Source Test Report

The Chemours Company, FC, LLC
Fayetteville Works
22828 Highway 87W
Fayetteville, North Carolina

Sources Tested: Vinyl Ethers North (VEN)
Carbon Bed (Inlet/Outlet)
Test Date: May 5, 2022

Project No. AST-2022-1651-001

Prepared By
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Regulatory Information

Permit No.	North Carolina Department of Air Quality (NCDAQ) Title V Air Permit No. 03735T48

Source Information

Source Name	*Target Parameter*
Vinyl Ethers North (VEN) Carbon Bed	HFPO-DA

Contact Information

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

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

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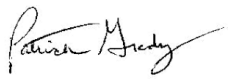

Patrick Grady
Alliance Technical Group, LLC

June 15, 2022
Date

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Introduction

1.0 Introduction

Alliance Technical Group, LLC (Alliance) was retained by The Chemours Company (Chemours) to conduct compliance testing at the Fayetteville Works Facility in Fayetteville, North Carolina. The facility operates under North Carolina Department of Air Quality (NCDAQ) Title V Air Permit No. 03735T48. Testing was conducted to determine the emission rate of hexafluoro-propylene oxide-dimer acid (HFPO-DA) from the inlet and outlet of the Vinyl Ethers North (VEN) Carbon Bed.

1.1 Source and Control System Descriptions

The Chemours Company (Chemours) owns and operates the Vinyl Ethers North (VEN) Carbon Bed. 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	Christel Compton Eddie Vega
Alliance Personnel	Patrick Grady Eric Alongi Antonio Anderson Brian Goodhile Angel Solis

Summary of Results

2.0 Summary of Results

Alliance conducted compliance testing at the Fayetteville Works Facility in Fayetteville, NC on May 5, 2022. Testing consisted of determining the emission rates of HFPO-DA at the inlet and outlet of the VEN Carbon Bed.

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

Table 2-1: Summary of Results – VEN Carbon Bed

Run Number	Run 1	Run 2	Run 3	Average
Date	**5/5/22**	**5/5/22**	**5/5/22**	**--**
HFPO-DA Data				
Outlet Emission Rate, lb/hr	4.1E-03	4.2E-03	4.1E-03	4.1E-03
Inlet Emission Rate, lb/hr	4.5E-02	3.7E-02	4.4E-02	4.2E-02
Reduction Efficiency, %	90.8	88.4	90.6	89.9

Testing Methodology

3.0 Testing Methodology

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

Table 3-1: Source Testing Methodology

Parameter	U.S. EPA Reference Test Methods	Notes/Remarks
Volumetric Flow Rate	1 & 2	Full Velocity Traverses
Oxygen/Carbon Dioxide	3	Fyrite Analysis
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 (for isokinetic sampling) and/or Figure 1-2 (measuring velocity alone) 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.

Stack gas velocity pressure and temperature readings were recorded during each test run. The data collected was utilized to calculate the volumetric flow rate in accordance with U.S. EPA Reference Test Method 2.

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

The oxygen (O_2) and carbon dioxide (CO_2) concentrations were assumed to be ambient for molecular weight and volumetric flow rate calculations.

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

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

3.4 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 20ºC.

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

3.5 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.

3.6 HFPO-DA Sample Train Recovery

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

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

sample cooler. The contents of the fifth impinger were placed in its original container and weighed for moisture determinations.

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

Appendix A

Location: Chemours Company - Fayetteville Works Facility, NC
Source: VEN Carbon Bed Outlet
Project No.: 2022-1651-001
Run No.: 1
Parameter: HFPO-DA

Meter Pressure (Pm), in. Hg

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

where,

Pb	30.22	= barometric pressure, in. Hg
ΔH	1.666	= pressure differential of orifice, in H_2O
Pm	30.34	= in. Hg

Absolute Stack Gas Pressure (Ps), in. Hg

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

where,

Pb	30.22	= barometric pressure, in. Hg
Pg	2.10	= static pressure, in. H_2O
Ps	30.37	= in. Hg

Standard Meter Volume (Vmstd), dscf

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

where,

Y	0.98	= meter correction factor
Vm	72.888	= meter volume, cf
Pm	30.34	= absolute meter pressure, in. Hg
Tm	539.0	= absolute meter temperature, °R
Vmstd	70.916	= dscf

Standard Wet Volume (Vwstd), scf

$$Vwstd = 0.04716 \times Vlc$$

where,

Vlc	64	= volume of H_2O collected, ml
Vwstd	3.018	= scf

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

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

where,

Ts	88.1	= stack temperature, °F
Ps	30.37	= absolute stack gas pressure, in. Hg
BWSsat	0.044	= dimensionless

Moisture Fraction (BWS), dimensionless (measured)

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

where,

Vwstd	3.018	= standard wet volume, scf
Vmstd	70.916	= standard meter volume, dscf
BWS	0.041	= dimensionless

Moisture Fraction (BWS), dimensionless

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

where,

BWSsat	0.044	= moisture fraction (theoretical at saturated conditions)
BWSmsd	0.041	= moisture fraction (measured)
BWS	0.041	

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

Location: Chemours Company - Fayetteville Works Facility, NC
Source: VEN Carbon Bed Outlet
Project No.: 2022-1651-001
Run No.: 1
Parameter: HFPO-DA

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	0.041	= moisture fraction, dimensionless
Ms	28.41	= 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
$\Delta P^{1/2}$	0.664	= velocity head of stack gas, $(in.\ H_2O)^{1/2}$
Ts	547.8	= absolute stack temperature, °R
Ps	30.37	= absolute stack gas pressure, in. Hg
Ms	28.41	= molecular weight of stack gas, lb/lb mol
Vs	38.0	= ft/sec

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

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

where,

Vs	38.0	= stack gas velocity, ft/sec
As	7.07	= cross-sectional area of stack, ft^2
Qa	16,115	= acfm

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

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

where,

Qa	16,115	= average stack gas flow at stack conditions, acfm
BWS	0.041	= moisture fraction, dimensionless
Ps	30.37	= absolute stack gas pressure, in. Hg
Ts	547.8	= absolute stack temperature, °R
Qs	15,117	= dscfm

Dry Gas Meter Calibration Check (Yqa), dimensionless

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

where,

Y	0.98	= meter correction factor, dimensionless
Θ	96	= run time, min.
Vm	72.888	= total meter volume, dcf
Tm	539.0	= absolute meter temperature, °R
ΔH@	1.686	= orifice meter calibration coefficient, in. H_2O
Pb	30.22	= barometric pressure, in. Hg
ΔH avg	1.666	= average pressure differential of orifice, in H_2O
Md	28.85	= molecular weight (DRY), lb/lb mol
$(\Delta H)^{1/2}$	1.284	= average squareroot pressure differential of orifice, $(in.\ H2O)^{1/2}$
Yqa	-0.3	= dimensionless

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	547.8	= absolute stack temperature, °R
Ps	30.37	= absolute stack gas pressure, in. Hg
Vlc	64.0	= volume of H_2O collected, ml
Vm	72.888	= meter volume, cf
Pm	30.34	= absolute meter pressure, in. Hg
Y	0.980	= meter correction factor, unitless
Tm	539.0	= absolute meter temperature, °R
Vn	75.594	= volume of nozzle, ft^3

Location: Chemours Company - Fayetteville Works Facility, NC
Source: VEN Carbon Bed Outlet
Project No.: 2022-1651-001
Run No.: 1
Parameter: HFPO-DA

Isokinetic Sampling Rate (I), %

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

where,

Vn	75.594	= nozzle volume, ft3
θ	96.0	= run time, minutes
An	0.00034	= area of nozzle, ft^2
Vs	38.0	= average velocity, ft/sec
I	101.3	= %

HFPO-DA Concentration (C), ng/dscm

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

where,

M	145,607	= HFPO-DA mass, ng
Vmstd	70.916	= standard meter volume, dscf
C_{NH3}	7.3E+04	= ng/dscm

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

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

where,

M	145,607	= HFPO-DA mass, ng
Qs	15,117	= average stack gas flow at standard conditions, dscfm
Vmstd	70.916	= standard meter volume, dscf
ER	4.1E-03	= lb/hr

Appendix B

VEN Inlet

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Inlet
Project No. 2022-1651-001
Parameter HFPO-DA

Run Number		Run 1	Run 2	Run 3	Average
Date		5/5/22	5/5/22	5/5/22	--
Start Time		8:41	11:12	13:50	--
Stop Time		10:45	13:07	15:42	--
Run Time, min	(θ)	96.0	96.0	96.0	96.0
INPUT DATA					
Barometric Pressure, in. Hg	(Pb)	30.22	30.22	30.22	30.22
Meter Correction Factor	(Y)	0.990	0.990	0.990	0.990
Orifice Calibration Value	(ΔH @)	1.660	1.660	1.660	1.660
Meter Volume, ft^3	(Vm)	69.611	68.532	69.461	69.201
Meter Temperature, °F	(Tm)	77.3	81.8	86.0	81.7
Meter Temperature, °R	(Tm)	537.0	541.4	545.7	541.4
Meter Orifice Pressure, in. WC	(ΔH)	1.500	1.471	1.488	1.486
Volume H_2O Collected, mL	(Vlc)	64.8	58.2	59.4	60.8
Nozzle Diameter, in	(Dn)	0.250	0.250	0.250	0.250
Area of Nozzle, ft^2	(An)	0.0003	0.0003	0.0003	0.0003
FH HFPO-DA Mass, ng	$M_{(HFPODA)}$	196,000.0	274,000.0	215,000.0	228,333.3
BH HFPO-DA Mass, ng	$M_{(HFPODA)}$	1,210,000.0	901,000.0	1,180,000.0	1,097,000.0
Imp HFPO-DA Mass, ng	$M_{(HFPODA)}$	182,000.0	115,000.0	138,000.0	145,000.0
Breakthrough HFPO-DA Mass, ng	$M_{(HFPODA)}$	1,320.0	3,390.0	2,600.0	2,436.67
Total HFPO-DA Mass, ng	$M_{(HFPODA)}$	1,589,320.0	1,293,390.0	1,535,600.0	1,472,770.0
ISOKINETIC DATA					
Standard Meter Volume, ft^3	(Vmstd)	68.646	67.026	67.403	67.691
Standard Water Volume, ft^3	(Vwstd)	3.056	2.745	2.801	2.867
Moisture Fraction Measured	(BWSmsd)	0.043	0.039	0.040	0.041
Moisture Fraction @ Saturation	(BWSsat)	0.041	0.041	0.043	0.042
Moisture Fraction	(BWS)	0.041	0.039	0.040	0.040
Meter Pressure, in Hg	(Pm)	30.33	30.33	30.33	30.33
Volume at Nozzle, ft^3	(Vn)	73.914	71.923	72.702	72.85
Isokinetic Sampling Rate, (%)	(I)	102.0	100.8	100.8	101.2
DGM Calibration Check Value, (+/- 5%)	(Y_{qa})	0.4	-0.6	-0.1	-0.1
EMISSION CALCULATIONS					
HFPO-DA Concentration, ng/dscm	$C_{(HFPODA)}$	8.2E+05	6.8E+05	8.0E+05	7.7E+05
HFPO-DA Emission Rate, lb/hr	$ER_{(HFPODA)}$	4.5E-02	3.7E-02	4.4E-02	4.2E-02

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Inlet
Project No. 2022-1651-001
Parameter HFPO-DA

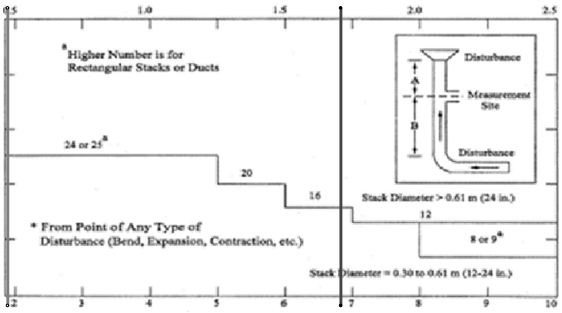
Run Number		Run 1	Run 2	Run 3	Average
Date		5/5/22	5/5/22	5/5/22	--
Start Time		8:41	11:12	13:50	--
Stop Time		10:45	13:07	15:42	--
Run Time, min		96.0	96.0	96.0	96.0
VELOCITY HEAD, in. WC					
Point 1		0.32	0.30	0.30	0.31
Point 2		0.34	0.32	0.32	0.33
Point 3		0.33	0.32	0.31	0.32
Point 4		0.33	0.34	0.33	0.33
Point 5		0.38	0.34	0.32	0.35
Point 6		0.38	0.34	0.34	0.35
Point 7		0.36	0.35	0.38	0.36
Point 8		0.37	0.42	0.41	0.40
Point 9		0.43	0.43	0.42	0.43
Point 10		0.42	0.45	0.44	0.44
Point 11		0.43	0.43	0.43	0.43
Point 12		0.40	0.38	0.40	0.39
Point 13		0.44	0.41	0.45	0.43
Point 14		0.43	0.43	0.45	0.44
Point 15		0.43	0.43	0.46	0.44
Point 16		0.45	0.42	0.48	0.45
Point 17		0.48	0.43	0.46	0.46
Point 18		0.48	0.44	0.46	0.46
Point 19		0.50	0.47	0.47	0.48
Point 20		0.49	0.46	0.47	0.47
Point 21		0.45	0.46	0.45	0.45
Point 22		0.45	0.44	0.45	0.45
Point 23		0.44	0.43	0.42	0.43
Point 24		0.38	0.40	0.40	0.39
CALCULATED DATA					
Square Root of ΔP, (in. WC)$^{1/2}$	(ΔP)	0.641	0.632	0.638	0.637
Pitot Tube Coefficient	(Cp)	0.840	0.840	0.840	0.840
Barometric Pressure, in. Hg	(Pb)	30.22	30.22	30.22	30.22
Static Pressure, in. WC	(Pg)	-3.20	-3.20	-3.60	-3.33
Stack Pressure, in. Hg	(Ps)	29.98	29.98	29.96	29.97
Stack Cross-sectional Area, ft^2	(As)	7.07	7.07	7.07	7.07
Temperature, °F	(Ts)	85.5	85.5	87.5	86.2
Temperature, °R	(Ts)	545.2	545.2	547.1	545.823
Moisture Fraction Measured	(BWSmsd)	0.043	0.039	0.040	0.041
Moisture Fraction @ Saturation	(BWSsat)	0.041	0.041	0.043	0.042
Moisture Fraction	(BWS)	0.041	0.039	0.040	0.040
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)	28.41	28.43	28.42	28.42
Velocity, ft/sec	(Vs)	36.8	36.3	36.7	36.6
VOLUMETRIC FLOW RATE					
At Stack Conditions, acfm	(Qa)	15,624	15,406	15,578	15,536
At Standard Conditions, dscfm	(Qs)	14,538	14,355	14,441	14,445

Method 1 Data

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Inlet
Project No. 2022-1651-001
Date: 05/04/22

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:	5.1	ft
Distance A Duct Diameters:	1.7	**(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):	PJG 5/4/22	
Reviewer (Initial and Date):	BAG 5/4/22	



CIRCULAR DUCT

LOCATION OF TRAVERSE POINTS

Number of traverse points on a diameter

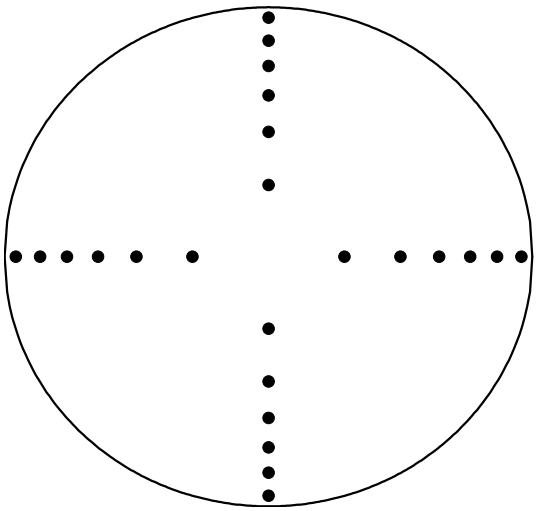
	2	3	4	5	6	7	8	9	10	11	12
1	14.6	--	6.7	--	4.4	--	3.2	--	2.6	--	2.1
2	85.4	--	25.0	--	14.6	--	10.5	--	8.2	--	6.7
3	--	--	75.0	--	29.6	--	19.4	--	14.6	--	11.8
4	--	--	93.3	--	70.4	--	32.3	--	22.6	--	17.7
5	--	--	--	--	85.4	--	67.7	--	34.2	--	25.0
6	--	--	--	--	95.6	--	80.6	--	65.8	--	35.6
7	--	--	--	--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

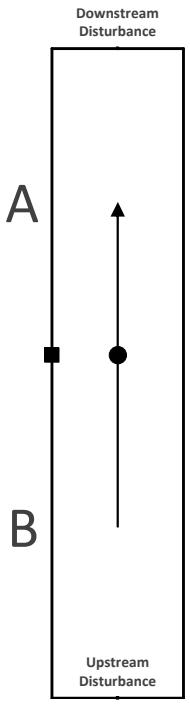
**Percent of stack diameter from inside wall to traverse point.*

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

Stack Diagram
A = 5.1 ft.
B = 5.7 ft.
Depth of Duct = 36 in.

Cross Sectional Area





Alliance SOURCE TESTING

Cyclonic Flow Check

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Inlet
Project No. 2022-1651-001
Date 05/05/22

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

Method 4 Data

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Inlet
Project No. 2022-1651-001
Parameter HFPO-DA
Analysis Gravimetric

Run 1	Date:	5/5/22							
Impinger No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Total**
Contents	XAD Trap	Empty	H2O	H2O	H2O	Empty	XAD Trap	Silica	--
Initial Mass, g	316.6	491.6	790.6	783.2	754.6	513.0	309.4	803.8	4762.8
Final Mass, g	336.4	505.6	789.4	783.8	755.2	515.2	324.6	817.4	4827.6
Gain	19.8	14.0	-1.2	0.6	0.6	2.2	15.2	13.6	64.8
Run 2	**Date:**	5/5/22							
Impinger No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Total**
Contents	XAD Trap	Empty	H2O	H2O	H2O	Empty	XAD Trap	Silica	--
Initial Mass, g	316.0	479.2	747.4	733.0	728.6	469.4	293.6	801.8	4569.0
Final Mass, g	335.4	488.8	745.0	731.8	728.8	471.8	308.8	816.8	4627.2
Gain	19.4	9.6	-2.4	-1.2	0.2	2.4	15.2	15.0	58.2
Run 3	**Date:**	5/5/22							
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	297.6	491.8	798.8	784.8	756.2	512.8	304.8	842.4	4789.2
Final Mass, g	322.4	501.2	797.0	784.4	756.0	515.4	316.6	855.6	4848.6
Gain	24.8	9.4	-1.8	-0.4	-0.2	2.6	11.8	13.2	59.4

Alliance SOURCE TESTING

Isokinetic Field Data

Location:	Chemours Company - Fayetteville Works Facility, NC		**Start Time:**	8:41	**Source:**	VEN Carbon Bed Inlet	
Date:	5/5/22	Run 1 VALID	**End Time:**	10:45	**Project No.:**	2022-1651-001	**Parameter:** HFPO-DA

STACK DATA (EST)			EQUIPMENT			STACK DATA (EST)					FILTER NO.	STACK DATA (FINAL)			MOIST. DATA
Moisture:	2.5	% est.	Meter Box ID:	4		Est. Tm:	55	°F				Pb:	30.22	in. Hg	Vlc (ml)
Barometric:	30.15	in. Hg	Y:	0.990		Est. Ts:	92	°F				Pg:	-3.20	in. WC	64.8
Static Press:	-6.80	in. WC	ΔH @ (in.WC):	1.660		Est. ΔP:	0.62	in. WC				O_2:	20.9	%	K-FACTOR
Stack Press:	29.65	in. Hg	Probe ID:	P4-3		Est. Dn:	0.243	in.				CO_2:	0.1	%	3.397
CO_2:	0.1	%	Liner Material:	glass		Target Rate:	0.78	scfm							
O_2:	20.9	%	Pitot ID:	P4-3		LEAK CHECK:	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):	0.008	0.009	0.010	--	0.011	Mid 1 (cf)	545.846	546.048	0.202
Md:	28.85	lb/lb-mole	Nozzle ID:	G-2	glass	Vacuum (in Hg):	12	16	12	--	16	Mid 2 (cf)	546.048	546.552	0.504
Ms:	28.58	lb/lb-mole	Nozzle Dn (in.):	0.250		Pitot Tube:	Pass	--	--	--	Pass	Mid 3 (cf)	--	--	--
												Mid-Point Leak Check Vol (cf):			0.706

