_{(HFPODA)}$	67,400.0	85,800.0	88,600.0	80600.00
Imp HFPO-DA Mass, ng	$M_{(HFPODA)}$	9,860.0	0.0	1,120.0	3660.00
Breakthrough HFPO-DA Mass, ng	$M_{(HFPODA)}$	0.0	22.8	44.1	22.30
Total HFPO-DA Mass, ng	$M_{(HFPODA)}$	398,260.0	396,822.8	439,764.1	411615.63
ISOKINETIC DATA					
Standard Meter Volume, ft^3	(Vmstd)	72.300	68.788	69.572	70.220
Standard Water Volume, ft^3	(Vwstd)	1.297	1.693	1.358	1.449
Moisture Fraction Measured	(BWSmsd)	0.018	0.024	0.019	0.020
Moisture Fraction @ Saturation	(BWSsat)	0.021	0.026	0.029	0.025
Moisture Fraction	(BWS)	0.018	0.024	0.019	0.020
Meter Pressure, in Hg	(Pm)	30.21	30.20	30.21	30.21
Volume at Nozzle, ft^3	(Vn)	73.371	71.102	71.993	72.16
Isokinetic Sampling Rate, (%)	(I)	100.4	100.8	99.1	100.1
DGM Calibration Check Value, (+/- 5%)	(Y_{qa})	0.5	0.3	-0.8	0.0
EMISSION CALCULATIONS					
HFPO-DA Concentration, ng/dscm	$C_{(HFPODA)}$	1.9E+05	2.0E+05	2.2E+05	2.1E+05
HFPO-DA Emission Rate, lb/hr	$ER_{(HFPODA)}$	1.0E-02	1.0E-02	1.2E-02	1.1E-02

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Isokinetic Field Data

Location:	The Chemours Company - Fayetteville, NC			**Start Time:**	8:20	**Source:**	VEN Carbon Bed Inlet
Date:	11/16/22	**Run 1**	**VALID**	**End Time:**	10:15	**Project No.:**	2022-4108

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 7		Est. Tm:	55	°F			Pb:	30.08	in. Hg	Vlc (ml)
Barometric:	30.23	in. Hg	Y:	1.001		Est. Ts:	75	°F			Pg:	-3.00	in. WC	27.5
Static Press:	-3.50	in. WC	ΔH @ (in.WC):	1.841		Est. ΔP:	0.36	in. WC			O_2:	20.9	%	K-FACTOR
Stack Press:	29.97	in. Hg	Probe ID:	TC-7D		Est. Dn:	0.224	in.			CO_2:	0.1	%	4.621
CO_2:	0.1	%	Liner Material:	glass		Target Rate:	0.52	scfm				Check Pt.	Initial	Final	Corr.
O_2:	20.9	%	Pitot ID:	P4-1		LEAK CHECKS	Pre	Mid 1	Mid 2	Mid 3	Post	Mid 1 (cf)	679.498	######	0.080
N_2/CO:	79.0	%	Pitot Cp/Type:	0.840	S-type	Leak Rate (cfm):	0.005	0.002	0.002	--	0.003	Mid 2 (cf)	679.578	######	0.116
Md:	28.85	lb/lb-mole	Nozzle ID:	GL-6	glass	Vacuum (in Hg):	10	12	11	--	8	Mid 3 (cf)			--
Ms:	28.63	lb/lb-mole	Nozzle Dn (in.):	0.260		Pitot Tube:	Pass	--	--	--	Pass	Mid-Point Leak Check Vol (cf):			0.196

Sample Pt.	Sample Time (minutes)		Dry Gas Meter Reading (ft^3)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F)		Orifice Press. ΔH (in. WC)		Pump Vac (in. Hg)	Gas Temperatures (°F)				% ISO	Vs (fps)
					DGM Average	Stack				Probe	Filter	Imp Exit	Aux		
	Begin	End			Amb.	Amb.	Ideal	Actual		Amb.	Amb.	Amb.	Amb.		
													-		
A1	0.00	4.00	644.704	0.22	48	63	1.03	1.00	2	73	75	45	37	106.3	26.29
2	4.00	8.00	647.030	0.29	50	63	1.36	1.40	2	72	76	42	37	102.8	30.18
3	8.00	12.00	649.620	0.28	53	63	1.32	1.30	2	75	76	42	37	99.6	29.65
4	12.00	16.00	652.100	0.29	55	64	1.37	1.40	2	78	76	42	37	102.3	30.21
5	16.00	20.00	654.700	0.31	55	65	1.46	1.50	2	75	75	42	38	106.3	31.26
6	20.00	24.00	657.490	0.33	55	65	1.56	1.60	2	76	76	42	38	104.5	32.25
7	24.00	28.00	660.320	0.42	59	65	1.99	2.00	2	76	76	43	38	97.2	36.39
8	28.00	32.00	663.310	0.48	59	65	2.28	2.30	3	78	74	43	37	98.3	38.90
9	32.00	36.00	666.540	0.48	60	65	2.28	2.30	4	75	74	42	37	98.4	38.90
10	36.00	40.00	669.780	0.46	60	65	2.19	2.20	3	72	76	42	37	106.4	38.08
11	40.00	44.00	673.210	0.46	61	65	2.19	2.20	3	72	75	43	38	101.0	38.08
12	44.00	48.00	676.470	0.45	61	65	2.14	2.10	3	75	76	43	38	94.8	37.66
B1	48.00	52.00	679.498	0.19	55	62	0.90	0.90	2	74	77	43	36	98.7	24.40
2	52.00	56.00	681.730	0.23	58	62	1.10	1.10	2	74	75	40	37	103.4	26.85
3	56.00	60.00	684.090	0.35	59	65	1.66	1.70	2	75	76	40	37	99.0	33.22
4	60.00	64.00	686.870	0.40	61	65	1.91	1.90	3	73	74	41	37	99.2	35.51
5	64.00	68.00	689.860	0.45	61	67	2.13	2.10	3	77	76	42	37	99.1	37.74
6	68.00	72.00	693.020	0.50	63	67	2.38	2.40	4	76	75	43	37	101.7	39.78
7	72.00	76.00	696.450	0.47	64	67	2.24	2.20	3	76	76	43	38	100.4	38.57
8	76.00	80.00	699.740	0.44	64	68	2.10	2.10	3	73	75	43	37	102.3	37.35
9	80.00	84.00	702.980	0.42	64	68	2.00	2.00	3	72	75	43	36	100.8	36.49
10	84.00	88.00	706.100	0.42	64	68	2.00	2.00	3	75	76	43	37	101.4	36.49
11	88.00	92.00	709.240	0.40	65	68	1.91	1.90	3	75	75	43	36	97.4	35.61
12	92.00	96.00	712.190	0.38	65	68	1.81	1.80	3	75	77	43	36	102.8	34.71
	Final DGM:		715.224												

RESULTS	Run Time		Vm		ΔP		Tm		Ts		Max Vac	ΔH		%ISO	BWS	Y_{qa}
	96.0	min	70.324	ft^3	0.38	in. WC	59.1	°F	65.3	°F	4	1.808	in. WC	100.4	0.018	0.5

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Isokinetic Field Data

Location:	The Chemours Company - Fayetteville, NC			**Start Time:**	10:50	**Source:**	VEN Carbon Bed Inlet
Date:	11/16/22	**Run 2**	**VALID**	**End Time:**	12:51	**Project No.:**	2022-4108

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 7		Est. Tm:	59	°F			Pb:	30.08	in. Hg	Vlc (ml)
Barometric:	30.23	in. Hg	Y:	1.001		Est. Ts:	65	°F			Pg:	-3.20	in. WC	35.9
Static Press:	-3.50	in. WC	ΔH @ (in.WC):	1.841		Est. ΔP:	0.38	in. WC			O_2:	20.9	%	K-FACTOR
Stack Press:	29.97	in. Hg	Probe ID:	TC-7D		Est. Dn:	0.219	in.			CO_2:	0.1	%	4.74
CO_2:	0.1	%	Liner Material:	glass		Target Rate:	0.52	scfm						
O_2:	20.9	%	Pitot ID:	P4-1		LEAK CHECKS	Pre	Mid 1	Mid 2	Mid 3	Post	Check Pt.	Initial	Final	Corr.
N_2/CO:	79.0	%	Pitot Cp/Type:	0.840	S-type	Leak Rate (cfm):	0.005	0.002	0.003	--	0.003	Mid 1 (cf)	748.248	######	0.113
Md:	28.85	lb/lb-mole	Nozzle ID:	GL-6	glass	Vacuum (in Hg):	9	8	8	--	7	Mid 2 (cf)	748.361	######	0.114
Ms:	28.63	lb/lb-mole	Nozzle Dn (in.):	0.260		Pitot Tube:	Pass	--	--	--	Pass	Mid 3 (cf)			--
												Mid-Point Leak Check Vol (cf):			0.227

Sample Pt.	Sample Time (minutes)		Dry Gas Meter Reading (ft^3)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F)		Orifice Press. ΔH (in. WC)		Pump Vac (in. Hg)	Gas Temperatures (°F)				% ISO	Vs (fps)
					DGM Average	Stack				Probe	Filter	Imp Exit	Aux		
					Amb.	Amb.				Amb.	Amb.	Amb.	Amb.		
	Begin	End			--	--	Ideal	Actual		--	--	--	--		
A1	0.00	4.00	715.560	0.20	59	69	0.94	0.90	1	76	77	58	53	101.4	25.21
2	4.00	8.00	717.710	0.23	61	70	1.09	1.10	2	79	80	51	54	104.5	27.06
3	8.00	12.00	720.090	0.25	64	70	1.19	1.20	2	77	80	51	52	97.6	28.21
4	12.00	16.00	722.420	0.26	65	70	1.24	1.20	2	78	78	51	52	99.2	28.77
5	16.00	20.00	724.840	0.26	65	70	1.24	1.20	2	76	80	50	53	99.6	28.77
6	20.00	24.00	727.270	0.28	66	70	1.34	1.30	2	79	79	49	53	95.0	29.85
7	24.00	28.00	729.680	0.36	67	70	1.72	1.70	3	76	78	49	54	94.8	33.85
8	28.00	32.00	732.410	0.38	68	71	1.81	1.80	3	77	79	49	51	102.0	34.81
9	32.00	36.00	735.430	0.42	68	71	2.00	2.00	4	78	78	49	51	100.0	36.59
10	36.00	40.00	738.540	0.43	69	71	2.06	2.10	4	77	78	49	54	103.1	37.03
11	40.00	44.00	741.790	0.48	70	71	2.30	2.30	4	75	81	49	54	95.6	39.12
12	44.00	48.00	744.980	0.46	70	71	2.20	2.20	4	81	82	48	52	100.1	38.30
B1	48.00	52.00	748.248	0.18	64	69	0.86	0.86	2	81	83	53	48	106.1	23.91
2	52.00	56.00	750.630	0.29	64	70	1.38	1.40	2	81	85	47	47	99.6	30.38
3	56.00	60.00	753.190	0.33	65	72	1.56	1.60	2	80	82	47	47	100.3	32.47
4	60.00	64.00	755.940	0.36	66	73	1.71	1.70	2	82	80	48	49	98.8	33.94
5	64.00	68.00	758.770	0.42	66	73	1.99	2.00	2	80	81	49	50	100.9	36.66
6	68.00	72.00	761.890	0.45	68	73	2.14	2.20	3	80	79	50	51	101.2	37.95
7	72.00	76.00	765.140	0.44	68	73	2.09	2.10	3	81	80	51	51	102.3	37.53
8	76.00	80.00	768.390	0.40	69	73	1.91	1.90	2	80	78	51	49	100.1	35.78
9	80.00	84.00	771.430	0.39	69	73	1.86	1.90	2	77	80	52	52	105.1	35.33
10	84.00	88.00	774.580	0.38	69	73	1.81	1.80	2	78	80	53	52	104.7	34.87
11	88.00	92.00	777.680	0.37	69	73	1.76	1.80	2	77	78	53	50	102.7	34.41
12	92.00	96.00	780.680	0.37	69	73	1.76	1.80	2	80	79	53	52	102.7	34.41
	Final DGM:		783.680												

RESULTS	Run Time		Vm		ΔP		Tm		Ts		Max Vac	ΔH		%ISO	BWS	Y_{qa}
	96.0	min	67.893	ft^3	0.35	in. WC	66.6	°F	71.3	°F	4	1.669	in. WC	100.8	0.024	0.3

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Isokinetic Field Data

Location:	The Chemours Company - Fayetteville, NC			**Start Time:**	13:30	**Source:**	VEN Carbon Bed Inlet
Date:	11/16/22	**Run 3**	**VALID**	**End Time:**	15:22	**Project No.:**	2022-4108

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 7		**Est. Tm:**	67	°F			**Pb:**	30.08	in. Hg	**Vlc (ml)**
Barometric:	30.23	in. Hg	**Y:**	1.001		**Est. Ts:**	71	°F			**Pg:**	-3.20	in. WC	28.8
Static Press:	-3.50	in. WC	**ΔH @ (in.WC):**	1.841		**Est. ΔP:**	0.35	in. WC			**O_2:**	20.9	%	**K-FACTOR**
Stack Press:	29.97	in. Hg	**Probe ID:**	TC-7D		**Est. Dn:**	0.223	in.			**CO_2:**	0.1	%	4.758
CO_2:	0.1	%	**Liner Material:**	glass		**Target Rate:**	0.52	scfm						
O_2:	20.9	%	**Pitot ID:**	P4-1		**LEAK CHECKS**	**Pre**	**Mid 1**	**Mid 2**	**Mid 3**	**Post**	**Check Pt.**	**Initial**	**Final**	**Corr.**
N_2/CO:	79.0	%	**Pitot Cp/Type:**	0.840	S-type	Leak Rate (cfm):	0.004	0.002	0.003	--	0.002	Mid 1 (cf)	818.308	######	0.130
Md:	28.85	lb/lb-mole	**Nozzle ID:**	GL-6	glass	Vacuum (in Hg):	8	8	9	--	8	Mid 2 (cf)	818.438	######	0.113
Ms:	28.63	lb/lb-mole	**Nozzle Dn (in.):**	0.260		Pitot Tube:	Pass	--	--	--	Pass	Mid 3 (cf)			--
												Mid-Point Leak Check Vol (cf):			0.243

Sample Pt.	Sample Time (minutes)		Dry Gas Meter Reading (ft^3)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F)		Orifice Press. ΔH (in. WC)		Pump Vac (in. Hg)	Gas Temperatures (°F)				% ISO	Vs (fps)
					DGM Average	Stack				Probe	Filter	Imp Exit	Aux		
	Begin	End			Amb.	Amb.	Ideal	Actual		Amb.	Amb.	Amb.	Amb.		
					--	--				--	--	--	--		
A1	0.00	4.00	784.014	0.20	66	74	0.95	0.95	2	85	86	58	38	103.7	25.32
2	4.00	8.00	786.230	0.24	68	74	1.14	1.10	2	83	84	45	36	100.9	27.74
3	8.00	12.00	788.600	0.28	69	74	1.33	1.30	2	82	86	45	36	99.1	29.96
4	12.00	16.00	791.120	0.28	70	74	1.34	1.30	2	84	87	45	36	101.7	29.96
5	16.00	20.00	793.710	0.28	71	75	1.34	1.30	2	87	84	45	37	97.3	29.99
6	20.00	24.00	796.190	0.32	71	75	1.53	1.50	3	84	87	45	36	94.7	32.06
7	24.00	28.00	798.770	0.46	71	75	2.19	2.20	4	82	84	44	36	97.2	38.44
8	28.00	32.00	801.940	0.48	71	75	2.28	2.30	4	82	86	44	36	96.1	39.27
9	32.00	36.00	805.140	0.46	72	75	2.19	2.20	4	87	86	44	36	99.2	38.44
10	36.00	40.00	808.380	0.47	72	75	2.24	2.20	4	85	84	45	37	98.4	38.86
11	40.00	44.00	811.630	0.45	73	74	2.15	2.20	4	82	87	45	37	104.6	37.99
12	44.00	48.00	815.020	0.48	74	74	2.30	2.30	4	83	85	45	37	98.1	39.23
B1	48.00	52.00	818.308	0.21	67	74	1.00	1.00	2	84	86	49	38	106.6	25.95
2	52.00	56.00	820.890	0.24	70	74	1.15	1.20	2	86	84	43	36	103.9	27.74
3	56.00	60.00	823.340	0.33	71	74	1.58	1.60	3	84	85	43	36	96.1	32.53
4	60.00	64.00	826.000	0.38	71	74	1.81	1.80	4	85	87	44	36	99.0	34.91
5	64.00	68.00	828.940	0.44	72	75	2.10	2.10	4	82	84	45	37	102.3	37.60
6	68.00	72.00	832.210	0.48	73	75	2.29	2.30	4	84	87	45	37	94.0	39.27
7	72.00	76.00	835.350	0.44	73	75	2.10	2.10	4	86	84	45	37	99.3	37.60
8	76.00	80.00	838.530	0.42	73	75	2.01	2.00	4	84	86	45	37	104.2	36.73
9	80.00	84.00	841.790	0.39	74	75	1.87	1.90	4	86	85	45	37	98.6	35.40
10	84.00	88.00	844.770	0.38	74	75	1.82	1.80	4	81	85	45	37	96.2	34.94
11	88.00	92.00	847.640	0.38	74	75	1.82	1.80	4	82	86	44	37	97.9	34.94
12	92.00	96.00	850.560	0.37	74	75	1.77	1.80	4	85	84	44	37	101.2	34.48
	Final DGM:		853.539												

