Source Test Report

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

Sources Tested: VEN Carbon Bed
Test Date: June 29-30, 2022

Project No. AST-2022-2345

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

Regulatory Information

Permit No. Title V Permit No. 03735T48

Source Information

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

Contact Information

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

Facility Contact
Christel E. Compton
christel.e.compton@chemours.com

Test Company
Alliance Source Testing, LLC
6515A Basile Rowe
East Syracuse, NY 13057

Project Manager/Field Team Leader
Patrick Grady
patrick.grady@stacktest.com

QA/QC Manager
Heather Morgan
heather.morgan@stacktest.com

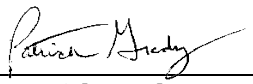
Report Coordinator
Leslie Ashley
leslie.ashley@stacktest.com

Analytical Laboratory
Eurofins TestAmerica
5815 Middlebrook Pike
Knoxville, TN 37921
Courtney Adkins
Courtney.adkins@testamericainc.com

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

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

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



August 3, 2022

Patrick Grady, QSTI
Project Manager
Alliance Technical Group, LLC

Date

TABLE OF CONTENTS

LIST OF TABLES

APPENDICES

Introduction

1.0 Introduction

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

1.1 Source and Control System Descriptions

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

1.2 Project Team

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

Table 1-1: Project Team

Facility Personnel	Christel Compton Eddie Vega
Alliance Personnel	Patrick Grady Antonio Anderson Kathleen DeMong Brian Goodhile Steve Milo Jeffrey Sheldon

Summary of Results

2.0 Summary of Results

Alliance conducted compliance testing at the Fayetteville Works facility in Fayetteville, North Carolina on June 29 and 30, 2022. Testing consisted of determining the emission rates of HFPO-DA at the inlet and outlet of the VEN carbon bed. The VEN unit was running a campaign of PPVE during the test program.

Table 2-1 provides a summary of the emission testing results. Note that during Run 1 there was a leak in the tower which affected the results of this test run. The emissions from this leak have been captured in the 12-month rolling calculation under accidental releases for June 29, 2022. Any difference between the summary results listed in the following tables and the detailed results contained in appendices is due to rounding for presentation.

Table 2-1: Summary of Results

Run Number	Run 1	Run 2	Run 3	Average
Date	**6/29/22**	**6/30/22**	**6/30/22**	**--**
HFPO-DA Data				
Outlet Emission Rate, lb/hr	4.7E-01	1.8E-02	3.3E-02	1.8E-01
Inlet Emission Rate, lb/hr	1.8E-03	4.4E-05	4.4E-05	6.3E-04
Reduction Efficiency, %	99.6	99.8	99.9	99.7

Testing Methodology

3.0 Testing Methodology

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

Table 3-1: Source Testing Methodology

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

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

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

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

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

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

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

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

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

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

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

3.4 HFPO-DA Sample Train and Equipment Preparation

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

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

3.5 HFPO-DA Sample Train Recovery

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

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

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

Appendix A

Location: Chemours Company - Fayetteville Works Facility, NC
Source: VEN Carbon Bed Inlet
Project No.: 2022-2345
Run No.: 1
Parameter: HFPO-DA

Meter Pressure (Pm), in. Hg

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

where,

Pb	30.20	= barometric pressure, in. Hg
ΔH	1.950	= 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	30.20	= barometric pressure, in. Hg
Pg	-3.30	= static pressure, in. H_2O
Ps	29.96	= in. Hg

Standard Meter Volume (Vmstd), dscf

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

where,

Y	0.985	= meter correction factor
Vm	74.197	= meter volume, cf
Pm	30.34	= absolute meter pressure, in. Hg
Tm	546.7	= absolute meter temperature, °R
Vmstd	71.542	= dscf

Standard Wet Volume (Vwstd), scf

$$Vwstd = 0.04716 \times Vlc$$

where,

Vlc	65.2	= volume of H_2O collected, ml
Vwstd	3.075	= scf

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

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

where,

Ts	88.3	= stack temperature, °F
Ps	29.96	= absolute stack gas pressure, in. Hg
BWSsat	0.045	= dimensionless

Moisture Fraction (BWS), dimensionless (measured)

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

where,

Vwstd	3.075	= standard wet volume, scf
Vmstd	71.542	= standard meter volume, dscf
BWS	0.041	= dimensionless

Moisture Fraction (BWS), dimensionless

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

where,

BWSsat	0.045	= moisture fraction (theoretical at saturated conditions)
BWSmsd	0.041	= moisture fraction (measured)
BWS	0.041	

Alliance SOURCE TESTING

Location: Chemours Company - Fayetteville Works Facility, NC
Source: VEN Carbon Bed Inlet
Project No.: 2022-2345
Run No.: 1
Parameter: HFPO-DA

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

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

where,

CO_2	0.1	= carbon dioxide concentration, %
O_2	20.9	= oxygen concentration, %
Md	28.85	= lb/lb mol

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

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

where,

Md	28.85	= molecular weight (DRY), lb/lb mol
BWS	0.041	= 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
$\Delta P^{1/2}$	0.642	= velocity head of stack gas, $(in.\ H_2O)^{1/2}$
Ts	548.0	= absolute stack temperature, °R
Ps	29.96	= absolute stack gas pressure, in. Hg
Ms	28.41	= molecular weight of stack gas, lb/lb mol
Vs	37.0	= ft/sec

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

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

where,

Vs	37.0	= stack gas velocity, ft/sec
As	7.07	= cross-sectional area of stack, ft^2
Qa	15,696	= acfm

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

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

where,

Qa	15,696	= average stack gas flow at stack conditions, acfm
BWS	0.041	= moisture fraction, dimensionless
Ps	29.96	= absolute stack gas pressure, in. Hg
Ts	548.0	= absolute stack temperature, °R
Qs	14,510	= 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	0.985	= meter correction factor, dimensionless
Θ	96	= run time, min.
Vm	74.197	= total meter volume, dcf
Tm	546.7	= absolute meter temperature, °R
ΔH@	1.827	= orifice meter calibration coefficient, in. H_2O
Pb	30.20	= barometric pressure, in. Hg
ΔH avg	1.950	= average pressure differential of orifice, in H_2O
Md	28.85	= molecular weight (DRY), lb/lb mol
$(\Delta H)^{1/2}$	1.396	= average squareroot pressure differential of orifice, $(in.\ H2O)^{1/2}$
Yqa	-3.1	= dimensionless

Alliance SOURCE TESTING

Location: Chemours Company - Fayetteville Works Facility, NC
Source: VEN Carbon Bed Inlet
Project No.: 2022-2345
Run No.: 1
Parameter: HFPO-DA

Volume of Nozzle (Vn), ft^3

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

where,

Ts	548.0	= absolute stack temperature, °R
Ps	29.96	= absolute stack gas pressure, in. Hg
Vlc	65.2	= volume of H_2O collected, ml
Vm	74.197	= meter volume, cf
Pm	30.34	= absolute meter pressure, in. Hg
Y	0.985	= meter correction factor, unitless
Tm	546.7	= absolute meter temperature, °R
Vn	77.384	= volume of nozzle, ft^3

Isokinetic Sampling Rate (I), %

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

where,

Vn	77.384	= nozzle volume, ft3
θ	96.0	= run time, minutes
An	0.00037	= area of nozzle, ft^2
Vs	37.0	= average velocity, ft/sec
I	98.5	= %

HFPO-DA Concentration (C), ng/dscm

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

where,

M	17,686,000	= HFPO-DA mass, ng
Vmstd	71.542	= standard meter volume, dscf
C_{NH3}	8730190.64	= ng/dscm

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

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

where,

M	17,686,000	= HFPO-DA mass, ng
Qs	14,510	= average stack gas flow at standard conditions, dscfm
Vmstd	71.542	= standard meter volume, dscf
ER	0.47	= lb/hr

Appendix B


Inlet

Emission Calculations

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Inlet
Project No. 2022-2345
Parameter HFPO-DA

Run Number		Run 1	Run 2	Run 3	Average
Date		6/29/22	6/30/22	6/30/22	--
Start Time		8:31	14:08	16:32	--
Stop Time		10:26	16:01	18:26	--
Run Time, min	(θ)	96.0	96.0	96.0	96.0
INPUT DATA					
Barometric Pressure, in. Hg	(Pb)	30.20	30.19	30.19	30.19
Meter Correction Factor	(Y)	0.985	0.985	0.985	0.985
Orifice Calibration Value	(ΔH @)	1.827	1.827	1.827	1.827
Meter Volume, ft^3	(Vm)	74.197	73.646	72.978	73.607
Meter Temperature, °F	(Tm)	87.0	97.6	97.8	94.1
Meter Temperature, °R	(Tm)	546.7	557.3	557.5	553.8
Meter Orifice Pressure, in. WC	(ΔH)	1.950	1.843	1.785	1.860
Volume H_2O Collected, mL	(Vlc)	65.2	60.9	67.0	64.4
Nozzle Diameter, in	(Dn)	0.260	0.260	0.260	0.260
Area of Nozzle, ft^2	(An)	0.0004	0.0004	0.0004	0.0004
FH HFPO-DA Mass, ng	$M_{(HFPODA)}$	366,000.0	286,000.0	237,000.0	296,333.3
BH HFPO-DA Mass, ng	$M_{(HFPODA)}$	14,100,000.0	366,000.0	439,000.0	4,968,333.3
Imp HFPO-DA Mass, ng	$M_{(HFPODA)}$	3,220,000.0	31,500.0	111,000.0	1,120,833.3
Breakthrough HFPO-DA Mass, ng	$M_{(HFPODA)}$	--	766.0	467,000.0	233,883.00
Total HFPO-DA Mass, ng	$M_{(HFPODA)}$	17,686,000.0	684,266.0	1,254,000.0	6,541,422.0
ISOKINETIC DATA					
Standard Meter Volume, ft^3	(Vmstd)	71.542	69.616	68.954	70.038
Standard Water Volume, ft^3	(Vwstd)	3.075	2.872	3.159	3.035
Moisture Fraction Measured	(BWSmsd)	0.041	0.040	0.044	0.042
Moisture Fraction @ Saturation	(BWSsat)	0.045	0.055	0.056	0.052
Moisture Fraction	(BWS)	0.041	0.040	0.044	0.042
Meter Pressure, in Hg	(Pm)	30.34	30.33	30.32	30.33
Volume at Nozzle, ft^3	(Vn)	77.384	76.157	74.732	76.09
Isokinetic Sampling Rate, (%)	(I)	98.5	99.5	99.6	99.2
DGM Calibration Check Value, (+/- 5%)	(Y_{qa})	-3.1	-1.7	-1.2	-2.0
EMISSION CALCULATIONS					
HFPO-DA Concentration, ng/dscm	$C_{(HFPODA)}$	8.7E+06	3.5E+05	6.4E+05	3.2E+06
HFPO-DA Emission Rate, lb/hr	$ER_{(HFPODA)}$	4.7E-01	1.8E-02	3.3E-02	1.8E-01

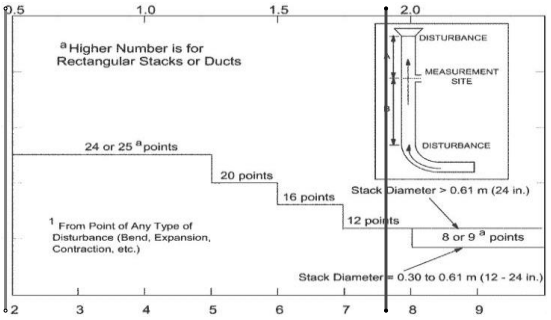
Underlined values are non-detected reported as the reporting limit.