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	512.084	0.32	70	85	1.13	1.20	4	90	98	64	56	96.6	32.57
2	4.00	8.00	514.500	0.34	71	85	1.21	1.30	4	90	98	55	57	104.5	33.57
3	8.00	12.00	517.200	0.33	73	85	1.18	1.20	5	90	98	54	54	105.7	33.07
4	12.00	16.00	519.900	0.33	74	85	1.18	1.20	5	89	97	54	54	105.5	33.07
5	16.00	20.00	522.600	0.38	75	85	1.36	1.40	5	89	98	53	50	98.2	35.49
6	20.00	24.00	525.300	0.38	75	85	1.36	1.40	5	89	99	52	51	101.8	35.49
7	24.00	28.00	528.100	0.36	75	85	1.29	1.30	5	88	99	54	53	104.6	34.54
8	28.00	32.00	530.900	0.37	75	85	1.32	1.30	5	90	98	55	53	106.8	35.02
9	32.00	36.00	533.800	0.43	76	85	1.54	1.60	6	91	97	55	52	105.8	37.75
10	36.00	40.00	536.900	0.42	77	85	1.51	1.50	6	89	97	55	53	106.8	37.31
11	40.00	44.00	540.000	0.43	78	85	1.55	1.60	6	90	97	54	52	102.0	37.75
12	44.00	48.00	543.000	0.40	78	85	1.44	1.40	6	89	98	53	52	100.3	36.41
B1	48.00	52.00	545.846	0.44	78	86	1.58	1.60	6	93	96	58	56	106.1	38.22
2	52.00	56.00	549.000	0.43	79	86	1.55	1.60	6	96	98	50	48	105.3	37.79
3	56.00	60.00	552.100	0.43	79	86	1.55	1.60	7	100	99	51	49	98.5	37.79
4	60.00	64.00	555.000	0.45	79	86	1.62	1.60	7	100	98	52	50	102.9	38.66
5	64.00	68.00	558.100	0.48	80	86	1.73	1.70	7	101	99	50	51	96.3	39.92
6	68.00	72.00	561.100	0.48	80	86	1.73	1.70	7	97	98	50	52	102.7	39.92
7	72.00	76.00	564.300	0.50	80	86	1.80	1.80	8	95	99	50	49	94.4	40.75
8	76.00	80.00	567.300	0.49	80	86	1.76	1.80	8	97	98	50	48	104.9	40.34
9	80.00	84.00	570.600	0.45	81	86	1.62	1.60	8	98	97	51	50	95.9	38.66
10	84.00	88.00	573.500	0.45	81	86	1.62	1.60	8	98	97	51	50	99.3	38.66
11	88.00	92.00	576.500	0.44	81	86	1.59	1.60	8	99	96	51	49	103.7	38.22
12	92.00	96.00	579.600	0.38	81	86	1.37	1.40	8	97	97	50	48	100.8	35.52
	Final DGM:		582.401												

RESULTS	Run Time		Vm		ΔP		Tm		Ts		Max Vac	ΔH		%ISO	BWS	Y_{qa}
	96.0	min	69.611	ft^3	0.41	in. WC	77.3	°F	85.5	°F	8	1.500	in. WC	102.0	0.041	0.4

Alliance SOURCE TESTING

Isokinetic Field Data

Location:	Chemours Company - Fayetteville Works Facility, NC		**Start Time:**	11:12	**Source:**	VEN Carbon Bed Inlet	
Date:	5/5/22	Run 2 VALID	**End Time:**	13:07	**Project No.:**	2022-1651-001	**Parameter:** HFPO-DA

STACK DATA (EST)			EQUIPMENT			STACK DATA (EST)			FILTER NO.	STACK DATA (FINAL)		MOIST. DATA
Moisture:	2.5	% est.	Meter Box ID:	4		Est. Tm:	77	°F		Pb:	30.22 in. Hg	Vlc (ml)
Barometric:	30.15	in. Hg	Y:	0.990		Est. Ts:	86	°F		Pg:	-3.20 in. WC	58.2
Static Press:	-6.80	in. WC	ΔH @ (in.WC):	1.660		Est. ΔP:	0.41	in. WC		O_2:	20.9 %	K-FACTOR
Stack Press:	29.65	in. Hg	Probe ID:	P4-3		Est. Dn:	0.262	in.		CO_2:	0.1 %	3.59
CO_2:	0.1	%	Liner Material:	glass		Target Rate:	0.78	scfm				
O_2:	20.9	%	Pitot ID:	P4-3		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):	0.008	0.009	0.008	--	0.007	Mid 1 (cf)	615.556	615.706	0.150
Md:	28.85	lb/lb-mole	Nozzle ID:	G-2	glass	Vacuum (in Hg):	16	12	14	--	12	Mid 2 (cf)	615.706	615.926	0.220
Ms:	28.58	lb/lb-mole	Nozzle Dn (in.):	0.250		Pitot Tube:	Pass	--	--	--	Pass	Mid 3 (cf)	--	--	--
												Mid-Point Leak Check Vol (cf):			0.370

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	582.906	0.30	79	85	1.08	1.10	4	90	100	63	54	101.2	31.53
2	4.00	8.00	585.400	0.32	79	85	1.15	1.20	4	96	98	58	52	102.2	32.57
3	8.00	12.00	588.000	0.32	80	85	1.16	1.20	4	100	98	59	48	102.0	32.57
4	12.00	16.00	590.600	0.34	80	85	1.23	1.20	4	98	95	59	50	99.0	33.57
5	16.00	20.00	593.200	0.34	80	85	1.23	1.20	4	95	98	59	50	102.8	33.57
6	20.00	24.00	595.900	0.34	81	85	1.23	1.20	4	98	95	56	48	95.0	33.57
7	24.00	28.00	598.400	0.35	81	85	1.27	1.30	4	97	98	54	49	101.1	34.06
8	28.00	32.00	601.100	0.42	81	85	1.52	1.50	5	98	100	54	50	95.8	37.31
9	32.00	36.00	603.900	0.43	82	85	1.56	1.60	6	99	101	53	49	94.5	37.75
10	36.00	40.00	606.700	0.45	82	85	1.63	1.60	6	98	100	54	50	102.3	38.62
11	40.00	44.00	609.800	0.43	82	85	1.56	1.60	6	100	101	54	51	97.9	37.75
12	44.00	48.00	612.700	0.38	82	85	1.38	1.40	6	98	99	54	51	102.5	35.49
B1	48.00	52.00	615.556	0.41	80	86	1.48	1.50	8	99	99	58	52	105.7	36.90
2	52.00	56.00	618.600	0.43	81	86	1.55	1.60	8	102	98	55	45	104.9	37.79
3	56.00	60.00	621.700	0.43	81	86	1.55	1.60	8	100	99	55	46	104.9	37.79
4	60.00	64.00	624.800	0.42	81	86	1.52	1.50	8	101	94	57	48	102.7	37.35
5	64.00	68.00	627.800	0.43	83	86	1.56	1.60	8	99	96	56	48	97.8	37.79
6	68.00	72.00	630.700	0.44	83	86	1.59	1.60	8	98	97	56	48	100.0	38.22
7	72.00	76.00	633.700	0.47	83	86	1.70	1.70	8	100	99	57	48	96.8	39.51
8	76.00	80.00	636.700	0.46	83	86	1.67	1.70	8	102	100	56	48	104.4	39.08
9	80.00	84.00	639.900	0.46	84	86	1.67	1.70	8	98	99	56	47	100.9	39.08
10	84.00	88.00	643.000	0.44	84	86	1.60	1.60	8	100	94	58	49	103.1	38.22
11	88.00	92.00	646.100	0.43	85	86	1.56	1.60	8	99	96	59	50	100.8	37.79
12	92.00	96.00	649.100	0.40	85	86	1.45	1.50	8	100	98	60	52	94.3	36.45
	Final DGM:		651.808												

RESULTS	Run Time	Vm	ΔP	Tm	Ts	Max Vac	ΔH	%ISO	BWS	Y_{qa}
	96.0 min	68.532 ft^3	0.40 in. WC	81.8 °F	85.5 °F	8	1.471 in. WC	100.8	0.039	-0.6

Alliance SOURCE TESTING

Isokinetic Field Data

Location:	Chemours Company - Fayetteville Works Facility, NC		**Start Time:**	13:50	**Source:**	VEN Carbon Bed Inlet	
Date:	5/5/22	Run 3 VALID	**End Time:**	15:42	**Project No.:**	2022-1651-001	**Parameter:** HFPO-DA

STACK DATA (EST)			EQUIPMENT			STACK DATA (EST)			FILTER NO.	STACK DATA (FINAL)		MOIST. DATA
Moisture:	2.5	% est.	Meter Box ID:	4		Est. Tm:	82	°F		Pb:	30.22 in. Hg	Vlc (ml)
Barometric:	30.15	in. Hg	Y:	0.990		Est. Ts:	86	°F		Pg:	-3.60 in. WC	59.4
Static Press:	-6.80	in. WC	ΔH @ (in.WC):	1.660		Est. ΔP:	0.40	in. WC		O_2:	20.9 %	K-FACTOR
Stack Press:	29.65	in. Hg	Probe ID:	P4-3		Est. Dn:	0.263	in.		CO_2:	0.1 %	3.616
CO_2:	0.1	%	Liner Material:	glass		Target Rate:	0.78	scfm				
O_2:	20.9	%	Pitot ID:	P4-3		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):	0.011	0.009	0.008	--	0.007	Mid 1 (cf) 686.471 686.581 0.110
Md:	28.85	lb/lb-mole	Nozzle ID:	G-2	glass	Vacuum (in Hg):	12	11	12	--	14	Mid 2 (cf) 686.581 686.756 0.175
Ms:	28.58	lb/lb-mole	Nozzle Dn (in.):	0.250		Pitot Tube:	Pass	--	--	--	Pass	Mid 3 (cf) -- -- --
												Mid-Point Leak Check Vol (cf): 0.285

Sample Pt.	Sample Time (minutes) Begin	End	Dry Gas Meter Reading (ft^3)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F) DGM Average Amb.	Stack Amb.	Orifice Press. ΔH (in. WC) Ideal	Actual	Pump Vac (in. Hg)	Gas Temperatures (°F) Probe Amb.	Filter Amb.	Imp Exit Amb.	Aux Amb.	% ISO	Vs (fps)
A1	0.00	4.00	653.304	0.30	82	86	1.09	1.10	4	98	100	65	58	100.8	31.56
2	4.00	8.00	655.800	0.32	84	86	1.16	1.20	4	99	101	62	56	101.3	32.60
3	8.00	12.00	658.400	0.31	84	87	1.12	1.10	4	100	102	58	54	101.8	32.11
4	12.00	16.00	660.970	0.33	84	87	1.20	1.20	4	97	95	56	53	101.0	33.13
5	16.00	20.00	663.600	0.32	84	87	1.16	1.20	4	93	96	56	53	103.4	32.63
6	20.00	24.00	666.250	0.34	85	87	1.23	1.20	4	94	95	56	55	99.4	33.63
7	24.00	28.00	668.880	0.38	85	87	1.38	1.40	4	98	95	56	55	97.3	35.55
8	28.00	32.00	671.600	0.41	85	87	1.49	1.50	5	100	96	56	54	99.8	36.93
9	32.00	36.00	674.500	0.42	86	87	1.53	1.50	5	99	97	56	54	101.9	37.38
10	36.00	40.00	677.500	0.44	86	87	1.60	1.60	5	98	94	57	55	102.9	38.26
11	40.00	44.00	680.600	0.43	86	87	1.56	1.60	5	100	98	56	54	100.7	37.82
12	44.00	48.00	683.600	0.40	87	88	1.45	1.50	5	100	98	54	52	99.8	36.51
B1	48.00	52.00	686.471	0.45	85	88	1.63	1.60	6	98	95	66	63	103.0	38.73
2	52.00	56.00	689.600	0.45	86	88	1.63	1.60	6	99	96	54	50	101.8	38.73
3	56.00	60.00	692.700	0.46	86	88	1.67	1.70	6	100	98	51	49	94.2	39.15
4	60.00	64.00	695.600	0.48	87	88	1.74	1.70	7	99	98	52	46	95.2	40.00
5	64.00	68.00	698.600	0.46	87	88	1.67	1.70	8	100	102	50	47	100.5	39.15
6	68.00	72.00	701.700	0.46	87	88	1.67	1.70	8	99	101	49	48	100.5	39.15
7	72.00	76.00	704.800	0.47	88	88	1.71	1.70	8	97	100	50	49	102.5	39.58
8	76.00	80.00	708.000	0.47	89	88	1.71	1.70	8	100	101	51	50	99.1	39.58
9	80.00	84.00	711.100	0.45	88	88	1.64	1.60	8	99	97	52	51	98.2	38.73
10	84.00	88.00	714.100	0.45	88	88	1.64	1.60	8	97	100	53	51	94.9	38.73
11	88.00	92.00	717.000	0.42	88	88	1.53	1.50	8	98	102	54	52	101.6	37.41
12	92.00	96.00	720.000	0.40	88	88	1.46	1.50	8	97	99	55	52	105.8	36.51
	Final DGM:		723.050												

RESULTS	Run Time	Vm	ΔP	Tm	Ts	Max Vac	ΔH	%ISO	BWS	Y_{qa}
	96.0 min	69.461 ft^3	0.41 in. WC	86.0 °F	87.5 °F	8	1.488 in. WC	100.8	0.040	-0.1

VEN Outlet

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Outlet
Project No. 2022-1651-001
Parameter HFPO-DA

Run Number		Run 1	Run 2	Run 3	Average
Date		5/5/22	5/5/22	5/5/22	--
Start Time		8:41	11:12	13:50	--
Stop Time		10:45	13:07	15:42	--
Run Time, min	(θ)	96.0	96.0	96.0	96.0
INPUT DATA					
Barometric Pressure, in. Hg	(Pb)	30.22	30.22	30.22	30.22
Meter Correction Factor	(Y)	0.980	0.980	0.980	0.980
Orifice Calibration Value	(ΔH @)	1.686	1.686	1.686	1.686
Meter Volume, ft^3	(Vm)	72.888	75.340	75.714	74.647
Meter Temperature, °F	(Tm)	79.3	83.3	86.5	83.1
Meter Temperature, °R	(Tm)	539.0	543.0	546.2	542.7
Meter Orifice Pressure, in. WC	(ΔH)	1.666	1.765	1.796	1.743
Volume H_2O Collected, mL	(Vlc)	64.0	53.6	59.8	59.1
Nozzle Diameter, in	(Dn)	0.250	0.250	0.250	0.250
Area of Nozzle, ft^2	(An)	0.0003	0.0003	0.0003	0.0003
FH HFPO-DA Mass, ng	$M_{(HFPODA)}$	99,300.0	93,100.0	97,900.0	96,766.7
BH HFPO-DA Mass, ng	$M_{(HFPODA)}$	44,800.0	54,400.0	45,400.0	48,200.0
Imp HFPO-DA Mass, ng	$M_{(HFPODA)}$	1,470.0	2,100.0	940.0	1,503.3
Breakthrough HFPO-DA Mass, ng	$M_{(HFPODA)}$	37.0	59.3	53.7	50.00
Total HFPO-DA Mass, ng	$M_{(HFPODA)}$	145,607.0	149,659.3	144,293.7	146,520.0
ISOKINETIC DATA					
Standard Meter Volume, ft^3	(Vmstd)	70.916	72.779	72.716	72.137
Standard Water Volume, ft^3	(Vwstd)	3.018	2.528	2.820	2.256
Moisture Fraction Measured	(BWSmsd)	0.041	0.034	0.037	0.037
Moisture Fraction @ Saturation	(BWSsat)	0.044	0.043	0.045	0.044
Moisture Fraction	(BWS)	0.041	0.034	0.037	0.037
Meter Pressure, in Hg	(Pm)	30.34	30.35	30.35	30.35
Volume at Nozzle, ft^3	(Vn)	75.594	76.963	77.338	76.63
Isokinetic Sampling Rate, (%)	(I)	101.3	100.9	100.6	100.9
DGM Calibration Check Value, (+/- 5%)	(Y_{qa})	-0.3	-0.1	-0.7	-0.4
EMISSION CALCULATIONS					
HFPO-DA Concentration, ng/dscm	$C_{(HFPODA)}$	7.3E+04	7.3E+04	7.0E+04	7.2E+04
Outlet HFPO-DA Emission Rate, lb/hr	$ER_{(HFPODA)}$	4.1E-03	4.2E-03	4.1E-03	4.1E-03
REDUCTION CALCULATIONS					
Inlet HFPO-DA Emission Rate, lb/hr	$ER_{(HFPODA)}$	4.5E-02	3.7E-02	4.4E-02	4.2E-02
HFPO-DA Reduction Efficiency, %	$ER_{(HFPODA)}$	90.8	88.4	90.6	89.9

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Outlet
Project No. 2022-1651-001
Parameter HFPO-DA

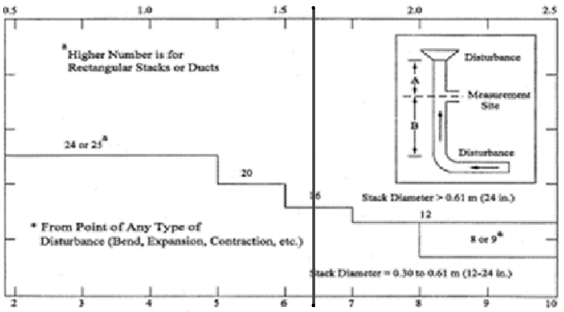
Run Number		Run 1	Run 2	Run 3	Average
Date		5/5/22	5/5/22	5/5/22	--
Start Time		8:41	11:12	13:50	--
Stop Time		10:45	13:07	15:42	--
Run Time, min		96.0	96.0	96.0	96.0
VELOCITY HEAD, in. WC					
Point 1		0.40	0.37	0.40	0.39
Point 2		0.39	0.38	0.42	0.40
Point 3		0.40	0.41	0.42	0.41
Point 4		0.42	0.43	0.43	0.43
Point 5		0.44	0.43	0.42	0.43
Point 6		0.45	0.40	0.40	0.42
Point 7		0.35	0.37	0.36	0.36
Point 8		0.32	0.37	0.36	0.35
Point 9		0.35	0.36	0.34	0.35
Point 10		0.36	0.35	0.34	0.35
Point 11		0.36	0.35	0.34	0.35
Point 12		0.36	0.35	0.36	0.36
Point 13		0.55	0.60	0.65	0.60
Point 14		0.56	0.63	0.68	0.62
Point 15		0.62	0.69	0.69	0.67
Point 16		0.68	0.71	0.71	0.70
Point 17		0.58	0.63	0.64	0.62
Point 18		0.48	0.59	0.57	0.55
Point 19		0.50	0.51	0.52	0.51
Point 20		0.49	0.50	0.50	0.50
Point 21		0.47	0.50	0.50	0.49
Point 22		0.45	0.48	0.47	0.47
Point 23		0.39	0.43	0.45	0.42
Point 24		0.33	0.41	0.43	0.39
CALCULATED DATA					
Square Root of ΔP, (in. WC)$^{1/2}$	(ΔP)	0.664	0.680	0.684	0.676
Pitot Tube Coefficient	(Cp)	0.840	0.840	0.840	0.840
Barometric Pressure, in. Hg	(Pb)	30.22	30.22	30.22	30.22
Static Pressure, in. WC	(Pg)	2.10	2.10	2.10	2.10
Stack Pressure, in. Hg	(Ps)	30.37	30.37	30.37	30.37
Stack Cross-sectional Area, ft^2	(As)	7.07	7.07	7.07	7.07
Temperature, °F	(Ts)	88.1	87.8	88.8	88.3
Temperature, °R	(Ts)	547.8	547.5	548.5	547.920
Moisture Fraction Measured	(BWSmsd)	0.041	0.034	0.037	0.037
Moisture Fraction @ Saturation	(BWSsat)	0.044	0.043	0.045	0.044
Moisture Fraction	(BWS)	0.041	0.034	0.037	0.037
O_2 Concentration, %	(O_2)	20.9	20.9	20.9	20.9
CO_2 Concentration, %	(CO_2)	0.1	0.1	0.1	0.1
Molecular Weight, lb/lb-mole (dry)	(Md)	28.85	28.85	28.85	28.85
Molecular Weight, lb/lb-mole (wet)	(Ms)	28.41	28.49	28.45	28.45
Velocity, ft/sec	(Vs)	38.0	38.8	39.1	38.7
VOLUMETRIC FLOW RATE					
At Stack Conditions, acfm	(Qa)	16,115	16,475	16,602	16,398
At Standard Conditions, dscfm	(Qs)	15,117	15,578	15,609	15,435

Method 1 Data

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Outlet
Project No. 2022-1651-001
Date: 12/15/21

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:	4.8	ft
Distance B Duct Diameters:	1.6	**(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):	PJG 5/4/22	
Reviewer (Initial and Date):	BAG 5/4/22	



CIRCULAR DUCT

LOCATION OF TRAVERSE POINTS

Number of traverse points on a diameter

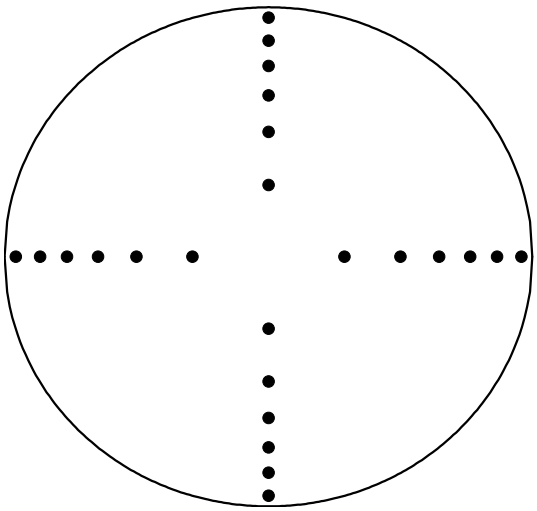
	2	3	4	5	6	7	8	9	10	11	12
1	14.6	--	6.7	--	4.4	--	3.2	--	2.6	--	2.1
2	85.4	--	25.0	--	14.6	--	10.5	--	8.2	--	6.7
3	--	--	75.0	--	29.6	--	19.4	--	14.6	--	11.8
4	--	--	93.3	--	70.4	--	32.3	--	22.6	--	17.7
5	--	--	--	--	85.4	--	67.7	--	34.2	--	25.0
6	--	--	--	--	95.6	--	80.6	--	65.8	--	35.6
7	--	--	--	--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

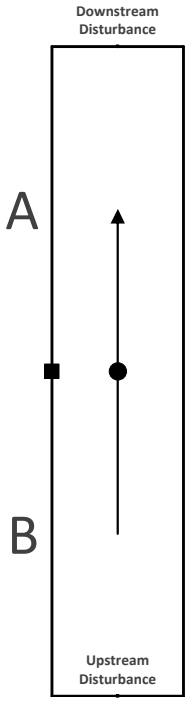
**Percent of stack diameter from inside wall to traverse point.*

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 = 4.8 ft.
Depth of Duct = 36 in.