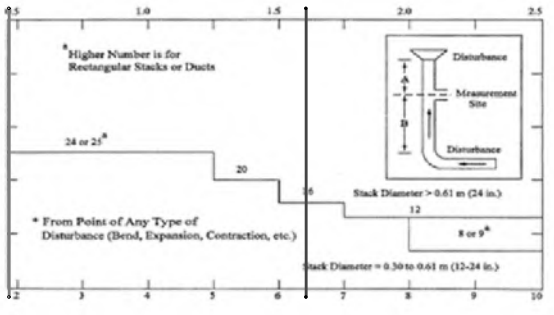
RESULTS	Run Time		Vm		ΔP		Tm		Ts		Max Vac	ΔH		%ISO	BWS	Y_{qa}
	96.0	min	69.282	ft^3	0.37	in. WC	71.4	°F	74.6	°F	4	1.760	in. WC	99.1	0.019	-0.8

Method 1 Data

Location The Chemours Company - Fayetteville, NC
Source VEN Carbon Bed Outlet
Project No. 2022-4108
Date: 11/15/22

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:	1.6	**(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):	AG 11/15/22	
Reviewer (Initial and Date):	AA 11/15/22	



CIRCULAR DUCT

LOCATION OF TRAVERSE POINTS

Number of traverse points on a diameter

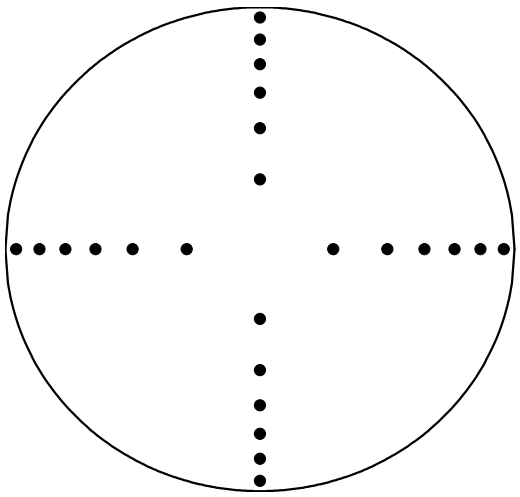
	2	3	4	5	6	7	8	9	10	11	12
1	14.6	--	6.7	--	4.4	--	3.2	--	2.6	--	2.1
2	85.4	--	25.0	--	14.6	--	10.5	--	8.2	--	6.7
3	--	--	75.0	--	29.6	--	19.4	--	14.6	--	11.8
4	--	--	93.3	--	70.4	--	32.3	--	22.6	--	17.7
5	--	--	--	--	85.4	--	67.7	--	34.2	--	25.0
6	--	--	--	--	95.6	--	80.6	--	65.8	--	35.6
7	--	--	--	--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

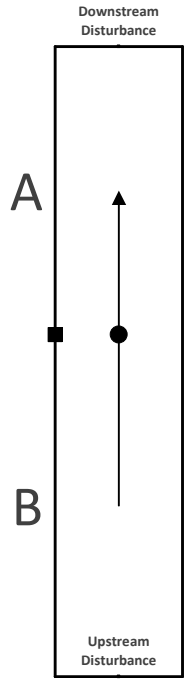
**Percent of stack diameter from inside wall to traverse point.*

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





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Method 2 Data

Location The Chemours Company - Fayetteville, NC
Source VEN Carbon Bed Outlet
Project No. 2022-4108
Date 11/15/22

Saturation Moisture Content Check	Traverse Point	Δ P (in. WC)	Ts (°F)
Stack Temperature (Ts): 75.0 °F		0.35	75
Moisture Fraction @ Sat.: 0.028			
Stack Parameters			
Pitot Tube ID#: P4-2			
Pitot Tube Coefficient (Cp): 0.840			
Barometric Pressure (Pb): 30.23 in. Hg			
Static Pressure(Pg): 2.00 in. WC			
Stack Pressure (Ps): 30.38 in. Hg			

Square Root of ΔP, (in. W.C.) $^{1/2}$	0.592
Average ΔP, (in. W.C.)	0.35
Average Temperature (Ts), °F	75.0
Average Temperature (Ts), °R	534.7
Moisture (BWS), %	2.0
O_2 Concentration, %	20.9
CO_2 Concentration, %	0.1
Molecular Weight (Md), lb/lb-mole (dry)	28.85
Molecular Weight (Ms), lb/lb-mole (wet)	28.63
Velocity (Vs), ft/sec	33.3
VFR at stack conditions (Qa), acfm	14,126
VFR at standard conditions (Qs), dscfm	13,871

Cyclonic Flow Check

Location The Chemours Company - Fayetteville, NC
Source VEN Carbon Bed Outlet
Project No. 2022-4108
Date 11/16/22

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

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Emission Calculations

Location The Chemours Company - Fayetteville, NC
Source VEN Carbon Bed Outlet
Project No. 2022-4108
Parameter HFPO-DA

Run Number		Run 1	Run 2	Run 3	Average
Date		11/16/22	11/16/22	11/16/22	--
Start Time		8:20	10:50	13:30	--
Stop Time		10:15	12:52	15:22	--
Run Time, min		96.0	96.0	96.0	96.0
VELOCITY HEAD, in. WC					
Point 1		0.26	0.25	0.22	0.24
Point 2		0.27	0.25	0.20	0.24
Point 3		0.26	0.25	0.22	0.24
Point 4		0.25	0.25	0.21	0.24
Point 5		0.27	0.27	0.22	0.25
Point 6		0.27	0.32	0.26	0.28
Point 7		0.45	0.40	0.32	0.39
Point 8		0.44	0.45	0.44	0.44
Point 9		0.43	0.45	0.45	0.44
Point 10		0.45	0.46	0.46	0.46
Point 11		0.45	0.45	0.46	0.45
Point 12		0.45	0.45	0.46	0.45
Point 13		0.34	0.66	0.75	0.58
Point 14		0.34	0.65	0.76	0.58
Point 15		0.34	0.64	0.75	0.58
Point 16		0.71	0.64	0.71	0.69
Point 17		0.64	0.65	0.71	0.67
Point 18		0.56	0.60	0.56	0.57
Point 19		0.36	0.48	0.36	0.40
Point 20		0.32	0.40	0.29	0.34
Point 21		0.32	0.33	0.26	0.30
Point 22		0.28	0.33	0.26	0.29
Point 23		0.28	0.31	0.27	0.29
Point 24		0.28	0.29	0.27	0.28
CALCULATED DATA					
Square Root of ΔP, $(\text{in. WC})^{1/2}$	(ΔP)	0.606	0.644	0.625	0.625
Pitot Tube Coefficient	(Cp)	0.840	0.840	0.840	0.840
Barometric Pressure, in. Hg	(Pb)	30.10	30.10	30.10	30.10
Static Pressure, in. WC	(Pg)	2.30	2.20	2.30	2.27
Stack Pressure, in. Hg	(Ps)	30.27	30.26	30.27	30.27
Stack Cross-sectional Area, ft^2	(As)	7.07	7.07	7.07	7.07
Temperature, °F	(Ts)	68.7	74.5	74.7	72.6
Temperature, °R	(Ts)	528.4	534.2	534.3	532.295
Moisture Fraction Measured	(BWSmsd)	0.021	0.025	0.026	0.024
Moisture Fraction @ Saturation	(BWSsat)	0.023	0.028	0.028	0.026
Moisture Fraction	(BWS)	0.021	0.025	0.026	0.024
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)	28.62	28.58	28.58	28.59
Velocity, ft/sec	(Vs)	34.0	36.3	35.3	35.2
VOLUMETRIC FLOW RATE					
At Stack Conditions, acfm	(Qa)	14,410	15,406	14,953	14,923
At Standard Conditions, dscfm	(Qs)	14,248	15,011	14,557	14,606

Method 3 Data

Location The Chemours Company - Fayetteville, NC

Source VEN Carbon Bed Outlet

Project No. 2022-4108

Analysis Type	Assumed Ambient

The remaining consistuent is assumed to be nitrogen.

Method 4 Data

Location The Chemours Company - Fayetteville, NC
Source VEN Carbon Bed Outlet
Project No. 2022-4108
Parameter HFPO-DA
Analysis Gravimetric

Run 1	Date:	11/16/22							
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	295.1	490.3	715.5	595.5	725.6	475.6	314.9	841.0	4453.5
Final Mass, g	306.5	490.8	714.6	593.4	726.8	476.3	322.4	854.3	4485.1
Gain	11.4	0.5	-0.9	-2.1	1.2	0.7	7.5	13.3	31.6
Run 2	**Date:**	11/16/22							
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	301.9	446.1	787.3	752.0	738.6	483.6	321.6	793.4	4624.5
Final Mass, g	319.2	446.6	786.1	754.9	739.4	485.0	326.7	805.8	4663.7
Gain	17.3	0.5	-1.2	2.9	0.8	1.4	5.1	12.4	39.2
Run 3	**Date:**	11/16/22							
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	309.2	490.0	739.6	716.0	728.3	498.7	301.3	871.4	4654.5
Final Mass, g	320.4	493.2	739.3	716.6	728.9	499.8	311.2	884.7	4694.1
Gain	11.2	3.2	-0.3	0.6	0.6	1.1	9.9	13.3	39.6

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Emission Calculations

Location The Chemours Company - Fayetteville, NC
Source VEN Carbon Bed Outlet
Project No. 2022-4108
Parameter HFPO-DA

Run Number		Run 1	Run 2	Run 3	Average
Date		11/16/22	11/16/22	11/16/22	--
Start Time		8:20	10:50	13:30	--
Stop Time		10:15	12:52	15:22	--
Run Time, min	(θ)	96.0	96.0	96.0	96.0
INPUT DATA					
Barometric Pressure, in. Hg	(Pb)	30.10	30.10	30.10	30.10
Meter Correction Factor	(Y)	1.032	1.032	1.032	1.032
Orifice Calibration Value	(ΔH @)	1.699	1.699	1.699	1.699
Meter Volume, ft^3	(Vm)	63.467	68.656	67.878	66.667
Meter Temperature, °F	(Tm)	50.0	59.3	64.4	57.9
Meter Temperature, °R	(Tm)	509.7	519.0	524.1	517.6
Meter Orifice Pressure, in. WC	(ΔH)	1.512	1.723	1.662	1.632
Volume H_2O Collected, mL	(Vlc)	31.6	39.2	39.6	36.8
Nozzle Diameter, in	(Dn)	0.255	0.255	0.255	0.255
Area of Nozzle, ft^2	(An)	0.0004	0.0004	0.0004	0.0004
FH HFPO-DA Mass, ng	$M_{(HFPODA)}$	55,000.0	52,000.0	60,000.0	55666.67
BH HFPO-DA Mass, ng	$M_{(HFPODA)}$	1,240,000.0	864,000.0	1,800,000.0	1301333.33
Imp HFPO-DA Mass, ng	$M_{(HFPODA)}$	0.0	0.0	1,870.0	623.33
Breakthrough HFPO-DA Mass, ng	$M_{(HFPODA)}$	713.0	22.2	759.0	498.07
Total HFPO-DA Mass, ng	$M_{(HFPODA)}$	1,295,713.0	916,022.2	1,862,629.0	1358121.40
ISOKINETIC DATA					
Standard Meter Volume, ft^3	(Vmstd)	68.471	72.774	71.241	70.829
Standard Water Volume, ft^3	(Vwstd)	1.490	1.849	1.868	1.735
Moisture Fraction Measured	(BWSmsd)	0.021	0.025	0.026	0.024
Moisture Fraction @ Saturation	(BWSsat)	0.023	0.028	0.028	0.026
Moisture Fraction	(BWS)	0.021	0.025	0.026	0.024
Meter Pressure, in Hg	(Pm)	30.21	30.23	30.22	30.22
Volume at Nozzle, ft^3	(Vn)	69.244	74.686	73.175	72.37
Isokinetic Sampling Rate, (%)	(I)	99.8	100.6	101.6	100.7
DGM Calibration Check Value, (+/- 5%)	(Y_{qa})	-0.5	0.2	1.7	0.5
EMISSION CALCULATIONS					
HFPO-DA Concentration, ng/dscm	$C_{(HFPODA)}$	6.7E+05	4.4E+05	9.2E+05	6.8E+05
HFPO-DA Emission Rate, lb/hr	$ER_{(HFPODA)}$	3.6E-02	2.5E-02	5.0E-02	3.7E-02
REDUCTION EFFICIENCY CALCULATIONS					
Inlet HFPO-DA Emission Rate, lb/hr	$RE_{(HFPODA)}$	1.0E-02	1.0E-02	1.2E-02	1.1E-02
HFPO-DA Reduction Efficiency, %	$RE_{(HFPODA)}$	-240.47	-140.26	-329.56	-236.77

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Isokinetic Field Data

Location:	The Chemours Company - Fayetteville, NC			**Start Time:**	8:20	**Source:**	VEN Carbon Bed Outlet
Date:	11/16/22	**Run 1**	VALID	**End Time:**	10:15	**Project No.:**	2022-4108
						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 15		**Est. Tm:**	60	°F			**Pb:**	30.10	in. Hg	**Vlc (ml)**
Barometric:	30.23	in. Hg	**Y:**	1.032		**Est. Ts:**	75	°F			**Pg:**	2.30	in. WC	31.6
Static Press:	2.00	in. WC	**ΔH @ (in.WC):**	1.699		**Est. ΔP:**	0.35	in. WC			**O_2:**	20.9	%	**K-FACTOR**
Stack Press:	30.38	in. Hg	**Probe ID:**	TC-5D		**Est. Dn:**	0.224	in.			**CO_2:**	0.1	%	4.040
CO_2:	0.1	%	**Liner Material:**	glass		**Target Rate:**	0.52	scfm						
O_2:	20.9	%	**Pitot ID:**	P4-2		**LEAK CHECKS**	**Pre**	**Mid 1**	**Mid 2**	**Mid 3**	**Post**	**Check Pt.**	**Initial**	**Final**	**Corr.**
N_2/CO:	79.0	%	**Pitot Cp/Type:**	0.840	S-type	Leak Rate (cfm):	0.010	0.010	0.001	--	0.001	Mid 1 (cf)	780.021	780.315	0.294
Md:	28.85	lb/lb-mole	**Nozzle ID:**	GL-5	glass	Vacuum (in Hg):	10	10	8	--	7	Mid 2 (cf)			--
Ms:	28.63	lb/lb-mole	**Nozzle Dn (in.):**	0.255		Pitot Tube:	Pass		--	--	Pass	Mid 3 (cf)			--
												Mid-Point Leak Check Vol (cf):			0.294

Sample Pt.	Sample Time (minutes)		Dry Gas Meter Reading (ft^3)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F)		Orifice Press. ΔH (in. WC)		Pump Vac (in. Hg)	Gas Temperatures (°F)				% ISO	Vs (fps)
					DGM Average	Stack				Probe	Filter	Imp Exit	Aux		
					Amb.	Amb.				Amb.	Amb.	Amb.	Amb.		
	Begin	End			45	45	Ideal	Actual					-		
A1	0.00	4.00	749.674	0.26	43	66	1.03	1.05	3	75	76	42	34	96.2	28.47
2	4.00	8.00	751.795	0.27	43	67	1.07	1.05	3	75	77	42	34	94.6	29.04
3	8.00	12.00	753.920	0.26	44	67	1.04	1.05	3	75	76	42	35	98.8	28.49
4	12.00	16.00	756.100	0.25	44	68	0.99	1.00	3	75	74	43	35	101.7	27.97
5	16.00	20.00	758.300	0.27	46	68	1.08	1.05	3	75	74	43	35	97.5	29.06
6	20.00	24.00	760.500	0.27	46	68	1.08	1.10	3	75	76	43	35	100.2	29.06
7	24.00	28.00	762.760	0.45	47	69	1.79	1.80	5	74	75	44	36	94.1	37.56
8	28.00	32.00	765.500	0.44	48	69	1.76	1.75	5	74	75	44	36	97.1	37.14
9	32.00	36.00	768.300	0.43	48	69	1.72	1.70	5	77	77	44	36	98.2	36.71
10	36.00	40.00	771.100	0.45	49	69	1.80	1.80	5	77	77	44	36	104.4	37.56
11	40.00	44.00	774.150	0.45	49	69	1.80	1.80	5	77	76	44	35	99.9	37.56
12	44.00	48.00	777.070	0.45	49	69	1.80	1.80	5	77	78	44	35	101.0	37.56
B1	48.00	52.00	780.315	0.34	51	64	1.38	1.40	4	79	78	45	36	96.9	32.49
2	52.00	56.00	782.800	0.34	52	66	1.38	1.38	4	77	78	45	36	96.3	32.55
3	56.00	60.00	785.270	0.34	52	66	1.38	1.38	4	77	78	44	35	96.7	32.55
4	60.00	64.00	787.750	0.71	53	70	2.85	2.90	7	77	77	44	35	96.3	47.22
5	64.00	68.00	791.300	0.64	53	70	2.57	2.60	7	77	77	44	35	100.5	44.83
6	68.00	72.00	794.820	0.56	54	70	2.25	2.25	6	77	77	45	36	102.9	41.93
7	72.00	76.00	798.200	0.36	54	70	1.45	1.45	5	77	77	45	36	106.1	33.62
8	76.00	80.00	801.000	0.32	55	71	1.29	1.30	4	77	78	45	36	104.3	31.73
9	80.00	84.00	803.600	0.32	55	71	1.29	1.30	4	77	79	45	35	103.1	31.73
10	84.00	88.00	806.170	0.28	55	71	1.13	1.10	4	79	77	45	35	104.2	29.68
11	88.00	92.00	808.600	0.28	55	71	1.13	1.15	4	79	78	45	35	107.2	29.68
12	92.00	96.00	811.100	0.28	55	71	1.13	1.13	4	78	78	45	35	100.1	29.68
	Final DGM:		813.435												