Method 1 Data

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Inlet
Project No. 2022-2345
Date: 06/28/22

Stack Parameters

Duct Orientation:	Horizontal	
Duct Design:	Circular	
Distance from Far Wall to Outside of Port:	51.13	in
Nipple Length:	15.13	in
Depth of Duct:	36.00	in
Cross Sectional Area of Duct:	7.07	ft^2
No. of Test Ports:	2	
Distance A:	5.7	ft
Distance A Duct Diameters:	1.9	**(must be > 0.5)**
Distance B:	5.7	ft
Distance B Duct Diameters:	1.9	**(must be > 2)**
Minimum Number of Traverse Points:	24	
Actual Number of Traverse Points:	24	
Number of Readings per Point:	1	
Measurer (Initial and Date):	BAG-6/28/22	
Reviewer (Initial and Date):	AA-6/28/22	



CIRCULAR DUCT

LOCATION OF TRAVERSE POINTS

Number of traverse points on a diameter

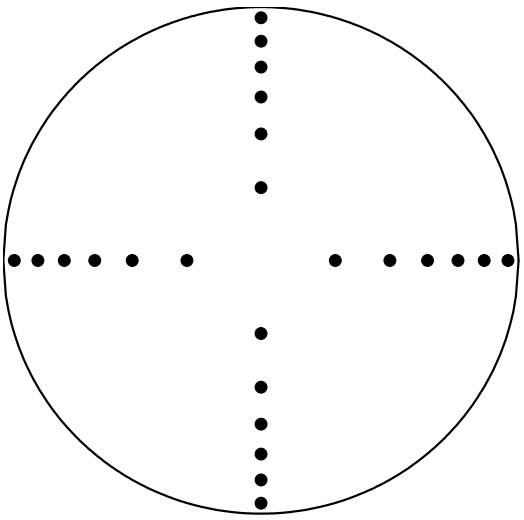
	2	3	4	5	6	7	8	9	10	11	12
1	14.6	--	6.7	--	4.4	--	3.2	--	2.6	--	2.1
2	85.4	--	25.0	--	14.6	--	10.5	--	8.2	--	6.7
3	--	--	75.0	--	29.6	--	19.4	--	14.6	--	11.8
4	--	--	93.3	--	70.4	--	32.3	--	22.6	--	17.7
5	--	--	--	--	85.4	--	67.7	--	34.2	--	25.0
6	--	--	--	--	95.6	--	80.6	--	65.8	--	35.6
7	--	--	--	--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

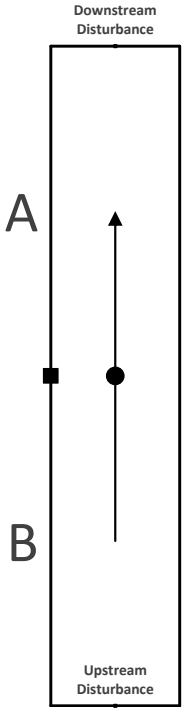
**Percent of stack diameter from inside wall to traverse point.*

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

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

Cross Sectional Area





Cyclonic Flow Check

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Inlet
Project No. 2022-2345
Date 06/29/22

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

Volumetric Flow Rate Data

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Inlet
Project No. 2022-2345
Parameter HFPO-DA

Run Number		Run 1	Run 2	Run 3	Average
Date		6/29/22	6/30/22	6/30/22	--
Start Time		8:31	14:08	16:32	--
Stop Time		10:26	16:01	18:26	--
Run Time, min		96.0	96.0	96.0	96.0
VELOCITY HEAD, in. WC					
Point 1		0.38	0.31	0.28	0.32
Point 2		0.37	0.35	0.27	0.33
Point 3		0.37	0.35	0.37	0.36
Point 4		0.42	0.38	0.37	0.39
Point 5		0.45	0.40	0.41	0.42
Point 6		0.45	0.40	0.41	0.42
Point 7		0.42	0.41	0.40	0.41
Point 8		0.41	0.38	0.39	0.39
Point 9		0.40	0.38	0.37	0.38
Point 10		0.40	0.36	0.37	0.38
Point 11		0.39	0.36	0.35	0.37
Point 12		0.38	0.36	0.35	0.36
Point 13		0.40	0.28	0.31	0.33
Point 14		0.42	0.27	0.32	0.34
Point 15		0.42	0.35	0.32	0.36
Point 16		0.45	0.35	0.39	0.40
Point 17		0.44	0.41	0.38	0.41
Point 18		0.46	0.43	0.43	0.44
Point 19		0.46	0.43	0.44	0.44
Point 20		0.42	0.48	0.44	0.45
Point 21		0.41	0.52	0.43	0.45
Point 22		0.41	0.54	0.42	0.46
Point 23		0.40	0.44	0.43	0.42
Point 24		0.38	0.40	0.41	0.40
CALCULATED DATA					
Square Root of ΔP, $(\text{in. WC})^{1/2}$	(ΔP)	0.642	0.622	0.613	0.626
Pitot Tube Coefficient	(Cp)	0.840	0.840	0.840	0.840
Barometric Pressure, in. Hg	(Pb)	30.20	30.19	30.19	30.19
Static Pressure, in. WC	(Pg)	-3.30	-3.30	3.00	-1.20
Stack Pressure, in. Hg	(Ps)	29.96	29.95	30.41	30.11
Stack Cross-sectional Area, ft^2	(As)	7.07	7.07	7.07	7.07
Temperature, °F	(Ts)	88.3	95.3	96.2	93.2
Temperature, °R	(Ts)	548.0	554.9	555.8	552.906
Moisture Fraction Measured	(BWSmsd)	0.041	0.040	0.044	0.042
Moisture Fraction @ Saturation	(BWSsat)	0.045	0.055	0.056	0.052
Moisture Fraction	(BWS)	0.041	0.040	0.044	0.042
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	28.42	28.38	28.40
Velocity, ft/sec	(Vs)	37.0	36.1	35.3	36.1
VOLUMETRIC FLOW RATE					
At Stack Conditions, acfm	(Qa)	15,696	15,291	14,986	15,324
At Standard Conditions, dscfm	(Qs)	14,510	13,976	13,826	14,104

Method 4 Data

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Inlet
Project No. 2022-2345
Parameter HFPO-DA
Analysis Gravimetric

Run 1	**Date:**	6/29/22							
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	303.1	511.4	754.5	772.3	725.3	531.6	298.8	862.7	4759.7
Final Mass, g	322.2	531.8	753.0	771.7	726.2	534.2	310.7	875.1	4824.9
Gain	19.1	20.4	-1.5	-0.6	0.9	2.6	11.9	12.4	65.2
Run 2	**Date:**	6/30/22							
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	300.7	481.3	760.0	780.7	756.5	475.9	296.3	927.5	4778.9
Final Mass, g	321.3	498	757.1	781.1	756.8	478.2	306	941.3	4839.8
Gain	20.6	16.7	-2.9	0.4	0.3	2.3	9.7	13.8	60.9
Run 3	**Date:**	6/30/22							
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	304.6	532.2	756.2	771.6	725.5	512.3	313.5	819	4734.9
Final Mass, g	329.1	547.2	753.7	772.0	725.8	515.4	327.4	831.3	4801.9
Gain	24.5	15.0	-2.5	0.4	0.3	3.1	13.9	12.3	67.0

Alliance SOURCE TESTING

Isokinetic Field Data

Location:	Chemours Company - Fayetteville Works Facility, N	**Start Time:**	8:31	**Source:**	VEN Carbon Bed Inlet
Date:	6/29/22 — Run 1 — VALID	**End Time:**	10:26	**Project No.:**	2022-2345 — **Parameter:** HFPO-DA

STACK DATA (EST)			EQUIPMENT			STACK DATA (EST)			FILTER NO.	STACK DATA (FINAL)		MOIST. DATA
Moisture:	2.0	% est.	Meter Box ID:	MB #7		Est. Tm:	85	°F		Pb:	30.20 in. Hg	Vlc (ml)
Barometric:	30.10	in. Hg	Y:	0.985		Est. Ts:	85	°F		Pg:	-3.30 in. WC	65.2
Static Press:	-8.60	in. WC	ΔH @ (in.WC):	1.827		Est. ΔP:	0.61	in. WC		O_2:	20.9 %	K-FACTOR
Stack Press:	29.47	in. Hg	Probe ID:	TC 7D		Est. Dn:	0.236	in.		CO_2:	0.1 %	4.704
CO_2:	0.1	%	Liner Material:	glass		Target Rate:	0.78	scfm			Check Pt. / Initial / Final / Corr.	
O_2:	20.9	%	Pitot ID:	P4-1		LEAK CHECK:	Pre	Mid 1 / Mid 2 / Mid 3 / Post			Mid 1 (cf) 2.740 2.857 0.117	
N_2/CO:	79.0	%	Pitot Cp/Type:	0.840	S-type	Leak Rate (cfm):	0.002	0.002 / 0.002 / -- / 0.002			Mid 2 (cf) 2.857 2.948 0.091	
Md:	28.85	lb/lb-mole	Nozzle ID:	G-5	glass	Vacuum (in Hg):	10	12 / 12 / -- / 12			Mid 3 (cf) --	
Ms:	28.63	lb/lb-mole	Nozzle Dn (in.):	0.260		Pitot Tube:	Pass	-- / -- / -- / Pass			Mid-Point Leak Check Vol (cf): 0.208	

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)
					78	78				77	78	78	79		
A-1	0.00	4.00	666.308	0.38	75	84	1.76	1.80	3	92	93	66	52	99.8	35.53
2	4.00	8.00	669.300	0.37	77	85	1.72	1.70	3	94	92	54	56	97.7	35.09
3	8.00	12.00	672.200	0.37	80	85	1.73	1.70	3	96	93	51	55	100.5	35.09
4	12.00	16.00	675.200	0.42	82	85	1.96	2.00	4	94	92	50	52	95.6	37.39
5	16.00	20.00	678.250	0.45	82	86	2.10	2.10	4	92	93	50	53	97.0	38.74
6	20.00	24.00	681.450	0.45	83	86	2.10	2.10	5	92	92	50	54	95.3	38.74
7	24.00	28.00	684.600	0.42	83	87	1.96	2.00	5	93	93	50	56	97.2	37.46
8	28.00	32.00	687.700	0.41	85	87	1.92	2.00	5	95	93	51	56	98.0	37.01
9	32.00	36.00	690.800	0.40	86	88	1.87	1.90	5	93	94	52	55	95.9	36.59
10	36.00	40.00	693.800	0.40	86	88	1.87	1.90	5	91	93	51	52	99.1	36.59
11	40.00	44.00	696.900	0.39	87	89	1.83	1.80	5	96	98	52	54	90.6	36.16
12	44.00	48.00	699.700	0.38	88	89	1.78	1.80	5	100	98	52	54	99.4	35.70
B-1	48.00	52.00	702.740	0.40	87	90	1.87	1.90	6	95	100	54	55	94.6	36.66
2	52.00	56.00	705.700	0.42	88	90	1.97	2.00	6	100	97	52	52	99.7	37.56
3	56.00	60.00	708.900	0.42	88	90	1.97	2.00	6	100	98	53	53	102.8	37.56
4	60.00	64.00	712.200	0.45	90	90	2.12	2.10	7	100	98	54	57	93.0	38.88
5	64.00	68.00	715.300	0.44	91	90	2.07	2.10	7	98	96	55	55	99.9	38.45
6	68.00	72.00	718.600	0.46	91	90	2.17	2.20	8	97	98	54	52	94.8	39.31
7	72.00	76.00	721.800	0.46	93	90	2.17	2.20	8	96	96	54	53	97.4	39.31
8	76.00	80.00	725.100	0.42	93	90	1.99	2.00	7	98	98	55	56	95.7	37.56
9	80.00	84.00	728.200	0.41	93	90	1.94	1.90	7	96	96	56	54	100.0	37.11
10	84.00	88.00	731.400	0.41	94	90	1.94	1.90	7	99	96	57	58	98.2	37.11
11	88.00	92.00	734.550	0.40	93	90	1.89	1.90	7	100	96	56	57	99.6	36.66
12	92.00	96.00	737.700	0.38	93	90	1.80	1.80	7	96	96	56	58	97.7	35.73
	Final DGM:		740.713												

RESULTS	Run Time		Vm		ΔP		Tm		Ts		Max Vac	ΔH		%ISO	BWS	Y_{qa}
	96.0	min	74.197	ft^3	0.41	in. WC	87.0	°F	88.3	°F	8	1.950	in. WC	98.5	0.041	-3.1

Alliance SOURCE TESTING

Isokinetic Field Data

Location:	Chemours Company - Fayetteville Works Facility, N	**Start Time:**	14:08	**Source:**	VEN Carbon Bed Inlet
Date:	6/30/22 — Run 2 — VALID	**End Time:**	16:01	**Project No.:**	2022-2345 — **Parameter:** HFPO-DA

STACK DATA (EST)			EQUIPMENT			STACK DATA (EST)			FILTER NO.	STACK DATA (FINAL)		MOIST. DATA
Moisture:	2.0	% est.	Meter Box ID:	MB #7		Est. Tm:	87	°F		Pb:	30.19 in. Hg	Vlc (ml)
Barometric:	30.10	in. Hg	Y:	0.985		Est. Ts:	88	°F		Pg:	-3.30 in. WC	60.9
Static Press:	-8.60	in. WC	ΔH @ (in.WC):	1.827		Est. ΔP:	0.41	in. WC		O_2:	20.9 %	K-FACTOR
Stack Press:	29.47	in. Hg	Probe ID:	TC 7D		Est. Dn:	0.260	in.		CO_2:	0.1 %	4.69
CO_2:	0.1	%	Liner Material:	glass		Target Rate:	0.78	scfm				
O_2:	20.9	%	Pitot ID:	P4-1		LEAK CHECK:	Pre	Mid 1	Mid 2	Mid 3	Post	
N_2/CO:	79.0	%	Pitot Cp/Type:	0.840	S-type	Leak Rate (cfm):	0.005	0.002	0.002	--	0.002	
Md:	28.85	lb/lb-mole	Nozzle ID:	G-5	glass	Vacuum (in Hg):	12	10	10	--	14	
Ms:	28.63	lb/lb-mole	Nozzle Dn (in.):	0.260		Pitot Tube:	Pass	--	--	--	Pass	