Cross Sectional Area





Cyclonic Flow Check

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Outlet
Project No. 2022-1651-001
Date 05/05/22

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

Method 4 Data

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Outlet
Project No. 2022-1651-001
Parameter HFPO-DA
Analysis Gravimetric

Run 1	Date:	5/5/22							
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	300.6	477.8	803.6	746.0	728.4	508.0	277.0	794.6	4636.0
Final Mass, g	318.6	492.6	803.0	747.2	730.4	509.8	291.2	807.2	4700.0
Gain	18.0	14.8	-0.6	1.2	2.0	1.8	14.2	12.6	64.0
Run 2	**Date:**	5/5/22							
Impinger No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Total**
Contents	XAD Trap	Empty	H2O	H2O	H2O	Empty	XAD Trap	Silica	--
Initial Mass, g	302.0	447.4	789.0	794.4	753.6	485.4	309.2	798.0	4679.0
Final Mass, g	320.6	458.0	787.0	794.2	754.8	487.6	318.4	812.0	4732.6
Gain	18.6	10.6	-2.0	-0.2	1.2	2.2	9.2	14.0	53.6
Run 3	**Date:**	5/5/22							
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	311.4	478.2	803.6	745.0	730.2	508.2	290.8	797.6	4665.0
Final Mass, g	333.4	489.0	799.4	744.4	732.8	512.0	301.6	812.2	4724.8
Gain	22.0	10.8	-4.2	-0.6	2.6	3.8	10.8	14.6	59.8

Alliance SOURCE TESTING

Isokinetic Field Data

Location:	Chemours Company - Fayetteville Works Facility, NC		**Start Time:**	8:41	**Source:**	VEN Carbon Bed Outlet	
Date:	5/5/22	Run 1 VALID	**End Time:**	10:45	**Project No.:**	2022-1651-001	**Parameter:** HFPO-DA

STACK DATA (EST)			EQUIPMENT			STACK DATA (EST)			FILTER NO.	STACK DATA (FINAL)			MOIST. DATA
Moisture:	2.5	% est.	Meter Box ID:	14		Est. Tm:	55	°F	OTM-45	Pb:	30.22	in. Hg	Vlc (ml)
Barometric:	30.40	in. Hg	Y:	0.980		Est. Ts:	93	°F		Pg:	2.10	in. WC	64.0
Static Press:	2.80	in. WC	ΔH @ (in.WC):	1.686		Est. ΔP:	0.67	in. WC		O_2:	20.9	%	K-FACTOR
Stack Press:	30.61	in. Hg	Probe ID:	P4-1		Est. Dn:	0.232	in.		CO_2:	0.1	%	3.526
CO_2:	0.1	%	Liner Material:	glass		Target Rate:	0.75	scfm					
O_2:	20.9	%	Pitot ID:	P4-1		LEAK CHECK:	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):	0.007	0.007	0.008	0.009	Mid 1 (cf)	558.989	559.081 / 0.092
Md:	28.85	lb/lb-mole	Nozzle ID:	G-3	glass	Vacuum (in Hg):	11	11	12	10	Mid 2 (cf)	559.081	559.144 / 0.063
Ms:	28.58	lb/lb-mole	Nozzle Dn (in.):	0.250		Pitot Tube:	Pass	Pass	Pass	Pass	Mid 3 (cf)		--
											Mid-Point Leak Check Vol (cf):		0.155

Sample Pt.	Sample Time (minutes) Begin	End	Dry Gas Meter Reading (ft^3)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F) DGM Average Amb.	Stack Amb.	Orifice Press. ΔH (in. WC) Ideal	Actual	Pump Vac (in. Hg)	Gas Temperatures (°F) Probe Amb.	Filter Amb.	Imp Exit Amb.	Aux Amb.	% ISO	Vs (fps)
					69	68				69	68	68	69		
A1	0.00	4.00	525.117	0.40	69	87	1.47	1.47	4	95	95	67	54	100.8	35.90
2	4.00	8.00	527.975	0.39	72	88	1.43	1.44	4	97	99	53	45	100.4	35.49
3	8.00	12.00	530.800	0.40	74	88	1.48	1.48	4	97	97	47	44	100.0	35.94
4	12.00	16.00	533.660	0.42	74	88	1.55	1.56	4	98	100	46	46	100.4	36.82
5	16.00	20.00	536.600	0.44	76	88	1.63	1.64	4	98	98	45	45	99.7	37.69
6	20.00	24.00	539.600	0.45	78	88	1.67	1.67	4	98	99	44	43	99.9	38.12
7	24.00	28.00	542.650	0.35	78	88	1.30	1.30	4	98	99	44	44	102.0	33.62
8	28.00	32.00	545.400	0.32	79	88	1.19	1.20	4	98	98	44	45	100.7	32.14
9	32.00	36.00	548.000	0.35	79	88	1.30	1.30	4	98	99	44	44	101.8	33.62
10	36.00	40.00	550.750	0.36	78	88	1.34	1.34	4	98	98	44	45	100.6	34.09
11	40.00	44.00	553.500	0.36	78	88	1.34	1.34	4	98	98	44	45	98.8	34.09
12	44.00	48.00	556.200	0.36	79	88	1.34	1.35	4	98	98	44	46	101.8	34.09
B1	48.00	52.00	558.989	0.55	78	88	2.04	2.05	6	100	101	58	46	97.3	42.14
2	52.00	56.00	562.270	0.56	80	88	2.09	2.10	7	99	103	45	43	100.1	42.52
3	56.00	60.00	565.690	0.62	81	89	2.31	2.30	8	99	100	46	43	99.8	44.78
4	60.00	64.00	569.280	0.68	82	88	2.54	2.56	8	99	97	48	44	101.9	46.86
5	64.00	68.00	573.125	0.58	83	88	2.17	2.18	7	99	99	48	45	102.3	43.27
6	68.00	72.00	576.700	0.48	84	88	1.80	1.80	6	99	97	49	42	97.2	39.37
7	72.00	76.00	579.800	0.50	84	88	1.88	1.88	6	99	99	48	42	99.9	40.18
8	76.00	80.00	583.050	0.49	84	88	1.84	1.85	6	99	100	49	42	100.1	39.78
9	80.00	84.00	586.275	0.47	83	88	1.76	1.77	6	99	99	49	44	99.6	38.96
10	84.00	88.00	589.410	0.45	83	88	1.69	1.70	6	99	97	49	42	101.9	38.12
11	88.00	92.00	592.550	0.39	84	89	1.46	1.47	5	99	99	50	44	100.9	35.52
12	92.00	96.00	595.450	0.33	84	89	1.24	1.24	4	99	99	50	45	102.5	32.67
	Final DGM:		598.160												

RESULTS	Run Time	Vm	ΔP	Tm	Ts	Max Vac	ΔH	%ISO	BWS	Y_{qa}
	96.0 min	72.888 ft^3	0.45 in. WC	79.3 °F	88.1 °F	8	1.666 in. WC	101.3	0.041	-0.3

Alliance SOURCE TESTING

Isokinetic Field Data

Location:	Chemours Company - Fayetteville Works Facility, NC	**Start Time:**	11:12	**Source:**	VEN Carbon Bed Outlet
Date:	5/5/22	Run 2	VALID	**End Time:**	13:07	**Project No.:**	2022-1651-001	**Parameter:**	HFPO-DA

STACK DATA (EST)			EQUIPMENT			STACK DATA (EST)			FILTER NO.	STACK DATA (FINAL)			MOIST. DATA
Moisture:	2.5	% est.	Meter Box ID:	14		Est. Tm:	79	°F	OTM-45	Pb:	30.22	in. Hg	Vlc (ml)
Barometric:	30.40	in. Hg	Y:	0.980		Est. Ts:	88	°F		Pg:	2.10	in. WC	53.6
Static Press:	2.80	in. WC	ΔH @ (in.WC):	1.686		Est. ΔP:	0.45	in. WC		O_2:	20.9	%	K-FACTOR
Stack Press:	30.61	in. Hg	Probe ID:	P4-1		Est. Dn:	0.251	in.		CO_2:	0.1	%	3.73
CO_2:	0.1	%	Liner Material:	glass		Target Rate:	0.75	scfm					
O_2:	20.9	%	Pitot ID:	P4-1		LEAK CHECK	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):	0.006	0.003	0.004		0.005	Mid 1 (cf)	632.414	632.500	0.086
Md:	28.85	lb/lb-mole	Nozzle ID:	G-3	glass	Vacuum (in Hg):	12	9	10		12	Mid 2 (cf)	632.500	632.575	0.075
Ms:	28.58	lb/lb-mole	Nozzle Dn (in.):	0.250		Pitot Tube:	Pass	Pass	Pass	--	Pass	Mid 3 (cf)			--
												Mid-Point Leak Check Vol (cf):			0.161

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	598.462	0.37	79	88	1.38	1.38	4	100	97	66	67	100.1	34.56
2	4.00	8.00	601.240	0.38	79	88	1.42	1.42	4	99	98	59	52	100.8	35.03
3	8.00	12.00	604.075	0.41	79	89	1.52	1.52	4	99	98	57	48	100.2	36.42
4	12.00	16.00	607.000	0.43	80	89	1.60	1.60	4	99	99	54	48	98.5	37.29
5	16.00	20.00	609.950	0.43	81	88	1.61	1.60	4	101	101	53	49	101.6	37.26
6	20.00	24.00	613.000	0.40	82	88	1.50	1.50	4	101	100	52	47	99.9	35.94
7	24.00	28.00	615.900	0.37	83	88	1.39	1.40	4	101	100	51	48	99.4	34.56
8	28.00	32.00	618.680	0.37	83	88	1.39	1.40	4	101	100	51	48	100.8	34.56
9	32.00	36.00	621.500	0.36	83	87	1.35	1.36	4	101	100	51	46	101.4	34.06
10	36.00	40.00	624.300	0.35	83	87	1.32	1.32	4	99	99	51	47	101.0	33.59
11	40.00	44.00	627.050	0.35	84	87	1.32	1.32	4	99	99	51	45	97.1	33.59
12	44.00	48.00	629.700	0.35	84	87	1.32	1.32	4	99	99	52	46	99.5	33.59
B1	48.00	52.00	632.414	0.60	80	87	2.24	2.25	6	99	100	67	54	102.8	43.97
2	52.00	56.00	636.050	0.63	82	88	2.36	2.37	6	99	100	49	39	100.4	45.10
3	56.00	60.00	639.700	0.69	84	88	2.59	2.60	7	99	99	51	41	102.2	47.20
4	60.00	64.00	643.600	0.71	84	88	2.66	2.66	7	99	99	52	41	100.1	47.88
5	64.00	68.00	647.475	0.63	85	88	2.37	2.38	7	99	98	53	42	101.3	45.10
6	68.00	72.00	651.175	0.59	85	88	2.22	2.23	6	99	99	53	43	102.5	43.65
7	72.00	76.00	654.800	0.51	86	88	1.92	1.93	5	99	99	53	44	100.1	40.58
8	76.00	80.00	658.100	0.50	87	88	1.89	1.90	5	99	99	53	45	99.4	40.18
9	80.00	84.00	661.350	0.50	87	88	1.89	1.90	5	99	100	53	44	100.9	40.18
10	84.00	88.00	664.650	0.48	87	88	1.81	1.82	5	99	99	55	46	103.0	39.37
11	88.00	92.00	667.950	0.43	87	88	1.63	1.63	5	99	99	55	46	100.5	37.26
12	92.00	96.00	671.000	0.41	86	87	1.55	1.56	5	99	99	55	47	100.0	36.35
	Final DGM:		673.963												

RESULTS	Run Time	Vm	ΔP	Tm	Ts	Max Vac	ΔH	%ISO	BWS	Y_{qa}
	96.0 min	75.340 ft^3	0.47 in. WC	83.3 °F	87.8 °F	7	1.765 in. WC	100.9	0.034	-0.1

Alliance SOURCE TESTING

Isokinetic Field Data

Location:	Chemours Company - Fayetteville Works Facility, NC		**Start Time:**	13:50	**Source:**	VEN Carbon Bed Outlet	
Date:	5/5/22	Run 3 VALID	**End Time:**	15:42	**Project No.:**	2022-1651-001	**Parameter:** HFPO-DA

STACK DATA (EST)			EQUIPMENT			STACK DATA (EST)			FILTER NO.	STACK DATA (FINAL)			MOIST. DATA
Moisture:	2.5	% est.	Meter Box ID:	14		Est. Tm:	83	°F	OTM-45	Pb:	30.22	in. Hg	Vlc (ml)
Barometric:	30.40	in. Hg	Y:	0.980		Est. Ts:	88	°F		Pg:	2.10	in. WC	59.8
Static Press:	2.80	in. WC	ΔH @ (in.WC):	1.686		Est. ΔP:	0.47	in. WC		O_2:	20.9	%	K-FACTOR
Stack Press:	30.61	in. Hg	Probe ID:	P4-1		Est. Dn:	0.247	in.		CO_2:	0.1	%	3.755
CO_2:	0.1	%	Liner Material:	glass		Target Rate:	0.75	scfm					
O_2:	20.9	%	Pitot ID:	P4-1		LEAK CHECK:	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):	0.007	0.008	0.008 / / 0.006	Mid 1 (cf)	708.524	708.591	0.067
Md:	28.85	lb/lb-mole	Nozzle ID:	G-3	glass	Vacuum (in Hg):	13	13	12 / / 11	Mid 2 (cf)	708.591	708.678	0.087
Ms:	28.58	lb/lb-mole	Nozzle Dn (in.):	0.250		Pitot Tube:	Pass	Pass	Pass / -- / Pass	Mid 3 (cf)			--
										Mid-Point Leak Check Vol (cf):			0.154

Sample Pt.	Sample Time (minutes) Begin	End	Dry Gas Meter Reading (ft^3)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F) DGM Average Amb. --	Stack Amb. --	Orifice Press. ΔH (in. WC) Ideal	Actual	Pump Vac (in. Hg)	Gas Temperatures (°F) Probe Amb. --	Filter Amb. --	Imp Exit Amb. --	Aux Amb. --	% ISO	Vs (fps)
A1	0.00	4.00	674.272	0.40	83	88	1.50	1.50	4	99	99	66	54	100.7	35.94
2	4.00	8.00	677.200	0.42	83	88	1.58	1.58	4	99	99	61	49	99.1	36.82
3	8.00	12.00	680.150	0.42	84	88	1.58	1.58	4	99	99	58	47	99.7	36.82
4	12.00	16.00	683.125	0.43	84	89	1.61	1.61	4	99	99	56	50	97.0	37.29
5	16.00	20.00	686.050	0.42	85	89	1.58	1.59	4	99	99	54	53	102.1	36.86
6	20.00	24.00	689.100	0.40	86	89	1.51	1.51	4	99	100	54	52	100.2	35.97
7	24.00	28.00	692.025	0.36	86	89	1.36	1.36	4	99	99	55	50	107.3	34.12
8	28.00	32.00	695.000	0.36	86	89	1.36	1.36	4	99	100	55	51	100.1	34.12
9	32.00	36.00	697.775	0.34	86	89	1.28	1.29	4	99	99	55	45	97.4	33.16
10	36.00	40.00	700.400	0.34	86	89	1.28	1.29	4	99	99	56	46	102.1	33.16
11	40.00	44.00	703.150	0.34	86	89	1.28	1.29	4	100	99	56	47	95.6	33.16
12	44.00	48.00	705.725	0.36	87	88	1.36	1.37	4	100	100	56	48	100.7	34.09
B1	48.00	52.00	708.524	0.65	85	89	2.44	2.45	6	98	99	67	60	101.8	45.85
2	52.00	56.00	712.300	0.68	87	89	2.56	2.58	6	99	101	51	43	94.6	46.90
3	56.00	60.00	715.900	0.69	87	89	2.60	2.61	7	99	102	51	43	99.2	47.24
4	60.00	64.00	719.700	0.71	87	89	2.67	2.68	7	99	101	51	43	101.0	47.92
5	64.00	68.00	723.625	0.64	88	89	2.41	2.43	6	99	100	52	43	100.0	45.50
6	68.00	72.00	727.325	0.57	88	89	2.15	2.16	6	99	100	51	43	102.3	42.94
7	72.00	76.00	730.900	0.52	88	89	1.96	1.97	5	99	100	52	45	98.9	41.01
8	76.00	80.00	734.200	0.50	89	89	1.89	1.90	5	99	100	52	47	102.1	40.22
9	80.00	84.00	737.550	0.50	89	89	1.89	1.90	5	99	100	53	47	102.9	40.22
10	84.00	88.00	740.925	0.47	89	89	1.78	1.80	5	99	100	53	48	95.1	38.99
11	88.00	92.00	743.950	0.45	89	89	1.70	1.70	5	99	100	53	49	101.5	38.15
12	92.00	96.00	747.110	0.43	89	89	1.63	1.60	4	100	100	53	49	99.5	37.29
	Final DGM:		750.140												

RESULTS	Run Time	Vm	ΔP	Tm	Ts	Max Vac	ΔH	%ISO	BWS	Y_{qa}
	96.0 min	75.714 ft^3	0.48 in. WC	86.5 °F	88.8 °F	7	1.796 in. WC	100.6	0.037	-0.7

Appendix C

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 140-27381-1
Client Project/Site: Fayetteville Emissions Test - VEN CB Inlet

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

Attn: Michael Aucoin

Authorized for release by:
5/24/2022 2:04:36 PM

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

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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: 140-27381-1

Laboratory: Eurofins Knoxville

Narrative

Job Narrative
140-27381-1

Receipt

The samples were received on 5/6/2022 6:55 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.0º C.

LCMS

Methods 537 (modified), Dilution: LC/MS/MS Sampling Train Preparation and Analysis: The sampling train components are extracted and analyzed for Per- and Polyfluorinated Alkyl Substances (PFAS) using Eurofins TestAmerica Knoxville standard operating procedures KNOX-OP-0026 and KNOX-LC-0007.

The sampling trains are prepared as four analytical fractions: The particulate filter and front half of the filter holder, nozzle and probe solvent rinses are combined for one analytical fraction. The XAD-2 resin trap and back half of the filter holder, coil condenser and connecting glassware solvent rinses are also combined as a separate analytical fraction. The condensate, impinger contents and their related glassware DI water rinses make up the third analytical fraction. The breakthrough XAD module makes up the fourth analytical fraction.

The filters and XAD components are spiked with isotope dilution internal standards and the components are extracted with methanol/ammonium hydroxide by shaking for at least 18 hours. The extracts are concentrated to 10 mL and analyzed by HPLC/MS/MS. The condensates are spiked with the isotope dilution internal standards and extracted using either Solid-Phase Extraction (SPE) or diluting the water sample for analysis. Each extract at its final volume is 80:20 methanol:water

Sample results were calculated using the following equation:

Result, ηg/sample = (on-column concentration, ηg/mL) × (nominal final volume of extract (10 mL) / 1 sample) × DF × SF

Where:
DF = Instrument dilution factor
SF = Extraction Split Factor = (final volume of extract in the initial extraction batch / initial volume of extract in the “Split” batch)
For condensate, if less than the entire sample is extracted, the fraction of sample used replaces “1 sample”

Method 537 (modified): The following samples were reported with elevated reporting limits for all analytes: T-2080,2079 VEN CB INLET R1 OTM-45 FH (140-27381-1), T-2073,2072 VEN CB INLET R2 OTM-45 FH (140-27381-5) and T-2066,2065 VEN CB INLET R3 OTM-45 FH (140-27381-9). 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): T-2080,2079 VEN CB INLET R1 OTM-45 FH (140-27381-1), T-2073,2072 VEN CB INLET R2 OTM-45 FH (140-27381-5) and T-2066,2065 VEN CB INLET R3 OTM-45 FH (140-27381-9). 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: T-2078,2077,2075 VEN CB INLET R1 OTM-45 BH (140-27381-2), T-2076 VEN CB INLET R1 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE (140-27381-3), T-2074 VEN CB INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-27381-4), T-2071,2070,2068 VEN CB INLET R2 OTM-45 BH (140-27381-6), T-2069 VEN CB INLET R2 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE (140-27381-7) and T-2062 VEN CB INLET R3 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE (140-27381-11). The samples were analyzed at a dilution based on screening results.

Method 537 (modified): Results for samples T-2076 VEN CB INLET R1 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE (140-27381-3), T-2069 VEN CB INLET R2 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE (140-27381-7) and T-2062 VEN CB INLET R3 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE (140-27381-11) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Job ID: 140-27381-1 (Continued)

Laboratory: Eurofins Knoxville (Continued)

Method 537 (modified): The required dilution factor for the following samples were higher than could be achieved by "in vial" dilution, as it would dilute out the Isotope Dilution Analytes (IDA): T-2078,2077,2075 VEN CB INLET R1 OTM-45 BH (140-27381-2), T-2074 VEN CB INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-27381-4) and T-2071,2070,2068 VEN CB INLET R2 OTM-45 BH (140-27381-6). 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 sample was reported with elevated reporting limits for all analytes: T-2067 VEN CB INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-27381-8). The sample was analyzed at a dilution based on screening results.