RESULTS	Run Time		Vm		ΔP		Tm		Ts		Max Vac	ΔH		%ISO	BWS	Y_{qa}
	96.0	min	63.467	ft^3	0.38	in. WC	50.0	°F	68.7	°F	7	1.512	in. WC	99.8	0.021	-0.5

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Isokinetic Field Data

Location:	The Chemours Company - Fayetteville, NC			**Start Time:**	10:50	**Source:**	VEN Carbon Bed Outlet
Date:	11/16/22	**Run 2**	**VALID**	**End Time:**	12:52	**Project No.:**	2022-4108
						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 15		**Est. Tm:**	50	°F				**Pb:**	30.10	in. Hg	**Vlc (ml)**
Barometric:	30.23	in. Hg	**Y:**	1.032		**Est. Ts:**	69	°F				**Pg:**	2.20	in. WC	39.2
Static Press:	2.00	in. WC	**ΔH @ (in.WC):**	1.699		**Est. ΔP:**	0.38	in. WC				**O_2:**	20.9	%	**K-FACTOR**
Stack Press:	30.38	in. Hg	**Probe ID:**	TC-5D		**Est. Dn:**	0.222	in.				**CO_2:**	0.1	%	4.01
CO_2:	0.1	%	**Liner Material:**	glass		**Target Rate:**	0.52	scfm							
O_2:	20.9	%	**Pitot ID:**	P4-2		**LEAK CHECKS**	**Pre**	**Mid 1**	**Mid 2**	**Mid 3**	**Post**	**Check Pt.**	**Initial**	**Final**	**Corr.**
N_2/CO:	79.0	%	**Pitot Cp/Type:**	0.840	S-type	Leak Rate (cfm):	0.000	0.000	0.000	--	0.000	**Mid 1 (cf)**	845.066	######	0.170
Md:	28.85	lb/lb-mole	**Nozzle ID:**	GL-5	glass	Vacuum (in Hg):	10	10	9	--	8	**Mid 2 (cf)**			--
Ms:	28.63	lb/lb-mole	**Nozzle Dn (in.):**	0.255		Pitot Tube:	Pass	Pass	--	--	Pass	**Mid 3 (cf)**			--
												Mid-Point Leak Check Vol (cf):			0.170

Sample Pt.	Sample Time (minutes)		Dry Gas Meter Reading (ft^3)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F)		Orifice Press. ΔH (in. WC)		Pump Vac (in. Hg)	Gas Temperatures (°F)				% ISO	Vs (fps)
					DGM Average	Stack				Probe	Filter	Imp Exit	Aux		
	Begin	End			Amb.	Amb.	Ideal	Actual		Amb.	Amb.	Amb.	Amb.		
					--	--				--	--	--	--		
A1	0.00	4.00	813.633	0.25	57	73	1.01	1.00	4	78	80	51	44	98.1	28.10
2	4.00	8.00	815.800	0.25	57	73	1.01	1.00	4	81	83	51	45	95.1	28.10
3	8.00	12.00	817.900	0.25	57	73	1.01	1.00	4	81	83	51	45	99.6	28.10
4	12.00	16.00	820.100	0.25	57	73	1.01	1.00	4	81	83	50	45	99.6	28.10
5	16.00	20.00	822.300	0.27	57	73	1.09	1.10	4	81	80	48	45	100.2	29.20
6	20.00	24.00	824.600	0.32	58	73	1.29	1.30	4	81	82	48	44	97.9	31.79
7	24.00	28.00	827.050	0.40	58	75	1.61	1.60	5	81	82	48	42	98.6	35.61
8	28.00	32.00	829.800	0.45	58	75	1.81	1.80	5	81	82	47	40	103.1	37.77
9	32.00	36.00	832.850	0.45	59	75	1.81	1.80	5	83	84	47	40	102.9	37.77
10	36.00	40.00	835.900	0.46	59	75	1.85	1.85	6	83	84	47	41	100.2	38.19
11	40.00	44.00	838.900	0.45	59	75	1.81	1.80	6	83	82	46	40	104.6	37.77
12	44.00	48.00	842.000	0.45	60	75	1.82	1.80	6	83	83	46	40	103.3	37.77
B1	48.00	52.00	845.236	0.66	60	75	2.66	2.65	7	83	83	46	40	96.0	45.74
2	52.00	56.00	848.680	0.65	60	75	2.62	2.65	7	83	85	45	38	97.5	45.39
3	56.00	60.00	852.150	0.64	60	75	2.58	2.60	7	83	84	44	37	98.8	45.04
4	60.00	64.00	855.640	0.64	60	75	2.58	2.60	7	83	83	44	37	97.9	45.04
5	64.00	68.00	859.100	0.65	61	75	2.62	2.65	7	83	83	44	36	100.9	45.39
6	68.00	72.00	862.700	0.60	61	75	2.42	2.45	6	83	83	44	36	102.1	43.61
7	72.00	76.00	866.200	0.48	61	75	1.94	1.95	6	83	83	44	36	101.0	39.01
8	76.00	80.00	869.300	0.40	61	75	1.62	1.60	5	83	85	45	38	104.4	35.61
9	80.00	84.00	872.230	0.33	61	75	1.34	1.35	4	83	84	45	38	105.5	32.34
10	84.00	88.00	874.920	0.33	61	75	1.34	1.35	4	83	83	46	38	102.4	32.34
11	88.00	92.00	877.530	0.31	61	75	1.26	1.25	4	83	84	46	38	100.7	31.35
12	92.00	96.00	880.020	0.29	61	75	1.18	1.20	4	83	84	46	38	102.0	30.32
	Final DGM:		882.459												

RESULTS	Run Time		Vm		ΔP		Tm		Ts		Max Vac	ΔH		%ISO	BWS	Y_{qa}
	96.0	min	68.656	ft^3	0.43	in. WC	59.3	°F	74.5	°F	7	1.723	in. WC	100.6	0.025	0.2

Alliance TECHNICAL GROUP

Isokinetic Field Data

Location:	The Chemours Company - Fayetteville, NC			**Start Time:**	13:30	**Source:**	VEN Carbon Bed Outlet
Date:	11/16/22	**Run 3**	**VALID**	**End Time:**	15:22	**Project No.:**	2022-4108

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 15		Est. Tm:	59	°F			Pb:	30.10	in. Hg	Vlc (ml)
Barometric:	30.23	in. Hg	Y:	1.032		Est. Ts:	75	°F			Pg:	2.30	in. WC	39.6
Static Press:	2.00	in. WC	ΔH @ (in.WC):	1.699		Est. ΔP:	0.43	in. WC			O_2:	20.9	%	K-FACTOR
Stack Press:	30.38	in. Hg	Probe ID:	TC-5D		Est. Dn:	0.213	in.			CO_2:	0.1	%	4.038
CO_2:	0.1	%	Liner Material:	glass		Target Rate:	0.52	scfm						
O_2:	20.9	%	Pitot ID:	P4-2		LEAK CHECKS	Pre	Mid 1	Mid 2	Mid 3	Post	Check Pt.	Initial	Final	Corr.
N_2/CO:	79.0	%	Pitot Cp/Type:	0.840	S-type	Leak Rate (cfm):	0.000	0.000	0.000	--	0.000	Mid 1 (cf)	912.979	######	0.227
Md:	28.85	lb/lb-mole	Nozzle ID:	GL-5	glass	Vacuum (in Hg):	10	8	10	--	8	Mid 2 (cf)			--
Ms:	28.63	lb/lb-mole	Nozzle Dn (in.):	0.255		Pitot Tube:	Pass	Pass	--	--	Pass	Mid 3 (cf)			--
												Mid-Point Leak Check Vol (cf):			0.227

Sample Pt.	Sample Time (minutes)		Dry Gas Meter Reading (ft^3)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F)		Orifice Press. ΔH (in. WC)		Pump Vac (in. Hg)	Gas Temperatures (°F)				% ISO	Vs (fps)
					DGM Average	Stack				Probe	Filter	Imp Exit	Aux		
	Begin	End			Amb.	Amb.	Ideal	Actual		Amb.	Amb.	Amb.	Amb.		
					--	--				--	--	--	--		
A1	0.00	4.00	882.648	0.22	62	73	0.90	0.90	3	83	83	50	38	102.4	26.36
2	4.00	8.00	884.790	0.20	62	73	0.82	0.82	3	83	83	46	38	105.8	25.13
3	8.00	12.00	886.900	0.22	62	74	0.90	0.90	3	83	84	42	37	105.3	26.38
4	12.00	16.00	889.100	0.21	62	74	0.85	0.86	3	83	82	43	38	93.0	25.78
5	16.00	20.00	891.000	0.22	62	74	0.90	0.90	3	83	83	43	38	100.5	26.38
6	20.00	24.00	893.100	0.26	63	74	1.06	1.00	3	83	83	43	38	107.6	28.68
7	24.00	28.00	895.550	0.32	63	75	1.30	1.00	3	83	83	42	38	93.2	31.85
8	28.00	32.00	897.900	0.44	63	75	1.79	1.80	5	83	84	42	38	98.2	37.35
9	32.00	36.00	900.800	0.45	63	75	1.83	1.80	5	83	83	42	37	99.5	37.77
10	36.00	40.00	903.770	0.46	64	75	1.87	1.90	6	83	82	42	37	103.5	38.19
11	40.00	44.00	906.900	0.46	64	75	1.87	1.90	6	83	83	42	37	99.9	38.19
12	44.00	48.00	909.920	0.46	64	75	1.87	1.90	6	83	82	42	37	101.2	38.19
B1	48.00	52.00	913.206	0.75	64	75	3.04	3.05	8	83	83	44	39	97.2	48.76
2	52.00	56.00	916.950	0.76	65	75	3.09	3.10	8	84	85	44	39	100.4	49.08
3	56.00	60.00	920.850	0.75	65	75	3.05	3.05	8	84	84	44	39	102.4	48.76
4	60.00	64.00	924.800	0.71	65	75	2.89	2.90	8	84	83	44	38	103.9	47.44
5	64.00	68.00	928.700	0.71	66	75	2.89	2.90	8	83	83	43	38	101.0	47.44
6	68.00	72.00	932.500	0.56	66	75	2.28	2.30	8	83	83	44	38	101.6	42.13
7	72.00	76.00	935.900	0.36	66	75	1.47	1.50	6	83	84	44	39	99.3	33.78
8	76.00	80.00	938.570	0.29	67	75	1.19	1.20	5	83	83	44	39	102.5	30.32
9	80.00	84.00	941.050	0.26	67	75	1.07	1.05	5	83	83	44	39	104.8	28.71
10	84.00	88.00	943.450	0.26	67	75	1.07	1.05	5	83	83	44	39	104.8	28.71
11	88.00	92.00	945.850	0.27	67	75	1.11	1.05	5	83	83	44	38	104.9	29.25
12	92.00	96.00	948.300	0.27	67	75	1.11	1.05	5	83	83	44	38	105.1	29.25
	Final DGM:		950.753												

RESULTS	Run Time		Vm		ΔP		Tm		Ts		Max Vac	ΔH		%ISO	BWS	Y_{qa}
	96.0	min	67.878	ft^3	0.41	in. WC	64.4	°F	74.7	°F	8	1.662	in. WC	101.6	0.026	1.7

Appendix C

Alliance SOURCE TESTING	DGM Calibration-Orifices	Document ID	620.004
		Revision	20.1
		Effective Date	10/5/20
Issuing Department	Tech Services	Page	1 of 1

Equipment Detail - Dry Gas Meter

Console ID: 7
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: 1/14/2023

Alliance SOURCE TESTING	DGM Calibration-Orifices	Document ID	620.004
		Revision	20.1
		Effective Date	10/5/20
Issuing Department	Tech Services	Page	1 of 1

Equipment Detail - Dry Gas Meter

Console ID: 15
Meter S/N: 17087361
Critical Orifice S/N: 1393

Calibration Detail

Initial Barometric Pressure, in. Hg	(Pb_I)	29.73					
Final Barometric Pressure, in. Hg	(Pb_F)	29.71					
Average Barometric Pressure, in. Hg	(Pb)	29.72					
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	19.5	19.5	16.5	16.5
Initial DGM Volume, ft^3	(Vm_I)	984.591	990.402	996.198	5.734	15.285	31.171
Final DGM Volume, ft^3	(Vm_F)	990.402	996.198	1,005.734	15.285	31.171	47.071
Total DGM Volume, ft^3	(Vm)	5.811	5.796	9.536	9.551	15.886	15.900
Ambient Temperature, °F	(Ta)	79	79	79	80	80	81
Initial DGM Temperature, °F	(Tm_I)	78	79	79	80	81	82
Final DGM Temperature, °F	(Tm_F)	79	79	80	81	82	83
Average DGM Temperature, °F	(Tm)	79	79	80	81	82	83
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	1.10	1.10	3.70	3.70
Standard Meter volume, ft^3	(Vmstd)	5.6677	5.6479	9.2972	9.2946	15.5299	15.5150
Standard Critical Orifice Volume, ft^3	(Vcr)	5.8775	5.8775	9.5288	9.520	16.0387	16.0239
Meter Correction Factor	(Y)	1.037	1.041	1.025	1.024	1.033	1.033
Tolerance	--	0.005	0.009	0.007	0.008	0.001	0.001
Orifice Calibration Value	(ΔH @)	1.822	1.821	1.495	1.495	1.780	1.780
Tolerance	--	0.124	0.122	0.204	0.204	0.081	0.081
Orifice Cal Check	--	1.39		1.37		0.80	
Meter Correction Factor	**(Y)**	**1.032**					
Orifice Calibration Value	**(ΔH @)**	**1.699**					
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: 7/21/2022
Expiration Date: 1/21/2023

QA/QC Data

Location The Chemours Company - Fayetteville, NC
Source VEN Carbon Bed Inlet
Project No. 2022-4108
Parameter HFPO-DA

Date	Nozzle ID	Nozzle Diameter (in.) #1	#2	#3	Dn (Average)	Difference	Criteria	Material
11/15/22	GL-6	0.260	0.261	0.260	0.260	0.001	≤ 0.004 in.	glass

Date	Pitot ID	Evidence of damage?	Evidence of mis-alignment?	Calibration or Repair required?
11/16/22	P4-1	no	no	no

Date	Probe or Thermocouple ID	Reference Temp. (°F)	Indicated Temp. (°F)	Difference	Criteria	Probe Length
11/16/22	TC-7D	62.0	63.0	0.2%	± 1.5 % (absolute)	5'

Field Balance Check

Date	**11/16/22**					
Balance ID:	**Scout Pro**					
Test Weight ID:	**SYR-2**					
Certified Weight (g):	**1000.0**					
Measured Weight (g):	**999.9**					
Weight Difference (g):	**0.1**	--	--	--	--	--

Date	Barometric Pressure	Evidence of damage?	Reading Verified	Calibration or Repair required?	Weather Station Location
11/16/22	Weather Station	NA	NA	NA	Fayetteville, NC

Date	Meter Box ID	Positive Pressure Leak Check
11/15/22	MB 7	Pass

Reagent	Lot#	Field Prep performed	Field Lot	Date	By
Di H2O	Eurofins/TA				
Ammonia/Methanol Mix	Eurofins/TA				

QA/QC Data

Location The Chemours Company - Fayetteville, NC
Source VEN Carbon Bed Outlet
Project No. 2022-4108
Parameter HFPO-DA

Date	Nozzle ID	Nozzle Diameter (in.) #1	#2	#3	Dn (Average)	Difference	Criteria	Material
11/15/22	GL-5	0.254	0.255	0.255	0.255	0.001	≤ 0.004 in.	glass

Date	Pitot ID	Evidence of damage?	Evidence of mis-alignment?	Calibration or Repair required?
11/16/22	P4-2	no	no	no

Date	Probe or Thermocouple ID	Reference Temp. (°F)	Indicated Temp. (°F)	Difference	Criteria	Probe Length
11/16/22	TC-5D	62.0	62.0	0.0%	± 1.5 % (absolute)	5'

Field Balance Check

Date	**11/16/22**					
Balance ID:	**Scout Pro**					
Test Weight ID:	**SYR-2**					
Certified Weight (g):	**1000.0**					
Measured Weight (g):	**999.9**					
Weight Difference (g):	**0.1**	--	--	--	--	--

Date	Barometric Pressure	Evidence of damage?	Reading Verified	Calibration or Repair required?	Weather Station Location
11/16/22	Weather Station	NA	NA	NA	Fayetteville, NC

Date	Meter Box ID	Positive Pressure Leak Check
11/15/22	MB 15	Pass

Reagent	Lot#	Field Prep performed	Field Lot	Date	By
Di H2O	Eurofins/TA				
Ammonia/Methanol Mix	Eurofins/TA				

Appendix D

Vinyl Ethers North Operations Data

Date	**11/16/2022**								
Time	800	900	1000	1100	1200	1300	1400	1500	1600
Stack Testing		Run 1: 820-1015		Run 2: 1050-1252			Run 3: 1330-1522		
VEN Product					PPVE				
VEN Precursor									
VEN Condensation (HFPO)									
VEN ABR									
VEN Refining									
Stripper Column Vent									

Appendix E

eurofins | Environment Testing

1 2 3 4 5 6 7 8 9 10 11 12 13 14

ANALYTICAL REPORT

PREPARED FOR

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

Generated 12/2/2022 3:46:56 PM

JOB DESCRIPTION

Fayetteville VEN CB Inlet - OTM-45

JOB NUMBER

140-29659-1

Eurofins Knoxville
5815 Middlebrook Pike
Knoxville TN 37921

See page two for job notes and contact information.