	Check Pt.	Initial	Final	Corr.
Mid 1 (cf)	7.751	7.863	0.112	
Mid 2 (cf)	7.863	7.949	0.086	
Mid 3 (cf)			--	
Mid-Point Leak Check Vol (cf):			0.198	

Sample Pt.	Sample Time (minutes) Begin	End	Dry Gas Meter Reading (ft^3)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F) DGM Average Amb. --	Stack Amb. --	Orifice Press. ΔH (in. WC) Ideal	Actual	Pump Vac (in. Hg)	Gas Temperatures (°F) Probe Amb. --	Filter Amb. --	Imp Exit Amb. --	Aux Amb. --	% ISO	Vs (fps)
A-1	0.00	4.00	741.778	0.31	91	95	1.45	1.50	4	101	103	66	64	102.1	32.42
2	4.00	8.00	744.600	0.35	94	95	1.64	1.60	4	103	104	64	56	98.2	34.44
3	8.00	12.00	747.500	0.35	94	95	1.64	1.60	4	103	103	64	57	99.9	34.44
4	12.00	16.00	750.450	0.38	96	95	1.79	1.80	5	101	103	61	57	97.2	35.89
5	16.00	20.00	753.450	0.40	97	95	1.89	1.90	5	100	103	59	54	96.2	36.82
6	20.00	24.00	756.500	0.40	97	95	1.89	1.90	5	100	101	58	54	97.8	36.82
7	24.00	28.00	759.600	0.41	97	95	1.94	1.94	5	102	101	57	54	96.6	37.28
8	28.00	32.00	762.700	0.38	97	95	1.79	1.80	5	102	101	57	57	100.3	35.89
9	32.00	36.00	765.800	0.38	97	95	1.79	1.80	5	101	102	57	57	97.1	35.89
10	36.00	40.00	768.800	0.36	98	95	1.70	1.70	5	102	101	57	58	99.5	34.93
11	40.00	44.00	771.800	0.36	98	95	1.70	1.70	5	102	101	58	56	97.9	34.93
12	44.00	48.00	774.750	0.36	98	95	1.70	1.70	6	100	103	58	53	99.5	34.93
B-1	48.00	52.00	777.751	0.28	96	95	1.32	1.30	6	101	107	66	56	103.7	30.81
2	52.00	56.00	780.500	0.27	96	95	1.27	1.30	6	105	108	60	54	103.7	30.25
3	56.00	60.00	783.200	0.35	98	95	1.66	1.70	7	104	107	60	53	97.6	34.44
4	60.00	64.00	786.100	0.35	98	95	1.66	1.70	7	103	105	58	54	100.9	34.44
5	64.00	68.00	789.100	0.41	99	95	1.94	1.90	8	101	103	59	52	96.2	37.28
6	68.00	72.00	792.200	0.43	99	95	2.04	2.00	8	101	102	60	52	97.0	38.18
7	72.00	76.00	795.400	0.43	100	96	2.04	2.00	8	100	102	61	53	96.9	38.21
8	76.00	80.00	798.600	0.48	100	96	2.27	2.30	8	100	103	61	53	94.7	40.37
9	80.00	84.00	801.900	0.52	100	96	2.46	2.50	10	101	102	60	54	96.5	42.02
10	84.00	88.00	805.400	0.54	101	96	2.56	2.60	10	100	102	61	57	97.3	42.82
11	88.00	92.00	809.000	0.44	101	96	2.09	2.10	8	100	102	63	58	101.7	38.66
12	92.00	96.00	812.400	0.40	101	96	1.90	1.90	8	102	102	64	59	101.0	36.86
	Final DGM:		815.622												

RESULTS	Run Time		Vm		ΔP		Tm		Ts		Max Vac	ΔH		%ISO	BWS	Y_{qa}
	96.0	min	73.646	ft^3	0.39	in. WC	97.6	°F	95.3	°F	10	1.843	in. WC	99.5	0.040	-1.7

Alliance SOURCE TESTING

Isokinetic Field Data

Location:	Chemours Company - Fayetteville Works Facility, N	**Start Time:**	16:32	**Source:**	VEN Carbon Bed Inlet
Date:	6/30/22 — Run 3 — VALID	**End Time:**	18:26	**Project No.:**	2022-2345 — **Parameter:** HFPO-DA

STACK DATA (EST)			EQUIPMENT			STACK DATA (EST)			FILTER NO.	STACK DATA (FINAL)		MOIST. DATA
Moisture:	2.0	% est.	Meter Box ID:	MB #7		Est. Tm:	98	°F		Pb:	30.19 in. Hg	Vlc (ml)
Barometric:	30.10	in. Hg	Y:	0.985		Est. Ts:	95	°F		Pg:	3.00 in. WC	67.0
Static Press:	-8.60	in. WC	ΔH @ (in.WC):	1.827		Est. ΔP:	0.39	in. WC		O_2:	20.9 %	K-FACTOR
Stack Press:	29.47	in. Hg	Probe ID:	TC 7D		Est. Dn:	0.262	in.		CO_2:	0.1 %	4.725
CO_2:	0.1	%	Liner Material:	glass		Target Rate:	0.78	scfm				
O_2:	20.9	%	Pitot ID:	P4-1		LEAK CHECK:	Pre	Mid 1	Mid 2 / Mid 3	Post		
N_2/CO:	79.0	%	Pitot Cp/Type:	0.840	S-type	Leak Rate (cfm):	0.005	0.006	0.005 / --	0.003		
Md:	28.85	lb/lb-mole	Nozzle ID:	G-5	glass	Vacuum (in Hg):	12	9	10 / --	11		
Ms:	28.63	lb/lb-mole	Nozzle Dn (in.):	0.260		Pitot Tube:	Pass	--	-- / --	Pass		

Check Pt.	Initial	Final	Corr.
Mid 1 (cf)	2.519	2.601	0.082
Mid 2 (cf)	2.601	2.684	0.083
Mid 3 (cf)			--
Mid-Point Leak Check Vol (cf):			0.165

Sample Pt.	Sample Time (minutes) Begin	End	Dry Gas Meter Reading (ft^3)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F) DGM Average Amb.	Stack Amb.	Orifice Press. ΔH (in. WC) Ideal	Actual	Pump Vac (in. Hg)	Gas Temperatures (°F) Probe Amb.	Filter Amb.	Imp Exit Amb.	Aux Amb.	% ISO	Vs (fps)
A-1	0.00	4.00	816.310	0.28	97	96	1.32	1.30	5	105	105	66	60	101.3	30.84
2	4.00	8.00	819.000	0.27	99	96	1.28	1.30	5	107	108	63	58	107.0	30.28
3	8.00	12.00	821.800	0.37	100	96	1.75	1.80	5	106	106	60	62	94.7	35.45
4	12.00	16.00	824.700	0.37	100	97	1.75	1.80	5	107	104	60	63	101.3	35.48
5	16.00	20.00	827.800	0.41	100	97	1.94	1.90	5	104	103	63	63	96.2	37.35
6	20.00	24.00	830.900	0.41	100	97	1.94	1.90	6	101	102	58	54	96.2	37.35
7	24.00	28.00	834.000	0.40	100	98	1.89	1.90	6	100	102	57	58	97.5	36.92
8	28.00	32.00	837.100	0.39	100	97	1.84	1.80	6	100	103	55	54	98.6	36.43
9	32.00	36.00	840.200	0.37	101	97	1.75	1.80	6	103	102	54	56	104.4	35.48
10	36.00	40.00	843.400	0.37	101	97	1.75	1.75	6	103	101	54	57	101.1	35.48
11	40.00	44.00	846.500	0.35	101	97	1.66	1.70	6	101	102	54	54	100.6	34.51
12	44.00	48.00	849.500	0.35	101	97	1.66	1.70	6	102	103	54	55	101.2	34.51
B-1	48.00	52.00	852.519	0.31	96	96	1.46	1.50	6	100	104	64	56	99.8	32.45
2	52.00	56.00	855.300	0.32	96	96	1.51	1.50	6	105	106	55	53	98.9	32.97
3	56.00	60.00	858.100	0.32	96	96	1.51	1.50	6	106	107	54	54	95.4	32.97
4	60.00	64.00	860.800	0.39	96	96	1.83	1.80	7	107	103	54	56	92.9	36.39
5	64.00	68.00	863.700	0.38	96	96	1.79	1.80	7	105	104	54	54	100.6	35.92
6	68.00	72.00	866.800	0.43	96	96	2.02	2.00	8	100	103	54	54	97.6	38.21
7	72.00	76.00	870.000	0.44	96	95	2.07	2.10	8	105	105	54	54	102.5	38.62
8	76.00	80.00	873.400	0.44	95	95	2.07	2.10	8	104	102	53	54	98.1	38.62
9	80.00	84.00	876.650	0.43	95	95	2.02	2.00	8	103	104	54	55	99.2	38.18
10	84.00	88.00	879.900	0.42	95	95	1.98	2.00	8	102	103	54	55	95.8	37.73
11	88.00	92.00	883.000	0.43	95	95	2.02	2.00	8	106	103	55	57	97.7	38.18
12	92.00	96.00	886.200	0.41	95	95	1.93	1.90	8	103	104	55	56	101.7	37.28
	Final DGM:		889.453												

RESULTS	Run Time		Vm		ΔP		Tm		Ts		Max Vac	ΔH		%ISO	BWS	Y_{qa}
	96.0	min	72.978	ft^3	0.38	in. WC	97.8	°F	96.2	°F	8	1.785	in. WC	99.6	0.044	-1.2


Outlet

Emission Calculations

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Outlet
Project No. 2022-2345
Parameter HFPO-DA

Run Number		Run 1	Run 2	Run 3	Average
Date		6/29/22	6/30/22	6/30/22	--
Start Time		8:31	14:08	16:32	--
Stop Time		10:25	16:01	18:26	--
Run Time, min	(θ)	96.0	96.0	96.0	96.0
INPUT DATA					
Barometric Pressure, in. Hg	(Pb)	30.20	30.19	30.19	30.19
Meter Correction Factor	(Y)	1.003	1.003	1.003	1.003
Orifice Calibration Value	(ΔH @)	1.643	1.643	1.643	1.643
Meter Volume, ft^3	(Vm)	70.727	74.495	71.892	72.371
Meter Temperature, °F	(Tm)	87.8	103.0	104.0	98.3
Meter Temperature, °R	(Tm)	547.5	562.6	563.7	557.9
Meter Orifice Pressure, in. WC	(ΔH)	1.548	1.658	1.529	1.578
Volume H_2O Collected, mL	(Vlc)	64.0	71.9	72.1	69.3
Nozzle Diameter, in	(Dn)	0.256	0.256	0.256	0.256
Area of Nozzle, ft^2	(An)	0.0004	0.0004	0.0004	0.0004
FH HFPO-DA Mass, ng	$M_{(HFPODA)}$	6,380.0	1,330.0	1,460.0	3,056.7
BH HFPO-DA Mass, ng	$M_{(HFPODA)}$	116.0	223.0	143.0	160.7
Imp HFPO-DA Mass, ng	$M_{(HFPODA)}$	--	104.0	55.1	79.6
Breakthrough HFPO-DA Mass, ng	$M_{(HFPODA)}$	61,600.0	12.8	11.4	20,541.40
Total HFPO-DA Mass, ng	$M_{(HFPODA)}$	68,096.0	1,669.8	1,669.5	23,811.8
ISOKINETIC DATA					
Standard Meter Volume, ft^3	(Vmstd)	69.274	70.994	68.360	69.543
Standard Water Volume, ft^3	(Vwstd)	3.018	3.391	3.400	3.270
Moisture Fraction Measured	(BWSmsd)	0.042	0.046	0.047	0.045
Moisture Fraction @ Saturation	(BWSsat)	0.046	0.065	0.061	0.057
Moisture Fraction	(BWS)	0.042	0.046	0.047	0.045
Meter Pressure, in Hg	(Pm)	30.31	30.31	30.30	30.31
Volume at Nozzle, ft^3	(Vn)	74.247	78.049	74.988	75.76
Isokinetic Sampling Rate, (%)	(I)	102.4	102.4	103.6	102.8
DGM Calibration Check Value, (+/- 5%)	(Y_{qa})	1.6	2.0	2.4	2.0
EMISSION CALCULATIONS					
HFPO-DA Concentration, ng/dscm	$C_{(HFPODA)}$	3.5E+04	8.3E+02	8.6E+02	1.2E+04
HFPO-DA Emission Rate, lb/hr	$ER_{(HFPODA)}$	1.8E-03	4.4E-05	4.4E-05	6.3E-04
REDUCTION CALCULATIONS					
Inlet HFPO-DA Emission Rate, lb/hr	$RE_{(HFPODA)}$	4.7E-01	1.8E-02	3.3E-02	1.8E-01
HFPO-DA Reduction Efficiency, %	$RE_{(HFPODA)}$	99.6	99.8	99.9	99.7

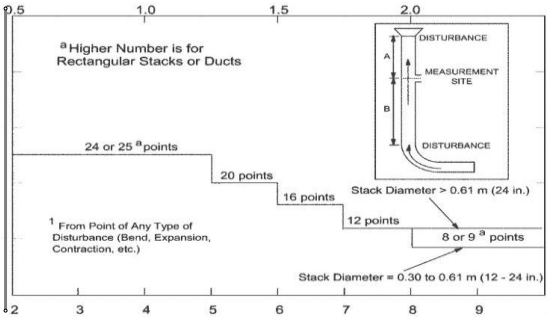
Underlined values are non-detected reported as the reporting limit.