Method 537 (modified): The following samples were reported with elevated reporting limits for all analytes: T-2074 VEN CB INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-27381-4), T-2064,2063,2061 VEN CB INLET R3 OTM-45 BH (140-27381-10) and T-2060 VEN CB INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-27381-12). The samples were analyzed at a dilution based on screening results.

Method 537 (modified): The required dilution factor for the following samples were higher than could be achieved by "in vial" dilution, as it would dilute out the Isotope Dilution Analytes (IDA): T-2064,2063,2061 VEN CB INLET R3 OTM-45 BH (140-27381-10) and T-2060 VEN CB INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-27381-12). 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 sample T-2074 VEN CB INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-27381-4) was 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

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

Organic Prep

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

Client Sample ID: T-2080,2079 VEN CB INLET R1 OTM-45 FH
Lab Sample ID: 140-27381-1

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	196		9.91	9.32	ug/Sample		05/09/22 08:48	05/18/22 19:55	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*102*		*25 - 150*	*05/09/22 08:48*	*05/18/22 19:55*	*1*

Client Sample ID: T-2078,2077,2075 VEN CB INLET R1 OTM-45 BH
Lab Sample ID: 140-27381-2

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	1210		500	275	ug/Sample		05/16/22 13:00	05/21/22 20:22	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*92*		*25 - 150*	*05/16/22 13:00*	*05/21/22 20:22*	*1*

Client Sample ID: T-2076 VEN CB INLET R1 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE
Lab Sample ID: 140-27381-3

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	182		1.50	0.600	ug/Sample		05/20/22 05:00	05/21/22 19:27	20

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*127*		*25 - 150*	*05/20/22 05:00*	*05/21/22 19:27*	*20*

Client Sample ID: T-2074 VEN CB INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
Lab Sample ID: 140-27381-4

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	1.32		0.400	0.220	ug/Sample		05/16/22 13:00	05/23/22 12:23	20

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*111*		*25 - 150*	*05/16/22 13:00*	*05/23/22 12:23*	*20*

Client Sample ID: T-2073,2072 VEN CB INLET R2 OTM-45 FH
Lab Sample ID: 140-27381-5

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	274		10.0	9.40	ug/Sample		05/09/22 08:48	05/18/22 20:03	1

Client Sample ID: T-2073,2072 VEN CB INLET R2 OTM-45 FH
Lab Sample ID: 140-27381-5

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	101		25 - 150	05/09/22 08:48	05/18/22 20:03	1

Client Sample ID: T-2071,2070,2068 VEN CB INLET R2 OTM-45 BH
Lab Sample ID: 140-27381-6

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	901		500	275	ug/Sample		05/16/22 13:00	05/21/22 20:57	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	114		25 - 150	05/16/22 13:00	05/21/22 20:57	1

Client Sample ID: T-2069 VEN CB INLET R2 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE
Lab Sample ID: 140-27381-7

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	115		1.52	0.610	ug/Sample		05/20/22 05:00	05/21/22 19:37	20

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	99		25 - 150	05/20/22 05:00	05/21/22 19:37	20

Client Sample ID: T-2067 VEN CB INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
Lab Sample ID: 140-27381-8

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	3.39		2.00	1.10	ug/Sample		05/16/22 13:00	05/22/22 13:06	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	83		25 - 150	05/16/22 13:00	05/22/22 13:06	1

Client Sample ID: T-2066,2065 VEN CB INLET R3 OTM-45 FH
Lab Sample ID: 140-27381-9

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	215		10.0	9.40	ug/Sample		05/09/22 08:48	05/18/22 20:12	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	107		25 - 150	05/09/22 08:48	05/18/22 20:12	1

Client: The Chemours Company FC, LLC
Job ID: 140-27381-1
Project/Site: Fayetteville Emissions Test - VEN CB Inlet

Client Sample ID: T-2064,2063,2061 VEN CB INLET R3 OTM-45 BH
Lab Sample ID: 140-27381-10

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	1180		500	275	ug/Sample		05/16/22 13:00	05/23/22 12:31	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*86*		*25 - 150*	*05/16/22 13:00*	*05/23/22 12:31*	*1*

Client Sample ID: T-2062 VEN CB INLET R3 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE
Lab Sample ID: 140-27381-11

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	138		1.60	0.640	ug/Sample		05/20/22 05:00	05/21/22 19:47	20

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*91*		*25 - 150*	*05/20/22 05:00*	*05/21/22 19:47*	*20*

Client Sample ID: T-2060 VEN CB INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
Lab Sample ID: 140-27381-12

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	2.60		2.00	1.10	ug/Sample		05/16/22 13:00	05/23/22 12:40	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*90*		*25 - 150*	*05/16/22 13:00*	*05/23/22 12:40*	*1*

Default Detection Limits

Client: The Chemours Company FC, LLC
Job ID: 140-27381-1
Project/Site: Fayetteville Emissions Test - VEN CB Inlet

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: 140-27381-1
Project/Site: Fayetteville Emissions Test - VEN CB Inlet

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)						
140-27381-1	T-2080,2079 VEN CB INLET R1	102						
140-27381-2	T-2078,2077,2075 VEN CB INLET R1 OTM-45 BH	92						
140-27381-3	T-2076 VEN CB INLET R1 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE	127						
140-27381-4	T-2074 VEN CB INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	111						
140-27381-5	T-2073,2072 VEN CB INLET R2 OTM-45 FH	101						
140-27381-6	T-2071,2070,2068 VEN CB INLET R2 OTM-45 BH	114						
140-27381-7	T-2069 VEN CB INLET R2 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE	99						
140-27381-8	T-2067 VEN CB INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	83						
140-27381-9	T-2066,2065 VEN CB INLET R3 OTM-45 FH	107						
140-27381-10	T-2064,2063,2061 VEN CB INLET R3 OTM-45 BH	86						
140-27381-11	T-2062 VEN CB INLET R3 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE	91						
140-27381-12	T-2060 VEN CB INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	90						
LCS 140-61492/2-B	Lab Control Sample	90						
LCS 140-61728/2-B	Lab Control Sample	90						
LCS 140-61825/2-A	Lab Control Sample	102						
LCSD 140-61492/3-B	Lab Control Sample Dup	90						
LCSD 140-61728/3-B	Lab Control Sample Dup	101						
LCSD 140-61825/3-A	Lab Control Sample Dup	110						
MB 140-61492/1-B	Method Blank	93						
MB 140-61728/1-B	Method Blank	94						
MB 140-61825/1-A	Method Blank	107						

Surrogate Legend

HFPODA = 13C3 HFPO-DA

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 140-61492/1-B
Matrix: Air
Analysis Batch: 61817

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61492

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		05/09/22 08:48	05/18/22 19:28	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*93*		*25 - 150*	*05/09/22 08:48*	*05/18/22 19:28*	*1*

Lab Sample ID: LCS 140-61492/2-B
Matrix: Air
Analysis Batch: 61817

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 61492

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0200	0.02261		ug/Sample		113	60 - 140		

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

Lab Sample ID: LCSD 140-61492/3-B
Matrix: Air
Analysis Batch: 61817

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 61492

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0200	0.02418		ug/Sample		121	60 - 140	7	30

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

Lab Sample ID: MB 140-61728/1-B
Matrix: Air
Analysis Batch: 61914

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61728

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		05/16/22 13:00	05/21/22 19:56	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*94*		*25 - 150*	*05/16/22 13:00*	*05/21/22 19:56*	*1*

Lab Sample ID: LCS 140-61728/2-B
Matrix: Air
Analysis Batch: 61914

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 61728

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0200	0.02358		ug/Sample		118	60 - 140		

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

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

Lab Sample ID: LCSD 140-61728/3-B
Matrix: Air
Analysis Batch: 61914

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 61728

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0200	0.02177		ug/Sample		109	60 - 140	8	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*101*		*25 - 150*

Lab Sample ID: MB 140-61825/1-A
Matrix: Air
Analysis Batch: 61905

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61825

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		05/20/22 05:00	05/20/22 17:34	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*107*		*25 - 150*	*05/20/22 05:00*	*05/20/22 17:34*	*1*

Lab Sample ID: LCS 140-61825/2-A
Matrix: Air
Analysis Batch: 61905

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 61825

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HFPO-DA			0.0100	0.009305		ug/Sample		93	60 - 140

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*102*		*25 - 150*

Lab Sample ID: LCSD 140-61825/3-A
Matrix: Air
Analysis Batch: 61905

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 61825

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0100	0.009893		ug/Sample		99	60 - 140	6	30

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

LCMS

Prep Batch: 61492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27381-1	T-2080,2079 VEN CB INLET R1 OTM-45 FH	Total/NA	Air	None	
140-27381-5	T-2073,2072 VEN CB INLET R2 OTM-45 FH	Total/NA	Air	None	
140-27381-9	T-2066,2065 VEN CB INLET R3 OTM-45 FH	Total/NA	Air	None	
MB 140-61492/1-B	Method Blank	Total/NA	Air	None	
LCS 140-61492/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-61492/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Cleanup Batch: 61620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27381-1	T-2080,2079 VEN CB INLET R1 OTM-45 FH	Total/NA	Air	Split	61492
140-27381-5	T-2073,2072 VEN CB INLET R2 OTM-45 FH	Total/NA	Air	Split	61492
140-27381-9	T-2066,2065 VEN CB INLET R3 OTM-45 FH	Total/NA	Air	Split	61492
MB 140-61492/1-B	Method Blank	Total/NA	Air	Split	61492
LCS 140-61492/2-B	Lab Control Sample	Total/NA	Air	Split	61492
LCSD 140-61492/3-B	Lab Control Sample Dup	Total/NA	Air	Split	61492

Prep Batch: 61728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27381-2	T-2078,2077,2075 VEN CB INLET R1 OTM-45 B	Total/NA	Air	None	
140-27381-4	T-2074 VEN CB INLET R1 OTM-45 BREAKTHR(	Total/NA	Air	None	
140-27381-6	T-2071,2070,2068 VEN CB INLET R2 OTM-45 B	Total/NA	Air	None	
140-27381-8	T-2067 VEN CB INLET R2 OTM-45 BREAKTHR(	Total/NA	Air	None	
140-27381-10	T-2064,2063,2061 VEN CB INLET R3 OTM-45 B	Total/NA	Air	None	
140-27381-12	T-2060 VEN CB INLET R3 OTM-45 BREAKTHR(	Total/NA	Air	None	
MB 140-61728/1-B	Method Blank	Total/NA	Air	None	
LCS 140-61728/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-61728/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Cleanup Batch: 61788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27381-2	T-2078,2077,2075 VEN CB INLET R1 OTM-45 B	Total/NA	Air	Split	61728
140-27381-4	T-2074 VEN CB INLET R1 OTM-45 BREAKTHR(	Total/NA	Air	Split	61728
140-27381-6	T-2071,2070,2068 VEN CB INLET R2 OTM-45 B	Total/NA	Air	Split	61728
140-27381-8	T-2067 VEN CB INLET R2 OTM-45 BREAKTHR(	Total/NA	Air	Split	61728
140-27381-10	T-2064,2063,2061 VEN CB INLET R3 OTM-45 B	Total/NA	Air	Split	61728
140-27381-12	T-2060 VEN CB INLET R3 OTM-45 BREAKTHR(	Total/NA	Air	Split	61728
MB 140-61728/1-B	Method Blank	Total/NA	Air	Split	61728
LCS 140-61728/2-B	Lab Control Sample	Total/NA	Air	Split	61728
LCSD 140-61728/3-B	Lab Control Sample Dup	Total/NA	Air	Split	61728

Analysis Batch: 61817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27381-1	T-2080,2079 VEN CB INLET R1 OTM-45 FH	Total/NA	Air	537 (modified)	61818
140-27381-5	T-2073,2072 VEN CB INLET R2 OTM-45 FH	Total/NA	Air	537 (modified)	61818
140-27381-9	T-2066,2065 VEN CB INLET R3 OTM-45 FH	Total/NA	Air	537 (modified)	61818
MB 140-61492/1-B	Method Blank	Total/NA	Air	537 (modified)	61620
LCS 140-61492/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	61620
LCSD 140-61492/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	61620

LCMS

Cleanup Batch: 61818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27381-1	T-2080,2079 VEN CB INLET R1 OTM-45 FH	Total/NA	Air	Dilution	61620
140-27381-5	T-2073,2072 VEN CB INLET R2 OTM-45 FH	Total/NA	Air	Dilution	61620
140-27381-9	T-2066,2065 VEN CB INLET R3 OTM-45 FH	Total/NA	Air	Dilution	61620

Prep Batch: 61825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27381-3	T-2076 VEN CB INLET R1 OTM-45 IMPINGERS	Total/NA	Air	PFAS Prep	
140-27381-7	T-2069 VEN CB INLET R2 OTM-45 IMPINGERS	Total/NA	Air	PFAS Prep	
140-27381-11	T-2062 VEN CB INLET R3 OTM-45 IMPINGERS	Total/NA	Air	PFAS Prep	
MB 140-61825/1-A	Method Blank	Total/NA	Air	PFAS Prep	
LCS 140-61825/2-A	Lab Control Sample	Total/NA	Air	PFAS Prep	
LCSD 140-61825/3-A	Lab Control Sample Dup	Total/NA	Air	PFAS Prep	

Analysis Batch: 61905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 140-61825/1-A	Method Blank	Total/NA	Air	537 (modified)	61825
LCS 140-61825/2-A	Lab Control Sample	Total/NA	Air	537 (modified)	61825
LCSD 140-61825/3-A	Lab Control Sample Dup	Total/NA	Air	537 (modified)	61825

Analysis Batch: 61914

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27381-2	T-2078,2077,2075 VEN CB INLET R1 OTM-45 B	Total/NA	Air	537 (modified)	61915
140-27381-3	T-2076 VEN CB INLET R1 OTM-45 IMPINGERS	Total/NA	Air	537 (modified)	61825
140-27381-6	T-2071,2070,2068 VEN CB INLET R2 OTM-45 B	Total/NA	Air	537 (modified)	61915
140-27381-7	T-2069 VEN CB INLET R2 OTM-45 IMPINGERS	Total/NA	Air	537 (modified)	61825
140-27381-11	T-2062 VEN CB INLET R3 OTM-45 IMPINGERS	Total/NA	Air	537 (modified)	61825
MB 140-61728/1-B	Method Blank	Total/NA	Air	537 (modified)	61788
LCS 140-61728/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	61788
LCSD 140-61728/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	61788

Cleanup Batch: 61915

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27381-2	T-2078,2077,2075 VEN CB INLET R1 OTM-45 B	Total/NA	Air	Dilution	61788
140-27381-6	T-2071,2070,2068 VEN CB INLET R2 OTM-45 B	Total/NA	Air	Dilution	61788

Analysis Batch: 61919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27381-8	T-2067 VEN CB INLET R2 OTM-45 BREAKTHR(	Total/NA	Air	537 (modified)	61921

Cleanup Batch: 61921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27381-8	T-2067 VEN CB INLET R2 OTM-45 BREAKTHR(	Total/NA	Air	Dilution	61788

Analysis Batch: 61945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27381-4	T-2074 VEN CB INLET R1 OTM-45 BREAKTHR(	Total/NA	Air	537 (modified)	61788
140-27381-10	T-2064,2063,2061 VEN CB INLET R3 OTM-45 B	Total/NA	Air	537 (modified)	61950
140-27381-12	T-2060 VEN CB INLET R3 OTM-45 BREAKTHR(	Total/NA	Air	537 (modified)	61950

LCMS

Cleanup Batch: 61950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27381-10	T-2064,2063,2061 VEN CB INLET R3 OTM-45 B	Total/NA	Air	Dilution	61788
140-27381-12	T-2060 VEN CB INLET R3 OTM-45 BREAKTHR(	Total/NA	Air	Dilution	61788

Client Sample ID: T-2080,2079 VEN CB INLET R1 OTM-45 FH
Lab Sample ID: 140-27381-1

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	61492	05/09/22 08:48	CAC	TAL KNX
Total/NA	Cleanup	Split			57 mL	10 mL	61620	05/12/22 13:53	DWS	TAL KNX
Total/NA	Cleanup	Dilution			5 uL	10000 uL	61818	05/18/22 18:38	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			61817	05/18/22 19:55	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-2078,2077,2075 VEN CB INLET R1 OTM-45 BH
Lab Sample ID: 140-27381-2

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	61728	05/16/22 13:00	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61788	05/18/22 09:44	DWS	TAL KNX
Total/NA	Cleanup	Dilution			0.4 uL	10000 uL	61915	05/21/22 19:12	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			61914	05/21/22 20:22	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-2076 VEN CB INLET R1 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE
Lab Sample ID: 140-27381-3

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	61825	05/20/22 05:00	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		20			61914	05/21/22 19:27	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-2074 VEN CB INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
Lab Sample ID: 140-27381-4

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	61728	05/16/22 13:00	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61788	05/18/22 09:44	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		20			61945	05/23/22 12:23	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-2073,2072 VEN CB INLET R2 OTM-45 FH
Lab Sample ID: 140-27381-5

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	84 mL	61492	05/09/22 08:48	CAC	TAL KNX
Total/NA	Cleanup	Split			42 mL	10 mL	61620	05/12/22 13:53	DWS	TAL KNX
Total/NA	Cleanup	Dilution			5 uL	10000 uL	61818	05/18/22 18:38	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			61817	05/18/22 20:03	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-2071,2070,2068 VEN CB INLET R2 OTM-45 BH
Lab Sample ID: 140-27381-6

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	61728	05/16/22 13:00	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61788	05/18/22 09:44	DWS	TAL KNX
Total/NA	Cleanup	Dilution			0.4 uL	10000 uL	61915	05/21/22 19:12	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			61914	05/21/22 20:57	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-2069 VEN CB INLET R2 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE
Lab Sample ID: 140-27381-7

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			0.00656 Sample	10 mL	61825	05/20/22 05:00	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		20			61914	05/21/22 19:37	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-2067 VEN CB INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
Lab Sample ID: 140-27381-8

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	61728	05/16/22 13:00	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61788	05/18/22 09:44	DWS	TAL KNX
Total/NA	Cleanup	Dilution			100 uL	10000 uL	61921	05/22/22 12:12	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			61919	05/22/22 13:06	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-2066,2065 VEN CB INLET R3 OTM-45 FH
Lab Sample ID: 140-27381-9

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	82 mL	61492	05/09/22 08:48	CAC	TAL KNX
Total/NA	Cleanup	Split			41 mL	10 mL	61620	05/12/22 13:53	DWS	TAL KNX
Total/NA	Cleanup	Dilution			5 uL	10000 uL	61818	05/18/22 18:38	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			61817	05/18/22 20:12	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-2064,2063,2061 VEN CB INLET R3 OTM-45 BH
Lab Sample ID: 140-27381-10

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	61728	05/16/22 13:00	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61788	05/18/22 09:44	DWS	TAL KNX
Total/NA	Cleanup	Dilution			0.4 uL	10000 uL	61950	05/23/22 11:00	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			61945	05/23/22 12:31	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-2062 VEN CB INLET R3 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE
Lab Sample ID: 140-27381-11

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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			0.00625 Sample	10 mL	61825	05/20/22 05:00	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		20			61914	05/21/22 19:47	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-2060 VEN CB INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
Lab Sample ID: 140-27381-12

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	61728	05/16/22 13:00	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61788	05/18/22 09:44	DWS	TAL KNX
Total/NA	Cleanup	Dilution			100 uL	10000 uL	61950	05/23/22 11:00	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			61945	05/23/22 12:40	JRC	TAL KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Job ID: 140-27381-1
Project/Site: Fayetteville Emissions Test - VEN CB Inlet

Client Sample ID: Method Blank
Lab Sample ID: MB 140-61492/1-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	61492	05/09/22 08:48	CAC	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	61620	05/12/22 13:53	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61817	05/18/22 19:28	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-61728/1-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	61728	05/16/22 13:00	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61788	05/18/22 09:44	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61914	05/21/22 19:56	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-61825/1-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	61825	05/20/22 05:00	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61905	05/20/22 17:34	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-61492/2-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	61492	05/09/22 08:48	CAC	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	61620	05/12/22 13:53	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61817	05/18/22 19:37	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-61728/2-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	61728	05/16/22 13:00	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61788	05/18/22 09:44	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61914	05/21/22 20:05	JRC	TAL KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Job ID: 140-27381-1
Project/Site: Fayetteville Emissions Test - VEN CB Inlet

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-61825/2-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	61825	05/20/22 05:00	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61905	05/20/22 17:43	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-61492/3-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	61492	05/09/22 08:48	CAC	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	61620	05/12/22 13:53	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61817	05/18/22 19:46	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-61728/3-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	61728	05/16/22 13:00	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61788	05/18/22 09:44	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61914	05/21/22 20:13	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-61825/3-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	61825	05/20/22 05:00	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61905	05/20/22 17:51	JRC	TAL KNX
	Instrument ID: LCA									

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

Accreditation/Certification Summary

Client: The Chemours Company FC, LLC
Job ID: 140-27381-1
Project/Site: Fayetteville Emissions Test - VEN CB Inlet