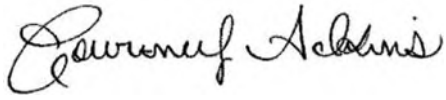
myEOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

Authorization



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12/2/2022 3:46:56 PM

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

Table of Contents

Definitions/Glossary

Client: The Chemours Company FC, LLC
Job ID: 140-29659-1
Project/Site: Fayetteville VEN CB Inlet - OTM-45

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: 140-29659-1

Laboratory: Eurofins Knoxville

Narrative

Job Narrative
140-29659-1

Comments
No additional comments.

Receipt
The samples were received on 11/16/2022 8:00 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 1.3º C.

LCMS
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): V-1001,1002 VEN CB INLET R1 OTM-45 FH (140-29659-1), V-1008,1009 VEN CB INLET R2 OTM-45 FH (140-29659-5) and V-1015,1016 VEN CB INLET R3 OTM-45 FH (140-29659-9). 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: V-1001,1002 VEN CB INLET R1 OTM-45 FH (140-29659-1), V-1008,1009 VEN CB INLET R2 OTM-45 FH (140-29659-5) and V-1015,1016 VEN CB INLET R3 OTM-45 FH (140-29659-9). 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): V-1003,1004,1006 VEN CB INLET R1 OTM-45 BH (140-29659-2), V-1010,1011,1013 VEN CB INLET R2 OTM-45 BH (140-29659-6) and V-1017,1018,1020 VEN CB INLET R3 OTM-45 BH (140-29659-10). 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: V-1003,1004,1006 VEN CB INLET R1 OTM-45 BH (140-29659-2), V-1010,1011,1013 VEN CB INLET R2 OTM-45 BH (140-29659-6) and V-1017,1018,1020 VEN CB INLET R3 OTM-45 BH (140-29659-10). The sample was analyzed at a dilution based on screening results.

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: V-1001,1002 VEN CB INLET R1 OTM-45 FH
Lab Sample ID: 140-29659-1

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	321		12.4	11.7	ug/Sample		11/18/22 13:12	11/22/22 10:13	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*90*		*25 - 150*	*11/18/22 13:12*	*11/22/22 10:13*	*1*

Client Sample ID: V-1003,1004,1006 VEN CB INLET R1 OTM-45 BH
Lab Sample ID: 140-29659-2

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	67.4		50.0	27.5	ug/Sample		11/18/22 13:07	11/29/22 19:01	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*91*		*25 - 150*	*11/18/22 13:07*	*11/29/22 19:01*	*1*

Client Sample ID: V-1005 VEN CB INLET R1 OTM-45 IMPINGER 1,2&3 CONDENSATE
Lab Sample ID: 140-29659-3

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	9.86		0.0737	0.0295	ug/Sample		11/18/22 13:15	11/20/22 22:21	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*91*		*25 - 150*	*11/18/22 13:15*	*11/20/22 22:21*	*1*

Client Sample ID: V-1007 VEN CB INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
Lab Sample ID: 140-29659-4

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 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		11/18/22 13:07	11/29/22 19:10	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*103*		*25 - 150*	*11/18/22 13:07*	*11/29/22 19:10*	*1*

Client Sample ID: V-1008,1009 VEN CB INLET R2 OTM-45 FH
Lab Sample ID: 140-29659-5

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	311		12.4	11.6	ug/Sample		11/18/22 13:12	11/22/22 10:22	1

Client Sample ID: V-1008,1009 VEN CB INLET R2 OTM-45 FH
Lab Sample ID: 140-29659-5

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	98		25 - 150	11/18/22 13:12	11/22/22 10:22	1

Client Sample ID: V-1010,1011,1013 VEN CB INLET R2 OTM-45 BH
Lab Sample ID: 140-29659-6

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	85.8		50.0	27.5	ug/Sample		11/18/22 13:07	11/29/22 19:36	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	95		25 - 150	11/18/22 13:07	11/29/22 19:36	1

Client Sample ID: V-1012 VEN CB INLET R2 OTM-45 IMPINGER 1,2&3 CONDENSATE
Lab Sample ID: 140-29659-7

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0712	0.0285	ug/Sample		11/18/22 13:15	11/20/22 22:30	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	98		25 - 150	11/18/22 13:15	11/20/22 22:30	1

Client Sample ID: V-1014 VEN CB INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
Lab Sample ID: 140-29659-8

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.0228		0.0200	0.0110	ug/Sample		11/18/22 13:07	11/29/22 19:45	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	109		25 - 150	11/18/22 13:07	11/29/22 19:45	1

Client Sample ID: V-1015,1016 VEN CB INLET R3 OTM-45 FH
Lab Sample ID: 140-29659-9

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	350		12.5	11.8	ug/Sample		11/18/22 13:12	11/22/22 10:31	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	90		25 - 150	11/18/22 13:12	11/22/22 10:31	1

Client: The Chemours Company FC, LLC
Job ID: 140-29659-1
Project/Site: Fayetteville VEN CB Inlet - OTM-45

Client Sample ID: V-1017,1018,1020 VEN CB INLET R3 OTM-45 BH

Lab Sample ID: 140-29659-10

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	88.6		50.0	27.5	ug/Sample		11/18/22 13:07	11/29/22 20:03	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	93		25 - 150	11/18/22 13:07	11/29/22 20:03	1

Client Sample ID: V-1019 VEN CB INLET R3 OTM-45 IMPINGER 1,2&3 CONDENSATE

Lab Sample ID: 140-29659-11

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	1.12		0.0745	0.0298	ug/Sample		11/18/22 13:15	11/20/22 22:57	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	98		25 - 150	11/18/22 13:15	11/20/22 22:57	1

Client Sample ID: V-1021 VEN CB INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-29659-12

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.0441		0.0200	0.0110	ug/Sample		11/18/22 13:07	11/29/22 20:12	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	109		25 - 150	11/18/22 13:07	11/29/22 20:12	1

Default Detection Limits

Client: The Chemours Company FC, LLC
Job ID: 140-29659-1
Project/Site: Fayetteville VEN CB Inlet - OTM-45

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

Isotope Dilution Summary

Client: The Chemours Company FC, LLC
Job ID: 140-29659-1
Project/Site: Fayetteville VEN CB Inlet - OTM-45

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)
140-29659-1	V-1001,1002 VEN CB INLET R1	90
140-29659-2	V-1003,1004,1006 VEN CB INLET R1 OTM-45 BH	91
140-29659-3	V-1005 VEN CB INLET R1 OTM-45 IMPINGER 1,2&3 CONDENSATE	91
140-29659-4	V-1007 VEN CB INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	103
140-29659-5	V-1008,1009 VEN CB INLET R2 OTM-45 FH	98
140-29659-6	V-1010,1011,1013 VEN CB INLET R2 OTM-45 BH	95
140-29659-7	V-1012 VEN CB INLET R2 OTM-45 IMPINGER 1,2&3 CONDENSATE	98
140-29659-8	V-1014 VEN CB INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	109
140-29659-9	V-1015,1016 VEN CB INLET R3 OTM-45 FH	90
140-29659-10	V-1017,1018,1020 VEN CB INLET R3 OTM-45 BH	93
140-29659-11	V-1019 VEN CB INLET R3 OTM-45 IMPINGER 1,2&3 CONDENSATE	98
140-29659-12	V-1021 VEN CB INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	109
LCS 140-67658/2-B	Lab Control Sample	103
LCS 140-67660/2-B	Lab Control Sample	85
LCS 140-67661/2-A	Lab Control Sample	96
LCSD 140-67658/3-B	Lab Control Sample Dup	107
LCSD 140-67660/3-B	Lab Control Sample Dup	92
LCSD 140-67661/3-A	Lab Control Sample Dup	94
MB 140-67658/14-B	Method Blank	92
MB 140-67658/1-B	Method Blank	101
MB 140-67660/1-B	Method Blank	86
MB 140-67661/1-A	Method Blank	100

Surrogate Legend

HFPODA = 13C3 HFPO-DA

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 140-67658/14-B
Matrix: Air
Analysis Batch: 67887

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 67658

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		11/18/22 13:07	11/29/22 19:54	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*92*		*25 - 150*	*11/18/22 13:07*	*11/29/22 19:54*	*1*

Lab Sample ID: MB 140-67658/1-B
Matrix: Air
Analysis Batch: 67887

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 67658

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		11/18/22 13:07	11/29/22 17:24	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*101*		*25 - 150*	*11/18/22 13:07*	*11/29/22 17:24*	*1*

Lab Sample ID: LCS 140-67658/2-B
Matrix: Air
Analysis Batch: 67887

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 67658

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0200	0.01765	J	ug/Sample		88	60 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*103*		*25 - 150*

Lab Sample ID: LCSD 140-67658/3-B
Matrix: Air
Analysis Batch: 67887

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 67658

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0200	0.01845	J	ug/Sample		92	60 - 140	4	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*107*		*25 - 150*

Lab Sample ID: MB 140-67660/1-B
Matrix: Air
Analysis Batch: 67751

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 67660

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		11/18/22 13:12	11/22/22 09:20	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*86*		*25 - 150*	*11/18/22 13:12*	*11/22/22 09:20*	*1*

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

Lab Sample ID: LCS 140-67660/2-B
Matrix: Air
Analysis Batch: 67751

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 67660

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0200	0.02200		ug/Sample		110	60 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*85*		*25 - 150*

Lab Sample ID: LCSD 140-67660/3-B
Matrix: Air
Analysis Batch: 67751

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 67660

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0200	0.02312		ug/Sample		116	60 - 140	5	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*92*		*25 - 150*

Lab Sample ID: MB 140-67661/1-A
Matrix: Air
Analysis Batch: 67687

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 67661

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		11/18/22 13:15	11/20/22 21:28	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*100*		*25 - 150*	*11/18/22 13:15*	*11/20/22 21:28*	*1*

Lab Sample ID: LCS 140-67661/2-A
Matrix: Air
Analysis Batch: 67687

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 67661

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0100	0.01132		ug/Sample		113	60 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*96*		*25 - 150*

Lab Sample ID: LCSD 140-67661/3-A
Matrix: Air
Analysis Batch: 67687

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 67661

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0100	0.01159		ug/Sample		116	60 - 140	2	30

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

LCMS

Prep Batch: 67658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29659-2	V-1003,1004,1006 VEN CB INLET R1 OTM-45 B	Total/NA	Air	None	
140-29659-4	V-1007 VEN CB INLET R1 OTM-45 BREAKTHR(	Total/NA	Air	None	
140-29659-6	V-1010,1011,1013 VEN CB INLET R2 OTM-45 B	Total/NA	Air	None	
140-29659-8	V-1014 VEN CB INLET R2 OTM-45 BREAKTHR(	Total/NA	Air	None	
140-29659-10	V-1017,1018,1020 VEN CB INLET R3 OTM-45 B	Total/NA	Air	None	
140-29659-12	V-1021 VEN CB INLET R3 OTM-45 BREAKTHR(	Total/NA	Air	None	
MB 140-67658/14-B	Method Blank	Total/NA	Air	None	
MB 140-67658/1-B	Method Blank	Total/NA	Air	None	
LCS 140-67658/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-67658/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Prep Batch: 67660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29659-1	V-1001,1002 VEN CB INLET R1 OTM-45 FH	Total/NA	Air	None	
140-29659-5	V-1008,1009 VEN CB INLET R2 OTM-45 FH	Total/NA	Air	None	
140-29659-9	V-1015,1016 VEN CB INLET R3 OTM-45 FH	Total/NA	Air	None	
MB 140-67660/1-B	Method Blank	Total/NA	Air	None	
LCS 140-67660/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-67660/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Prep Batch: 67661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29659-3	V-1005 VEN CB INLET R1 OTM-45 IMPINGER 1	Total/NA	Air	PFAS Prep	
140-29659-7	V-1012 VEN CB INLET R2 OTM-45 IMPINGER 1	Total/NA	Air	PFAS Prep	
140-29659-11	V-1019 VEN CB INLET R3 OTM-45 IMPINGER 1	Total/NA	Air	PFAS Prep	
MB 140-67661/1-A	Method Blank	Total/NA	Air	PFAS Prep	
LCS 140-67661/2-A	Lab Control Sample	Total/NA	Air	PFAS Prep	
LCSD 140-67661/3-A	Lab Control Sample Dup	Total/NA	Air	PFAS Prep	

Cleanup Batch: 67676

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29659-1	V-1001,1002 VEN CB INLET R1 OTM-45 FH	Total/NA	Air	Split	67660
140-29659-5	V-1008,1009 VEN CB INLET R2 OTM-45 FH	Total/NA	Air	Split	67660
140-29659-9	V-1015,1016 VEN CB INLET R3 OTM-45 FH	Total/NA	Air	Split	67660
MB 140-67660/1-B	Method Blank	Total/NA	Air	Split	67660
LCS 140-67660/2-B	Lab Control Sample	Total/NA	Air	Split	67660
LCSD 140-67660/3-B	Lab Control Sample Dup	Total/NA	Air	Split	67660

Analysis Batch: 67687

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29659-3	V-1005 VEN CB INLET R1 OTM-45 IMPINGER 1	Total/NA	Air	537 (modified)	67661
140-29659-7	V-1012 VEN CB INLET R2 OTM-45 IMPINGER 1	Total/NA	Air	537 (modified)	67661
140-29659-11	V-1019 VEN CB INLET R3 OTM-45 IMPINGER 1	Total/NA	Air	537 (modified)	67661
MB 140-67661/1-A	Method Blank	Total/NA	Air	537 (modified)	67661
LCS 140-67661/2-A	Lab Control Sample	Total/NA	Air	537 (modified)	67661
LCSD 140-67661/3-A	Lab Control Sample Dup	Total/NA	Air	537 (modified)	67661

Cleanup Batch: 67699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29659-2	V-1003,1004,1006 VEN CB INLET R1 OTM-45 B	Total/NA	Air	Split	67658
140-29659-4	V-1007 VEN CB INLET R1 OTM-45 BREAKTHR(	Total/NA	Air	Split	67658

LCMS (Continued)

Cleanup Batch: 67699 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29659-6	V-1010,1011,1013 VEN CB INLET R2 OTM-45 B	Total/NA	Air	Split	67658
140-29659-8	V-1014 VEN CB INLET R2 OTM-45 BREAKTHR(	Total/NA	Air	Split	67658
140-29659-10	V-1017,1018,1020 VEN CB INLET R3 OTM-45 B	Total/NA	Air	Split	67658
140-29659-12	V-1021 VEN CB INLET R3 OTM-45 BREAKTHR(	Total/NA	Air	Split	67658
MB 140-67658/14-B	Method Blank	Total/NA	Air	Split	67658
MB 140-67658/1-B	Method Blank	Total/NA	Air	Split	67658
LCS 140-67658/2-B	Lab Control Sample	Total/NA	Air	Split	67658
LCSD 140-67658/3-B	Lab Control Sample Dup	Total/NA	Air	Split	67658

Analysis Batch: 67751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29659-1	V-1001,1002 VEN CB INLET R1 OTM-45 FH	Total/NA	Air	537 (modified)	67774
140-29659-5	V-1008,1009 VEN CB INLET R2 OTM-45 FH	Total/NA	Air	537 (modified)	67774
140-29659-9	V-1015,1016 VEN CB INLET R3 OTM-45 FH	Total/NA	Air	537 (modified)	67774
MB 140-67660/1-B	Method Blank	Total/NA	Air	537 (modified)	67676
LCS 140-67660/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	67676
LCSD 140-67660/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	67676

Cleanup Batch: 67774

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29659-1	V-1001,1002 VEN CB INLET R1 OTM-45 FH	Total/NA	Air	Dilution	67676
140-29659-5	V-1008,1009 VEN CB INLET R2 OTM-45 FH	Total/NA	Air	Dilution	67676
140-29659-9	V-1015,1016 VEN CB INLET R3 OTM-45 FH	Total/NA	Air	Dilution	67676

Analysis Batch: 67887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29659-2	V-1003,1004,1006 VEN CB INLET R1 OTM-45 B	Total/NA	Air	537 (modified)	67898
140-29659-4	V-1007 VEN CB INLET R1 OTM-45 BREAKTHR(	Total/NA	Air	537 (modified)	67699
140-29659-6	V-1010,1011,1013 VEN CB INLET R2 OTM-45 B	Total/NA	Air	537 (modified)	67898
140-29659-8	V-1014 VEN CB INLET R2 OTM-45 BREAKTHR(	Total/NA	Air	537 (modified)	67699
140-29659-10	V-1017,1018,1020 VEN CB INLET R3 OTM-45 B	Total/NA	Air	537 (modified)	67898
140-29659-12	V-1021 VEN CB INLET R3 OTM-45 BREAKTHR(	Total/NA	Air	537 (modified)	67699
MB 140-67658/14-B	Method Blank	Total/NA	Air	537 (modified)	67699
MB 140-67658/1-B	Method Blank	Total/NA	Air	537 (modified)	67699
LCS 140-67658/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	67699
LCSD 140-67658/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	67699

Cleanup Batch: 67898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29659-2	V-1003,1004,1006 VEN CB INLET R1 OTM-45 B	Total/NA	Air	Dilution	67699
140-29659-6	V-1010,1011,1013 VEN CB INLET R2 OTM-45 B	Total/NA	Air	Dilution	67699
140-29659-10	V-1017,1018,1020 VEN CB INLET R3 OTM-45 B	Total/NA	Air	Dilution	67699

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville VEN CB Inlet - OTM-45

Job ID: 140-29659-1

Client Sample ID: V-1001,1002 VEN CB INLET R1 OTM-45 FH

Lab Sample ID: 140-29659-1

Date Collected: 11/16/22 00:00
Date Received: 11/16/22 20:00

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	117 mL	67660	11/18/22 13:12	CAC	EET KNX
Total/NA	Cleanup	Split			59 mL	10 mL	67676	11/19/22 12:06	CAC	EET KNX
Total/NA	Cleanup	Dilution			4 uL	10000 uL	67774	11/21/22 10:34	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67751	11/22/22 10:13	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: V-1003,1004,1006 VEN CB INLET R1 OTM-45 BH