Method 1 Data

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Outlet
Project No. 2022-2345
Date: 06/28/22

Stack Parameters

Duct Orientation:	Horizontal	
Duct Design:	Circular	
Distance from Far Wall to Outside of Port:	51.13	in
Nipple Length:	15.13	in
Depth of Duct:	36.00	in
Cross Sectional Area of Duct:	7.07	ft^2
No. of Test Ports:	2	
Distance A:	4.8	ft
Distance A Duct Diameters:	4.8	**(must be > 0.5)**
Distance B:	5.7	ft
Distance B Duct Diameters:	1.90	**(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):	BAG-6/28/22	
Reviewer (Initial and Date):	AA-6/28/22	



CIRCULAR DUCT

LOCATION OF TRAVERSE POINTS

Number of traverse points on a diameter

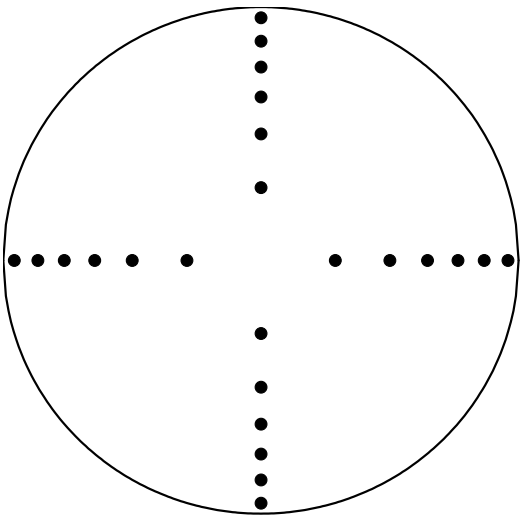
	2	3	4	5	6	7	8	9	10	11	12
1	14.6	--	6.7	--	4.4	--	3.2	--	2.6	--	2.1
2	85.4	--	25.0	--	14.6	--	10.5	--	8.2	--	6.7
3	--	--	75.0	--	29.6	--	19.4	--	14.6	--	11.8
4	--	--	93.3	--	70.4	--	32.3	--	22.6	--	17.7
5	--	--	--	--	85.4	--	67.7	--	34.2	--	25.0
6	--	--	--	--	95.6	--	80.6	--	65.8	--	35.6
7	--	--	--	--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

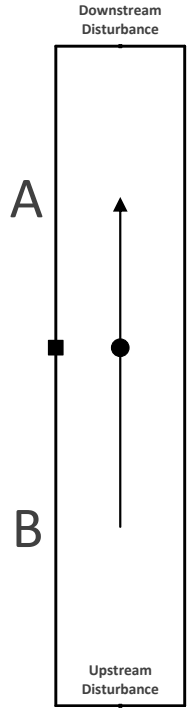
**Percent of stack diameter from inside wall to traverse point.*

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

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

Cross Sectional Area





Cyclonic Flow Check

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Outlet
Project No. 2022-2345
Date 06/29/22

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

Volumetric Flow Rate Data

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Outlet
Project No. 2022-2345
Parameter HFPO-DA

Run Number		Run 1	Run 2	Run 3	Average
Date		6/29/22	6/30/22	6/30/22	--
Start Time		8:31	14:08	16:32	--
Stop Time		10:25	16:01	18:26	--
Run Time, min		96.0	96.0	96.0	96.0
VELOCITY HEAD, in. WC					
Point 1		0.32	0.41	0.38	0.37
Point 2		0.33	0.44	0.39	0.39
Point 3		0.41	0.47	0.43	0.44
Point 4		0.43	0.47	0.41	0.44
Point 5		0.45	0.46	0.40	0.44
Point 6		0.44	0.45	0.42	0.44
Point 7		0.40	0.44	0.37	0.40
Point 8		0.34	0.39	0.35	0.36
Point 9		0.33	0.34	0.31	0.33
Point 10		0.32	0.32	0.30	0.31
Point 11		0.32	0.31	0.28	0.30
Point 12		0.34	0.30	0.28	0.31
Point 13		0.25	0.65	0.70	0.53
Point 14		0.25	0.65	0.70	0.53
Point 15		0.66	0.66	0.62	0.65
Point 16		0.66	0.64	0.60	0.63
Point 17		0.63	0.62	0.51	0.59
Point 18		0.62	0.60	0.31	0.51
Point 19		0.60	0.32	0.29	0.40
Point 20		0.29	0.28	0.26	0.28
Point 21		0.24	0.24	0.22	0.23
Point 22		0.25	0.21	0.20	0.22
Point 23		0.23	0.22	0.21	0.22
Point 24		0.22	0.21	0.21	0.21
CALCULATED DATA					
Square Root of ΔP, (in. WC)$^{1/2}$	(ΔP)	0.614	0.638	0.607	0.620
Pitot Tube Coefficient	(Cp)	0.840	0.840	0.840	0.840
Barometric Pressure, in. Hg	(Pb)	30.20	30.19	30.19	30.19
Static Pressure, in. WC	(Pg)	1.50	1.50	1.50	1.50
Stack Pressure, in. Hg	(Ps)	30.31	30.30	30.30	30.30
Stack Cross-sectional Area, ft^2	(As)	7.07	7.07	7.07	7.07
Temperature, °F	(Ts)	89.4	101.1	98.8	96.4
Temperature, °R	(Ts)	549.0	560.8	558.5	556.087
Moisture Fraction Measured	(BWSmsd)	0.042	0.046	0.047	0.045
Moisture Fraction @ Saturation	(BWSsat)	0.046	0.065	0.061	0.057
Moisture Fraction	(BWS)	0.042	0.046	0.047	0.045
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)	28.40	28.36	28.34	28.37
Velocity, ft/sec	(Vs)	35.2	37.0	35.2	35.8
VOLUMETRIC FLOW RATE					
At Stack Conditions, acfm	(Qa)	14,931	15,708	14,909	15,182
At Standard Conditions, dscfm	(Qs)	13,930	14,286	13,590	13,935

Method 4 Data

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Outlet
Project No. 2022-2345
Parameter HFPO-DA
Analysis Gravimetric

Run 1	**Date:**	6/29/22							
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	291.5	477.3	708.0	717.8	723.5	466.4	295.4	908.2	4588.1
Final Mass, g	313.7	494.3	706.3	717.7	723.6	468.3	305.1	923.1	4652.1
Gain	22.2	17.0	-1.7	-0.1	0.1	1.9	9.7	14.9	64.0
Run 2	**Date:**	6/30/22							
Impinger No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Total**
Contents	XAD Trap	Empty	H2O	H2O	H2O	Empty	XAD Trap	Silica	--
Initial Mass, g	295.1	499.0	778.4	748.4	746.4	506.3	302.0	906.5	4782.1
Final Mass, g	318.8	519.1	776.3	749.8	746.8	508.1	313.2	921.9	4854.0
Gain	23.7	20.1	-2.1	1.4	0.4	1.8	11.2	15.4	71.9
Run 3	**Date:**	6/30/22							
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	294.2	478.7	708.6	721.4	723.6	468.4	296.4	896.4	4587.7
Final Mass, g	317.0	498	707.3	721.8	724.2	470.2	310.8	910.5	4659.8
Gain	22.8	19.3	-1.3	0.4	0.6	1.8	14.4	14.1	72.1

Alliance SOURCE TESTING

Isokinetic Field Data

Location:	Chemours Company - Fayetteville Works Facility, N		**Start Time:**	8:31	**Source:**	VEN Carbon Bed Outlet	
Date:	6/29/22	Run 1 VALID	**End Time:**	10:25	**Project No.:**	2022-2345	**Parameter:** HFPO-DA

STACK DATA (EST)			EQUIPMENT			STACK DATA (EST)			FILTER NO.		STACK DATA (FINAL)				MOIST. DATA
Moisture:	2.0	% est.	Meter Box ID:	MB #10		Est. Tm:	85	°F			Pb:	30.20	in. Hg		Vlc (ml)
Barometric:	30.10	in. Hg	Y:	1.003		Est. Ts:	84	°F			Pg:	1.50	in. WC		64.0
Static Press:	2.80	in. WC	ΔH @ (in.WC):	1.643		Est. ΔP:	0.55	in. WC			O_2:	20.9	%		K-FACTOR
Stack Press:	30.31	in. Hg	Probe ID:	TC-5D		Est. Dn:	0.240	in.			CO_2:	0.1	%		4.099
CO_2:	0.1	%	Liner Material:	glass		Target Rate:	0.78	scfm				Check Pt.	Initial	Final	Corr.
O_2:	20.9	%	Pitot ID:	P4-2		LEAK CHECK:	Pre	Mid 1	Mid 2	Mid 3	Post	Mid 1 (cf)	0.498	0.612	0.114
N_2/CO:	79.0	%	Pitot Cp/Type:	0.840	S-type	Leak Rate (cfm):	0.001	0.001	0.001	--	0.001	Mid 2 (cf)	0.612	0.885	0.273
Md:	28.85	lb/lb-mole	Nozzle ID:	G-4	glass	Vacuum (in Hg):	10	8	8	--	8	Mid 3 (cf)			--
Ms:	28.63	lb/lb-mole	Nozzle Dn (in.):	0.256		Pitot Tube:	Pass	--	--	--	Pass	Mid-Point Leak Check Vol (cf):			0.387

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			79	79	Ideal	Actual		78	78	78	79		
A-1	0.00	4.00	535.384	0.32	81	81	1.31	1.30	5	95	101	65	56	102.5	32.06
2	4.00	8.00	538.150	0.33	81	85	1.34	1.30	5	94	100	65	56	103.7	32.68
3	8.00	12.00	540.980	0.41	81	85	1.67	1.60	5	96	100	60	60	95.7	36.43
4	12.00	16.00	543.890	0.43	81	85	1.75	1.70	5	95	98	58	53	99.9	37.31
5	16.00	20.00	547.000	0.45	84	85	1.84	1.80	5	93	100	59	60	98.4	38.16
6	20.00	24.00	550.150	0.44	85	87	1.79	1.70	5	93	100	59	60	98.9	37.81
7	24.00	28.00	553.280	0.40	85	87	1.63	1.60	5	94	99	60	55	98.0	36.05
8	28.00	32.00	556.240	0.34	85	86	1.39	1.40	5	93	100	62	56	102.6	33.20
9	32.00	36.00	559.100	0.33	87	88	1.35	1.30	5	93	99	63	57	103.6	32.77
10	36.00	40.00	561.950	0.32	89	88	1.31	1.30	5	93	101	64	55	105.2	32.27
11	40.00	44.00	564.810	0.32	90	89	1.31	1.30	5	94	100	64	58	104.7	32.30
12	44.00	48.00	567.660	0.34	90	89	1.39	1.40	5	94	100	64	60	101.2	33.29
B-1	48.00	52.00	570.885	0.25	90	89	1.03	1.00	4	92	105	65	58	95.7	28.55
2	52.00	56.00	573.190	0.25	90	89	1.03	1.00	4	93	105	63	49	107.6	28.55
3	56.00	60.00	575.780	0.66	92	90	2.70	2.60	8	96	104	60	49	93.7	46.43
4	60.00	64.00	579.440	0.66	92	90	2.70	2.60	8	96	105	57	50	96.2	46.43
5	64.00	68.00	583.200	0.63	93	90	2.59	2.50	8	96	104	57	50	98.3	45.36
6	68.00	72.00	586.960	0.62	91	92	2.53	2.50	8	96	96	57	51	99.1	45.08
7	72.00	76.00	590.700	0.60	90	94	2.43	2.40	8	96	99	57	51	101.3	44.43
8	76.00	80.00	594.450	0.29	90	95	1.18	1.15	5	96	99	56	50	98.9	30.92
9	80.00	84.00	597.000	0.24	90	95	0.97	0.95	5	96	101	58	51	102.3	28.13
10	84.00	88.00	599.400	0.25	90	95	1.02	1.00	5	96	100	58	52	104.0	28.71
11	88.00	92.00	601.890	0.23	90	95	0.93	0.90	5	96	100	58	52	101.4	27.53
12	92.00	96.00	604.220	0.22	90	96	0.89	0.85	5	96	100	58	55	101.4	26.95
	Final DGM:		606.498												