Laboratory: Eurofins Knoxville

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

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-25
ANAB	Dept. of Energy	L2311.01	02-13-25
ANAB	ISO/IEC 17025	L2311	02-13-25
Arkansas DEQ	State	88-0688	06-17-22
California	State	2423	06-30-22
Colorado	State	TN00009	02-28-23
Connecticut	State	PH-0223	09-30-23
Florida	NELAP	E87177	06-30-22
Georgia (DW)	State	906	12-11-22
Hawaii	State	NA	12-11-22
Kansas	NELAP	E-10349	10-31-22
Kentucky (DW)	State	90101	12-31-22
Louisiana	NELAP	83979	06-30-22
Louisiana (DW)	State	LA019	12-31-22
Maryland	State	277	03-31-23
Michigan	State	9933	12-11-22
Nevada	State	TN00009	07-31-22
New Hampshire	NELAP	299919	01-17-23
New Jersey	NELAP	TN001	06-30-22
New York	NELAP	10781	03-31-23
North Carolina (DW)	State	21705	07-31-22
North Carolina (WW/SW)	State	64	12-31-22
Ohio VAP	State	CL0059	06-02-23
Oklahoma	State	9415	08-31-22
Oregon	NELAP	TNI0189	12-31-22
Pennsylvania	NELAP	68-00576	12-31-22
Tennessee	State	02014	12-11-22
Texas	NELAP	T104704380-18-12	08-31-22
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-19-00236	08-20-22
Utah	NELAP	TN00009	07-31-22
Virginia	NELAP	460176	09-14-22
Washington	State	C593	01-19-23
West Virginia (DW)	State	9955C	12-31-22
West Virginia DEP	State	345	04-30-23
Wisconsin	State	998044300	08-31-22

Method Summary

Client: The Chemours Company FC, LLC
Job ID: 140-27381-1
Project/Site: Fayetteville Emissions Test - VEN CB Inlet

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

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

Sample Summary

Client: The Chemours Company FC, LLC
Job ID: 140-27381-1
Project/Site: Fayetteville Emissions Test - VEN CB Inlet

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-27381-1	T-2080,2079 VEN CB INLET R1 OTM-45 FH	Air	05/05/22 00:00	05/06/22 18:55
140-27381-2	T-2078,2077,2075 VEN CB INLET R1 OTM-45 BH	Air	05/05/22 00:00	05/06/22 18:55
140-27381-3	T-2076 VEN CB INLET R1 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE	Air	05/05/22 00:00	05/06/22 18:55
140-27381-4	T-2074 VEN CB INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	05/05/22 00:00	05/06/22 18:55
140-27381-5	T-2073,2072 VEN CB INLET R2 OTM-45 FH	Air	05/05/22 00:00	05/06/22 18:55
140-27381-6	T-2071,2070,2068 VEN CB INLET R2 OTM-45 BH	Air	05/05/22 00:00	05/06/22 18:55
140-27381-7	T-2069 VEN CB INLET R2 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE	Air	05/05/22 00:00	05/06/22 18:55
140-27381-8	T-2067 VEN CB INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	05/05/22 00:00	05/06/22 18:55
140-27381-9	T-2066,2065 VEN CB INLET R3 OTM-45 FH	Air	05/05/22 00:00	05/06/22 18:55
140-27381-10	T-2064,2063,2061 VEN CB INLET R3 OTM-45 BH	Air	05/05/22 00:00	05/06/22 18:55
140-27381-11	T-2062 VEN CB INLET R3 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE	Air	05/05/22 00:00	05/06/22 18:55
140-27381-12	T-2060 VEN CB INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	05/05/22 00:00	05/06/22 18:55

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

Laboratory Deliverable Turnaround Requirements:	
Analytical Due Date: (Review-Released Data)	21 Days from Lab Receipt
Data Package Due Date:	28 Days from Lab Receipt
Laboratory Destination:	TestAmerica Laboratories, Inc. 5815 Middlebrook Pike Knoxville, TN 37921
Lab Phone Number:	865.291.3000
Courier:	FedEx or Hand Deliver

Project Deliverables:
Report analytical results on TALS Reports and in data packages. Include "Field Samp ...er" on all TALS Reports.

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

140-27381 Chain of Custody

Field Sample No./Sample Coding ID	**Run No.**	**Sample Collection Date**	**Project QC Require -ments**	**Sample Bottle/ Container**	**Sample Type/Analysis**	**Analytical Specifications**
T-2080 VEN CB INLET R1 OTM-45 Particulate Filter (Combine with *T-2079*)	1	5/5/22		125 mL HDPE Wide-Mouth Bottle	**Particulate Filter (82.6 mm Whatman Glass Microfiber)** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using method 8321A-HFPO.
T-2079 VEN CB INLET R1 OTM-45 FH of Filter Holder & Probe Methanol Rinse (Combine with *T-2080*)	1	5/5/22		125 mL HDPE Wide-Mouth Bottle	**Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the Particulate Filter extraction.
T-2078 VEN CB INLET R1 OTM-45 XAD-2 Resin Tube	1	5/5/22		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 BacT-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using method 8321A-HFPO.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require -ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-2077 VEN CB INLET R1 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *T-2078*)	1	5/5/22		125 mL HDPE Wide-Mouth Bottle	**Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction.
T-2076 VEN CB INLET R1 OTM-45 Impingers 1,2 & 3 Condensate	1	5/5/22		500 mL HDPE Wide-Mouth Bottle	**Impinger #1, #2 & #3 Condensate** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Analyze the sample for HFPO-DA.
T-2075 VEN CB INLET R1 OTM-45 Impinger Glassware MeOH Rinse (Combine with *T-2078*)	1	5/5/22		250 mL HDPE Wide-Mouth Bottle	**Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the XAD-2 Resin Extraction.
T-2074 VEN CB INLET R1 OTM-45 Breakthrough XAD-2 Resin Tube	1	5/5/22		XAD-2 Resin Tube	**Breakthrough XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using method 8321A-HFPO.
T-2073 VEN CB INLET R2 OTM-45 Particulate Filter (Combine with *T-2072*)	2	5/5/22		125 mL HDPE Wide-Mouth Bottle	**Particulate Filter (82.6 mm Whatman Glass Microfiber)** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using method 8321A-HFPO.
T-2072 VEN CB INLET R2 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with *T-2073*)	2	5/5/22		125 mL HDPE Wide-Mouth Bottle	**Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the Particulate Filter extraction.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require-ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-2071 VEN CB INLET R2 OTM-45 XAD-2 Resin Tube	2	5/5/22		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 BacT-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using method 8321A-HFPO. Analyze.
T-2070 VEN CB INLET R2 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *T-2071*)	2	5/5/22		125 mL HDPE Wide-Mouth Bottle	**Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction.
T-2069 VEN CB INLET R2 OTM-45 Impingers 1,2 & 3 Condensate	2	5/5/22		500 mL HDPE Wide-Mouth Bottle	**Impinger #1, #2 & #3 Condensate** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Analyze the sample for HFPO-DA.
T-2068 VEN CB INLET R2 OTM-45 Impinger Glassware MeOH Rinse (Combine with *T-2071*)	2	5/5/22		250 mL HDPE Wide-Mouth Bottle	**Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the XAD-2 Resin Extraction.
T-2067 VEN CB INLET R2 OTM-45 Breakthrough XAD-2 Resin Tube	2	5/5/22		XAD-2 Resin Tube	**Breakthrough XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using method 8321A-HFPO.
T-2066 VEN CB INLET R3 OTM-45 Particulate Filter (Combine with *T-2065*)	3	5/5/22		125 mL HDPE Wide-Mouth Bottle	**Particulate Filter (82.6 mm Whatman Glass Microfiber)** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using method 8321A-HFPO.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require -ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-2065 VEN CB INLET R3 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with *T-2066*)	3	5/5/22		125 mL HDPE Wide-Mouth Bottle	**Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the Particulate Filter extraction.
T-2064 VEN CB INLET R3 OTM-45 XAD-2 Resin Tube	3	5/5/22		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 BacT-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using method 8321A-HFPO.
T-2063 VEN CB INLET R3 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *T-2064*)	3	5/5/22		125 mL HDPE Wide-Mouth Bottle	**Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction. Analyze for HFPO-DA using method 8321A-HFPO.
T-2062 VEN CB INLET R3 OTM-45 Impingers 1,2 & 3 Condensate	3	5/5/22		500 mL HDPE Wide-Mouth Bottle	**Impinger #1, #2 & #3 Condensate** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Analyze the sample for HFPO-DA.
T-2061 VEN CB INLET R3 OTM-45 Impinger Glassware MeOH Rinse (Combine with *T-2064*)	3	5/5/22		250 mL HDPE Wide-Mouth Bottle	**Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the XAD-2 Resin Extraction.
T-2060 VEN CB INLET R3 OTM-45 Breakthrough XAD-2 Resin Tube	3	5/5/22		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.

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 1.5/CT 2.0°C
(3) Record any apparent sample loss/breakage.	NONE
(4) Record any unidentified samples transported with this shipment of samples:	NONE
(5) Indicate if all samples were received according to the project's required specifications (i.e. no nonconformances):	HAND DELIVERED, NO CUSTODY SEALS

Custody Transfer:

	Name	Company	Date/Time
Relinquished By:	[signature]	Alliance	5/5/22/1730
Accepted By:	[signature]	ETA KNOX	5/5/22/1730
Relinquished By:	[signature]	ETA KNOX	5/6/22 1855
Accepted By:	[signature]	ETA KY	5/6/22 18:55
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?	Comments/Actions Taken
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 : SC71 Correction factor: +0.5°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**	**Labeling Verified by: Date:**
10. Was the sampler identified on the COC?			✓	☐ **Sampler Not Listed on COC**	
11. Is the client and project name/# identified?	✓			☐ **COC Incorrect/Incomplete**	**pH test strip lot number:**
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	

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

Project #: ____________ PM Instructions: ____________

Sample Receiving Associate: [signature] Date: 5-7-22

QA026R32.doc, 062719

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 140-27382-1
Client Project/Site: Fayetteville Emissions Test - VEN CB Outlet

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

Attn: Michael Aucoin

Authorized for release by:
5/24/2022 2:09:15 PM

Courtney Adkins, Project Manager II
(865)291-3019
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Definitions/Glossary

Client: The Chemours Company FC, LLC
Job ID: 140-27382-1
Project/Site: Fayetteville Emissions Test - VEN CB Outlet

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: 140-27382-1

Laboratory: Eurofins Knoxville

Narrative

Job Narrative
140-27382-1

Receipt

The samples were received on 5/6/2022 6:55 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 3.1º C.

LCMS

Method 537 (modified): The following samples were reported with elevated reporting limits for all analytes: T-2059,2058 VEN CB OUTLET R1 OTM-45 FH (140-27382-1), T-2052,2051 VEN CB OUTLET R2 OTM-45 FH (140-27382-5) and T-2045,2044 VEN CB OUTLET R3 OTM-45 FH (140-27382-9). 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): T-2059,2058 VEN CB OUTLET R1 OTM-45 FH (140-27382-1), T-2052,2051 VEN CB OUTLET R2 OTM-45 FH (140-27382-5) and T-2045,2044 VEN CB OUTLET R3 OTM-45 FH (140-27382-9). 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: T-2057,2056,2054 VEN CB OUTLET R1 OTM-45 BH (140-27382-2) and T-2050,2049,2047 VEN CB OUTLET R2 OTM-45 BH (140-27382-6). The samples were analyzed at a dilution based on screening results.

Method 537 (modified): The required dilution factor for the following samples were higher than could be achieved by "in vial" dilution, as it would dilute out the Isotope Dilution Analytes (IDA): T-2057,2056,2054 VEN CB OUTLET R1 OTM-45 BH (140-27382-2) and T-2050,2049,2047 VEN CB OUTLET R2 OTM-45 BH (140-27382-6). As such, the dilution was achieved by taking a subsample of the undiluted extract, adding sufficient solvent, and re-spiking the extract with IDA.

Method 537 (modified): The following samples were reported with elevated reporting limits for all analytes: T-2043,2042,2040 VEN CB OUTLET R3 OTM-45 BH (140-27382-10). These samples were analyzed at a dilution based on screening results.

Method 537 (modified): The required dilution factor for the following samples were higher than could be achieved by "in vial" dilution, as it would dilute out the Isotope Dilution Analytes (IDA): T-2043,2042,2040 VEN CB OUTLET R3 OTM-45 BH (140-27382-10). As such, the dilution was achieved by taking a subsample of the undiluted extract, adding sufficient solvent, and re-spiking the extract with IDA.

Method 537 (modified): The following samples were reported with elevated reporting limits for all analytes: T-2043,2042,2040 VEN CB OUTLET R3 OTM-45 BH (140-27382-10). The samples were analyzed at a dilution based on screening results.

Method 537 (modified): The required dilution factor for the following samples were higher than could be achieved by "in vial" dilution, as it would dilute out the Isotope Dilution Analytes (IDA): T-2043,2042,2040 VEN CB OUTLET R3 OTM-45 BH (140-27382-10). As such, the dilution was achieved by taking a subsample of the undiluted extract, adding sufficient solvent, and re-spiking the extract with IDA.

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

Organic Prep

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

Client Sample ID: T-2059,2058 VEN CB OUTLET R1 OTM-45 FH
Lab Sample ID: 140-27382-1

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	99.3		5.00	4.70	ug/Sample		05/09/22 08:48	05/18/22 20:21	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*99*		*25 - 150*	*05/09/22 08:48*	*05/18/22 20:21*	*1*

Client Sample ID: T-2057,2056,2054 VEN CB OUTLET R1 OTM-45 BH
Lab Sample ID: 140-27382-2

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	44.8		40.0	22.0	ug/Sample		05/07/22 12:47	05/19/22 21:18	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*98*		*25 - 150*	*05/07/22 12:47*	*05/19/22 21:18*	*1*

Client Sample ID: T-2055 VEN CB OUTLET R1 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE
Lab Sample ID: 140-27382-3

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	1.47		0.0800	0.0320	ug/Sample		05/20/22 05:00	05/20/22 18:27	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*119*		*25 - 150*	*05/20/22 05:00*	*05/20/22 18:27*	*1*

Client Sample ID: T-2053 VEN CB OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
Lab Sample ID: 140-27382-4

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.0370		0.0200	0.0110	ug/Sample		05/07/22 12:47	05/19/22 21:27	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*121*		*25 - 150*	*05/07/22 12:47*	*05/19/22 21:27*	*1*

Client Sample ID: T-2052,2051 VEN CB OUTLET R2 OTM-45 FH

Lab Sample ID: 140-27382-5

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	93.1		4.94	4.64	ug/Sample		05/09/22 08:48	05/18/22 20:30	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	96		25 - 150	05/09/22 08:48	05/18/22 20:30	1

Client Sample ID: T-2050,2049,2047 VEN CB OUTLET R2 OTM-45 BH

Lab Sample ID: 140-27382-6

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	54.4		50.0	27.5	ug/Sample		05/07/22 12:47	05/19/22 21:36	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	108		25 - 150	05/07/22 12:47	05/19/22 21:36	1

Client Sample ID: T-2048 VEN CB OUTLET R2 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE

Lab Sample ID: 140-27382-7

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	2.10		0.0787	0.0315	ug/Sample		05/20/22 05:00	05/20/22 18:35	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	103		25 - 150	05/20/22 05:00	05/20/22 18:35	1

Client Sample ID: T-2046 VEN CB OUTLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-27382-8

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.0593		0.0200	0.0110	ug/Sample		05/07/22 12:47	05/19/22 21:45	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	102		25 - 150	05/07/22 12:47	05/19/22 21:45	1

Client: The Chemours Company FC, LLC
Job ID: 140-27382-1
Project/Site: Fayetteville Emissions Test - VEN CB Outlet

Client Sample ID: T-2045,2044 VEN CB OUTLET R3 OTM-45 FH
Lab Sample ID: 140-27382-9

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	97.9		4.93	4.64	ug/Sample		05/09/22 08:48	05/18/22 20:39	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	103		25 - 150	05/09/22 08:48	05/18/22 20:39	1

Client Sample ID: T-2043,2042,2040 VEN CB OUTLET R3 OTM-45 BH
Lab Sample ID: 140-27382-10

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	45.4		20.0	11.0	ug/Sample		05/07/22 12:47	05/23/22 12:14	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	90		25 - 150	05/07/22 12:47	05/23/22 12:14	1

Client Sample ID: T-2041 VEN CB OUTLET R3 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE
Lab Sample ID: 140-27382-11

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.940		0.0762	0.0305	ug/Sample		05/20/22 05:00	05/20/22 18:44	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	103		25 - 150	05/20/22 05:00	05/20/22 18:44	1

Client Sample ID: T-2039 VEN CB OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
Lab Sample ID: 140-27382-12

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.0537		0.0200	0.0110	ug/Sample		05/07/22 12:47	05/19/22 22:11	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	119		25 - 150	05/07/22 12:47	05/19/22 22:11	1

Default Detection Limits

Client: The Chemours Company FC, LLC
Job ID: 140-27382-1
Project/Site: Fayetteville Emissions Test - VEN CB Outlet

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: 140-27382-1
Project/Site: Fayetteville Emissions Test - VEN CB Outlet

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)
140-27382-1	T-2059,2058 VEN CB OUTLET I	99
140-27382-2	T-2057,2056,2054 VEN CB OUTLET R1 OTM-45 BH	98
140-27382-3	T-2055 VEN CB OUTLET R1 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE	119
140-27382-4	T-2053 VEN CB OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	121
140-27382-5	T-2052,2051 VEN CB OUTLET R2 OTM-45 FH	96
140-27382-6	T-2050,2049,2047 VEN CB OUTLET R2 OTM-45 BH	108
140-27382-7	T-2048 VEN CB OUTLET R2 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE	103
140-27382-8	T-2046 VEN CB OUTLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	102
140-27382-9	T-2045,2044 VEN CB OUTLET R3 OTM-45 FH	103
140-27382-10	T-2043,2042,2040 VEN CB OUTLET R3 OTM-45 BH	90
140-27382-11	T-2041 VEN CB OUTLET R3 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE	103
140-27382-12	T-2039 VEN CB OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	119
LCS 140-61479/2-B	Lab Control Sample	92
LCS 140-61492/2-B	Lab Control Sample	90
LCS 140-61825/2-A	Lab Control Sample	102
LCSD 140-61479/3-B	Lab Control Sample Dup	81
LCSD 140-61492/3-B	Lab Control Sample Dup	90
LCSD 140-61825/3-A	Lab Control Sample Dup	110
MB 140-61479/14-B	Method Blank	102
MB 140-61479/1-B	Method Blank	91
MB 140-61492/1-B	Method Blank	93
MB 140-61825/1-A	Method Blank	107

Surrogate Legend

HFPODA = 13C3 HFPO-DA

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 140-61479/14-B
Matrix: Air
Analysis Batch: 61857

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61479

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		05/07/22 12:47	05/19/22 21:54	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*102*		*25 - 150*	*05/07/22 12:47*	*05/19/22 21:54*	*1*

Lab Sample ID: MB 140-61479/1-B
Matrix: Air
Analysis Batch: 61857

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61479

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		05/07/22 12:47	05/19/22 19:41	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*91*		*25 - 150*	*05/07/22 12:47*	*05/19/22 19:41*	*1*

Lab Sample ID: LCS 140-61479/2-B
Matrix: Air
Analysis Batch: 61857

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 61479

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0100	0.01168	J	ug/Sample		117	60 - 140		

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

Lab Sample ID: LCSD 140-61479/3-B
Matrix: Air
Analysis Batch: 61857

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 61479

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0100	0.01180	J	ug/Sample		118	60 - 140	1	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*81*		*25 - 150*

Lab Sample ID: MB 140-61492/1-B
Matrix: Air
Analysis Batch: 61817

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61492

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		05/09/22 08:48	05/18/22 19:28	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*93*		*25 - 150*	*05/09/22 08:48*	*05/18/22 19:28*	*1*

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

Lab Sample ID: LCS 140-61492/2-B
Matrix: Air
Analysis Batch: 61817

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 61492

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0200	0.02261		ug/Sample		113	60 - 140		

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

Lab Sample ID: LCSD 140-61492/3-B
Matrix: Air
Analysis Batch: 61817

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 61492

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0200	0.02418		ug/Sample		121	60 - 140	7	30

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

Lab Sample ID: MB 140-61825/1-A
Matrix: Air
Analysis Batch: 61905

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61825

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		05/20/22 05:00	05/20/22 17:34	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*107*		*25 - 150*	*05/20/22 05:00*	*05/20/22 17:34*	*1*

Lab Sample ID: LCS 140-61825/2-A
Matrix: Air
Analysis Batch: 61905

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 61825

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0100	0.009305		ug/Sample		93	60 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*102*		*25 - 150*

Lab Sample ID: LCSD 140-61825/3-A
Matrix: Air
Analysis Batch: 61905

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 61825

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0100	0.009893		ug/Sample		99	60 - 140	6	30