Lab Sample ID: 140-29659-2

Date Collected: 11/16/22 00:00
Date Received: 11/16/22 20:00

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	67658	11/18/22 13:07	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67699	11/21/22 08:19	ACW	EET KNX
Total/NA	Cleanup	Dilution			4 uL	10000 uL	67898	11/29/22 13:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 19:01	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: V-1005 VEN CB INLET R1 OTM-45 IMPINGER 1,2&3 CONDENSATE

Lab Sample ID: 140-29659-3

Date Collected: 11/16/22 00:00
Date Received: 11/16/22 20:00

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			0.00678 Sample	10 mL	67661	11/18/22 13:15	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67687	11/20/22 22:21	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: V-1007 VEN CB INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-29659-4

Date Collected: 11/16/22 00:00
Date Received: 11/16/22 20:00

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	67658	11/18/22 13:07	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67699	11/21/22 08:19	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 19:10	CAC	EET KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville VEN CB Inlet - OTM-45

Job ID: 140-29659-1

Client Sample ID: V-1008,1009 VEN CB INLET R2 OTM-45 FH

Lab Sample ID: 140-29659-5

Date Collected: 11/16/22 00:00
Date Received: 11/16/22 20:00

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	113 mL	67660	11/18/22 13:12	CAC	EET KNX
Total/NA	Cleanup	Split			57 mL	10 mL	67676	11/19/22 12:06	CAC	EET KNX
Total/NA	Cleanup	Dilution			4 uL	10000 uL	67774	11/21/22 10:34	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67751	11/22/22 10:22	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: V-1010,1011,1013 VEN CB INLET R2 OTM-45 BH

Lab Sample ID: 140-29659-6

Date Collected: 11/16/22 00:00
Date Received: 11/16/22 20:00

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	67658	11/18/22 13:07	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67699	11/21/22 08:19	ACW	EET KNX
Total/NA	Cleanup	Dilution			4 uL	10000 uL	67898	11/29/22 13:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 19:36	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: V-1012 VEN CB INLET R2 OTM-45 IMPINGER 1,2&3 CONDENSATE

Lab Sample ID: 140-29659-7

Date Collected: 11/16/22 00:00
Date Received: 11/16/22 20:00

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			0.00702 Sample	10 mL	67661	11/18/22 13:15	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67687	11/20/22 22:30	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: V-1014 VEN CB INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-29659-8

Date Collected: 11/16/22 00:00
Date Received: 11/16/22 20:00

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	67658	11/18/22 13:07	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67699	11/21/22 08:19	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 19:45	CAC	EET KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville VEN CB Inlet - OTM-45

Job ID: 140-29659-1

Client Sample ID: V-1015,1016 VEN CB INLET R3 OTM-45 FH

Lab Sample ID: 140-29659-9

Date Collected: 11/16/22 00:00
Date Received: 11/16/22 20:00

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	128 mL	67660	11/18/22 13:12	CAC	EET KNX
Total/NA	Cleanup	Split			64 mL	10 mL	67676	11/19/22 12:06	CAC	EET KNX
Total/NA	Cleanup	Dilution			4 uL	10000 uL	67774	11/21/22 10:34	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67751	11/22/22 10:31	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: V-1017,1018,1020 VEN CB INLET R3 OTM-45 BH

Lab Sample ID: 140-29659-10

Date Collected: 11/16/22 00:00
Date Received: 11/16/22 20:00

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	67658	11/18/22 13:07	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67699	11/21/22 08:19	ACW	EET KNX
Total/NA	Cleanup	Dilution			4 uL	10000 uL	67898	11/29/22 13:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 20:03	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: V-1019 VEN CB INLET R3 OTM-45 IMPINGER 1,2&3 CONDENSATE

Lab Sample ID: 140-29659-11

Date Collected: 11/16/22 00:00
Date Received: 11/16/22 20:00

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			0.00671 Sample	10 mL	67661	11/18/22 13:15	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67687	11/20/22 22:57	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: V-1021 VEN CB INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-29659-12

Date Collected: 11/16/22 00:00
Date Received: 11/16/22 20:00

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	67658	11/18/22 13:07	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67699	11/21/22 08:19	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 20:12	CAC	EET KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville VEN CB Inlet - OTM-45

Job ID: 140-29659-1

Client Sample ID: Method Blank
Lab Sample ID: MB 140-67658/14-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	67658	11/18/22 13:07	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67699	11/21/22 08:19	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 19:54	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-67658/1-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	67658	11/18/22 13:07	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67699	11/21/22 08:19	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 17:24	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-67660/1-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	67660	11/18/22 13:12	CAC	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	67676	11/19/22 12:06	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67751	11/22/22 09:20	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-67661/1-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	67661	11/18/22 13:15	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67687	11/20/22 21:28	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-67658/2-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	67658	11/18/22 13:07	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67699	11/21/22 08:19	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 17:51	CAC	EET KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Job ID: 140-29659-1
Project/Site: Fayetteville VEN CB Inlet - OTM-45

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-67660/2-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	67660	11/18/22 13:12	CAC	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	67676	11/19/22 12:06	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67751	11/22/22 09:29	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-67661/2-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	67661	11/18/22 13:15	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67687	11/20/22 21:37	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-67658/3-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	67658	11/18/22 13:07	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67699	11/21/22 08:19	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 18:00	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-67660/3-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	67660	11/18/22 13:12	CAC	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	67676	11/19/22 12:06	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67751	11/22/22 09:38	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-67661/3-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	67661	11/18/22 13:15	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67687	11/20/22 21:46	CAC	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: 140-29659-1
Project/Site: Fayetteville VEN CB Inlet - OTM-45

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	06-30-23
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	07-27-23
Kansas	NELAP	E-10349	10-31-23
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	08-31-23
Oregon	NELAP	TNI0189	12-31-22
Pennsylvania	NELAP	68-00576	12-01-23
Tennessee	State	02014	07-27-25
Texas	NELAP	T104704380-22-17	08-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-19-00236	12-31-22
Utah	NELAP	TN00009	07-31-23
Virginia	NELAP	460176	09-14-23
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

Method Summary

Client: The Chemours Company FC, LLC
Job ID: 140-29659-1
Project/Site: Fayetteville VEN CB Inlet - OTM-45

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	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: Fayetteville VEN CB Inlet - OTM-45

Job ID: 140-29659-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-29659-1	V-1001,1002 VEN CB INLET R1 OTM-45 FH	Air	11/16/22 00:00	11/16/22 20:00
140-29659-2	V-1003,1004,1006 VEN CB INLET R1 OTM-45 BH	Air	11/16/22 00:00	11/16/22 20:00
140-29659-3	V-1005 VEN CB INLET R1 OTM-45 IMPINGER 1,2&3 CONDENSATE	Air	11/16/22 00:00	11/16/22 20:00
140-29659-4	V-1007 VEN CB INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	11/16/22 00:00	11/16/22 20:00
140-29659-5	V-1008,1009 VEN CB INLET R2 OTM-45 FH	Air	11/16/22 00:00	11/16/22 20:00
140-29659-6	V-1010,1011,1013 VEN CB INLET R2 OTM-45 BH	Air	11/16/22 00:00	11/16/22 20:00
140-29659-7	V-1012 VEN CB INLET R2 OTM-45 IMPINGER 1,2&3 CONDENSATE	Air	11/16/22 00:00	11/16/22 20:00
140-29659-8	V-1014 VEN CB INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	11/16/22 00:00	11/16/22 20:00
140-29659-9	V-1015,1016 VEN CB INLET R3 OTM-45 FH	Air	11/16/22 00:00	11/16/22 20:00
140-29659-10	V-1017,1018,1020 VEN CB INLET R3 OTM-45 BH	Air	11/16/22 00:00	11/16/22 20:00
140-29659-11	V-1019 VEN CB INLET R3 OTM-45 IMPINGER 1,2&3 CONDENSATE	Air	11/16/22 00:00	11/16/22 20:00
140-29659-12	V-1021 VEN CB INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	11/16/22 00:00	11/16/22 20:00

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

Analytical Testing QC Requirements:
The Legend for ProjecV-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:	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

140-29659 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
V-1001 VEN CB INLET R1 OTM-45 Particulate Filter (Combine with *V-1002*)	1	11/16/22		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 FronV-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using method 8321A-HFPO.
V-1002 VEN CB INLET R1 OTM-45 FH of Filter Holder & Probe Methanol Rinse (Combine with *V-1001*)	1	11/16/22		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.
V-1003 VEN CB INLET R1 OTM-45 XAD-2 Resin Tube	1	11/16/22		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
V-1004 VEN CB INLET R1 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *V-1003*)	1	11/16/22		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.
V-1005 VEN CB INLET R1 OTM-45 Impingers 1,2 & 3 Condensate	1	11/16/22		500 mL HDPE Wide-Mouth Bottle	**Impinger #1, #2 & #3 Condensate** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Analyze the sample for HFPO-DA.
V-1006 VEN CB INLET R1 OTM-45 Impinger Glassware MeOH Rinse (Combine with *V-1003*)	1	11/16/22		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.
V-1007 VEN CB INLET R1 OTM-45 Breakthrough XAD-2 Resin Tube	1	11/16/22		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.
V-1008 VEN CB INLET R2 OTM-45 Particulate Filter (Combine with *V-1009*)	2	11/16/22		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 FronV-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using method 8321A-HFPO.
V-1009 VEN CB INLET R2 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with *V-1008*)	2	11/16/22		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
V-1010 VEN CB INLET R2 OTM-45 XAD-2 Resin Tube	2	11/16/22		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.
V-1011 VEN CB INLET R2 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *V-1010*)	2	11/16/22		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.
V-1012 VEN CB INLET R2 OTM-45 Impingers 1,2 & 3 Condensate	2	11/16/22		500 mL HDPE Wide-Mouth Bottle	**Impinger #1, #2 & #3 Condensate** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Analyze the sample for HFPO-DA.
V-1013 VEN CB INLET R2 OTM-45 Impinger Glassware MeOH Rinse (Combine with *V-1010*)	2	11/16/22		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.
V-1014 VEN CB INLET R2 OTM-45 Breakthrough XAD-2 Resin Tube	2	11/16/22		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.
V-1015 VEN CB INLET R3 OTM-45 Particulate Filter (Combine with *V-1016*)	3	11/16/22		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 FronV-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
V-1016 VEN CB INLET R3 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with *V-1015*)	3	11/16/22		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.
V-1017 VEN CB INLET R3 OTM-45 XAD-2 Resin Tube	3	11/16/22		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.
V-1018 VEN CB INLET R3 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *V-1017*)	3	11/16/22		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.
V-1019 VEN CB INLET R3 OTM-45 Impingers 1,2 & 3 Condensate	3	11/16/22		500 mL HDPE Wide-Mouth Bottle	**Impinger #1, #2 & #3 Condensate** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Analyze the sample for HFPO-DA.
V-1020 VEN CB INLET R3 OTM-45 Impinger Glassware MeOH Rinse (Combine with *V-1017*)	3	11/16/22		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.
V-1021 VEN CB INLET R3 OTM-45 Breakthrough XAD-2 Resin Tube	3	11/16/22		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
V-1022 VEN CB INLET R4 OTM-45 Particulate Filter (Combine with *V-1023*)	4	N/A		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 FronV-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using method 8321A-HFPO.
V-1023 VEN CB INLET R4 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with *V-1022*)	4			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.
V-1024 VEN CB INLET R4 OTM-45 XAD-2 Resin Tube	4			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.
V-1025 VEN CB INLET R4 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *V-1024*)	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.
V-1026 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.
V-1027 VEN CB INLET R4 OTM-45 Impinger Glassware MeOH Rinse (Combine with *V-1024*)	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.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require -ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
V-1028 VEN CB INLET R4 OTM-45 Breakthrough XAD-2 Resin Tube	4	N/A		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 1.1 / CT 1.3°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:	[signature]	Alliance	11/16/22/2000
Accepted By:	[signature]	ETA KNX	11-16-22 20:00
Relinquished By:			
Accepted By:			
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 : S674 Correction factor: +0.2°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: Ryan Cannon Date: 11-18-22

QA026R32.doc, 062719

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 12/2/2022 3:45:57 PM

JOB DESCRIPTION

Fayetteville VEN CB Outlet - OTM-45

JOB NUMBER

140-29656-1

Eurofins Knoxville
5815 Middlebrook Pike
Knoxville TN 37921

See page two for job notes and contact information.

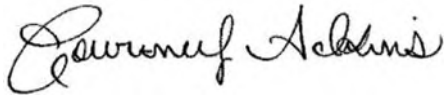
myEOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

Authorization



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12/2/2022 3:45:57 PM

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

Table of Contents

Definitions/Glossary

Client: The Chemours Company FC, LLC
Job ID: 140-29656-1
Project/Site: Fayetteville VEN CB Outlet - OTM-45

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: 140-29656-1

Laboratory: Eurofins Knoxville

Narrative

Job Narrative
140-29656-1

Comments
No additional comments.

Receipt
The samples were received on 11/16/2022 8:00 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 0.9º C.

LCMS
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): V-1029,1030 VEN CB OUTLET R1 OTM-45 FH (140-29656-1), V-1036,1037 VEN CB OUTLET R2 OTM-45 FH (140-29656-5) and V-1043,1044 VEN CB OUTLET R3 OTM-45 FH (140-29656-9). 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: V-1029,1030 VEN CB OUTLET R1 OTM-45 FH (140-29656-1), V-1036,1037 VEN CB OUTLET R2 OTM-45 FH (140-29656-5) and V-1043,1044 VEN CB OUTLET R3 OTM-45 FH (140-29656-9). 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): V-1031,1032,1034 VEN CB OUTLET R1 OTM-45 BH (140-29656-2), V-1038,1039,1041 VEN CB OUTLET R2 OTM-45 BH (140-29656-6) and V-1045,1046,1048 VEN CB OUTLET R3 OTM-45 BH (140-29656-10). 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): Results for samples V-1035 VEN CB OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-29656-4) and V-1049 VEN CB OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-29656-12) 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 following samples were reported with elevated reporting limits for all analytes: V-1031,1032,1034 VEN CB OUTLET R1 OTM-45 BH (140-29656-2), V-1035 VEN CB OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-29656-4), V-1038,1039,1041 VEN CB OUTLET R2 OTM-45 BH (140-29656-6), V-1045,1046,1048 VEN CB OUTLET R3 OTM-45 BH (140-29656-10) and V-1049 VEN CB OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-29656-12). The sample was analyzed at a dilution based on screening results.

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
Job ID: 140-29656-1
Project/Site: Fayetteville VEN CB Outlet - OTM-45

Client Sample ID: V-1029,1030 VEN CB OUTLET R1 OTM-45 FH
Lab Sample ID: 140-29656-1

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	55.0		12.5	11.8	ug/Sample		11/18/22 13:12	11/22/22 09:47	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*90*		*25 - 150*	*11/18/22 13:12*	*11/22/22 09:47*	*1*

Client Sample ID: V-1031,1032,1034 VEN CB OUTLET R1 OTM-45 BH
Lab Sample ID: 140-29656-2

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	1240		200	110	ug/Sample		11/18/22 13:07	11/29/22 18:08	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*90*		*25 - 150*	*11/18/22 13:07*	*11/29/22 18:08*	*1*

Client Sample ID: V-1033 VEN CB OUTLET R1 OTM-45 IMPINGER 1,2&3 CONDENSATE
Lab Sample ID: 140-29656-3

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0705	0.0282	ug/Sample		11/18/22 13:15	11/20/22 21:55	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*99*		*25 - 150*	*11/18/22 13:15*	*11/20/22 21:55*	*1*

Client Sample ID: V-1035 VEN CB OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
Lab Sample ID: 140-29656-4

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.713		0.200	0.110	ug/Sample		11/18/22 13:07	11/29/22 18:17	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*107*		*25 - 150*	*11/18/22 13:07*	*11/29/22 18:17*	*10*

Client Sample ID: V-1036,1037 VEN CB OUTLET R2 OTM-45 FH
Lab Sample ID: 140-29656-5

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	52.0		9.90	9.30	ug/Sample		11/18/22 13:12	11/22/22 09:55	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*90*		*25 - 150*	*11/18/22 13:12*	*11/22/22 09:55*	*1*

Client Sample ID: V-1038,1039,1041 VEN CB OUTLET R2 OTM-45 BH
Lab Sample ID: 140-29656-6

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	864		100	55.0	ug/Sample		11/18/22 13:07	11/29/22 18:26	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*91*		*25 - 150*	*11/18/22 13:07*	*11/29/22 18:26*	*1*

Client Sample ID: V-1040 VEN CB OUTLET R2 OTM-45 IMPINGER 1,2&3 CONDENSATE
Lab Sample ID: 140-29656-7

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0750	0.0300	ug/Sample		11/18/22 13:15	11/20/22 22:04	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*93*		*25 - 150*	*11/18/22 13:15*	*11/20/22 22:04*	*1*

Client Sample ID: V-1042 VEN CB OUTLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
Lab Sample ID: 140-29656-8

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.0222		0.0200	0.0110	ug/Sample		11/18/22 13:07	11/29/22 18:35	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*97*		*25 - 150*	*11/18/22 13:07*	*11/29/22 18:35*	*1*

Client Sample ID: V-1043,1044 VEN CB OUTLET R3 OTM-45 FH

Lab Sample ID: 140-29656-9

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	60.3		12.3	11.6	ug/Sample		11/18/22 13:12	11/22/22 10:04	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*90*		*25 - 150*	*11/18/22 13:12*	*11/22/22 10:04*	*1*