RESULTS	Run Time		Vm		ΔP		Tm		Ts		Max Vac	ΔH		%ISO	BWS	Y_{qa}
	96.0	min	70.727	ft^3	0.39	in. WC	87.8	°F	89.4	°F	8	1.548	in. WC	102.4	0.042	1.6

Alliance SOURCE TESTING

Isokinetic Field Data

Location:	Chemours Company - Fayetteville Works Facility, N		**Start Time:**	14:08	**Source:**	VEN Carbon Bed Outlet	
Date:	6/30/22	Run 2 VALID	**End Time:**	16:01	**Project No.:**	2022-2345	**Parameter:** HFPO-DA

STACK DATA (EST)			EQUIPMENT			STACK DATA (EST)			FILTER NO.	STACK DATA (FINAL)		MOIST. DATA
Moisture:	2.0	% est.	Meter Box ID:	MB #10		Est. Tm:	88	°F		Pb:	30.19 in. Hg	Vlc (ml)
Barometric:	30.10	in. Hg	Y:	1.003		Est. Ts:	89	°F		Pg:	1.50 in. WC	71.9
Static Press:	2.80	in. WC	ΔH @ (in.WC):	1.643		Est. ΔP:	0.39	in. WC		O_2:	20.9 %	K-FACTOR
Stack Press:	30.31	in. Hg	Probe ID:	TC-5D		Est. Dn:	0.262	in.		CO_2:	0.1 %	4.08
CO_2:	0.1	%	Liner Material:	glass		Target Rate:	0.78	scfm				
O_2:	20.9	%	Pitot ID:	P4-2		LEAK CHECK:	Pre	Mid 1	Mid 2	Mid 3	Post	
N_2/CO:	79.0	%	Pitot Cp/Type:	0.840	S-type	Leak Rate (cfm):	0.001	0.001	0.001	--	0.001	
Md:	28.85	lb/lb-mole	Nozzle ID:	G-4	glass	Vacuum (in Hg):	10	10	10	--	12	
Ms:	28.63	lb/lb-mole	Nozzle Dn (in.):	0.256		Pitot Tube:	Pass	--	--	--	Pass	

	Check Pt.	Initial	Final	Corr.
Mid 1 (cf)	4.685	4.875	0.190	
Mid 2 (cf)	4.875	4.980	0.105	
Mid 3 (cf)				--
Mid-Point Leak Check Vol (cf):				0.295

Sample Pt.	Sample Time (minutes) Begin	End	Dry Gas Meter Reading (ft^3)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F) DGM Average Amb. --	Stack Amb. --	Orifice Press. ΔH (in. WC) Ideal	Actual	Pump Vac (in. Hg)	Gas Temperatures (°F) Probe Amb. --	Filter Amb. --	Imp Exit Amb. --	Aux Amb. --	% ISO	Vs (fps)
A-1	0.00	4.00	608.110	0.41	94	104	1.65	1.60	6	106	110	64	65	98.4	37.06
2	4.00	8.00	611.120	0.44	97	103	1.78	1.70	6	105	107	65	63	97.8	38.36
3	8.00	12.00	614.240	0.47	98	103	1.91	1.80	6	105	107	66	60	98.4	39.64
4	12.00	16.00	617.490	0.47	98	103	1.91	1.80	6	105	106	65	58	102.4	39.64
5	16.00	20.00	620.870	0.46	100	101	1.88	1.80	6	106	104	62	58	101.4	39.15
6	20.00	24.00	624.200	0.45	100	101	1.84	1.80	6	105	105	61	58	101.6	38.72
7	24.00	28.00	627.500	0.44	101	101	1.80	1.47	6	106	105	60	59	100.6	38.29
8	28.00	32.00	630.740	0.39	102	101	1.60	1.50	6	106	105	60	60	99.1	36.05
9	32.00	36.00	633.750	0.34	102	101	1.39	1.40	5	106	105	60	61	103.0	33.66
10	36.00	40.00	636.670	0.32	102	100	1.31	1.30	5	105	105	60	61	98.0	32.62
11	40.00	44.00	639.370	0.31	103	100	1.28	1.20	4	105	105	60	62	99.4	32.11
12	44.00	48.00	642.070	0.30	103	100	1.24	1.20	4	105	105	62	62	97.9	31.59
B-1	48.00	52.00	644.685	0.65	102	100	2.66	2.60	10	105	104	64	58	96.3	46.49
2	52.00	56.00	648.750	0.65	103	100	2.67	2.60	10	106	105	57	55	98.2	46.49
3	56.00	60.00	652.600	0.66	104	100	2.71	2.60	10	106	105	56	57	98.0	46.85
4	60.00	64.00	656.480	0.64	105	100	2.64	2.60	10	106	105	57	51	100.4	46.14
5	64.00	68.00	660.400	0.62	106	101	2.55	2.50	10	105	106	57	52	101.4	45.45
6	68.00	72.00	664.300	0.60	106	101	2.47	2.40	10	105	105	57	53	100.9	44.71
7	72.00	76.00	668.120	0.32	107	101	1.32	1.30	7	105	105	58	51	100.5	32.65
8	76.00	80.00	670.910	0.28	107	101	1.16	1.10	6	105	105	58	52	99.3	30.54
9	80.00	84.00	673.490	0.24	107	101	0.99	0.96	5	105	105	59	51	102.2	28.28
10	84.00	88.00	675.950	0.21	108	101	0.87	0.84	5	106	105	59	53	101.1	26.45
11	88.00	92.00	678.230	0.22	108	101	0.91	0.88	5	106	106	59	52	102.2	27.07
12	92.00	96.00	680.590	0.21	108	101	0.87	0.84	5	105	105	59	51	102.4	26.45
	Final DGM:		682.900												

RESULTS

Run Time	Vm	ΔP	Tm	Ts	Max Vac	ΔH	%ISO	BWS	Y_{qa}
96.0 min	74.495 ft^3	0.42 in. WC	103.0 °F	101.1 °F	10	1.658 in. WC	102.4	0.046	2.0

Alliance SOURCE TESTING

Isokinetic Field Data

Location:	Chemours Company - Fayetteville Works Facility, N		**Start Time:**	16:32	**Source:**	VEN Carbon Bed Outlet	
Date:	6/30/22	Run 3 VALID	**End Time:**	18:26	**Project No.:**	2022-2345	**Parameter:** HFPO-DA

STACK DATA (EST)			EQUIPMENT			STACK DATA (EST)		FILTER NO.	STACK DATA (FINAL)		MOIST. DATA
Moisture:	2.0	% est.	Meter Box ID:	MB #10		Est. Tm:	103 °F		Pb:	30.19 in. Hg	Vlc (ml)
Barometric:	30.10	in. Hg	Y:	1.003		Est. Ts:	101 °F		Pg:	1.50 in. WC	72.1
Static Press:	2.80	in. WC	ΔH @ (in.WC):	1.643		Est. ΔP:	0.42 in. WC		O_2:	20.9 %	K-FACTOR
Stack Press:	30.31	in. Hg	Probe ID:	TC-5D		Est. Dn:	0.254 in.		CO_2:	0.1 %	4.105
CO_2:	0.1	%	Liner Material:	glass		Target Rate:	0.78 scfm			Check Pt. Initial Final Corr.	
O_2:	20.9	%	Pitot ID:	P4-2		LEAK CHECK:	Pre Mid 1 Mid 2 Mid 3 Post			Mid 1 (cf) 9.090 9.245 0.155	
N_2/CO:	79.0	%	Pitot Cp/Type:	0.840	S-type	Leak Rate (cfm):	0.001 0.001 0.001 -- 0.001			Mid 2 (cf) 9.245 9.321 0.076	
Md:	28.85	lb/lb-mole	Nozzle ID:	G-4	glass	Vacuum (in Hg):	10 10 10 -- 12			Mid 3 (cf) --	
Ms:	28.63	lb/lb-mole	Nozzle Dn (in.):	0.256		Pitot Tube:	Pass -- -- -- Pass			Mid-Point Leak Check Vol (cf): 0.231	

Sample Pt.	Sample Time (minutes) Begin	End	Dry Gas Meter Reading (ft^3)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F) DGM Average Amb. --	Stack Amb. --	Orifice Press. ΔH (in. WC) Ideal	Actual	Pump Vac (in. Hg)	Gas Temperatures (°F) Probe Amb. --	Filter Amb. --	Imp Exit Amb. --	Aux Amb. --	% ISO	Vs (fps)
A-1	0.00	4.00	683.637	0.38	104	105	1.55	1.60	5	105	105	64	57	102.2	35.71
2	4.00	8.00	686.700	0.39	104	105	1.59	1.50	5	105	105	63	51	100.1	36.18
3	8.00	12.00	689.740	0.43	104	109	1.74	1.70	6	115	115	65	51	100.8	38.12
4	12.00	16.00	692.940	0.41	104	108	1.67	1.60	6	115	115	63	51	101.8	37.19
5	16.00	20.00	696.100	0.40	105	107	1.63	1.60	6	115	115	63	51	102.1	36.70
6	20.00	24.00	699.240	0.42	105	107	1.71	1.70	6	115	115	62	51	100.3	37.61
7	24.00	28.00	702.400	0.37	106	104	1.52	1.50	6	115	115	62	50	101.0	35.20
8	28.00	32.00	705.400	0.35	106	103	1.44	1.40	6	115	115	62	51	100.3	34.21
9	32.00	36.00	708.300	0.31	106	102	1.28	1.20	5	115	115	63	53	103.1	32.17
10	36.00	40.00	711.110	0.30	106	100	1.24	1.20	5	115	115	63	54	101.2	31.59
11	40.00	44.00	713.830	0.28	106	99	1.16	1.10	5	115	115	65	54	99.7	30.49
12	44.00	48.00	716.420	0.28	106	98	1.16	1.10	5	115	115	66	57	102.7	30.46
B-1	48.00	52.00	719.090	0.70	102	96	2.89	2.80	10	105	105	66	59	100.4	48.08
2	52.00	56.00	723.410	0.70	103	95	2.90	2.80	10	105	105	62	49	100.1	48.03
3	56.00	60.00	727.500	0.62	103	95	2.57	2.50	10	105	105	59	45	101.6	45.21
4	60.00	64.00	731.410	0.60	104	95	2.49	2.40	10	105	105	57	45	99.4	44.47
5	64.00	68.00	735.180	0.51	104	95	2.12	2.00	8	105	105	54	44	100.6	41.00
6	68.00	72.00	738.700	0.31	103	94	1.29	1.30	6	105	105	54	45	100.7	31.94
7	72.00	76.00	741.450	0.29	103	94	1.21	1.20	5	105	105	54	44	100.3	30.89
8	76.00	80.00	744.100	0.26	103	93	1.08	1.10	5	105	105	54	44	102.2	29.22
9	80.00	84.00	746.660	0.22	103	92	0.92	0.89	5	105	105	53	46	101.4	26.86
10	84.00	88.00	749.000	0.20	103	92	0.84	0.81	5	105	105	54	44	100.5	25.61
11	88.00	92.00	751.210	0.21	102	92	0.88	0.85	5	105	105	54	45	101.8	26.24
12	92.00	96.00	753.500	0.21	102	91	0.88	0.85	5	105	105	55	45	100.4	26.21
	Final DGM:		755.760												

RESULTS	Run Time		Vm		ΔP		Tm		Ts		Max Vac	ΔH		%ISO	BWS	Y_{qa}
	96.0	min	71.892	ft^3	0.38	in. WC	104.0	°F	98.8	°F	10	1.529	in. WC	103.6	0.047	2.4

Appendix C

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 140-27976-1
Client Project/Site: VEN CB INLET Q2

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:
7/13/2022 4:22:31 PM

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

Table of Contents

Definitions/Glossary

Client: The Chemours Company FC, LLC
Project/Site: VEN CB INLET Q2

Job ID: 140-27976-1

Glossary

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

Job ID: 140-27976-1

Laboratory: Eurofins Knoxville

Narrative

Job Narrative
140-27976-1

Receipt

The samples were received on 7/1/2022 2:00 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.7º 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-0339 VEN CB INTLET R1 CONDENSATE (140-27976-5), T-0346 VEN CB INLET R2 CONDENSATE (140-27976-11) and T-0353 VEN CB INLET R3 CONDENSATE (140-27976-17). The sample was analyzed at a dilution based on screening results.