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

LCMS

Prep Batch: 61479

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27382-2	T-2057,2056,2054 VEN CB OUTLET R1 OTM-45	Total/NA	Air	None	
140-27382-4	T-2053 VEN CB OUTLET R1 OTM-45 BREAKTH	Total/NA	Air	None	
140-27382-6	T-2050,2049,2047 VEN CB OUTLET R2 OTM-45	Total/NA	Air	None	
140-27382-8	T-2046 VEN CB OUTLET R2 OTM-45 BREAKTH	Total/NA	Air	None	
140-27382-10	T-2043,2042,2040 VEN CB OUTLET R3 OTM-45	Total/NA	Air	None	
140-27382-12	T-2039 VEN CB OUTLET R3 OTM-45 BREAKTH	Total/NA	Air	None	
MB 140-61479/14-B	Method Blank	Total/NA	Air	None	
MB 140-61479/1-B	Method Blank	Total/NA	Air	None	
LCS 140-61479/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-61479/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Prep Batch: 61492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27382-1	T-2059,2058 VEN CB OUTLET R1 OTM-45 FH	Total/NA	Air	None	
140-27382-5	T-2052,2051 VEN CB OUTLET R2 OTM-45 FH	Total/NA	Air	None	
140-27382-9	T-2045,2044 VEN CB OUTLET R3 OTM-45 FH	Total/NA	Air	None	
MB 140-61492/1-B	Method Blank	Total/NA	Air	None	
LCS 140-61492/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-61492/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Cleanup Batch: 61530

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27382-2	T-2057,2056,2054 VEN CB OUTLET R1 OTM-45	Total/NA	Air	Split	61479
140-27382-4	T-2053 VEN CB OUTLET R1 OTM-45 BREAKTH	Total/NA	Air	Split	61479
140-27382-6	T-2050,2049,2047 VEN CB OUTLET R2 OTM-45	Total/NA	Air	Split	61479
140-27382-8	T-2046 VEN CB OUTLET R2 OTM-45 BREAKTH	Total/NA	Air	Split	61479
140-27382-10	T-2043,2042,2040 VEN CB OUTLET R3 OTM-45	Total/NA	Air	Split	61479
140-27382-12	T-2039 VEN CB OUTLET R3 OTM-45 BREAKTH	Total/NA	Air	Split	61479
MB 140-61479/14-B	Method Blank	Total/NA	Air	Split	61479
MB 140-61479/1-B	Method Blank	Total/NA	Air	Split	61479
LCS 140-61479/2-B	Lab Control Sample	Total/NA	Air	Split	61479
LCSD 140-61479/3-B	Lab Control Sample Dup	Total/NA	Air	Split	61479

Cleanup Batch: 61620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27382-1	T-2059,2058 VEN CB OUTLET R1 OTM-45 FH	Total/NA	Air	Split	61492
140-27382-5	T-2052,2051 VEN CB OUTLET R2 OTM-45 FH	Total/NA	Air	Split	61492
140-27382-9	T-2045,2044 VEN CB OUTLET R3 OTM-45 FH	Total/NA	Air	Split	61492
MB 140-61492/1-B	Method Blank	Total/NA	Air	Split	61492
LCS 140-61492/2-B	Lab Control Sample	Total/NA	Air	Split	61492
LCSD 140-61492/3-B	Lab Control Sample Dup	Total/NA	Air	Split	61492

Analysis Batch: 61817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27382-1	T-2059,2058 VEN CB OUTLET R1 OTM-45 FH	Total/NA	Air	537 (modified)	61818
140-27382-5	T-2052,2051 VEN CB OUTLET R2 OTM-45 FH	Total/NA	Air	537 (modified)	61818
140-27382-9	T-2045,2044 VEN CB OUTLET R3 OTM-45 FH	Total/NA	Air	537 (modified)	61818
MB 140-61492/1-B	Method Blank	Total/NA	Air	537 (modified)	61620
LCS 140-61492/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	61620
LCSD 140-61492/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	61620

LCMS

Cleanup Batch: 61818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27382-1	T-2059,2058 VEN CB OUTLET R1 OTM-45 FH	Total/NA	Air	Dilution	61620
140-27382-5	T-2052,2051 VEN CB OUTLET R2 OTM-45 FH	Total/NA	Air	Dilution	61620
140-27382-9	T-2045,2044 VEN CB OUTLET R3 OTM-45 FH	Total/NA	Air	Dilution	61620

Prep Batch: 61825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27382-3	T-2055 VEN CB OUTLET R1 OTM-45 IMPINGEF	Total/NA	Air	PFAS Prep	
140-27382-7	T-2048 VEN CB OUTLET R2 OTM-45 IMPINGEF	Total/NA	Air	PFAS Prep	
140-27382-11	T-2041 VEN CB OUTLET R3 OTM-45 IMPINGEF	Total/NA	Air	PFAS Prep	
MB 140-61825/1-A	Method Blank	Total/NA	Air	PFAS Prep	
LCS 140-61825/2-A	Lab Control Sample	Total/NA	Air	PFAS Prep	
LCSD 140-61825/3-A	Lab Control Sample Dup	Total/NA	Air	PFAS Prep	

Analysis Batch: 61857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27382-2	T-2057,2056,2054 VEN CB OUTLET R1 OTM-45	Total/NA	Air	537 (modified)	61858
140-27382-4	T-2053 VEN CB OUTLET R1 OTM-45 BREAKTH	Total/NA	Air	537 (modified)	61530
140-27382-6	T-2050,2049,2047 VEN CB OUTLET R2 OTM-45	Total/NA	Air	537 (modified)	61858
140-27382-8	T-2046 VEN CB OUTLET R2 OTM-45 BREAKTH	Total/NA	Air	537 (modified)	61530
140-27382-12	T-2039 VEN CB OUTLET R3 OTM-45 BREAKTH	Total/NA	Air	537 (modified)	61530
MB 140-61479/14-B	Method Blank	Total/NA	Air	537 (modified)	61530
MB 140-61479/1-B	Method Blank	Total/NA	Air	537 (modified)	61530
LCS 140-61479/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	61530
LCSD 140-61479/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	61530

Cleanup Batch: 61858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27382-2	T-2057,2056,2054 VEN CB OUTLET R1 OTM-45	Total/NA	Air	Dilution	61530
140-27382-6	T-2050,2049,2047 VEN CB OUTLET R2 OTM-45	Total/NA	Air	Dilution	61530

Analysis Batch: 61905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27382-3	T-2055 VEN CB OUTLET R1 OTM-45 IMPINGEF	Total/NA	Air	537 (modified)	61825
140-27382-7	T-2048 VEN CB OUTLET R2 OTM-45 IMPINGEF	Total/NA	Air	537 (modified)	61825
140-27382-11	T-2041 VEN CB OUTLET R3 OTM-45 IMPINGEF	Total/NA	Air	537 (modified)	61825
MB 140-61825/1-A	Method Blank	Total/NA	Air	537 (modified)	61825
LCS 140-61825/2-A	Lab Control Sample	Total/NA	Air	537 (modified)	61825
LCSD 140-61825/3-A	Lab Control Sample Dup	Total/NA	Air	537 (modified)	61825

Analysis Batch: 61945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27382-10	T-2043,2042,2040 VEN CB OUTLET R3 OTM-45	Total/NA	Air	537 (modified)	61950

Cleanup Batch: 61950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27382-10	T-2043,2042,2040 VEN CB OUTLET R3 OTM-45	Total/NA	Air	Dilution	61530

Client: The Chemours Company FC, LLC
Job ID: 140-27382-1
Project/Site: Fayetteville Emissions Test - VEN CB Outlet

Client Sample ID: T-2059,2058 VEN CB OUTLET R1 OTM-45 FH
Lab Sample ID: 140-27382-1

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	68 mL	61492	05/09/22 08:48	CAC	TAL KNX
Total/NA	Cleanup	Split			34 mL	10 mL	61620	05/12/22 13:53	DWS	TAL KNX
Total/NA	Cleanup	Dilution			10 uL	10000 uL	61818	05/18/22 18:38	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			61817	05/18/22 20:21	JRC	TAL KNX

Instrument ID: LCA

Client Sample ID: T-2057,2056,2054 VEN CB OUTLET R1 OTM-45 BH
Lab Sample ID: 140-27382-2

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	61479	05/07/22 12:47	CAC	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61530	05/10/22 08:58	CAC	TAL KNX
Total/NA	Cleanup	Dilution			5 uL	10000 uL	61858	05/19/22 16:37	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			61857	05/19/22 21:18	JRC	TAL KNX

Instrument ID: LCA

Client Sample ID: T-2055 VEN CB OUTLET R1 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE
Lab Sample ID: 140-27382-3

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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			0.00625 Sample	10 mL	61825	05/20/22 05:00	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61905	05/20/22 18:27	JRC	TAL KNX

Instrument ID: LCA

Client Sample ID: T-2053 VEN CB OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
Lab Sample ID: 140-27382-4

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	61479	05/07/22 12:47	CAC	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61530	05/10/22 08:58	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			61857	05/19/22 21:27	JRC	TAL KNX

Instrument ID: LCA

Client Sample ID: T-2052,2051 VEN CB OUTLET R2 OTM-45 FH
Lab Sample ID: 140-27382-5

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	83 mL	61492	05/09/22 08:48	CAC	TAL KNX
Total/NA	Cleanup	Split			42 mL	10 mL	61620	05/12/22 13:53	DWS	TAL KNX
Total/NA	Cleanup	Dilution			10 uL	10000 uL	61818	05/18/22 18:38	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			61817	05/18/22 20:30	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-2050,2049,2047 VEN CB OUTLET R2 OTM-45 BH
Lab Sample ID: 140-27382-6

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	61479	05/07/22 12:47	CAC	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61530	05/10/22 08:58	CAC	TAL KNX
Total/NA	Cleanup	Dilution			4 uL	10000 uL	61858	05/19/22 16:37	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			61857	05/19/22 21:36	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-2048 VEN CB OUTLET R2 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE
Lab Sample ID: 140-27382-7

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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			0.00635 Sample	10 mL	61825	05/20/22 05:00	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61905	05/20/22 18:35	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-2046 VEN CB OUTLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
Lab Sample ID: 140-27382-8

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	61479	05/07/22 12:47	CAC	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61530	05/10/22 08:58	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			61857	05/19/22 21:45	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-2045,2044 VEN CB OUTLET R3 OTM-45 FH
Lab Sample ID: 140-27382-9

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	75 mL	61492	05/09/22 08:48	CAC	TAL KNX
Total/NA	Cleanup	Split			38 mL	10 mL	61620	05/12/22 13:53	DWS	TAL KNX
Total/NA	Cleanup	Dilution			10 uL	10000 uL	61818	05/18/22 18:38	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			61817	05/18/22 20:39	JRC	TAL KNX

Instrument ID: LCA

Client Sample ID: T-2043,2042,2040 VEN CB OUTLET R3 OTM-45 BH
Lab Sample ID: 140-27382-10

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	61479	05/07/22 12:47	CAC	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61530	05/10/22 08:58	CAC	TAL KNX
Total/NA	Cleanup	Dilution			10 uL	10000 uL	61950	05/23/22 11:00	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			61945	05/23/22 12:14	JRC	TAL KNX

Instrument ID: LCA

Client Sample ID: T-2041 VEN CB OUTLET R3 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE
Lab Sample ID: 140-27382-11

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			0.00656 Sample	10 mL	61825	05/20/22 05:00	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61905	05/20/22 18:44	JRC	TAL KNX

Instrument ID: LCA

Client Sample ID: T-2039 VEN CB OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
Lab Sample ID: 140-27382-12

Date Collected: 05/05/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	61479	05/07/22 12:47	CAC	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61530	05/10/22 08:58	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			61857	05/19/22 22:11	JRC	TAL KNX

Instrument ID: LCA

Client Sample ID: Method Blank
Lab Sample ID: MB 140-61479/14-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	61479	05/07/22 12:47	CAC	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61530	05/10/22 08:58	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			61857	05/19/22 21:54	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-61479/1-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	61479	05/07/22 12:47	CAC	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61530	05/10/22 08:58	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			61857	05/19/22 19:41	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-61492/1-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	61492	05/09/22 08:48	CAC	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	61620	05/12/22 13:53	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61817	05/18/22 19:28	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-61825/1-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	61825	05/20/22 05:00	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61905	05/20/22 17:34	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-61479/2-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	61479	05/07/22 12:47	CAC	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61530	05/10/22 08:58	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			61857	05/19/22 19:50	JRC	TAL KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Job ID: 140-27382-1
Project/Site: Fayetteville Emissions Test - VEN CB Outlet

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-61492/2-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	61492	05/09/22 08:48	CAC	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	61620	05/12/22 13:53	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61817	05/18/22 19:37	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-61825/2-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	61825	05/20/22 05:00	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61905	05/20/22 17:43	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-61479/3-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	61479	05/07/22 12:47	CAC	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61530	05/10/22 08:58	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			61857	05/19/22 19:59	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-61492/3-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	61492	05/09/22 08:48	CAC	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	61620	05/12/22 13:53	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61817	05/18/22 19:46	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-61825/3-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	61825	05/20/22 05:00	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61905	05/20/22 17:51	JRC	TAL KNX
	Instrument ID: LCA									

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

Accreditation/Certification Summary

Client: The Chemours Company FC, LLC
Job ID: 140-27382-1
Project/Site: Fayetteville Emissions Test - VEN CB Outlet

Laboratory: Eurofins Knoxville

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

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-25
ANAB	Dept. of Energy	L2311.01	02-13-25
ANAB	ISO/IEC 17025	L2311	02-13-25
Arkansas DEQ	State	88-0688	06-17-22
California	State	2423	06-30-22
Colorado	State	TN00009	02-28-23
Connecticut	State	PH-0223	09-30-23
Florida	NELAP	E87177	06-30-22
Georgia (DW)	State	906	12-11-22
Hawaii	State	NA	12-11-22
Kansas	NELAP	E-10349	10-31-22
Kentucky (DW)	State	90101	12-31-22
Louisiana	NELAP	83979	06-30-22
Louisiana (DW)	State	LA019	12-31-22
Maryland	State	277	03-31-23
Michigan	State	9933	12-11-22
Nevada	State	TN00009	07-31-22
New Hampshire	NELAP	299919	01-17-23
New Jersey	NELAP	TN001	06-30-22
New York	NELAP	10781	03-31-23
North Carolina (DW)	State	21705	07-31-22
North Carolina (WW/SW)	State	64	12-31-22
Ohio VAP	State	CL0059	06-02-23
Oklahoma	State	9415	08-31-22
Oregon	NELAP	TNI0189	12-31-22
Pennsylvania	NELAP	68-00576	12-31-22
Tennessee	State	02014	12-11-22
Texas	NELAP	T104704380-18-12	08-31-22
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-19-00236	08-20-22
Utah	NELAP	TN00009	07-31-22
Virginia	NELAP	460176	09-14-22
Washington	State	C593	01-19-23
West Virginia (DW)	State	9955C	12-31-22
West Virginia DEP	State	345	04-30-23
Wisconsin	State	998044300	08-31-22

Method Summary

Client: The Chemours Company FC, LLC
Job ID: 140-27382-1
Project/Site: Fayetteville Emissions Test - VEN CB Outlet

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

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

Sample Summary

Client: The Chemours Company FC, LLC
Job ID: 140-27382-1
Project/Site: Fayetteville Emissions Test - VEN CB Outlet

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-27382-1	T-2059,2058 VEN CB OUTLET R1 OTM-45 FH	Air	05/05/22 00:00	05/06/22 18:55
140-27382-2	T-2057,2056,2054 VEN CB OUTLET R1 OTM-45 BH	Air	05/05/22 00:00	05/06/22 18:55
140-27382-3	T-2055 VEN CB OUTLET R1 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE	Air	05/05/22 00:00	05/06/22 18:55
140-27382-4	T-2053 VEN CB OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	05/05/22 00:00	05/06/22 18:55
140-27382-5	T-2052,2051 VEN CB OUTLET R2 OTM-45 FH	Air	05/05/22 00:00	05/06/22 18:55
140-27382-6	T-2050,2049,2047 VEN CB OUTLET R2 OTM-45 BH	Air	05/05/22 00:00	05/06/22 18:55
140-27382-7	T-2048 VEN CB OUTLET R2 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE	Air	05/05/22 00:00	05/06/22 18:55
140-27382-8	T-2046 VEN CB OUTLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	05/05/22 00:00	05/06/22 18:55
140-27382-9	T-2045,2044 VEN CB OUTLET R3 OTM-45 FH	Air	05/05/22 00:00	05/06/22 18:55
140-27382-10	T-2043,2042,2040 VEN CB OUTLET R3 OTM-45 BH	Air	05/05/22 00:00	05/06/22 18:55
140-27382-11	T-2041 VEN CB OUTLET R3 OTM-45 IMPINGERS 1,2 & 3 CONDENSATE	Air	05/05/22 00:00	05/06/22 18:55
140-27382-12	T-2039 VEN CB OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	05/05/22 00:00	05/06/22 18:55

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

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

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

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

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

Project Deliverables:
Report analytical results on TALS Report form Std_Tal_L4. Include "Field Sample Number' ALS Reports.

140-27382 Chain of Custody

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

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require-ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-2059 VEN CB OULTET R1 OTM-45 Filter (Combine with *T-2058*)	1	5/5/22		125 mL HDPE Wide-Mouth Bottle	**Particulate Filter (82.6 mm Whatman Glass Microfiber)** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using Method 8321A-HFPO.
T-2058 VEN CB OULTET R1 OTM-45 FH of Filter Holder & Probe Methanol Rinse (Combine with *T-2059*)	1	5/5/22		125 mL HDPE Wide-Mouth Bottle	**Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the Particulate Filter extraction.
T-2057 VEN CB OULTET R1 OTM-45 XAD-2 Resin Tube	1	5/5/22		XAD-2 Resin Tube	**XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using Method 8321A-HFPO.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require -ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-2056 VEN CB OULTET R1 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *T-2057*)	1	5/5/22		125 mL HDPE Wide-Mouth Bottle	**Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction. Analyze for HFPO-DA using Method 8321A-HFPO.
T-2055 VEN CB OULTET R1 OTM-45 Impingers 1,2 & 3 Condensate	1	5/5/22		500 mL HDPE Wide-Mouth Bottle	**Impinger #1, #2 & #3 Condensate** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Analyze the sample for HFPO-DA.
T-2054 VEN CB OULTET R1 OTM-45 Impinger Glassware MeOH Rinse (Combine with *T-2057*)	1	5/5/22		250 mL HDPE Wide-Mouth Bottle	**Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the XAD-2 Resin Extraction.
T-2053 VEN CB OULTET R1 OTM-45 Breakthrough XAD-2 Resin Tube	1	5/5/22		XAD-2 Resin Tube	**Breakthrough XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using Method 8321A-HFPO.
T-2052 VEN CB OULTET R2 OTM-45 Filter (Combine with *T-2051*)	2	5/5/22		125 mL HDPE Wide-Mouth Bottle	**Particulate Filter (82.6 mm Whatman Glass Microfiber)** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using Method 8321A-HFPO.
T-2051 VEN CB OULTET R2 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with *T-2052*)	2	5/5/22		125 mL HDPE Wide-Mouth Bottle	**Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the Particulate Filter extraction.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require-ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-2050 VEN CB OULTET R2 OTM-45 XAD-2 Resin Tube	2	5/5/22		XAD-2 Resin Tube	**XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using Method 8321A-HFPO.
T-2049 VEN CB OULTET R2 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *T-2050*)	2	5/5/22		125 mL HDPE Wide-Mouth Bottle	**Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction. Analyze for HFPO-DA using Method 8321A-HFPO.
T-2048 VEN CB OULTET R2 OTM-45 Impingers 1,2 & 3 Condensate	2	5/5/22		500 mL HDPE Wide-Mouth Bottle	**Impinger #1, #2 & #3 Condensate** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Analyze the sample for HFPO-DA.
T-2047 VEN CB OULTET R2 OTM-45 Impinger Glassware MeOH Rinse (Combine with *T-2050*)	2	5/5/22		250 mL HDPE Wide-Mouth Bottle	**Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the XAD-2 Resin Extraction.
T-2046 VEN CB OULTET R2 OTM-45 Breakthrough XAD-2 Resin Tube	2	5/5/22		XAD-2 Resin Tube	**Breakthrough XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using Method 8321A-HFPO.
T-2045 VEN CB OULTET R3 OTM-45 Filter (Combine with *T-2044*)	3	5/5/22		125 mL HDPE Wide-Mouth Bottle	**Particulate Filter (82.6 mm Whatman Glass Microfiber)** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using Method 8321A-HFPO.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require -ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-2044 VEN CB OULTET R3 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with *T-2045*)	3	5/5/22		125 mL HDPE Wide-Mouth Bottle	**Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the Particulate Filter extraction.
T-2043 VEN CB OULTET R3 OTM-45 XAD-2 Resin Tube	3	5/5/22		XAD-2 Resin Tube	**XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using Method 8321A-HFPO.
T-2042 VEN CB OULTET R3 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *T-2043*)	3	5/5/22		125 mL HDPE Wide-Mouth Bottle	**Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction. Analyze for HFPO-DA using Method 8321A-HFPO.
T-2041 VEN CB OULTET R3 OTM-45 Impingers 1,2 & 3 Condensate	3	5/5/22		500 mL HDPE Wide-Mouth Bottle	**Impinger #1, #2 & #3 Condensate** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Analyze the sample for HFPO-DA.
T-2040 VEN CB OULTET R3 OTM-45 Impinger Glassware MeOH Rinse (Combine with *T-2043*)	3	5/5/22		250 mL HDPE Wide-Mouth Bottle	**Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the XAD-2 Resin Extraction.
T-2039 VEN CB OULTET R3 OTM-45 Breakthrough XAD-2 Resin Tube	3	5/5/22		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.