Client Sample ID: V-1045,1046,1048 VEN CB OUTLET R3 OTM-45 BH

Lab Sample ID: 140-29656-10

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	1800		200	110	ug/Sample		11/18/22 13:07	11/29/22 18:44	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*90*		*25 - 150*	*11/18/22 13:07*	*11/29/22 18:44*	*1*

Client Sample ID: V-1047 VEN CB OUTLET R3 OTM-45 IMPINGER 1,2&3 CONDENSATE

Lab Sample ID: 140-29656-11

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	1.87		0.0712	0.0285	ug/Sample		11/18/22 13:15	11/20/22 22:13	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*98*		*25 - 150*	*11/18/22 13:15*	*11/20/22 22:13*	*1*

Client Sample ID: V-1049 VEN CB OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-29656-12

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.759		0.200	0.110	ug/Sample		11/18/22 13:07	11/29/22 18:52	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*100*		*25 - 150*	*11/18/22 13:07*	*11/29/22 18:52*	*10*

Default Detection Limits

Client: The Chemours Company FC, LLC
Job ID: 140-29656-1
Project/Site: Fayetteville VEN CB Outlet - OTM-45

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

Isotope Dilution Summary

Client: The Chemours Company FC, LLC
Job ID: 140-29656-1
Project/Site: Fayetteville VEN CB Outlet - OTM-45

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)
140-29656-1	V-1029,1030 VEN CB OUTLET	90
140-29656-2	V-1031,1032,1034 VEN CB OUTLET R1 OTM-45 BH	90
140-29656-3	V-1033 VEN CB OUTLET R1 OTM-45 IMPINGER 1,2&3 CONDENSATE	99
140-29656-4	V-1035 VEN CB OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	107
140-29656-5	V-1036,1037 VEN CB OUTLET R2 OTM-45 FH	90
140-29656-6	V-1038,1039,1041 VEN CB OUTLET R2 OTM-45 BH	91
140-29656-7	V-1040 VEN CB OUTLET R2 OTM-45 IMPINGER 1,2&3 CONDENSATE	93
140-29656-8	V-1042 VEN CB OUTLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	97
140-29656-9	V-1043,1044 VEN CB OUTLET R3 OTM-45 FH	90
140-29656-10	V-1045,1046,1048 VEN CB OUTLET R3 OTM-45 BH	90
140-29656-11	V-1047 VEN CB OUTLET R3 OTM-45 IMPINGER 1,2&3 CONDENSATE	98
140-29656-12	V-1049 VEN CB OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	100
LCS 140-67658/2-B	Lab Control Sample	103
LCS 140-67660/2-B	Lab Control Sample	85
LCS 140-67661/2-A	Lab Control Sample	96
LCSD 140-67658/3-B	Lab Control Sample Dup	107
LCSD 140-67660/3-B	Lab Control Sample Dup	92
LCSD 140-67661/3-A	Lab Control Sample Dup	94
MB 140-67658/1-B	Method Blank	101
MB 140-67660/1-B	Method Blank	86
MB 140-67661/1-A	Method Blank	100

Surrogate Legend

HFPODA = 13C3 HFPO-DA

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 140-67658/1-B
Matrix: Air
Analysis Batch: 67887

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 67658

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		11/18/22 13:07	11/29/22 17:24	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*101*		*25 - 150*	*11/18/22 13:07*	*11/29/22 17:24*	*1*

Lab Sample ID: LCS 140-67658/2-B
Matrix: Air
Analysis Batch: 67887

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 67658

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0200	0.01765	J	ug/Sample		88	60 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*103*		*25 - 150*

Lab Sample ID: LCSD 140-67658/3-B
Matrix: Air
Analysis Batch: 67887

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 67658

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0200	0.01845	J	ug/Sample		92	60 - 140	4	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*107*		*25 - 150*

Lab Sample ID: MB 140-67660/1-B
Matrix: Air
Analysis Batch: 67751

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 67660

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		11/18/22 13:12	11/22/22 09:20	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*86*		*25 - 150*	*11/18/22 13:12*	*11/22/22 09:20*	*1*

Lab Sample ID: LCS 140-67660/2-B
Matrix: Air
Analysis Batch: 67751

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 67660

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0200	0.02200		ug/Sample		110	60 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*85*		*25 - 150*

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

Lab Sample ID: LCSD 140-67660/3-B
Matrix: Air
Analysis Batch: 67751

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 67660

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0200	0.02312		ug/Sample		116	60 - 140	5	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*92*		*25 - 150*

Lab Sample ID: MB 140-67661/1-A
Matrix: Air
Analysis Batch: 67687

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 67661

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		11/18/22 13:15	11/20/22 21:28	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*100*		*25 - 150*	*11/18/22 13:15*	*11/20/22 21:28*	*1*

Lab Sample ID: LCS 140-67661/2-A
Matrix: Air
Analysis Batch: 67687

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 67661

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0100	0.01132		ug/Sample		113	60 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*96*		*25 - 150*

Lab Sample ID: LCSD 140-67661/3-A
Matrix: Air
Analysis Batch: 67687

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 67661

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0100	0.01159		ug/Sample		116	60 - 140	2	30

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

LCMS

Prep Batch: 67658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29656-2	V-1031,1032,1034 VEN CB OUTLET R1 OTM-45	Total/NA	Air	None	
140-29656-4	V-1035 VEN CB OUTLET R1 OTM-45 BREAKTH	Total/NA	Air	None	
140-29656-6	V-1038,1039,1041 VEN CB OUTLET R2 OTM-45	Total/NA	Air	None	
140-29656-8	V-1042 VEN CB OUTLET R2 OTM-45 BREAKTH	Total/NA	Air	None	
140-29656-10	V-1045,1046,1048 VEN CB OUTLET R3 OTM-45	Total/NA	Air	None	
140-29656-12	V-1049 VEN CB OUTLET R3 OTM-45 BREAKTH	Total/NA	Air	None	
MB 140-67658/1-B	Method Blank	Total/NA	Air	None	
LCS 140-67658/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-67658/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Prep Batch: 67660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29656-1	V-1029,1030 VEN CB OUTLET R1 OTM-45 FH	Total/NA	Air	None	
140-29656-5	V-1036,1037 VEN CB OUTLET R2 OTM-45 FH	Total/NA	Air	None	
140-29656-9	V-1043,1044 VEN CB OUTLET R3 OTM-45 FH	Total/NA	Air	None	
MB 140-67660/1-B	Method Blank	Total/NA	Air	None	
LCS 140-67660/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-67660/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Prep Batch: 67661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29656-3	V-1033 VEN CB OUTLET R1 OTM-45 IMPINGEF	Total/NA	Air	PFAS Prep	
140-29656-7	V-1040 VEN CB OUTLET R2 OTM-45 IMPINGEF	Total/NA	Air	PFAS Prep	
140-29656-11	V-1047 VEN CB OUTLET R3 OTM-45 IMPINGEF	Total/NA	Air	PFAS Prep	
MB 140-67661/1-A	Method Blank	Total/NA	Air	PFAS Prep	
LCS 140-67661/2-A	Lab Control Sample	Total/NA	Air	PFAS Prep	
LCSD 140-67661/3-A	Lab Control Sample Dup	Total/NA	Air	PFAS Prep	

Cleanup Batch: 67676

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29656-1	V-1029,1030 VEN CB OUTLET R1 OTM-45 FH	Total/NA	Air	Split	67660
140-29656-5	V-1036,1037 VEN CB OUTLET R2 OTM-45 FH	Total/NA	Air	Split	67660
140-29656-9	V-1043,1044 VEN CB OUTLET R3 OTM-45 FH	Total/NA	Air	Split	67660
MB 140-67660/1-B	Method Blank	Total/NA	Air	Split	67660
LCS 140-67660/2-B	Lab Control Sample	Total/NA	Air	Split	67660
LCSD 140-67660/3-B	Lab Control Sample Dup	Total/NA	Air	Split	67660

Analysis Batch: 67687

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29656-3	V-1033 VEN CB OUTLET R1 OTM-45 IMPINGEF	Total/NA	Air	537 (modified)	67661
140-29656-7	V-1040 VEN CB OUTLET R2 OTM-45 IMPINGEF	Total/NA	Air	537 (modified)	67661
140-29656-11	V-1047 VEN CB OUTLET R3 OTM-45 IMPINGEF	Total/NA	Air	537 (modified)	67661
MB 140-67661/1-A	Method Blank	Total/NA	Air	537 (modified)	67661
LCS 140-67661/2-A	Lab Control Sample	Total/NA	Air	537 (modified)	67661
LCSD 140-67661/3-A	Lab Control Sample Dup	Total/NA	Air	537 (modified)	67661

Cleanup Batch: 67699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29656-2	V-1031,1032,1034 VEN CB OUTLET R1 OTM-45	Total/NA	Air	Split	67658
140-29656-4	V-1035 VEN CB OUTLET R1 OTM-45 BREAKTH	Total/NA	Air	Split	67658
140-29656-6	V-1038,1039,1041 VEN CB OUTLET R2 OTM-45	Total/NA	Air	Split	67658

LCMS (Continued)

Cleanup Batch: 67699 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29656-8	V-1042 VEN CB OUTLET R2 OTM-45 BREAKTH	Total/NA	Air	Split	67658
140-29656-10	V-1045,1046,1048 VEN CB OUTLET R3 OTM-45	Total/NA	Air	Split	67658
140-29656-12	V-1049 VEN CB OUTLET R3 OTM-45 BREAKTH	Total/NA	Air	Split	67658
MB 140-67658/1-B	Method Blank	Total/NA	Air	Split	67658
LCS 140-67658/2-B	Lab Control Sample	Total/NA	Air	Split	67658
LCSD 140-67658/3-B	Lab Control Sample Dup	Total/NA	Air	Split	67658

Analysis Batch: 67751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29656-1	V-1029,1030 VEN CB OUTLET R1 OTM-45 FH	Total/NA	Air	537 (modified)	67774
140-29656-5	V-1036,1037 VEN CB OUTLET R2 OTM-45 FH	Total/NA	Air	537 (modified)	67774
140-29656-9	V-1043,1044 VEN CB OUTLET R3 OTM-45 FH	Total/NA	Air	537 (modified)	67774
MB 140-67660/1-B	Method Blank	Total/NA	Air	537 (modified)	67676
LCS 140-67660/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	67676
LCSD 140-67660/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	67676

Cleanup Batch: 67774

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29656-1	V-1029,1030 VEN CB OUTLET R1 OTM-45 FH	Total/NA	Air	Dilution	67676
140-29656-5	V-1036,1037 VEN CB OUTLET R2 OTM-45 FH	Total/NA	Air	Dilution	67676
140-29656-9	V-1043,1044 VEN CB OUTLET R3 OTM-45 FH	Total/NA	Air	Dilution	67676

Analysis Batch: 67887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29656-2	V-1031,1032,1034 VEN CB OUTLET R1 OTM-45	Total/NA	Air	537 (modified)	67898
140-29656-4	V-1035 VEN CB OUTLET R1 OTM-45 BREAKTH	Total/NA	Air	537 (modified)	67699
140-29656-6	V-1038,1039,1041 VEN CB OUTLET R2 OTM-45	Total/NA	Air	537 (modified)	67898
140-29656-8	V-1042 VEN CB OUTLET R2 OTM-45 BREAKTH	Total/NA	Air	537 (modified)	67699
140-29656-10	V-1045,1046,1048 VEN CB OUTLET R3 OTM-45	Total/NA	Air	537 (modified)	67898
140-29656-12	V-1049 VEN CB OUTLET R3 OTM-45 BREAKTH	Total/NA	Air	537 (modified)	67699
MB 140-67658/1-B	Method Blank	Total/NA	Air	537 (modified)	67699
LCS 140-67658/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	67699
LCSD 140-67658/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	67699

Cleanup Batch: 67898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29656-2	V-1031,1032,1034 VEN CB OUTLET R1 OTM-45	Total/NA	Air	Dilution	67699
140-29656-6	V-1038,1039,1041 VEN CB OUTLET R2 OTM-45	Total/NA	Air	Dilution	67699
140-29656-10	V-1045,1046,1048 VEN CB OUTLET R3 OTM-45	Total/NA	Air	Dilution	67699

Lab Chronicle

Client: The Chemours Company FC, LLC
Job ID: 140-29656-1
Project/Site: Fayetteville VEN CB Outlet - OTM-45

Client Sample ID: V-1029,1030 VEN CB OUTLET R1 OTM-45 FH
Lab Sample ID: 140-29656-1

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00

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	102 mL	67660	11/18/22 13:12	CAC	EET KNX
Total/NA	Cleanup	Split			51 mL	10 mL	67676	11/19/22 12:06	CAC	EET KNX
Total/NA	Cleanup	Dilution			4 uL	10000 uL	67774	11/21/22 10:34	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67751	11/22/22 09:47	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: V-1031,1032,1034 VEN CB OUTLET R1 OTM-45 BH
Lab Sample ID: 140-29656-2

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00

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	67658	11/18/22 13:07	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67699	11/21/22 08:19	ACW	EET KNX
Total/NA	Cleanup	Dilution			1 uL	10000 uL	67898	11/29/22 13:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 18:08	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: V-1033 VEN CB OUTLET R1 OTM-45 IMPINGER 1,2&3 CONDENSATE
Lab Sample ID: 140-29656-3

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00

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			0.00709 Sample	10 mL	67661	11/18/22 13:15	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67687	11/20/22 21:55	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: V-1035 VEN CB OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
Lab Sample ID: 140-29656-4

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00

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	67658	11/18/22 13:07	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67699	11/21/22 08:19	ACW	EET KNX
Total/NA	Analysis	537 (modified)		10	1 mL	1 mL	67887	11/29/22 18:17	CAC	EET KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville VEN CB Outlet - OTM-45

Job ID: 140-29656-1

Client Sample ID: V-1036,1037 VEN CB OUTLET R2 OTM-45 FH

Lab Sample ID: 140-29656-5

Date Collected: 11/16/22 00:00
Date Received: 11/16/22 20:00

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	95 mL	67660	11/18/22 13:12	CAC	EET KNX
Total/NA	Cleanup	Split			48 mL	10 mL	67676	11/19/22 12:06	CAC	EET KNX
Total/NA	Cleanup	Dilution			5 uL	10000 uL	67774	11/21/22 10:34	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67751	11/22/22 09:55	CAC	EET KNX

Instrument ID: LCA

Client Sample ID: V-1038,1039,1041 VEN CB OUTLET R2 OTM-45 BH

Lab Sample ID: 140-29656-6

Date Collected: 11/16/22 00:00
Date Received: 11/16/22 20:00

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	67658	11/18/22 13:07	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67699	11/21/22 08:19	ACW	EET KNX
Total/NA	Cleanup	Dilution			2 uL	10000 uL	67898	11/29/22 13:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 18:26	CAC	EET KNX

Instrument ID: LCA

Client Sample ID: V-1040 VEN CB OUTLET R2 OTM-45 IMPINGER 1,2&3 CONDENSATE

Lab Sample ID: 140-29656-7

Date Collected: 11/16/22 00:00
Date Received: 11/16/22 20:00

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			0.00667 Sample	10 mL	67661	11/18/22 13:15	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67687	11/20/22 22:04	CAC	EET KNX

Instrument ID: LCA

Client Sample ID: V-1042 VEN CB OUTLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-29656-8

Date Collected: 11/16/22 00:00
Date Received: 11/16/22 20:00

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	67658	11/18/22 13:07	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67699	11/21/22 08:19	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 18:35	CAC	EET KNX

Instrument ID: LCA

Lab Chronicle

Client: The Chemours Company FC, LLC
Job ID: 140-29656-1
Project/Site: Fayetteville VEN CB Outlet - OTM-45

Client Sample ID: V-1043,1044 VEN CB OUTLET R3 OTM-45 FH
Lab Sample ID: 140-29656-9

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00

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	67 mL	67660	11/18/22 13:12	CAC	EET KNX
Total/NA	Cleanup	Split			34 mL	10 mL	67676	11/19/22 12:06	CAC	EET KNX
Total/NA	Cleanup	Dilution			4 uL	10000 uL	67774	11/21/22 10:34	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67751	11/22/22 10:04	CAC	EET KNX

Instrument ID: LCA

Client Sample ID: V-1045,1046,1048 VEN CB OUTLET R3 OTM-45 BH
Lab Sample ID: 140-29656-10

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00

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	67658	11/18/22 13:07	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67699	11/21/22 08:19	ACW	EET KNX
Total/NA	Cleanup	Dilution			1 uL	10000 uL	67898	11/29/22 13:57	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 18:44	CAC	EET KNX

Instrument ID: LCA

Client Sample ID: V-1047 VEN CB OUTLET R3 OTM-45 IMPINGER 1,2&3 CONDENSATE
Lab Sample ID: 140-29656-11

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00

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			0.00702 Sample	10 mL	67661	11/18/22 13:15	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67687	11/20/22 22:13	CAC	EET KNX

Instrument ID: LCA

Client Sample ID: V-1049 VEN CB OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
Lab Sample ID: 140-29656-12

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00

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	67658	11/18/22 13:07	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67699	11/21/22 08:19	ACW	EET KNX
Total/NA	Analysis	537 (modified)		10	1 mL	1 mL	67887	11/29/22 18:52	CAC	EET KNX

Instrument ID: LCA

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville VEN CB Outlet - OTM-45