Method 537 (modified): The required dilution factor for the following sample was higher than could be achieved by "in vial" dilution, as it would dilute out the Isotope Dilution Analytes (IDA): T-0339 VEN CB INTLET R1 CONDENSATE (140-27976-5). As such, the dilution was achieved by taking a subsample of the undiluted extract, adding sufficient solvent, and re-spiking the extract with IDA.

Method 537 (modified): Results for samples T-0346 VEN CB INLET R2 CONDENSATE (140-27976-11) and T-0353 VEN CB INLET R3 CONDENSATE (140-27976-17) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Method 537 (modified): The following samples were reported with elevated reporting limits for all analytes: T-0337, T-0338, T-0340 VEN CB INTLET R1 BH COMPOSITE (140-27976-4), T-0341 VEN CB INLET R1 BREAKTHROUGH XAD-2 (140-27976-6), T-0344, T-0345, T-0347 VEN CB INLET R2 BH COMPOSITE (140-27976-10), T-0348 VEN CB INLET R2 BREAKTHROUGH XAD-2 (140-27976-12), T-0351, T-0352, T-0354 VEN CB INLET R3 BH COMPOSITE (140-27976-16) and T-0355 VEN CB INLET R3 BREAKTHROUGH XAD-2 (140-27976-18). The sample was analyzed at a dilution based on screening results.

Method 537 (modified): Results for samples T-0341 VEN CB INLET R1 BREAKTHROUGH XAD-2 (140-27976-6) and T-0348 VEN CB INLET R2 BREAKTHROUGH XAD-2 (140-27976-12) were reported from the analysis of a diluted extract due to high concentration of the

Job ID: 140-27976-1 (Continued)

Laboratory: Eurofins Knoxville (Continued)

target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Method 537 (modified): The required dilution factor for the following samples were higher than could be achieved by "in vial" dilution, as it would dilute out the Isotope Dilution Analytes (IDA): T-0337, T-0338, T-0340 VEN CB INTLET R1 BH COMPOSITE (140-27976-4), T-0344, T-0345, T-0347 VEN CB INLET R2 BH COMPOSITE (140-27976-10), T-0351, T-0352, T-0354 VEN CB INLET R3 BH COMPOSITE (140-27976-16) and T-0355 VEN CB INLET R3 BREAKTHROUGH XAD-2 (140-27976-18). 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-0335,T-0336 VEN CB INLET R1 FH COMPOSITE (140-27976-3), T-0342,T-0343 VEN CB INLET R2 FH COMPOSITE (140-27976-9) and T-0350,T-0351 VEN CB INLET R3 FH COMPOSITE (140-27976-15). The sample was analyzed at a dilution based on screening results.

Method 537 (modified): The required dilution factor for the following samples were higher than could be achieved by "in vial" dilution, as it would dilute out the Isotope Dilution Analytes (IDA): T-0335,T-0336 VEN CB INLET R1 FH COMPOSITE (140-27976-3), T-0342,T-0343 VEN CB INLET R2 FH COMPOSITE (140-27976-9) and T-0350,T-0351 VEN CB INLET R3 FH COMPOSITE (140-27976-15). As such, the dilution was achieved by taking a subsample of the undiluted extract, adding sufficient solvent, and re-spiking the extract with IDA.

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

General Chemistry

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

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

Organic Prep

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

Client: The Chemours Company FC, LLC
Project/Site: VEN CB INLET Q2

Job ID: 140-27976-1

Client Sample ID: T-0335 VEN CB INLET R1 TARED FILTER

Lab Sample ID: 140-27976-1
Matrix: Air
Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:20
Sample Container: Air Train

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	ND		0.500	0.500	mg/sample			07/08/22 16:33	1

Client Sample ID: T-0393 VEN CB INLET R1 ACETONE PROBE RINSE

Lab Sample ID: 140-27976-2
Matrix: Air
Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:20
Sample Container: Air Train

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	1.59		0.500	0.500	mg/sample			07/08/22 16:37	1

Client Sample ID: T-0335,T-0336 VEN CB INLET R1 FH COMPOSITE

Lab Sample ID: 140-27976-3
Matrix: Air
Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:20
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	366		24.7	23.2	ug/Sample		07/08/22 08:38	07/11/22 17:26	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*104*		*25 - 150*	*07/08/22 08:38*	*07/11/22 17:26*	*1*

Client Sample ID: T-0337, T-0338, T-0340 VEN CB INTLET R1 BH COMPOSITE

Lab Sample ID: 140-27976-4
Matrix: Air
Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:20
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	14100		5000	2750	ug/Sample		07/02/22 06:10	07/10/22 04:22	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*104*		*25 - 150*	*07/02/22 06:10*	*07/10/22 04:22*	*1*

Client Sample ID: T-0339 VEN CB INTLET R1 CONDENSATE

Lab Sample ID: 140-27976-5
Matrix: Air
Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:20
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	3220		31.0	12.4	ug/Sample		07/02/22 08:09	07/03/22 11:14	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*77*		*25 - 150*	*07/02/22 08:09*	*07/03/22 11:14*	*1*

Client: The Chemours Company FC, LLC
Project/Site: VEN CB INLET Q2

Job ID: 140-27976-1

Client Sample ID: T-0341 VEN CB INLET R1 BREAKTHROUGH XAD-2

Lab Sample ID: 140-27976-6

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:20
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		07/02/22 06:10	07/10/22 21:26	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*104*		*25 - 150*	*07/02/22 06:10*	*07/10/22 21:26*	*1*

Client Sample ID: T-0342 VEN CB INTLET R2 TARED FILTER

Lab Sample ID: 140-27976-7

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:20
Sample Container: Air Train

Matrix: Air

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	ND		0.500	0.500	mg/sample			07/08/22 16:33	1

Client Sample ID: T-0394 VEN CB INLET R2 ACETONE PROBE RINSE

Lab Sample ID: 140-27976-8

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:20
Sample Container: Air Train

Matrix: Air

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	**3.25**		0.500	0.500	mg/sample			07/08/22 16:37	1

Client Sample ID: T-0342,T-0343 VEN CB INLET R2 FH COMPOSITE

Lab Sample ID: 140-27976-9

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:20
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	**286**		24.7	23.2	ug/Sample		07/08/22 08:38	07/11/22 17:35	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*88*		*25 - 150*	*07/08/22 08:38*	*07/11/22 17:35*	*1*

Client Sample ID: T-0344, T-0345, T-0347 VEN CB INLET R2 BH COMPOSITE

Lab Sample ID: 140-27976-10

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:20
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	**366**		100	55.0	ug/Sample		07/02/22 06:10	07/10/22 04:57	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*106*		*25 - 150*	*07/02/22 06:10*	*07/10/22 04:57*	*1*

Client: The Chemours Company FC, LLC
Project/Site: VEN CB INLET Q2

Job ID: 140-27976-1

Client Sample ID: T-0346 VEN CB INLET R2 CONDENSATE

Lab Sample ID: 140-27976-11
Date Collected: 06/29/22 00:00
Matrix: Air
Date Received: 07/01/22 14:20
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	31.5		0.362	0.145	ug/Sample		07/02/22 08:09	07/03/22 10:35	5

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*90*		*25 - 150*	*07/02/22 08:09*	*07/03/22 10:35*	*5*

Client Sample ID: T-0348 VEN CB INLET R2 BREAKTHROUGH XAD-2

Lab Sample ID: 140-27976-12
Date Collected: 06/29/22 00:00
Matrix: Air
Date Received: 07/01/22 14:20
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.766		0.200	0.110	ug/Sample		07/02/22 06:10	07/10/22 05:14	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*115*		*25 - 150*	*07/02/22 06:10*	*07/10/22 05:14*	*10*

Client Sample ID: T-0348 VEN CB INLET R3 TARED FILTER

Lab Sample ID: 140-27976-13
Date Collected: 06/30/22 00:00
Matrix: Air
Date Received: 07/01/22 14:20
Sample Container: Air Train

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	ND		0.500	0.500	mg/sample			07/08/22 16:33	1

Client Sample ID: T-0395 VEN CB INLET R3 ACETONE PROBE RINSE

Lab Sample ID: 140-27976-14
Date Collected: 06/30/22 00:00
Matrix: Air
Date Received: 07/01/22 14:20
Sample Container: Air Train

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	2.55		0.500	0.500	mg/sample			07/08/22 16:37	1

Client Sample ID: T-0350,T-0351 VEN CB INLET R3 FH COMPOSITE

Lab Sample ID: 140-27976-15
Date Collected: 06/30/22 00:00
Matrix: Air
Date Received: 07/01/22 14:20
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	237		25.0	23.5	ug/Sample		07/08/22 08:38	07/11/22 17:45	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*93*		*25 - 150*	*07/08/22 08:38*	*07/11/22 17:45*	*1*

Client: The Chemours Company FC, LLC
Project/Site: VEN CB INLET Q2

Job ID: 140-27976-1

Client Sample ID: T-0351, T-0352, T-0354 VEN CB INLET R3 BH COMPOSITE

Lab Sample ID: 140-27976-16

Date Collected: 06/30/22 00:00
Date Received: 07/01/22 14:20
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	439		100	55.0	ug/Sample		07/02/22 06:10	07/10/22 05:23	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*106*		*25 - 150*	*07/02/22 06:10*	*07/10/22 05:23*	*1*

Client Sample ID: T-0353 VEN CB INLET R3 CONDENSATE

Lab Sample ID: 140-27976-17

Date Collected: 06/30/22 00:00
Date Received: 07/01/22 14:20
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	111		1.53	0.610	ug/Sample		07/02/22 08:09	07/03/22 10:44	20

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*109*		*25 - 150*	*07/02/22 08:09*	*07/03/22 10:44*	*20*

Client Sample ID: T-0355 VEN CB INLET R3 BREAKTHROUGH XAD-2

Lab Sample ID: 140-27976-18

Date Collected: 06/30/22 00:00
Date Received: 07/01/22 14:20
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	467		100	55.0	ug/Sample		07/02/22 06:10	07/10/22 05:32	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*129*		*25 - 150*	*07/02/22 06:10*	*07/10/22 05:32*	*1*

Default Detection Limits

Client: The Chemours Company FC, LLC
Project/Site: VEN CB INLET Q2

Job ID: 140-27976-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Prep: None

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

Method: 537 (modified) - Fluorinated Alkyl Substances

Prep: PFAS Prep

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

General Chemistry

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

Isotope Dilution Summary

Client: The Chemours Company FC, LLC
Project/Site: VEN CB INLET Q2

Job ID: 140-27976-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Air

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HFPODA (25-150)						
140-27976-3	T-0335,T-0336 VEN CB INLET F	104						
140-27976-4	T-0337, T-0338, T-0340 VEN CB INTLET R1 BH COMPOSITE	104						
140-27976-5	T-0339 VEN CB INTLET R1 CONDENSATE	77						
140-27976-6	T-0341 VEN CB INLET R1 BREAKTHROUGH XAD-2	104						
140-27976-9	T-0342,T-0343 VEN CB INLET R2 FH COMPOSITE	88						
140-27976-10	T-0344, T-0345, T-0347 VEN CB INLET R2 BH COMPOSITE	106						
140-27976-11	T-0346 VEN CB INLET R2 CONDENSATE	90						
140-27976-12	T-0348 VEN CB INLET R2 BREAKTHROUGH XAD-2	115						
140-27976-15	T-0350,T-0351 VEN CB INLET R3 FH COMPOSITE	93						
140-27976-16	T-0351, T-0352, T-0354 VEN CB INLET R3 BH COMPOSITE	106						
140-27976-17	T-0353 VEN CB INLET R3 CONDENSATE	109						
140-27976-18	T-0355 VEN CB INLET R3 BREAKTHROUGH XAD-2	129						
LCS 140-63110/2-B	Lab Control Sample	95						
LCS 140-63111/2-A	Lab Control Sample	91						
LCS 140-63237/2-B	Lab Control Sample	67						
LCSD 140-63110/3-B	Lab Control Sample Dup	97						
LCSD 140-63111/3-A	Lab Control Sample Dup	88						
LCSD 140-63237/3-B	Lab Control Sample Dup	82						
MB 140-63110/14-B	Method Blank	101						
MB 140-63110/1-B	Method Blank	86						
MB 140-63111/1-A	Method Blank	93						
MB 140-63237/1-B	Method Blank	72						