Sample Receipt Log and Condition of the Samples Upon Receipt:

Please fill in the following information:	Comments (Please write "NONE" if no comment applicable)
(1) Record the identities of any samples that were listed on the RFA but were not found in the sample shipment.	NONE
(2) Record the sample shipping cooler temperature of all coolers transporting samples listed on this RFA:	RT 2.6/ CT 3.1°C
(3) Record any apparent sample loss/breakage.	NONE
(4) Record any unidentified samples transported with this shipment of samples:	NONE
(5) Indicate if all samples were received according to the project's required specifications (i.e. no nonconformances):	HAND DELIVERED, NO CUSTODY SEALS

Custody Transfer:

	Name	Company	Date/Time
Relinquished By:	Patrick Grady	Alliance	5/5/22/1730
Accepted By:	Doug Cahill	ETA KNOX	5/5/22 1730
Relinquished By:	Doug Cahill	ETA KNOX	5/6/22 1855
Accepted By:	Courtney Adkins	ETA Ky	5/6/22 1855
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?	Comments/Actions Taken
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 : SC71 Correction factor: +0.5°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	**Labeling Verified by:** **Date:**
10. Was the sampler identified on the COC?			✓	☐ Sampler Not Listed on COC	
11. Is the client and project name/# identified?	✓			☐ COC Incorrect/Incomplete	**pH test strip lot number:**
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	

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

Project #: ________ PM Instructions: ________

Sample Receiving Associate: [signature] Date: 5-7-22

QA026R32.doc, 062719

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ANALYTICAL REPORT

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

Laboratory Job ID: 140-27386-1
Client Project/Site: Fayetteville Emissions Test - VEN+Semi Works CB QC

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

Attn: Michael Aucoin

Authorized for release by:
5/24/2022 2:14:47 PM

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

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Definitions/Glossary

Client: The Chemours Company FC, LLC
Job ID: 140-27386-1
Project/Site: Fayetteville Emissions Test - VEN+Semi Works
CB QC

Qualifiers

LCMS

Qualifier	Qualifier Description
*5+	Isotope dilution analyte is outside acceptance limits, high biased.

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: 140-27386-1

Laboratory: Eurofins Knoxville

Narrative

Job Narrative
140-27386-1

Receipt

The samples were received on 5/6/2022 6:55 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 3.8º C.

LCMS

Methods 537 (modified), Dilution: LC/MS/MS Sampling Train Preparation and Analysis: The sampling train components are extracted and analyzed for Per- and Polyfluorinated Alkyl Substances (PFAS) using Eurofins TestAmerica Knoxville standard operating procedures KNOX-OP-0026 and KNOX-LC-0007.

The sampling trains are prepared as four analytical fractions: The particulate filter and front half of the filter holder, nozzle and probe solvent rinses are combined for one analytical fraction. The XAD-2 resin trap and back half of the filter holder, coil condenser and connecting glassware solvent rinses are also combined as a separate analytical fraction. The condensate, impinger contents and their related glassware DI water rinses make up the third analytical fraction. The breakthrough XAD module makes up the fourth analytical fraction.

The filters and XAD components are spiked with isotope dilution internal standards and the components are extracted with methanol/ammonium hydroxide by shaking for at least 18 hours. The extracts are concentrated to 10 mL and analyzed by HPLC/MS/MS. The condensates are spiked with the isotope dilution internal standards and extracted using either Solid-Phase Extraction (SPE) or diluting the water sample for analysis. Each extract at its final volume is 80:20 methanol:water

Sample results were calculated using the following equation:

Result, ηg/sample = (on-column concentration, ηg/mL) × (nominal final volume of extract (10 mL) / 1 sample) × DF × SF

Where:
DF = Instrument dilution factor
SF = Extraction Split Factor = (final volume of extract in the initial extraction batch / initial volume of extract in the “Split” batch)
For condensate, if less than the entire sample is extracted, the fraction of sample used replaces “1 sample”

Method 537 (modified): The internal standard (IS) recovery for the following sample; T-1990 VEN CB QC OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE PBT (140-27386-4) was outside QC criteria (low). A low bias of the internal standard may cause the Isotope Dilution Analyte (IDA) analytes to have high recoveries. The IS recovery was confirmed by re-injecting the sample on a different analytical batch.

Method 537 (modified): One or more Isotope Dilution Analyte (IDA) recoveries are above the method recommended limit for the following sample: T-1990 VEN CB QC OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE PBT (140-27386-4). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

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: 140-27386-1
Project/Site: Fayetteville Emissions Test - VEN+Semi Works
CB QC

Client Sample ID: T-1996,1995 VEN CB QC OTM-45 FH PBT
Lab Sample ID: 140-27386-1
Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		05/09/22 08:48	05/18/22 22:07	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*89*		*25 - 150*	*05/09/22 08:48*	*05/18/22 22:07*	*1*

Client Sample ID: T-1994,1993,1991 VEN CB QC OTM-45 BH PBT
Lab Sample ID: 140-27386-2
Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		05/16/22 13:00	05/22/22 12:12	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*131*		*25 - 150*	*05/16/22 13:00*	*05/22/22 12:12*	*1*

Client Sample ID: T-1992 VEN CB QC OTM-45 IMPINGERS 1,2 & 3 CONDENSATE PBT
Lab Sample ID: 140-27386-3
Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		05/20/22 05:00	05/20/22 20:12	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*101*		*25 - 150*	*05/20/22 05:00*	*05/20/22 20:12*	*1*

Client Sample ID: T-1990 VEN CB QC OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE PBT
Lab Sample ID: 140-27386-4
Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		05/16/22 13:00	05/21/22 23:01	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*157*	**5+*	*25 - 150*	*05/16/22 13:00*	*05/21/22 23:01*	*1*

Client Sample ID: T-1989 VEN CB QC OTM-45 DI WATER RB
Lab Sample ID: 140-27386-5
Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		05/20/22 05:00	05/20/22 20:21	1

Client Sample ID: T-1989 VEN CB QC OTM-45 DI WATER RB
Lab Sample ID: 140-27386-5

Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	109		25 - 150	05/20/22 05:00	05/20/22 20:21	1

Client Sample ID: T-1988 VEN CB QC OTM-45 MEOH WITH 5% NH4OH RB
Lab Sample ID: 140-27386-6

Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		05/16/22 13:00	05/21/22 23:10	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	103		25 - 150	05/16/22 13:00	05/21/22 23:10	1

Client Sample ID: T-1987,1986 VEN CB QC OTM-45 FH BT
Lab Sample ID: 140-27386-7

Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		05/09/22 08:48	05/18/22 22:16	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	100		25 - 150	05/09/22 08:48	05/18/22 22:16	1

Client Sample ID: T-1985,1984,1982 VEN CB QC OTM-45 BH BT
Lab Sample ID: 140-27386-8

Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		05/16/22 13:00	05/22/22 12:40	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	141		25 - 150	05/16/22 13:00	05/22/22 12:40	1

Client Sample ID: T-1983 VEN CB QC OTM-45 IMPINGERS 1,2 & 3 CONDENSATE BT
Lab Sample ID: 140-27386-9

Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		05/20/22 05:00	05/20/22 20:30	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	115		25 - 150	05/20/22 05:00	05/20/22 20:30	1

Client: The Chemours Company FC, LLC
Job ID: 140-27386-1
Project/Site: Fayetteville Emissions Test - VEN+Semi Works
CB QC

Client Sample ID: T-1981 VEN CB QC OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE BT

Lab Sample ID: 140-27386-10

Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		05/16/22 13:00	05/21/22 23:27	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*137*		*25 - 150*	*05/16/22 13:00*	*05/21/22 23:27*	*1*

Client Sample ID: T-2258 MEDIA CHECK FILTER

Lab Sample ID: 140-27386-11

Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		05/09/22 08:48	05/18/22 22:24	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*110*		*25 - 150*	*05/09/22 08:48*	*05/18/22 22:24*	*1*

Client Sample ID: T-2259 MEDIA CHECK XAD

Lab Sample ID: 140-27386-12

Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		05/16/22 13:00	05/21/22 23:36	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*115*		*25 - 150*	*05/16/22 13:00*	*05/21/22 23:36*	*1*

Default Detection Limits

Client: The Chemours Company FC, LLC
Job ID: 140-27386-1
Project/Site: Fayetteville Emissions Test - VEN+Semi Works C

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: 140-27386-1
Project/Site: Fayetteville Emissions Test - VEN+Semi Works
CB QC

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)
140-27386-1	T-1996,1995 VEN CB QC OTM-45 IMPINGERS 1,2 & 3 CONDENSATE PBT	89
140-27386-2	T-1994,1993,1991 VEN CB QC OTM-45 BH PBT	131
140-27386-3	T-1992 VEN CB QC OTM-45 BREAKTHROUGH XAD-2 RESI TUBE PBT	101
140-27386-4	T-1990 VEN CB QC OTM-45 DI WATER RB	157 *5+
140-27386-5	T-1989 VEN CB QC OTM-45 MEOH WITH 5% NH4OH RB	109
140-27386-6	T-1988 VEN CB QC OTM-45 FH BT	103
140-27386-7	T-1987,1986 VEN CB QC OTM-45 BH BT	100
140-27386-8	T-1985,1984,1982 VEN CB QC OTM-45 IMPINGERS 1,2 & 3 CONDENSATE BT	141
140-27386-9	T-1983 VEN CB QC OTM-45 BREAKTHROUGH XAD-2 RESI TUBE BT	115
140-27386-10	T-1981 VEN CB QC OTM-45 MEOH WITH 5% NH4OH RB	137
140-27386-11	T-2258 MEDIA CHECK FILTER	110
140-27386-12	T-2259 MEDIA CHECK XAD	115
LCS 140-61492/2-B	Lab Control Sample	90
LCS 140-61728/2-B	Lab Control Sample	90
LCS 140-61825/2-A	Lab Control Sample	102
LCSD 140-61492/3-B	Lab Control Sample Dup	90
LCSD 140-61728/3-B	Lab Control Sample Dup	101
LCSD 140-61825/3-A	Lab Control Sample Dup	110
MB 140-61492/14-B	Method Blank	99
MB 140-61492/1-B	Method Blank	93
MB 140-61728/14-B	Method Blank	103
MB 140-61728/1-B	Method Blank	94
MB 140-61825/14-A	Method Blank	110
MB 140-61825/1-A	Method Blank	107

Surrogate Legend

HFPODA = 13C3 HFPO-DA

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 140-61492/14-B
Matrix: Air
Analysis Batch: 61817

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61492

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		05/09/22 08:48	05/18/22 21:40	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*99*		*25 - 150*	*05/09/22 08:48*	*05/18/22 21:40*	*1*

Lab Sample ID: MB 140-61492/1-B
Matrix: Air
Analysis Batch: 61817

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61492

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		05/09/22 08:48	05/18/22 19:28	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*93*		*25 - 150*	*05/09/22 08:48*	*05/18/22 19:28*	*1*

Lab Sample ID: LCS 140-61492/2-B
Matrix: Air
Analysis Batch: 61817

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 61492

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0200	0.02261		ug/Sample		113	60 - 140		

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

Lab Sample ID: LCSD 140-61492/3-B
Matrix: Air
Analysis Batch: 61817

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 61492

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0200	0.02418		ug/Sample		121	60 - 140	7	30

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

Lab Sample ID: MB 140-61728/14-B
Matrix: Air
Analysis Batch: 61914

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61728

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		05/16/22 13:00	05/21/22 21:59	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*103*		*25 - 150*	*05/16/22 13:00*	*05/21/22 21:59*	*1*

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

Lab Sample ID: MB 140-61728/1-B
Matrix: Air
Analysis Batch: 61914

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61728

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		05/16/22 13:00	05/21/22 19:56	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*94*		*25 - 150*	*05/16/22 13:00*	*05/21/22 19:56*	*1*

Lab Sample ID: LCS 140-61728/2-B
Matrix: Air
Analysis Batch: 61914

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 61728

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0200	0.02358		ug/Sample		118	60 - 140		

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

Lab Sample ID: LCSD 140-61728/3-B
Matrix: Air
Analysis Batch: 61914

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 61728

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0200	0.02177		ug/Sample		109	60 - 140	8	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*101*		*25 - 150*

Lab Sample ID: MB 140-61825/14-A
Matrix: Air
Analysis Batch: 61905

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61825

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		05/20/22 05:00	05/20/22 19:37	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*110*		*25 - 150*	*05/20/22 05:00*	*05/20/22 19:37*	*1*

Lab Sample ID: MB 140-61825/1-A
Matrix: Air
Analysis Batch: 61905

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61825

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		05/20/22 05:00	05/20/22 17:34	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*107*		*25 - 150*	*05/20/22 05:00*	*05/20/22 17:34*	*1*

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

Lab Sample ID: LCS 140-61825/2-A
Matrix: Air
Analysis Batch: 61905

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 61825

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0100	0.009305		ug/Sample		93	60 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*102*		*25 - 150*

Lab Sample ID: LCSD 140-61825/3-A
Matrix: Air
Analysis Batch: 61905

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 61825

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0100	0.009893		ug/Sample		99	60 - 140	6	30

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

QC Association Summary

Client: The Chemours Company FC, LLC
Job ID: 140-27386-1
Project/Site: Fayetteville Emissions Test - VEN+Semi Works
CB QC

LCMS

Prep Batch: 61492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27386-1	T-1996,1995 VEN CB QC OTM-45 FH PBT	Total/NA	Air	None	
140-27386-7	T-1987,1986 VEN CB QC OTM-45 FH BT	Total/NA	Air	None	
140-27386-11	T-2258 MEDIA CHECK FILTER	Total/NA	Air	None	
MB 140-61492/14-B	Method Blank	Total/NA	Air	None	
MB 140-61492/1-B	Method Blank	Total/NA	Air	None	
LCS 140-61492/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-61492/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Cleanup Batch: 61620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27386-1	T-1996,1995 VEN CB QC OTM-45 FH PBT	Total/NA	Air	Split	61492
140-27386-7	T-1987,1986 VEN CB QC OTM-45 FH BT	Total/NA	Air	Split	61492
140-27386-11	T-2258 MEDIA CHECK FILTER	Total/NA	Air	Split	61492
MB 140-61492/14-B	Method Blank	Total/NA	Air	Split	61492
MB 140-61492/1-B	Method Blank	Total/NA	Air	Split	61492
LCS 140-61492/2-B	Lab Control Sample	Total/NA	Air	Split	61492
LCSD 140-61492/3-B	Lab Control Sample Dup	Total/NA	Air	Split	61492

Prep Batch: 61728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27386-2	T-1994,1993,1991 VEN CB QC OTM-45 BH PBT	Total/NA	Air	None	
140-27386-4	T-1990 VEN CB QC OTM-45 BREAKTHROUGH	Total/NA	Air	None	
140-27386-6	T-1988 VEN CB QC OTM-45 MEOH WITH 5% N	Total/NA	Air	None	
140-27386-8	T-1985,1984,1982 VEN CB QC OTM-45 BH BT	Total/NA	Air	None	
140-27386-10	T-1981 VEN CB QC OTM-45 BREAKTHROUGH	Total/NA	Air	None	
140-27386-12	T-2259 MEDIA CHECK XAD	Total/NA	Air	None	
MB 140-61728/14-B	Method Blank	Total/NA	Air	None	
MB 140-61728/1-B	Method Blank	Total/NA	Air	None	
LCS 140-61728/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-61728/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Cleanup Batch: 61788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27386-2	T-1994,1993,1991 VEN CB QC OTM-45 BH PBT	Total/NA	Air	Split	61728
140-27386-4	T-1990 VEN CB QC OTM-45 BREAKTHROUGH	Total/NA	Air	Split	61728
140-27386-6	T-1988 VEN CB QC OTM-45 MEOH WITH 5% N	Total/NA	Air	Split	61728
140-27386-8	T-1985,1984,1982 VEN CB QC OTM-45 BH BT	Total/NA	Air	Split	61728
140-27386-10	T-1981 VEN CB QC OTM-45 BREAKTHROUGH	Total/NA	Air	Split	61728
140-27386-12	T-2259 MEDIA CHECK XAD	Total/NA	Air	Split	61728
MB 140-61728/14-B	Method Blank	Total/NA	Air	Split	61728
MB 140-61728/1-B	Method Blank	Total/NA	Air	Split	61728
LCS 140-61728/2-B	Lab Control Sample	Total/NA	Air	Split	61728
LCSD 140-61728/3-B	Lab Control Sample Dup	Total/NA	Air	Split	61728

Analysis Batch: 61817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27386-1	T-1996,1995 VEN CB QC OTM-45 FH PBT	Total/NA	Air	537 (modified)	61620
140-27386-7	T-1987,1986 VEN CB QC OTM-45 FH BT	Total/NA	Air	537 (modified)	61620
140-27386-11	T-2258 MEDIA CHECK FILTER	Total/NA	Air	537 (modified)	61620
MB 140-61492/14-B	Method Blank	Total/NA	Air	537 (modified)	61620

LCMS (Continued)

Analysis Batch: 61817 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 140-61492/1-B	Method Blank	Total/NA	Air	537 (modified)	61620
LCS 140-61492/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	61620
LCSD 140-61492/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	61620

Prep Batch: 61825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27386-3	T-1992 VEN CB QC OTM-45 IMPINGERS 1,2 &	Total/NA	Air	PFAS Prep	
140-27386-5	T-1989 VEN CB QC OTM-45 DI WATER RB	Total/NA	Air	PFAS Prep	
140-27386-9	T-1983 VEN CB QC OTM-45 IMPINGERS 1,2 &	Total/NA	Air	PFAS Prep	
MB 140-61825/14-A	Method Blank	Total/NA	Air	PFAS Prep	
MB 140-61825/1-A	Method Blank	Total/NA	Air	PFAS Prep	
LCS 140-61825/2-A	Lab Control Sample	Total/NA	Air	PFAS Prep	
LCSD 140-61825/3-A	Lab Control Sample Dup	Total/NA	Air	PFAS Prep	

Analysis Batch: 61905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27386-3	T-1992 VEN CB QC OTM-45 IMPINGERS 1,2 &	Total/NA	Air	537 (modified)	61825
140-27386-5	T-1989 VEN CB QC OTM-45 DI WATER RB	Total/NA	Air	537 (modified)	61825
140-27386-9	T-1983 VEN CB QC OTM-45 IMPINGERS 1,2 &	Total/NA	Air	537 (modified)	61825
MB 140-61825/14-A	Method Blank	Total/NA	Air	537 (modified)	61825
MB 140-61825/1-A	Method Blank	Total/NA	Air	537 (modified)	61825
LCS 140-61825/2-A	Lab Control Sample	Total/NA	Air	537 (modified)	61825
LCSD 140-61825/3-A	Lab Control Sample Dup	Total/NA	Air	537 (modified)	61825

Analysis Batch: 61914

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27386-4	T-1990 VEN CB QC OTM-45 BREAKTHROUGH	Total/NA	Air	537 (modified)	61788
140-27386-6	T-1988 VEN CB QC OTM-45 MEOH WITH 5% N	Total/NA	Air	537 (modified)	61788
140-27386-10	T-1981 VEN CB QC OTM-45 BREAKTHROUGH	Total/NA	Air	537 (modified)	61788
140-27386-12	T-2259 MEDIA CHECK XAD	Total/NA	Air	537 (modified)	61788
MB 140-61728/14-B	Method Blank	Total/NA	Air	537 (modified)	61788
MB 140-61728/1-B	Method Blank	Total/NA	Air	537 (modified)	61788
LCS 140-61728/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	61788
LCSD 140-61728/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	61788

Analysis Batch: 61919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27386-2	T-1994,1993,1991 VEN CB QC OTM-45 BH PBT	Total/NA	Air	537 (modified)	61788
140-27386-8	T-1985,1984,1982 VEN CB QC OTM-45 BH BT	Total/NA	Air	537 (modified)	61788

Client: The Chemours Company FC, LLC
Job ID: 140-27386-1
Project/Site: Fayetteville Emissions Test - VEN+Semi Works
CB QC

Client Sample ID: T-1996,1995 VEN CB QC OTM-45 FH PBT
Lab Sample ID: 140-27386-1
Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	66 mL	61492	05/09/22 08:48	CAC	TAL KNX
Total/NA	Cleanup	Split			33 mL	10 mL	61620	05/12/22 13:53	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61817	05/18/22 22:07	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-1994,1993,1991 VEN CB QC OTM-45 BH PBT
Lab Sample ID: 140-27386-2
Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	61728	05/16/22 13:00	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61788	05/18/22 09:44	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61919	05/22/22 12:12	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-1992 VEN CB QC OTM-45 IMPINGERS 1,2 & 3 CONDENSATE PBT
Lab Sample ID: 140-27386-3
Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	61825	05/20/22 05:00	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61905	05/20/22 20:12	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-1990 VEN CB QC OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE PBT
Lab Sample ID: 140-27386-4
Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	61728	05/16/22 13:00	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61788	05/18/22 09:44	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61914	05/21/22 23:01	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-1989 VEN CB QC OTM-45 DI WATER RB
Lab Sample ID: 140-27386-5
Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	61825	05/20/22 05:00	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61905	05/20/22 20:21	JRC	TAL KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Job ID: 140-27386-1
Project/Site: Fayetteville Emissions Test - VEN+Semi Works
CB QC

Client Sample ID: T-1988 VEN CB QC OTM-45 MEOH WITH 5% NH4OH RB
Lab Sample ID: 140-27386-6

Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	61728	05/16/22 13:00	DWS	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	61788	05/18/22 09:44	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61914	05/21/22 23:10	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-1987,1986 VEN CB QC OTM-45 FH BT
Lab Sample ID: 140-27386-7

Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	122 mL	61492	05/09/22 08:48	CAC	TAL KNX
Total/NA	Cleanup	Split			61 mL	10 mL	61620	05/12/22 13:53	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61817	05/18/22 22:16	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-1985,1984,1982 VEN CB QC OTM-45 BH BT
Lab Sample ID: 140-27386-8

Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	61728	05/16/22 13:00	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61788	05/18/22 09:44	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61919	05/22/22 12:40	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-1983 VEN CB QC OTM-45 IMPINGERS 1,2 & 3 CONDENSATE BT
Lab Sample ID: 140-27386-9

Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	61825	05/20/22 05:00	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61905	05/20/22 20:30	JRC	TAL KNX
	Instrument ID: LCA									

Client: The Chemours Company FC, LLC
Job ID: 140-27386-1
Project/Site: Fayetteville Emissions Test - VEN+Semi Works
CB QC

Client Sample ID: T-1981 VEN CB QC OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE BT

Lab Sample ID: 140-27386-10
Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	61728	05/16/22 13:00	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61788	05/18/22 09:44	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61914	05/21/22 23:27	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-2258 MEDIA CHECK FILTER

Lab Sample ID: 140-27386-11
Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	61492	05/09/22 08:48	CAC	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	61620	05/12/22 13:53	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61817	05/18/22 22:24	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-2259 MEDIA CHECK XAD

Lab Sample ID: 140-27386-12
Date Collected: 05/04/22 00:00
Matrix: Air
Date Received: 05/06/22 18:55

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	61728	05/16/22 13:00	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61788	05/18/22 09:44	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61914	05/21/22 23:36	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank

Lab Sample ID: MB 140-61492/14-B
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	61492	05/09/22 08:48	CAC	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	61620	05/12/22 13:53	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61817	05/18/22 21:40	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank

Lab Sample ID: MB 140-61492/1-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	61492	05/09/22 08:48	CAC	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	61620	05/12/22 13:53	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61817	05/18/22 19:28	JRC	TAL KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Job ID: 140-27386-1
Project/Site: Fayetteville Emissions Test - VEN+Semi Works
CB QC

Client Sample ID: Method Blank
Lab Sample ID: MB 140-61728/14-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	61728	05/16/22 13:00	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61788	05/18/22 09:44	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61914	05/21/22 21:59	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-61728/1-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	61728	05/16/22 13:00	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61788	05/18/22 09:44	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61914	05/21/22 19:56	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-61825/14-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	61825	05/20/22 05:00	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61905	05/20/22 19:37	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-61825/1-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	61825	05/20/22 05:00	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61905	05/20/22 17:34	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-61492/2-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	61492	05/09/22 08:48	CAC	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	61620	05/12/22 13:53	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61817	05/18/22 19:37	JRC	TAL KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Job ID: 140-27386-1
Project/Site: Fayetteville Emissions Test - VEN+Semi Works
CB QC

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-61728/2-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	61728	05/16/22 13:00	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61788	05/18/22 09:44	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61914	05/21/22 20:05	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-61825/2-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	61825	05/20/22 05:00	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61905	05/20/22 17:43	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-61492/3-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	61492	05/09/22 08:48	CAC	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	61620	05/12/22 13:53	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61817	05/18/22 19:46	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-61728/3-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	61728	05/16/22 13:00	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	61788	05/18/22 09:44	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61914	05/21/22 20:13	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-61825/3-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	61825	05/20/22 05:00	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			61905	05/20/22 17:51	JRC	TAL KNX
	Instrument ID: LCA									

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

Accreditation/Certification Summary

Client: The Chemours Company FC, LLC
Job ID: 140-27386-1
Project/Site: Fayetteville Emissions Test - VEN+Semi Works
CB QC

Laboratory: Eurofins Knoxville

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

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-25
ANAB	Dept. of Energy	L2311.01	02-13-25
ANAB	ISO/IEC 17025	L2311	02-13-25
Arkansas DEQ	State	88-0688	06-17-22
California	State	2423	06-30-22
Colorado	State	TN00009	02-28-23
Connecticut	State	PH-0223	09-30-23
Florida	NELAP	E87177	06-30-22
Georgia (DW)	State	906	12-11-22
Hawaii	State	NA	12-11-22
Kansas	NELAP	E-10349	10-31-22
Kentucky (DW)	State	90101	12-31-22
Louisiana	NELAP	83979	06-30-22
Louisiana (DW)	State	LA019	12-31-22
Maryland	State	277	03-31-23
Michigan	State	9933	12-11-22
Nevada	State	TN00009	07-31-22
New Hampshire	NELAP	299919	01-17-23
New Jersey	NELAP	TN001	06-30-22
New York	NELAP	10781	03-31-23
North Carolina (DW)	State	21705	07-31-22
North Carolina (WW/SW)	State	64	12-31-22
Ohio VAP	State	CL0059	06-02-23
Oklahoma	State	9415	08-31-22
Oregon	NELAP	TNI0189	12-31-22
Pennsylvania	NELAP	68-00576	12-31-22
Tennessee	State	02014	12-11-22
Texas	NELAP	T104704380-18-12	08-31-22
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-19-00236	08-20-22
Utah	NELAP	TN00009	07-31-22
Virginia	NELAP	460176	09-14-22
Washington	State	C593	01-19-23
West Virginia (DW)	State	9955C	12-31-22
West Virginia DEP	State	345	04-30-23
Wisconsin	State	998044300	08-31-22

Method Summary

Client: The Chemours Company FC, LLC
Job ID: 140-27386-1
Project/Site: Fayetteville Emissions Test - VEN+Semi Works
CB QC

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL KNX
None	Leaching Procedure	TAL SOP	TAL KNX
None	Leaching Procedure for Filter	TAL SOP	TAL KNX
PFAS Prep	Preparation, Direct Inject PFAS	TAL-SAC	TAL KNX
Split	Source Air Split	None	TAL 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:

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

Sample Summary

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville Emissions Test - VEN+Semi Works
CB QC

Job ID: 140-27386-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-27386-1	T-1996,1995 VEN CB QC OTM-45 FH PBT	Air	05/04/22 00:00	05/06/22 18:55
140-27386-2	T-1994,1993,1991 VEN CB QC OTM-45 BH PBT	Air	05/04/22 00:00	05/06/22 18:55
140-27386-3	T-1992 VEN CB QC OTM-45 IMPINGERS 1,2 & 3 CONDENSATE PBT	Air	05/04/22 00:00	05/06/22 18:55
140-27386-4	T-1990 VEN CB QC OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE PBT	Air	05/04/22 00:00	05/06/22 18:55
140-27386-5	T-1989 VEN CB QC OTM-45 DI WATER RB	Air	05/04/22 00:00	05/06/22 18:55
140-27386-6	T-1988 VEN CB QC OTM-45 MEOH WITH 5% NH4OH RB	Air	05/04/22 00:00	05/06/22 18:55
140-27386-7	T-1987,1986 VEN CB QC OTM-45 FH BT	Air	05/04/22 00:00	05/06/22 18:55
140-27386-8	T-1985,1984,1982 VEN CB QC OTM-45 BH BT	Air	05/04/22 00:00	05/06/22 18:55
140-27386-9	T-1983 VEN CB QC OTM-45 IMPINGERS 1,2 & 3 CONDENSATE BT	Air	05/04/22 00:00	05/06/22 18:55
140-27386-10	T-1981 VEN CB QC OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE BT	Air	05/04/22 00:00	05/06/22 18:55
140-27386-11	T-2258 MEDIA CHECK FILTER	Air	05/04/22 00:00	05/06/22 18:55
140-27386-12	T-2259 MEDIA CHECK XAD	Air	05/04/22 00:00	05/06/22 18:55

Request for Analysis/Chain-of-Custody – RFA/COC #005
The Chemours Company – Fayetteville NC
VEN 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

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

Analytical Testing QC Requirements:
The Legend for 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 Destination:	Eurofins TestAmerica 5815 Middlebrook Pike Knoxville, TN 37921
Lab Phone Number:	865.291.3000
Courier:	FedEx or 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

140-27386 Chain of Custody

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require-ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-1996 VEN CB QC OTM-45 Particulate Filter PBT (Combine with *T-1995*)	QC	5/4/22	Proof Blank Train	250 mL HDPE Wide-Mouth Bottle	**Particulate Filter (82.6 mm Whatman Glass Microfiber)** OTM-45 Proof Blank Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front- Half Probe Rinse to assist the solvent extraction of the Filter sample. Analyze for HFPO-DA.
T-1995 VEN CB QC OTM-45 FH of Filter Holder & Probe MeOH Rinse PBT (Combine with *T-2308*)	QC	5/4/22	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.

Rec @ 3.3°C

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require-ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-1994 VEN CB QC OTM-45 XAD-2 Resin Tube PBT	QC	5/4/22	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.
T-1993 VEN CB QC OTM-45 BH of Filter Holder & Coil Condenser MeOH Rinse PBT (Combine with *T-1994*)	QC	5/4/22	Proof Blank Train	250 mL HDPE Wide-Mouth Bottle	**Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Proof Blank Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction. Analyze for HFPO-DA.
T-1992 VEN CB QC OTM-45 Impingers 1,2 & 3 Condensate PBT	QC	5/4/22	Proof Blank Train	1 Liter HDPE Wide-Mouth Bottle	**Impinger #1, #2 & #3 Condensate** OTM-45 Proof Blank Train HFPO-DA Analysis	**Knoxville**: Analyze for HFPO-DA.
T-1991 VEN CB QC OTM-45 Impinger Glassware MeOH Rinse PBT (Combine with *T-1994)*	QC	5/4/22	Proof Blank Train	250 mL HDPE Wide-Mouth Bottle	**Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Proof Blank Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the XAD-2 Resin Extraction.
T-1990 VEN CB QC OTM-45 Breakthrough XAD-2 Resin Tube PBT	QC	5/4/22	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.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require-ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-1989 VEN CB QC OTM-45 DI Water RB	QC	5/4/22	Reagent Blank	250 mL HDPE Wide-Mouth Bottle	**Deionized (DI) Water Reagent Blank** OTM-45 Reagent Blank HFPO-DA Analysis	**Knoxville**: Analyze for HFPO-DA.
T-1988 VEN CB QC OTM-45 MeOH with 5% NH_4OH RB	QC	5/4/22	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.
T-1987 VEN CB QC OTM-45 Particulate Filter BT (Combine with *T-1986*)	QC	5/4/22	Field Blank Train	250 mL HDPE Wide-Mouth Bottle	**Particulate Filter (82.6 mm Whatman Glass Microfiber)** OTM-45 Field Blank Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front- Half Probe Rinse to assist the solvent extraction of the Filter sample. Analyze for HFPO-DA.
T-1986 VEN CB QC OTM-45 FH of Filter Holder & Probe MeOH Rinse BT (Combine with *T-1987*)	QC	5/4/22	Field Blank Train	250 mL HDPE Wide-Mouth Bottle	**Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Field Blank Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the Filter extraction.
T-1985 VEN CB QC OTM-45 XAD-2 Resin Tube BT	QC	5/4/22	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.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require-ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-1984 VEN CB QC OTM-45 BH of Filter Holder & Coil Condenser MeOH Rinse BT (Combine with *T-1985*)	QC	5/4/22	Field Blank Train	250 mL HDPE Wide-Mouth Bottle	**Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Field Blank Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction. Analyze for HFPO-DA.
T-1983 VEN CB QC OTM-45 Impingers 1,2 & 3 Condensate BT	QC	5/4/22	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.
T-1982 VEN CB QC OTM-45 Impinger Glassware MeOH Rinse BT (Combine with *T-1985)*	QC	5/4/22	Field Blank Train	250 mL HDPE Wide-Mouth Bottle	**Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Field Blank Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the XAD-2 Resin Extraction.
T-1981 VEN CB QC OTM-45 Breakthrough XAD-2 Resin Tube BT	QC	5/4/22	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:	Rec @ 3.3°C (ET) 3.8°C (CT)
(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:	[signature]	Alliance	5/5/22 1730
Accepted By:	[signature]	ETA KNOX	5/5/22 1730
Relinquished By:	[signature]	ETA KNOX	5/6/22 1855
Accepted By:	[signature]	ETA Kno	5/6/22 18:55
Relinquished By:			
Accepted By:			
Relinquished By:			
Accepted By:			

Loc: 140
27386

EUROFINS/TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST **Log In Number:**

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
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 : SC71 Correction factor: +0.5°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	**Labeling Verified by:** **Date:**
11. Is the client and project name/# identified?	✓			☐ COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	✓			☐ COC No tests on COC	**pH test strip lot number:**
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	

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

Project #: ____________ PM Instructions: ____________

Sample Receiving Associate: [signature] Date: 5-7-22

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Appendix D

Method 3 Data

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Inlet
Project No. 2022-1651-001

Analysis Type	Assumed Ambient

The remaining consistuent is assumed to be nitrogen.

Method 3 Data

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Outlet
Project No. 2022-1651-001

Analysis Type	Assumed Ambient

The remaining consistuent is assumed to be nitrogen.

QA/QC Data

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Inlet
Project No. 2022-1651-001
Parameter HFPO-DA

Date	Nozzle ID	Nozzle Diameter (in.) #1	#2	#3	Dn (Average)	Difference	Criteria	Material
5/5/22	G-2	0.250	0.251	0.250	0.250	0.001	≤ 0.004 in.	glass

Date	Pitot ID	Evidence of damage?	Evidence of mis-alignment?	Calibration or Repair required?
5/5/22	P4-3	no	no	no

Date	Probe or Thermocouple ID	Reference Temp. (°F)	Indicated Temp. (°F)	Difference	Criteria	Probe Length
5/5/22	P4-3	68.0	68.0	0.0%	± 1.5 % (absolute)	5 '

Field Balance Check

Date	**05/05/22**					
Balance ID:	**Citizon**					
Test Weight ID:	**Troemner**					
Certified Weight (g):	**200.0**					
Measured Weight (g):	**199.8**					
Weight Difference (g):	**0.2**	--	--	--	--	--

Date	Barometric Pressure	Evidence of damage?	Reading Verified	Calibration or Repair required?	Weather Station Location
5/5/22	Weather Station	NA	NA	NA	Fayetteville, NC

Date	Meter Box ID	Positive Pressure Leak Check
5/5/22	4	Pass

Reagent	Lot#	Field Prep performed	Field Lot	Date	By
DiH2O	TA/Eurofins	No			
Methanol/Ammonia Mix	TA/Eurofins	No			

QA/QC Data

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Outlet
Project No. 2022-1651-001
Parameter HFPO-DA

Date	Nozzle ID	Nozzle Diameter (in.) #1	#2	#3	Dn (Average)	Difference	Criteria	Material
5/5/22	G-3	0.250	0.250	0.250	0.250	0.000	≤ 0.004 in.	glass

Date	Pitot ID	Evidence of damage?	Evidence of mis-alignment?	Calibration or Repair required?
5/5/22	P4-1	no	no	no

Date	Probe or Thermocouple ID	Reference Temp. (°F)	Indicated Temp. (°F)	Difference	Criteria	Probe Length
5/5/22	P4-1	68.0	69.0	0.2%	± 1.5 % (absolute)	5 '

Field Balance Check

Date	**05/05/22**					
Balance ID:	**Citizon**					
Test Weight ID:	**Troemner**					
Certified Weight (g):	**200.0**					
Measured Weight (g):	**199.8**					
Weight Difference (g):	**0.2**	--	--	--	--	--

Date	Barometric Pressure	Evidence of damage?	Reading Verified	Calibration or Repair required?	Weather Station Location
5/5/22	Weather Station	NA	NA	NA	Fayetteville, NC

Date	Meter Box ID	Positive Pressure Leak Check
5/5/22	14	Pass

Reagent	Lot#	Field Prep performed	Field Lot	Date	By
DiH2O	TA/Eurofins	No			
Methanol/Ammonia Mix	TA/Eurofins	No			

Equipment Detail - Dry Gas Meter

Console ID: MB-4
Meter S/N: 3477777
Critical Orifice S/N: 1393

Calibration Detail

Initial Barometric Pressure, in. Hg	(Pb_I)	29.34					
Final Barometric Pressure, in. Hg	(Pb_F)	29.34					
Average Barometric Pressure, in. Hg	(Pb)	29.34					
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	21.0	21.0	16.0	16.0
Initial DGM Volume, ft^3	(Vm_I)	195.748	203.773	211.802	222.185	232.573	248.926
Final DGM Volume, ft^3	(Vm_F)	203.773	211.802	222.185	231.933	248.926	265.286
Total DGM Volume, ft^3	(Vm)	8.025	8.029	10.383	9.748	16.353	16.360
Ambient Temperature, °F	(Ta)	62	61	61	62	62	62
Initial DGM Temperature, °F	(Tm_I)	62	63	64	66	63	64
Final DGM Temperature, °F	(Tm_F)	63	64	65	66	64	66
Average DGM Temperature, °F	(Tm)	63	64	65	66	64	65
Elapsed Time	(Θ)	20.00	20.00	16.00	15.00	15.00	15.00
Meter Orifice Pressure, in. WC	(ΔH)	0.44	0.44	1.20	1.20	3.60	3.60
Standard Meter volume, ft^3	(Vmstd)	7.9626	7.9513	10.2825	9.6261	16.3229	16.2832
Standard Critical Orifice Volume, ft^3	(Vcr)	7.8615	7.8690	10.2061	9.5590	16.1045	16.1045
Meter Correction Factor	(Y)	0.987	0.990	0.993	0.993	0.987	0.989
Tolerance	--	0.002	0.000	0.003	0.003	0.003	0.001
Orifice Calibration Value	(ΔH @)	1.589	1.583	1.643	1.641	1.754	1.749
Tolerance	--	0.070	0.076	0.017	0.019	0.094	0.089
Orifice Cal Check	--	0.44		0.50		0.50	
Meter Correction Factor	**(Y)**	**0.990**					
Orifice Calibration Value	**(ΔH @)**	**1.660**					
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	1	461	-0.2	1
100	560	99	559	0.2	1
300	760	299	759	0.1	1
400	860	395	855	0.6	5
500	960	495	955	0.5	5
600	1,060	595	1,055	0.5	5
700	1,160	698	1,158	0.2	2
800	1,260	796	1,256	0.3	4
900	1,360	896	1,356	0.3	4
1,000	1,460	998	1,458	0.1	2
1,100	1,560	1,098	1,558	0.1	2
1,200	1,660	1,196	1,656	0.2	4

Personnel

Calibration By: Steven Milo
Calibration Date: 3/1/2022
Expiration Date: 9/1/2022

Equipment Detail - Dry Gas Meter

Console ID: 14
Meter S/N: 1522
Critical Orifice S/N: 1393

Calibration Detail

Initial Barometric Pressure, in. Hg	(Pb_I)	29.12					
Final Barometric Pressure, in. Hg	(Pb_F)	29.12					
Average Barometric Pressure, in. Hg	(Pb)	29.12					
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)	23.0	23.0	20.5	20.5	16.0	16.0
Initial DGM Volume, ft^3	(Vm_I)	233.968	240.045	246.142	256.046	265.900	282.474
Final DGM Volume, ft^3	(Vm_F)	240.045	246.142	256.046	265.900	282.474	299.068
Total DGM Volume, ft^3	(Vm)	6.077	6.097	9.904	9.854	16.574	16.594
Ambient Temperature, °F	(Ta)	66	66	66	66	66	66
Initial DGM Temperature, °F	(Tm_I)	68	68	68	68	68	68
Final DGM Temperature, °F	(Tm_F)	68	68	68	68	68	68
Average DGM Temperature, °F	(Tm)	68	68	68	68	68	68
Elapsed Time	(Θ)	15.00	15.00	15.00	15.00	15.00	15.00
Meter Orifice Pressure, in. WC	(ΔH)	0.45	0.45	1.20	1.20	3.60	3.60
Standard Meter volume, ft^3	(Vmstd)	5.9223	5.9418	9.6702	9.6214	16.2805	16.3002
Standard Critical Orifice Volume, ft^3	(Vcr)	5.8296	5.8296	9.4512	9.4512	15.9228	15.9228
Meter Correction Factor	(Y)	0.984	0.981	0.977	0.982	0.978	0.977
Tolerance	--	0.004	0.001	0.003	0.002	0.002	0.003
Orifice Calibration Value	(ΔH @)	1.633	1.633	1.660	1.660	1.765	1.765
Tolerance	--	0.053	0.053	0.026	0.026	0.079	0.079
Orifice Cal Check	--	0.54		0.29		0.54	
Meter Correction Factor	**(Y)**	**0.980**					
Orifice Calibration Value	**(ΔH @)**	**1.686**					
Positive Pressure Leak Check		**Yes**					

Equipment Detail - Thermocouple Sensor

Reference Calibrator Make: Altek
Reference Calibrator Model: Series 22 TC Source
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
68	528	68	528	0.0	0
100	560	99	559	0.2	1
200	660	199	659	0.2	1
300	760	299	759	0.1	1
400	860	395	855	0.6	5
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	1,095	1,555	0.3	5
1,200	1,660	1,192	1,652	0.5	8

Personnel

Calibration By: Stephen Phipps
Calibration Date: 4/8/2022
Expiration Date: 10/8/2022

Appendix E

Vinyl Ethers North Operating Data

Date **5/5/2022**

Time	800	900	1000	1100	1200	1300	1400	1500	1600	1700
Stack Testing			Run 1: 841-1045		Run 2: 1112-1307		Run 3: 1350-1542			
VEN Product	PPVE									
VEN Precursor										
VEN Condensation (HFPO)										
VEN ABR	Burnout									
VEN Refining										
Stripper Column Vent										

Last Page of Report