Job ID: 140-29656-1

Client Sample ID: Method Blank
Lab Sample ID: MB 140-67658/1-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	67658	11/18/22 13:07	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67699	11/21/22 08:19	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 17:24	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-67660/1-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	67660	11/18/22 13:12	CAC	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	67676	11/19/22 12:06	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67751	11/22/22 09:20	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-67661/1-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	67661	11/18/22 13:15	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67687	11/20/22 21:28	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-67658/2-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	67658	11/18/22 13:07	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67699	11/21/22 08:19	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 17:51	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-67660/2-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	67660	11/18/22 13:12	CAC	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	67676	11/19/22 12:06	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67751	11/22/22 09:29	CAC	EET KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Job ID: 140-29656-1
Project/Site: Fayetteville VEN CB Outlet - OTM-45

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-67661/2-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	67661	11/18/22 13:15	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67687	11/20/22 21:37	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-67658/3-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	67658	11/18/22 13:07	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67699	11/21/22 08:19	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 18:00	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-67660/3-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	67660	11/18/22 13:12	CAC	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	67676	11/19/22 12:06	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67751	11/22/22 09:38	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-67661/3-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	67661	11/18/22 13:15	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67687	11/20/22 21:46	CAC	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: 140-29656-1
Project/Site: Fayetteville VEN CB Outlet - OTM-45

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	06-30-23
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	07-27-23
Kansas	NELAP	E-10349	10-31-23
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	08-31-23
Oregon	NELAP	TNI0189	12-31-22
Pennsylvania	NELAP	68-00576	12-01-23
Tennessee	State	02014	07-27-25
Texas	NELAP	T104704380-22-17	08-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-19-00236	12-31-22
Utah	NELAP	TN00009	07-31-23
Virginia	NELAP	460176	09-14-23
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

Method Summary

Client: The Chemours Company FC, LLC
Job ID: 140-29656-1
Project/Site: Fayetteville VEN CB Outlet - OTM-45

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	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
Job ID: 140-29656-1
Project/Site: Fayetteville VEN CB Outlet - OTM-45

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-29656-1	V-1029,1030 VEN CB OUTLET R1 OTM-45 FH	Air	11/16/22 00:00	11/16/22 20:00
140-29656-2	V-1031,1032,1034 VEN CB OUTLET R1 OTM-45 BH	Air	11/16/22 00:00	11/16/22 20:00
140-29656-3	V-1033 VEN CB OUTLET R1 OTM-45 IMPINGER 1,2&3 CONDENSATE	Air	11/16/22 00:00	11/16/22 20:00
140-29656-4	V-1035 VEN CB OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	11/16/22 00:00	11/16/22 20:00
140-29656-5	V-1036,1037 VEN CB OUTLET R2 OTM-45 FH	Air	11/16/22 00:00	11/16/22 20:00
140-29656-6	V-1038,1039,1041 VEN CB OUTLET R2 OTM-45 BH	Air	11/16/22 00:00	11/16/22 20:00
140-29656-7	V-1040 VEN CB OUTLET R2 OTM-45 IMPINGER 1,2&3 CONDENSATE	Air	11/16/22 00:00	11/16/22 20:00
140-29656-8	V-1042 VEN CB OUTLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	11/16/22 00:00	11/16/22 20:00
140-29656-9	V-1043,1044 VEN CB OUTLET R3 OTM-45 FH	Air	11/16/22 00:00	11/16/22 20:00
140-29656-10	V-1045,1046,1048 VEN CB OUTLET R3 OTM-45 BH	Air	11/16/22 00:00	11/16/22 20:00
140-29656-11	V-1047 VEN CB OUTLET R3 OTM-45 IMPINGER 1,2&3 CONDENSATE	Air	11/16/22 00:00	11/16/22 20:00
140-29656-12	V-1049 VEN CB OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	11/16/22 00:00	11/16/22 20:00

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 ProjecV-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 Number", "Sample Type", and "Run Number" on all TALS Reports.

Analytical Parameter:	Holding Time Requirements:	Preservation Requirements:
HFPO-DA (CAS No. 13252-13-6)	14 Days to Extraction; 40 Days to Analysis	Cool, 4°C

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require-ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
V-1029 VEN CB OUTLET R1 OTM-45 Filter (Combine with *V-1030*)	1	11/16/22		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 FronV-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using Method 8321A-HFPO.
V-1030 VEN CB OUTLET R1 OTM-45 FH of Filter Holder & Probe Methanol Rinse (Combine with *V-1029*)	1	11/16/22		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. 140-29656 Chain of Custody
V-1031 VEN CB OUTLET R1 OTM-45 XAD-2 Resin Tube	1	11/16/22		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
V-1032 VEN CB OUTLET R1 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *V-1031*)	1	11/16/22		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.
V-1033 VEN CB OUTLET R1 OTM-45 Impingers 1,2 & 3 Condensate	1	11/16/22		500 mL HDPE Wide-Mouth Bottle	**Impinger #1, #2 & #3 Condensate** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Analyze the sample for HFPO-DA.
V-1034 VEN CB OUTLET R1 OTM-45 Impinger Glassware MeOH Rinse (Combine with *V-1031*)	1	11/16/22		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.
V-1035 VEN CB OUTLET R1 OTM-45 Breakthrough XAD-2 Resin Tube	1	11/16/22		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.
V-1036 VEN CB OUTLET R2 OTM-45 Filter (Combine with *V-1037*)	2	11/16/22		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 FronV-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using Method 8321A-HFPO.
V-1037 VEN CB OUTLET R2 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with *V-1036*)	2	11/16/22		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
V-1038 VEN CB OUTLET R2 OTM-45 XAD-2 Resin Tube	2	11/16/22		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.
V-1039 VEN CB OUTLET R2 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *V-1038*)	2	11/16/22		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.
V-1040 VEN CB OUTLET R2 OTM-45 Impingers 1,2 & 3 Condensate	2	11/16/22		500 mL HDPE Wide-Mouth Bottle	**Impinger #1, #2 & #3 Condensate** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Analyze the sample for HFPO-DA.
V-1041 VEN CB OUTLET R2 OTM-45 Impinger Glassware MeOH Rinse (Combine with *V-1038*)	2	11/16/22		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.
V-1042 VEN CB OUTLET R2 OTM-45 Breakthrough XAD-2 Resin Tube	2	11/16/22		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.
V-1043 VEN CB OUTLET R3 OTM-45 Filter (Combine with *V-1044*)	3	11/16/22		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 FronV-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
V-1044 VEN CB OUTLET R3 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with *V-1043*)	3	11/16/22		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.
V-1045 VEN CB OUTLET R3 OTM-45 XAD-2 Resin Tube	3	11/16/22		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.
V-1046 VEN CB OUTLET R3 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *V-1045*)	3	11/16/22		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.
V-1047 VEN CB OUTLET R3 OTM-45 Impingers 1,2 & 3 Condensate	3	11/16/22		500 mL HDPE Wide-Mouth Bottle	**Impinger #1, #2 & #3 Condensate** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Analyze the sample for HFPO-DA.
V-1048 VEN CB OUTLET R3 OTM-45 Impinger Glassware MeOH Rinse (Combine with *V-1045*)	3	11/16/22		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.
V-1049 VEN CB OUTLET R3 OTM-45 Breakthrough XAD-2 Resin Tube	3	11/16/22		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
V-1050 VEN CB OUTLET R4 OTM-45 Filter (Combine with *V-1051*)	4	N/A		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 FronV-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using Method 8321A-HFPO.
V-1051 VEN CB OUTLET R4 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with *V-1050*)	4			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.
V-1052 VEN CB OUTLET R4 OTM-45 XAD-2 Resin Tube	4			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.
V-1053 VEN CB OUTLET R4 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *V-1052*)	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.
V-1054 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
V-1055 VEN CB OUTLET R4 OTM-45 Impinger Glassware MeOH Rinse (Combine with *V-1052*)	4	N/A		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.
V-1056 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 0.7 / CT 0.9°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:	[signature]	Alliance	11/16/22 2000
Accepted By:	[signature]	EVATEX	11-16-22 20:00
Relinquished By:			
Accepted By:			
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 :_____ Correction factor: _____	✓			☐ **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 #: 140043216 PM Instructions: _____

Sample Receiving Associate: _____ Date: 12-18-22

QA026R32.doc, 062719

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 12/2/2022 3:50:22 PM

JOB DESCRIPTION

Fayetteville CB Field QC - OTM-45

JOB NUMBER

140-29662-1

Eurofins Knoxville
5815 Middlebrook Pike
Knoxville TN 37921

See page two for job notes and contact information.

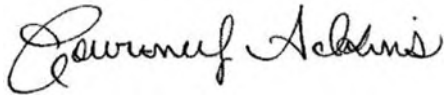
myEOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

Authorization



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12/2/2022 3:50:22 PM

Authorized for release by
Courtney Adkins, Project Manager II
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(865)291-3019

Table of Contents

Definitions/Glossary

Client: The Chemours Company FC, LLC
Job ID: 140-29662-1
Project/Site: Fayetteville CB Field QC - OTM-45

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: 140-29662-1

Laboratory: Eurofins Knoxville

Narrative

Job Narrative
140-29662-1

Comments
No additional comments.

Receipt
The samples were received on 11/16/2022 8:00 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 0.9º C.

LCMS
No analytical or quality issues were noted, other than those described 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: V-1057,1058 QC OTM-45 FH PBT
Lab Sample ID: 140-29662-1

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		11/18/22 10:54	11/22/22 11:24	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*88*		*25 - 150*	*11/18/22 10:54*	*11/22/22 11:24*	*1*

Client Sample ID: V-1059,1060,1062 QC OTM-45 BH PBT
Lab Sample ID: 140-29662-2

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 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		11/18/22 10:51	11/29/22 16:23	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*96*		*25 - 150*	*11/18/22 10:51*	*11/29/22 16:23*	*1*

Client Sample ID: V-1061 QC OTM-45 IMPINGERS 1,2&3 CONDENSATE PBT
Lab Sample ID: 140-29662-3

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 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		11/18/22 10:56	11/21/22 18:21	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*104*		*25 - 150*	*11/18/22 10:56*	*11/21/22 18:21*	*1*

Client Sample ID: V-1063 QC OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE PBT
Lab Sample ID: 140-29662-4

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 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		11/18/22 10:51	11/29/22 16:32	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*96*		*25 - 150*	*11/18/22 10:51*	*11/29/22 16:32*	*1*

Client Sample ID: V-1064 QC OTM-45 DI WATER RB
Lab Sample ID: 140-29662-5

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 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		11/18/22 10:56	11/21/22 18:29	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*109*		*25 - 150*	*11/18/22 10:56*	*11/21/22 18:29*	*1*

Client Sample ID: V-1065 QC OTM-45 MEOH WITH 5% NH4OH RB
Lab Sample ID: 140-29662-6

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 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		11/18/22 10:51	11/29/22 16:40	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*92*		*25 - 150*	*11/18/22 10:51*	*11/29/22 16:40*	*1*

Client Sample ID: V-1066,1067 QC OTM-45 FH BT
Lab Sample ID: 140-29662-7

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		11/18/22 10:54	11/22/22 11:32	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*88*		*25 - 150*	*11/18/22 10:54*	*11/22/22 11:32*	*1*

Client Sample ID: V-1068,1069,1071 QC OTM-45 BH BT
Lab Sample ID: 140-29662-8

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 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		11/18/22 10:51	11/29/22 16:49	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*101*		*25 - 150*	*11/18/22 10:51*	*11/29/22 16:49*	*1*

Client Sample ID: V-1070 QC OTM-45 IMPINGERS 1,2&3 CONDENSATE BT
Lab Sample ID: 140-29662-9

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 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		11/18/22 10:56	11/21/22 18:38	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*109*		*25 - 150*	*11/18/22 10:56*	*11/21/22 18:38*	*1*

Client Sample ID: V-1072 QC OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE BT
Lab Sample ID: 140-29662-10

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00
Sample Container: Air Train

Method: EPA 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		11/18/22 10:51	11/29/22 16:58	1

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville CB Field QC - OTM-45

Job ID: 140-29662-1

Client Sample ID: V-1072 QC OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE BT

Lab Sample ID: 140-29662-10

Date Collected: 11/16/22 00:00
Date Received: 11/16/22 20:00
Sample Container: Air Train

Matrix: Air

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	94		25 - 150	11/18/22 10:51	11/29/22 16:58	1

Client Sample ID: A-1251 OTM-45 MEDIA CHECK XAD

Lab Sample ID: 140-29662-11

Date Collected: 11/16/22 00:00
Date Received: 11/16/22 20:00
Sample Container: Air Train

Matrix: Air

Method: EPA 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		11/18/22 10:51	11/29/22 17:07	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	105		25 - 150	11/18/22 10:51	11/29/22 17:07	1

Client Sample ID: A-1252 OTM-45 MEDIA CHECK FILTER

Lab Sample ID: 140-29662-12

Date Collected: 11/16/22 00:00
Date Received: 11/16/22 20:00
Sample Container: Air Train

Matrix: Air

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		11/18/22 10:54	11/22/22 11:41	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	84		25 - 150	11/18/22 10:54	11/22/22 11:41	1

Default Detection Limits

Client: The Chemours Company FC, LLC
Job ID: 140-29662-1
Project/Site: Fayetteville CB Field QC - OTM-45

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

Isotope Dilution Summary

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville CB Field QC - OTM-45

Job ID: 140-29662-1

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)
140-29662-1	V-1057,1058 QC OTM-45 FH PE	88
140-29662-2	V-1059,1060,1062 QC OTM-45 BH PBT	96
140-29662-3	V-1061 QC OTM-45 IMPINGER 1,2&3 CONDENSATE PBT	104
140-29662-4	V-1063 QC OTM-45 BREAKTHROUGH XAD-2 RESI TUBE PBT	96
140-29662-5	V-1064 QC OTM-45 DI WATER RB	109
140-29662-6	V-1065 QC OTM-45 MEOH WITH 5% NH4OH RB	92
140-29662-7	V-1066,1067 QC OTM-45 FH BT	88
140-29662-8	V-1068,1069,1071 QC OTM-45 BH BT	101
140-29662-9	V-1070 QC OTM-45 IMPINGER 1,2&3 CONDENSATE BT	109
140-29662-10	V-1072 QC OTM-45 BREAKTHROUGH XAD-2 RESI TUBE BT	94
140-29662-11	A-1251 OTM-45 MEDIA CHECK XAD	105
140-29662-12	A-1252 OTM-45 MEDIA CHECK FILTER	84
LCS 140-67648/2-B	Lab Control Sample	97
LCS 140-67649/2-B	Lab Control Sample	89
LCS 140-67651/2-A	Lab Control Sample	107
LCSD 140-67648/3-B	Lab Control Sample Dup	98
LCSD 140-67649/3-B	Lab Control Sample Dup	66
LCSD 140-67651/3-A	Lab Control Sample Dup	104
MB 140-67648/1-B	Method Blank	88
MB 140-67649/1-B	Method Blank	88
MB 140-67651/1-A	Method Blank	105

Surrogate Legend

HFPODA = 13C3 HFPO-DA

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 140-67648/1-B
Matrix: Air
Analysis Batch: 67887

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 67648

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		11/18/22 10:51	11/29/22 15:55	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*88*		*25 - 150*	*11/18/22 10:51*	*11/29/22 15:55*	*1*

Lab Sample ID: LCS 140-67648/2-B
Matrix: Air
Analysis Batch: 67887

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 67648

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HFPO-DA	0.0200	0.02085		ug/Sample		104	60 - 140

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*97*		*25 - 150*

Lab Sample ID: LCSD 140-67648/3-B
Matrix: Air
Analysis Batch: 67887

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 67648

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA	0.0200	0.02079		ug/Sample		104	60 - 140	0	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*98*		*25 - 150*

Lab Sample ID: MB 140-67649/1-B
Matrix: Air
Analysis Batch: 67751

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 67649

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		11/18/22 10:54	11/22/22 10:57	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*88*		*25 - 150*	*11/18/22 10:54*	*11/22/22 10:57*	*1*

Lab Sample ID: LCS 140-67649/2-B
Matrix: Air
Analysis Batch: 67751

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 67649

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HFPO-DA	0.0200	0.02076		ug/Sample		104	60 - 140

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*89*		*25 - 150*

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

Lab Sample ID: LCSD 140-67649/3-B
Matrix: Air
Analysis Batch: 67751

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 67649

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0200	0.02078		ug/Sample		104	60 - 140	0	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*66*		*25 - 150*

Lab Sample ID: MB 140-67651/1-A
Matrix: Air
Analysis Batch: 67741

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 67651

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		11/18/22 10:56	11/21/22 17:54	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*105*		*25 - 150*	*11/18/22 10:56*	*11/21/22 17:54*	*1*

Lab Sample ID: LCS 140-67651/2-A
Matrix: Air
Analysis Batch: 67741

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 67651

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0100	0.01017		ug/Sample		102	60 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*107*		*25 - 150*

Lab Sample ID: LCSD 140-67651/3-A
Matrix: Air
Analysis Batch: 67741

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 67651

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0100	0.01017		ug/Sample		102	60 - 140	0	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*104*		*25 - 150*

QC Association Summary

Client: The Chemours Company FC, LLC
Job ID: 140-29662-1
Project/Site: Fayetteville CB Field QC - OTM-45

LCMS

Prep Batch: 67648

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29662-2	V-1059,1060,1062 QC OTM-45 BH PBT	Total/NA	Air	None	
140-29662-4	V-1063 QC OTM-45 BREAKTHROUGH XAD-2 R	Total/NA	Air	None	
140-29662-6	V-1065 QC OTM-45 MEOH WITH 5% NH4OH RI	Total/NA	Air	None	
140-29662-8	V-1068,1069,1071 QC OTM-45 BH BT	Total/NA	Air	None	
140-29662-10	V-1072 QC OTM-45 BREAKTHROUGH XAD-2 R	Total/NA	Air	None	
140-29662-11	A-1251 OTM-45 MEDIA CHECK XAD	Total/NA	Air	None	
MB 140-67648/1-B	Method Blank	Total/NA	Air	None	
LCS 140-67648/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-67648/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Prep Batch: 67649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29662-1	V-1057,1058 QC OTM-45 FH PBT	Total/NA	Air	None	
140-29662-7	V-1066,1067 QC OTM-45 FH BT	Total/NA	Air	None	
140-29662-12	A-1252 OTM-45 MEDIA CHECK FILTER	Total/NA	Air	None	
MB 140-67649/1-B	Method Blank	Total/NA	Air	None	
LCS 140-67649/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-67649/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Prep Batch: 67651