Surrogate Legend

HFPODA = 13C3 HFPO-DA

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 140-63110/14-B
Matrix: Air
Analysis Batch: 63274

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63110

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		07/02/22 06:10	07/10/22 05:06	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*101*		*25 - 150*	*07/02/22 06:10*	*07/10/22 05:06*	*1*

Lab Sample ID: MB 140-63110/1-B
Matrix: Air
Analysis Batch: 63276

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63110

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		07/02/22 06:10	07/10/22 21:08	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*86*		*25 - 150*	*07/02/22 06:10*	*07/10/22 21:08*	*1*

Lab Sample ID: LCS 140-63110/2-B
Matrix: Air
Analysis Batch: 63274

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 63110

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0200	0.02132		ug/Sample		107	60 - 140		

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

Lab Sample ID: LCSD 140-63110/3-B
Matrix: Air
Analysis Batch: 63274

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 63110

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0200	0.02348		ug/Sample		117	60 - 140	10	30

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

Lab Sample ID: MB 140-63111/1-A
Matrix: Air
Analysis Batch: 63113

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63111

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		07/02/22 08:09	07/02/22 19:25	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*93*		*25 - 150*	*07/02/22 08:09*	*07/02/22 19:25*	*1*

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

Lab Sample ID: LCS 140-63111/2-A
Matrix: Air
Analysis Batch: 63113

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 63111

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0100	0.01091		ug/Sample		109	60 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*91*		*25 - 150*

Lab Sample ID: LCSD 140-63111/3-A
Matrix: Air
Analysis Batch: 63113

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 63111

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0100	0.01074		ug/Sample		107	60 - 140	2	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*88*		*25 - 150*

Lab Sample ID: MB 140-63237/1-B
Matrix: Air
Analysis Batch: 63276

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63237

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		07/08/22 08:38	07/10/22 19:20	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*72*		*25 - 150*	*07/08/22 08:38*	*07/10/22 19:20*	*1*

Lab Sample ID: LCS 140-63237/2-B
Matrix: Air
Analysis Batch: 63276

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 63237

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0200	0.02415		ug/Sample		121	60 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*67*		*25 - 150*

Lab Sample ID: LCSD 140-63237/3-B
Matrix: Air
Analysis Batch: 63276

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 63237

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0200	0.02540		ug/Sample		127	60 - 140	5	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*82*		*25 - 150*

LCMS

Prep Batch: 63110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27976-4	T-0337, T-0338, T-0340 VEN CB INTLET R1 BH	Total/NA	Air	None	
140-27976-6	T-0341 VEN CB INLET R1 BREAKTHROUGH X/	Total/NA	Air	None	
140-27976-10	T-0344, T-0345, T-0347 VEN CB INLET R2 BH C	Total/NA	Air	None	
140-27976-12	T-0348 VEN CB INLET R2 BREAKTHROUGH X/	Total/NA	Air	None	
140-27976-16	T-0351, T-0352, T-0354 VEN CB INLET R3 BH C	Total/NA	Air	None	
140-27976-18	T-0355 VEN CB INLET R3 BREAKTHROUGH X/	Total/NA	Air	None	
MB 140-63110/14-B	Method Blank	Total/NA	Air	None	
MB 140-63110/1-B	Method Blank	Total/NA	Air	None	
LCS 140-63110/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-63110/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Prep Batch: 63111

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27976-5	T-0339 VEN CB INTLET R1 CONDENSATE	Total/NA	Air	PFAS Prep	
140-27976-11	T-0346 VEN CB INLET R2 CONDENSATE	Total/NA	Air	PFAS Prep	
140-27976-17	T-0353 VEN CB INLET R3 CONDENSATE	Total/NA	Air	PFAS Prep	
MB 140-63111/1-A	Method Blank	Total/NA	Air	PFAS Prep	
LCS 140-63111/2-A	Lab Control Sample	Total/NA	Air	PFAS Prep	
LCSD 140-63111/3-A	Lab Control Sample Dup	Total/NA	Air	PFAS Prep	

Analysis Batch: 63113

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27976-5	T-0339 VEN CB INTLET R1 CONDENSATE	Total/NA	Air	537 (modified)	63114
140-27976-11	T-0346 VEN CB INLET R2 CONDENSATE	Total/NA	Air	537 (modified)	63111
140-27976-17	T-0353 VEN CB INLET R3 CONDENSATE	Total/NA	Air	537 (modified)	63111
MB 140-63111/1-A	Method Blank	Total/NA	Air	537 (modified)	63111
LCS 140-63111/2-A	Lab Control Sample	Total/NA	Air	537 (modified)	63111
LCSD 140-63111/3-A	Lab Control Sample Dup	Total/NA	Air	537 (modified)	63111

Cleanup Batch: 63114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27976-5	T-0339 VEN CB INTLET R1 CONDENSATE	Total/NA	Air	Dilution	63111

Cleanup Batch: 63161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27976-4	T-0337, T-0338, T-0340 VEN CB INTLET R1 BH	Total/NA	Air	Split	63110
140-27976-6	T-0341 VEN CB INLET R1 BREAKTHROUGH X/	Total/NA	Air	Split	63110
140-27976-10	T-0344, T-0345, T-0347 VEN CB INLET R2 BH C	Total/NA	Air	Split	63110
140-27976-12	T-0348 VEN CB INLET R2 BREAKTHROUGH X/	Total/NA	Air	Split	63110
140-27976-16	T-0351, T-0352, T-0354 VEN CB INLET R3 BH C	Total/NA	Air	Split	63110
140-27976-18	T-0355 VEN CB INLET R3 BREAKTHROUGH X/	Total/NA	Air	Split	63110
MB 140-63110/14-B	Method Blank	Total/NA	Air	Split	63110
MB 140-63110/1-B	Method Blank	Total/NA	Air	Split	63110
LCS 140-63110/2-B	Lab Control Sample	Total/NA	Air	Split	63110
LCSD 140-63110/3-B	Lab Control Sample Dup	Total/NA	Air	Split	63110

Prep Batch: 63237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27976-3	T-0335,T-0336 VEN CB INLET R1 FH COMPOSI	Total/NA	Air	None	
140-27976-9	T-0342,T-0343 VEN CB INLET R2 FH COMPOSI	Total/NA	Air	None	
140-27976-15	T-0350,T-0351 VEN CB INLET R3 FH COMPOSI	Total/NA	Air	None	

LCMS (Continued)

Prep Batch: 63237 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 140-63237/1-B	Method Blank	Total/NA	Air	None	
LCS 140-63237/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-63237/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Cleanup Batch: 63266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27976-3	T-0335,T-0336 VEN CB INLET R1 FH COMPOSI	Total/NA	Air	Split	63237
140-27976-9	T-0342,T-0343 VEN CB INLET R2 FH COMPOSI	Total/NA	Air	Split	63237
140-27976-15	T-0350,T-0351 VEN CB INLET R3 FH COMPOSI	Total/NA	Air	Split	63237
MB 140-63237/1-B	Method Blank	Total/NA	Air	Split	63237
LCS 140-63237/2-B	Lab Control Sample	Total/NA	Air	Split	63237
LCSD 140-63237/3-B	Lab Control Sample Dup	Total/NA	Air	Split	63237

Cleanup Batch: 63272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27976-4	T-0337, T-0338, T-0340 VEN CB INTLET R1 BH	Total/NA	Air	Dilution	63161
140-27976-10	T-0344, T-0345, T-0347 VEN CB INLET R2 BH C	Total/NA	Air	Dilution	63161
140-27976-16	T-0351, T-0352, T-0354 VEN CB INLET R3 BH C	Total/NA	Air	Dilution	63161
140-27976-18	T-0355 VEN CB INLET R3 BREAKTHROUGH XA	Total/NA	Air	Dilution	63161

Analysis Batch: 63274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27976-4	T-0337, T-0338, T-0340 VEN CB INTLET R1 BH	Total/NA	Air	537 (modified)	63272
140-27976-10	T-0344, T-0345, T-0347 VEN CB INLET R2 BH C	Total/NA	Air	537 (modified)	63272
140-27976-12	T-0348 VEN CB INLET R2 BREAKTHROUGH XA	Total/NA	Air	537 (modified)	63161
140-27976-16	T-0351, T-0352, T-0354 VEN CB INLET R3 BH C	Total/NA	Air	537 (modified)	63272
140-27976-18	T-0355 VEN CB INLET R3 BREAKTHROUGH XA	Total/NA	Air	537 (modified)	63272
MB 140-63110/14-B	Method Blank	Total/NA	Air	537 (modified)	63161
LCS 140-63110/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	63161
LCSD 140-63110/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	63161

Analysis Batch: 63276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27976-6	T-0341 VEN CB INLET R1 BREAKTHROUGH XA	Total/NA	Air	537 (modified)	63161
MB 140-63110/1-B	Method Blank	Total/NA	Air	537 (modified)	63161
MB 140-63237/1-B	Method Blank	Total/NA	Air	537 (modified)	63266
LCS 140-63237/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	63266
LCSD 140-63237/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	63266

Cleanup Batch: 63311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27976-3	T-0335,T-0336 VEN CB INLET R1 FH COMPOSI	Total/NA	Air	Dilution	63266
140-27976-9	T-0342,T-0343 VEN CB INLET R2 FH COMPOSI	Total/NA	Air	Dilution	63266
140-27976-15	T-0350,T-0351 VEN CB INLET R3 FH COMPOSI	Total/NA	Air	Dilution	63266

Analysis Batch: 63313

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27976-3	T-0335,T-0336 VEN CB INLET R1 FH COMPOSI	Total/NA	Air	537 (modified)	63311
140-27976-9	T-0342,T-0343 VEN CB INLET R2 FH COMPOSI	Total/NA	Air	537 (modified)	63311
140-27976-15	T-0350,T-0351 VEN CB INLET R3 FH COMPOSI	Total/NA	Air	537 (modified)	63311

QC Association Summary

Client: The Chemours Company FC, LLC
Project/Site: VEN CB INLET Q2

Job ID: 140-27976-1

General Chemistry

Analysis Batch: 63261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27976-1	T-0335 VEN CB INLET R1 TARED FILTER	Total/NA	Air	5	
140-27976-2	T-0393 VEN CB INLET R1 ACETONE PROBE R	Total/NA	Air	5	
140-27976-7	T-0342 VEN CB INTLET R2 TARED FILTER	Total/NA	Air	5	
140-27976-8	T-0394 VEN CB INLET R2 ACETONE PROBE R	Total/NA	Air	5	
140-27976-13	T-0348 VEN CB INLET R3 TARED FILTER	Total/NA	Air	5	
140-27976-14	T-0395 VEN CB INLET R3 ACETONE PROBE R	Total/NA	Air	5	

Client Sample ID: T-0335 VEN CB INLET R1 TARED FILTER

Lab Sample ID: 140-27976-1

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:20

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			63261	07/08/22 16:33	JXP	TAL KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-0393 VEN CB INLET R1 ACETONE PROBE RINSE

Lab Sample ID: 140-27976-2

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:20

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			63261	07/08/22 16:37	JXP	TAL KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-0335,T-0336 VEN CB INLET R1 FH COMPOSITE

Lab Sample ID: 140-27976-3

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:20

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	85 mL	63237	07/08/22 08:38	CAC	TAL KNX
Total/NA	Cleanup	Split			43 mL	10 mL	63266	07/09/22 11:14	CAC	TAL KNX
Total/NA	Cleanup	Dilution			2 uL	10000 uL	63311	07/11/22 15:06	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63313	07/11/22 17:26	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0337, T-0338, T-0340 VEN CB INTLET R1 BH COMPOSITE

Lab Sample ID: 140-27976-4

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:20

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Cleanup	Dilution			0.04 uL	10000 uL	63272	07/09/22 16:02	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63274	07/10/22 04:22	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0339 VEN CB INTLET R1 CONDENSATE

Lab Sample ID: 140-27976-5

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:20

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			0.0064516 Sample	10 mL	63111	07/02/22 08:09	DWS	TAL KNX
Total/NA	Cleanup	Dilution			25 uL	10000 uL	63114	07/03/22 09:10	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63113	07/03/22 11:14	JRC	TAL KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: VEN CB INLET Q2

Job ID: 140-27976-1

Client Sample ID: T-0341 VEN CB INLET R1 BREAKTHROUGH XAD-2

Lab Sample ID: 140-27976-6

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:20

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63276	07/10/22 21:26	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0342 VEN CB INTLET R2 TARED FILTER