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29662-3	V-1061 QC OTM-45 IMPINGERS 1,2&3 CONDEI	Total/NA	Air	PFAS Prep	
140-29662-5	V-1064 QC OTM-45 DI WATER RB	Total/NA	Air	PFAS Prep	
140-29662-9	V-1070 QC OTM-45 IMPINGERS 1,2&3 CONDEI	Total/NA	Air	PFAS Prep	
MB 140-67651/1-A	Method Blank	Total/NA	Air	PFAS Prep	
LCS 140-67651/2-A	Lab Control Sample	Total/NA	Air	PFAS Prep	
LCSD 140-67651/3-A	Lab Control Sample Dup	Total/NA	Air	PFAS Prep	

Cleanup Batch: 67677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29662-1	V-1057,1058 QC OTM-45 FH PBT	Total/NA	Air	Split	67649
140-29662-7	V-1066,1067 QC OTM-45 FH BT	Total/NA	Air	Split	67649
140-29662-12	A-1252 OTM-45 MEDIA CHECK FILTER	Total/NA	Air	Split	67649
MB 140-67649/1-B	Method Blank	Total/NA	Air	Split	67649
LCS 140-67649/2-B	Lab Control Sample	Total/NA	Air	Split	67649
LCSD 140-67649/3-B	Lab Control Sample Dup	Total/NA	Air	Split	67649

Cleanup Batch: 67698

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29662-2	V-1059,1060,1062 QC OTM-45 BH PBT	Total/NA	Air	Split	67648
140-29662-4	V-1063 QC OTM-45 BREAKTHROUGH XAD-2 R	Total/NA	Air	Split	67648
140-29662-6	V-1065 QC OTM-45 MEOH WITH 5% NH4OH RI	Total/NA	Air	Split	67648
140-29662-8	V-1068,1069,1071 QC OTM-45 BH BT	Total/NA	Air	Split	67648
140-29662-10	V-1072 QC OTM-45 BREAKTHROUGH XAD-2 R	Total/NA	Air	Split	67648
140-29662-11	A-1251 OTM-45 MEDIA CHECK XAD	Total/NA	Air	Split	67648
MB 140-67648/1-B	Method Blank	Total/NA	Air	Split	67648
LCS 140-67648/2-B	Lab Control Sample	Total/NA	Air	Split	67648
LCSD 140-67648/3-B	Lab Control Sample Dup	Total/NA	Air	Split	67648

QC Association Summary

Client: The Chemours Company FC, LLC
Job ID: 140-29662-1
Project/Site: Fayetteville CB Field QC - OTM-45

LCMS

Analysis Batch: 67741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29662-3	V-1061 QC OTM-45 IMPINGERS 1,2&3 CONDEI	Total/NA	Air	537 (modified)	67651
140-29662-5	V-1064 QC OTM-45 DI WATER RB	Total/NA	Air	537 (modified)	67651
140-29662-9	V-1070 QC OTM-45 IMPINGERS 1,2&3 CONDEI	Total/NA	Air	537 (modified)	67651
MB 140-67651/1-A	Method Blank	Total/NA	Air	537 (modified)	67651
LCS 140-67651/2-A	Lab Control Sample	Total/NA	Air	537 (modified)	67651
LCSD 140-67651/3-A	Lab Control Sample Dup	Total/NA	Air	537 (modified)	67651

Analysis Batch: 67751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29662-1	V-1057,1058 QC OTM-45 FH PBT	Total/NA	Air	537 (modified)	67677
140-29662-7	V-1066,1067 QC OTM-45 FH BT	Total/NA	Air	537 (modified)	67677
140-29662-12	A-1252 OTM-45 MEDIA CHECK FILTER	Total/NA	Air	537 (modified)	67677
MB 140-67649/1-B	Method Blank	Total/NA	Air	537 (modified)	67677
LCS 140-67649/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	67677
LCSD 140-67649/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	67677

Analysis Batch: 67887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-29662-2	V-1059,1060,1062 QC OTM-45 BH PBT	Total/NA	Air	537 (modified)	67698
140-29662-4	V-1063 QC OTM-45 BREAKTHROUGH XAD-2 R	Total/NA	Air	537 (modified)	67698
140-29662-6	V-1065 QC OTM-45 MEOH WITH 5% NH4OH RI	Total/NA	Air	537 (modified)	67698
140-29662-8	V-1068,1069,1071 QC OTM-45 BH BT	Total/NA	Air	537 (modified)	67698
140-29662-10	V-1072 QC OTM-45 BREAKTHROUGH XAD-2 R	Total/NA	Air	537 (modified)	67698
140-29662-11	A-1251 OTM-45 MEDIA CHECK XAD	Total/NA	Air	537 (modified)	67698
MB 140-67648/1-B	Method Blank	Total/NA	Air	537 (modified)	67698
LCS 140-67648/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	67698
LCSD 140-67648/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	67698

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville CB Field QC - OTM-45

Job ID: 140-29662-1

Client Sample ID: V-1057,1058 QC OTM-45 FH PBT
Lab Sample ID: 140-29662-1
Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00

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	102 mL	67649	11/18/22 10:54	CAC	EET KNX
Total/NA	Cleanup	Split			51 mL	10 mL	67677	11/19/22 12:13	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67751	11/22/22 11:24	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: V-1059,1060,1062 QC OTM-45 BH PBT
Lab Sample ID: 140-29662-2
Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00

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	67648	11/18/22 10:51	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67698	11/21/22 08:13	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 16:23	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: V-1061 QC OTM-45 IMPINGERS 1,2&3 CONDENSATE PBT
Lab Sample ID: 140-29662-3
Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00

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	67651	11/18/22 10:56	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67741	11/21/22 18:21	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: V-1063 QC OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE PBT
Lab Sample ID: 140-29662-4
Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00

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	67648	11/18/22 10:51	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67698	11/21/22 08:13	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 16:32	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: V-1064 QC OTM-45 DI WATER RB
Lab Sample ID: 140-29662-5
Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00

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	67651	11/18/22 10:56	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67741	11/21/22 18:29	CAC	EET KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville CB Field QC - OTM-45

Job ID: 140-29662-1

Client Sample ID: V-1065 QC OTM-45 MEOH WITH 5% NH4OH RB

Lab Sample ID: 140-29662-6

Date Collected: 11/16/22 00:00
Date Received: 11/16/22 20:00

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	67648	11/18/22 10:51	CAC	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	67698	11/21/22 08:13	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 16:40	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: V-1066,1067 QC OTM-45 FH BT

Lab Sample ID: 140-29662-7

Date Collected: 11/16/22 00:00
Date Received: 11/16/22 20:00

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	86 mL	67649	11/18/22 10:54	CAC	EET KNX
Total/NA	Cleanup	Split			43 mL	10 mL	67677	11/19/22 12:13	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67751	11/22/22 11:32	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: V-1068,1069,1071 QC OTM-45 BH BT

Lab Sample ID: 140-29662-8

Date Collected: 11/16/22 00:00
Date Received: 11/16/22 20:00

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	67648	11/18/22 10:51	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67698	11/21/22 08:13	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 16:49	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: V-1070 QC OTM-45 IMPINGERS 1,2&3 CONDENSATE BT

Lab Sample ID: 140-29662-9

Date Collected: 11/16/22 00:00
Date Received: 11/16/22 20:00

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	67651	11/18/22 10:56	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67741	11/21/22 18:38	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: V-1072 QC OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE BT

Lab Sample ID: 140-29662-10

Date Collected: 11/16/22 00:00
Date Received: 11/16/22 20:00

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	67648	11/18/22 10:51	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67698	11/21/22 08:13	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 16:58	CAC	EET KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville CB Field QC - OTM-45

Job ID: 140-29662-1

Client Sample ID: A-1251 OTM-45 MEDIA CHECK XAD

Lab Sample ID: 140-29662-11

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00

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	67648	11/18/22 10:51	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67698	11/21/22 08:13	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 17:07	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: A-1252 OTM-45 MEDIA CHECK FILTER

Lab Sample ID: 140-29662-12

Date Collected: 11/16/22 00:00
Matrix: Air
Date Received: 11/16/22 20:00

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	67649	11/18/22 10:54	CAC	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	67677	11/19/22 12:13	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67751	11/22/22 11:41	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank

Lab Sample ID: MB 140-67648/1-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	67648	11/18/22 10:51	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67698	11/21/22 08:13	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 15:55	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank

Lab Sample ID: MB 140-67649/1-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	67649	11/18/22 10:54	CAC	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	67677	11/19/22 12:13	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67751	11/22/22 10:57	CAC	EET KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank

Lab Sample ID: MB 140-67651/1-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	67651	11/18/22 10:56	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67741	11/21/22 17:54	CAC	EET KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville CB Field QC - OTM-45

Job ID: 140-29662-1

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-67648/2-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	67648	11/18/22 10:51	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67698	11/21/22 08:13	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 16:04	CAC	EET KNX

Instrument ID: LCA

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-67649/2-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	67649	11/18/22 10:54	CAC	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	67677	11/19/22 12:13	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67751	11/22/22 11:06	CAC	EET KNX

Instrument ID: LCA

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-67651/2-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	67651	11/18/22 10:56	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67741	11/21/22 18:03	CAC	EET KNX

Instrument ID: LCA

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-67648/3-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	67648	11/18/22 10:51	CAC	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	67698	11/21/22 08:13	ACW	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67887	11/29/22 16:13	CAC	EET KNX

Instrument ID: LCA

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-67649/3-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	67649	11/18/22 10:54	CAC	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	67677	11/19/22 12:13	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67751	11/22/22 11:15	CAC	EET KNX

Instrument ID: LCA

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville CB Field QC - OTM-45

Job ID: 140-29662-1

Client Sample ID: Lab Control Sample Dup

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

Lab Sample ID: LCSD 140-67651/3-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	67651	11/18/22 10:56	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	67741	11/21/22 18:12	CAC	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: 140-29662-1
Project/Site: Fayetteville CB Field QC - OTM-45

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	06-30-23
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	07-27-23
Kansas	NELAP	E-10349	10-31-23
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	08-31-23
Oregon	NELAP	TNI0189	12-31-22
Pennsylvania	NELAP	68-00576	12-01-23
Tennessee	State	02014	07-27-25
Texas	NELAP	T104704380-22-17	08-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-19-00236	12-31-22
Utah	NELAP	TN00009	07-31-23
Virginia	NELAP	460176	09-14-23
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

Method Summary

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville CB Field QC - OTM-45

Job ID: 140-29662-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	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: Fayetteville CB Field QC - OTM-45

Job ID: 140-29662-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-29662-1	V-1057,1058 QC OTM-45 FH PBT	Air	11/16/22 00:00	11/16/22 20:00
140-29662-2	V-1059,1060,1062 QC OTM-45 BH PBT	Air	11/16/22 00:00	11/16/22 20:00
140-29662-3	V-1061 QC OTM-45 IMPINGERS 1,2&3 CONDENSATE PBT	Air	11/16/22 00:00	11/16/22 20:00
140-29662-4	V-1063 QC OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE PBT	Air	11/16/22 00:00	11/16/22 20:00
140-29662-5	V-1064 QC OTM-45 DI WATER RB	Air	11/16/22 00:00	11/16/22 20:00
140-29662-6	V-1065 QC OTM-45 MEOH WITH 5% NH4OH RB	Air	11/16/22 00:00	11/16/22 20:00
140-29662-7	V-1066,1067 QC OTM-45 FH BT	Air	11/16/22 00:00	11/16/22 20:00
140-29662-8	V-1068,1069,1071 QC OTM-45 BH BT	Air	11/16/22 00:00	11/16/22 20:00
140-29662-9	V-1070 QC OTM-45 IMPINGERS 1,2&3 CONDENSATE BT	Air	11/16/22 00:00	11/16/22 20:00
140-29662-10	V-1072 QC OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE BT	Air	11/16/22 00:00	11/16/22 20:00
140-29662-11	A-1251 OTM-45 MEDIA CHECK XAD	Air	11/16/22 00:00	11/16/22 20:00
140-29662-12	A-1252 OTM-45 MEDIA CHECK FILTER	Air	11/16/22 00:00	11/16/22 20:00

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 Number", "Sample Type", and "Run Number" on all TALS Reports.

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 Analysis

140-29662 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
V-1057 QC OTM-45 Filter PBT (Combine with *V-1058*)	QC	11/16/22	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 FronV- Half Probe Rinse to assist the solvent extraction of the Filter sample. Analyze for HFPO-DA.
V-1058 QC OTM-45 FH of Filter Holder & Probe MeOH Rinse PBT (Combine with *V-1057*)	QC	11/16/22	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.
V-1059 QC OTM-45 XAD-2 Resin Tube PBT	QC	11/16/22	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.

Request for Analysis/Chain-of-Custody – RFA/COC #003
The Chemours Company – Fayetteville NC
Carbon Bed Field QC Samples

eurofins | Environment Testing America

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require-ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
V-1060 QC OTM-45 BH of Filter Holder & Coil Condenser MeOH Rinse PBT (Combine with *V-1059*)	QC	11/16/22	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.
V-1061 QC OTM-45 Impingers 1,2 & 3 Condensate PBT	QC	11/16/22	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.
V-1062 QC OTM-45 Impinger Glassware MeOH Rinse PBT (Combine with *V-1059)*	QC	11/16/22	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.
V-1063 QC OTM-45 Breakthrough XAD-2 Resin Tube PBT	QC	11/16/22	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.
V-1064 QC OTM-45 DI Water RB	QC	11/16/22	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.
V-1065 QC OTM-45 MeOH with 5% NH_4OH RB	QC	11/16/22	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
V-1066 QC OTM-45 Filter BT (Combine with *V-1067*)	QC	11/16/22	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 FronV- Half Probe Rinse to assist the solvent extraction of the Filter sample. Analyze for HFPO-DA.
V-1067 QC OTM-45 FH of Filter Holder & Probe MeOH Rinse BT (Combine with *V-1066*)	QC	11/16/22	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.
V-1068 QC OTM-45 XAD-2 Resin Tube BT	QC	11/16/22	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.
V-1069 QC OTM-45 BH of Filter Holder & Coil Condenser MeOH Rinse BT (Combine with *V-1068*)	QC	11/16/22	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.
V-1070 QC OTM-45 Impingers 1,2 & 3 Condensate BT	QC	11/16/22	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
V-1071 QC OTM-45 Impinger Glassware MeOH Rinse BT (Combine with *V-1068)*	QC	11/16/22	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.
V-1072 QC OTM-45 Breakthrough XAD-2 Resin Tube BT	QC	11/16/22	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.

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:	R 0.7 / CT 0.9
(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):	HAND DELIVERED, NO CUSTODY SEALS

Custody Transfer:

	Name	Company	Date/Time
Relinquished By:	Patrick Grady	Alliance	11/16/22 2000
Accepted By:		ETAKNX	11-16-22 20:00
Relinquished By:			
Accepted By:			
Relinquished By:			
Accepted By:			
Relinquished By:			
Accepted By:			

XAD Source Sampling Media Request Form

eurofins | Environment Testing TestAmerica

Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
865-291-3000

Form Number: 101022-2

-scan completed document and save on the public drive under Media/PDFs; filename should be the form number. **Send a copy to PM.**

Date of Request: November 7, 2022
Company: Chemours Fayetteville Works
Client Project: Carbon Bed Testing
Client PO#:

Rush Order? No
Quantims Quote:
Media Needed By: 11/10/2022
Project Manager: Courtney Adkins

Quantity	Media Type	Spiked for Method
20	Unspiked XAD Traps	OTM-45
10	82.6mm GFF	OTM-45
1 Set	RFAs, MSL, Bottles	
4 L	DI Water	
4 L	MeOH/5% NH4OH	

534267
ID: RestekUltraCl_00018
Exp: 11/08/24 Prpd: DRM
Restek Ultra Clean Resin

529652
ID: Pre82.6mmGFF_00090
Exp: 10/26/24 Prpd: DRM Crt: 10/26/22
82.6mm pre-cleaned glass

Media Check ID	
A-1251	Chemours, Carbon A-1251 OTM45 XAD
A-1252	Chemours, Carbon A-1252 OTM45 Filter

Comments:
Sampling Locations: VEN CB Inlet, VEN CB Outlet, and Field QC

Method	Color Code	Amt. Spiked	Conc. And Units	Spike Sol'n ID	Exp. Date	Spiked By/ Date	Verified By
8270C							
Dioxin							
1668 mod.							
CARB 429							
8081A							
TCO/Grav		NA	NA	NA	NA	NA	NA

Shipping *(include blank COCs and Custody Seals with this shipment. Send temperature blanks where applicable)*

Attn: Pat Grady/Eddie Vega
Company: The Chemours Company
Address 1: 22828 NC Hwy 87 W
Address 2:
City, State, Zip: Fayetteville, NC 28306
Phone: 910.678.1938
Fax:
FedEx Email: Edward.vega-1@chemours.com
Lot Number:

Completed/Shipped by: [signature]
Date Shipped: 11/9/22
Shipping Courier: FedEx
Tracking Number
Invoice #:

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 : SC74 Correction factor: +0.2°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: Kenyon Cannon Date: 11-18-22

QA026R32.doc, 062719