Lab Sample ID: 140-27976-7

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:20

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			63261	07/08/22 16:33	JXP	TAL KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-0394 VEN CB INLET R2 ACETONE PROBE RINSE

Lab Sample ID: 140-27976-8

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:20

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			63261	07/08/22 16:37	JXP	TAL KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-0342,T-0343 VEN CB INLET R2 FH COMPOSITE

Lab Sample ID: 140-27976-9

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:20

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	75 mL	63237	07/08/22 08:38	CAC	TAL KNX
Total/NA	Cleanup	Split			38 mL	10 mL	63266	07/09/22 11:14	CAC	TAL KNX
Total/NA	Cleanup	Dilution			2 uL	10000 uL	63311	07/11/22 15:06	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63313	07/11/22 17:35	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0344, T-0345, T-0347 VEN CB INLET R2 BH COMPOSITE

Lab Sample ID: 140-27976-10

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:20

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Cleanup	Dilution			2 uL	10000 uL	63272	07/09/22 16:02	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63274	07/10/22 04:57	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0346 VEN CB INLET R2 CONDENSATE

Lab Sample ID: 140-27976-11

Date Collected: 06/29/22 00:00
Matrix: Air
Date Received: 07/01/22 14:20

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			0.0068966 Sample	10 mL	63111	07/02/22 08:09	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		5			63113	07/03/22 10:35	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0348 VEN CB INLET R2 BREAKTHROUGH XAD-2

Lab Sample ID: 140-27976-12

Date Collected: 06/29/22 00:00
Matrix: Air
Date Received: 07/01/22 14:20

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	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		10			63274	07/10/22 05:14	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0348 VEN CB INLET R3 TARED FILTER

Lab Sample ID: 140-27976-13

Date Collected: 06/30/22 00:00
Matrix: Air
Date Received: 07/01/22 14:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			63261	07/08/22 16:33	JXP	TAL KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-0395 VEN CB INLET R3 ACETONE PROBE RINSE

Lab Sample ID: 140-27976-14

Date Collected: 06/30/22 00:00
Matrix: Air
Date Received: 07/01/22 14:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			63261	07/08/22 16:37	JXP	TAL KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-0350,T-0351 VEN CB INLET R3 FH COMPOSITE

Lab Sample ID: 140-27976-15

Date Collected: 06/30/22 00:00
Matrix: Air
Date Received: 07/01/22 14:20

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	63237	07/08/22 08:38	CAC	TAL KNX
Total/NA	Cleanup	Split			33 mL	10 mL	63266	07/09/22 11:14	CAC	TAL KNX
Total/NA	Cleanup	Dilution			2 uL	10000 uL	63311	07/11/22 15:06	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63313	07/11/22 17:45	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0351, T-0352, T-0354 VEN CB INLET R3 BH COMPOSITE

Lab Sample ID: 140-27976-16

Date Collected: 06/30/22 00:00
Date Received: 07/01/22 14:20

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Cleanup	Dilution			2 uL	10000 uL	63272	07/09/22 16:02	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63274	07/10/22 05:23	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0353 VEN CB INLET R3 CONDENSATE

Lab Sample ID: 140-27976-17

Date Collected: 06/30/22 00:00
Date Received: 07/01/22 14:20

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			0.006557 Sample	10 mL	63111	07/02/22 08:09	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		20			63113	07/03/22 10:44	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0355 VEN CB INLET R3 BREAKTHROUGH XAD-2

Lab Sample ID: 140-27976-18

Date Collected: 06/30/22 00:00
Date Received: 07/01/22 14:20

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Cleanup	Dilution			2 uL	10000 uL	63272	07/09/22 16:02	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63274	07/10/22 05:32	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank

Lab Sample ID: MB 140-63110/14-B

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

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63274	07/10/22 05:06	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-63110/1-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	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63276	07/10/22 21:08	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-63111/1-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	63111	07/02/22 08:09	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			63113	07/02/22 19:25	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-63237/1-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	63237	07/08/22 08:38	CAC	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	63266	07/09/22 11:14	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63276	07/10/22 19:20	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-63110/2-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	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63274	07/10/22 02:42	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-63111/2-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	63111	07/02/22 08:09	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			63113	07/02/22 19:34	JRC	TAL KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: VEN CB INLET Q2

Job ID: 140-27976-1

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-63237/2-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	63237	07/08/22 08:38	CAC	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	63266	07/09/22 11:14	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63276	07/10/22 19:29	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-63110/3-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	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63274	07/10/22 03:09	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-63111/3-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	63111	07/02/22 08:09	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			63113	07/02/22 19:43	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-63237/3-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	63237	07/08/22 08:38	CAC	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	63266	07/09/22 11:14	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63276	07/10/22 19:39	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: 140-27976-1
Project/Site: VEN CB INLET Q2

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	06-30-23
Georgia (DW)	State	906	12-11-22
Hawaii	State	NA	12-11-22
Kansas	NELAP	E-10349	10-31-22
Kentucky (DW)	State	90101	12-31-22
Louisiana	NELAP	83979	06-30-23
Louisiana (All)	NELAP	83979	06-30-23
Louisiana (DW)	State	LA019	12-31-22
Maryland	State	277	03-31-23
Michigan	State	9933	12-11-22
Nevada	State	TN00009	07-31-22
New Hampshire	NELAP	299919	01-17-23
New Jersey	NELAP	TN001	06-30-23
New York	NELAP	10781	03-31-23
North Carolina (DW)	State	21705	07-31-22
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

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

Method Summary

Client: The Chemours Company FC, LLC
Project/Site: VEN CB INLET Q2

Job ID: 140-27976-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL KNX
5	Particulates	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
Project/Site: VEN CB INLET Q2

Job ID: 140-27976-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-27976-1	T-0335 VEN CB INLET R1 TARED FILTER	Air	06/29/22 00:00	07/01/22 14:20
140-27976-2	T-0393 VEN CB INLET R1 ACETONE PROBE RINSE	Air	06/29/22 00:00	07/01/22 14:20
140-27976-3	T-0335,T-0336 VEN CB INLET R1 FH COMPOSITE	Air	06/29/22 00:00	07/01/22 14:20
140-27976-4	T-0337, T-0338, T-0340 VEN CB INTLET R1 BH COMPOSITE	Air	06/29/22 00:00	07/01/22 14:20
140-27976-5	T-0339 VEN CB INTLET R1 CONDENSATE	Air	06/29/22 00:00	07/01/22 14:20
140-27976-6	T-0341 VEN CB INLET R1 BREAKTHROUGH XAD-2	Air	06/29/22 00:00	07/01/22 14:20
140-27976-7	T-0342 VEN CB INTLET R2 TARED FILTER	Air	06/29/22 00:00	07/01/22 14:20
140-27976-8	T-0394 VEN CB INLET R2 ACETONE PROBE RINSE	Air	06/29/22 00:00	07/01/22 14:20
140-27976-9	T-0342,T-0343 VEN CB INLET R2 FH COMPOSITE	Air	06/29/22 00:00	07/01/22 14:20
140-27976-10	T-0344, T-0345, T-0347 VEN CB INLET R2 BH COMPOSITE	Air	06/29/22 00:00	07/01/22 14:20
140-27976-11	T-0346 VEN CB INLET R2 CONDENSATE	Air	06/29/22 00:00	07/01/22 14:20
140-27976-12	T-0348 VEN CB INLET R2 BREAKTHROUGH XAD-2	Air	06/29/22 00:00	07/01/22 14:20
140-27976-13	T-0348 VEN CB INLET R3 TARED FILTER	Air	06/30/22 00:00	07/01/22 14:20
140-27976-14	T-0395 VEN CB INLET R3 ACETONE PROBE RINSE	Air	06/30/22 00:00	07/01/22 14:20
140-27976-15	T-0350,T-0351 VEN CB INLET R3 FH COMPOSITE	Air	06/30/22 00:00	07/01/22 14:20
140-27976-16	T-0351, T-0352, T-0354 VEN CB INLET R3 BH COMPOSITE	Air	06/30/22 00:00	07/01/22 14:20
140-27976-17	T-0353 VEN CB INLET R3 CONDENSATE	Air	06/30/22 00:00	07/01/22 14:20
140-27976-18	T-0355 VEN CB INLET R3 BREAKTHROUGH XAD-2	Air	06/30/22 00:00	07/01/22 14:20

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:	Hand Deliver

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

Analytical Parameter:	**Holding Time Requirements:**	**Preservation Requirements:**
HFPO-DA (CAS No. 13252-13-6)	28 Days to Extraction; 28 Days to Analysis	Cool, 4°C

Field Sample No./Sample Coding ID	**Run No.**	**Sample Collection Date**	**Project QC Require-ments**	**Sample Bottle/ Container**	**Sample Type/Analysis**	**Analytical Specifications**
T-0335 VEN CB INLET R1 OTM-45 Tared Particulate Filter (Combine with *T-0336*)	1	6/29/22		Petri Dish	**Tared Particulate Filter (82.6 mm Whatman Glass Microfiber)** OTM-45 / Method 5 Train HFPO-DA / Particulate Analysis	**Knoxville**: Determine Particulate by performing replicate weights until a constant weight is achieved. Spike the 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. Determine Particulate by performing replicate weights until a constant weight is achieved.
T-0393 VEN CB INLET R1 OTM-45 Acetone Probe Rinse	1	6/29/22		250 mL Amber Boston Round	**Acetone Probe Rinse** OTM-45 / Method 5 Train HFPO-DA / Particulate Analysis	**Knoxville:** Evaporate sample to dryness in an oven at 105°C. Determine Particulate by performing replicate weights until a constant weight is achieved. Reconstitute residue with MeOH/5% NH_4OH solution and combine with Front-Half Probe Rinse and Particulate Filter before extraction.

140-27976 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-0336 VEN CB INLET R1 OTM-45 FH of Filter Holder & Probe Methanol Rinse (Combine with *T-0335*)	1	6/29/22		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-0337 VEN CB INLET R1 OTM-45 XAD-2 Resin Tube	1	6/29/22		XAD-2 Resin Tube	**XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike the 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-0338 VEN CB INLET R1 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *T-0337*)	1	6/29/22		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-0339 VEN CB INLET R1 OTM-45 Impingers 1,2 & 3 Condensate	1	6/29/22		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-0340 VEN CB INLET R1 OTM-45 Impinger Glassware MeOH Rinse (Combine with *T-0337*)	1	6/29/22		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-0341 VEN CB INLET R1 OTM-45 Breakthrough XAD-2 Resin Tube	1	6/29/22		XAD-2 Resin Tube	**Breakthrough XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike the sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using method 8321A-HFPO.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require -ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-0336 VEN CB INLET R1 OTM-45 FH of Filter Holder & Probe Methanol Rinse (Combine with *T-0335*)	1	6/29/22		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-0337 VEN CB INLET R1 OTM-45 XAD-2 Resin Tube	1	6/29/22		XAD-2 Resin Tube	**XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike the 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-0338 VEN CB INLET R1 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *T-0337*)	1	6/29/22		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-0339 VEN CB INLET R1 OTM-45 Impingers 1,2 & 3 Condensate	1	6/29/22		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-0340 VEN CB INLET R1 OTM-45 Impinger Glassware MeOH Rinse (Combine with *T-0337*)	1	6/29/22		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-0341 VEN CB INLET R1 OTM-45 Breakthrough XAD-2 Resin Tube	1	6/29/22		XAD-2 Resin Tube	**Breakthrough XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike the sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using method 8321A-HFPO.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require -ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-0342 VEN CB INLET R2 OTM-45 Particulate Filter (Combine with *T-0343*)	2	6/30/22		Petri Dish	**Tared Particulate Filter (82.6 mm Whatman Glass Microfiber)** OTM-45 / Method 5 Train HFPO-DA / Particulate Analysis	**Knoxville**: Determine Particulate by performing replicate weights until a constant weight is achieved. Spike the 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. Determine Particulate by performing replicate weights until a constant weight is achieved.
T-0394 VEN CB INLET R2 OTM-45 Acetone Probe Rinse	2	6/30/22		250 mL Amber Boston Round	**Acetone Probe Rinse** OTM-45 / Method 5 Train HFPO-DA / Particulate Analysis	**Knoxville:** Evaporate sample to dryness in an oven at 105°C. Determine Particulate by performing replicate weights until a constant weight is achieved. Reconstitute residue with MeOH/5% NH_4OH solution and combine with Front-Half Probe Rinse and Particulate Filter before extraction.
T-0343 VEN CB INLET R2 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with *T-0342*)	2	6/30/22		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-0344 VEN CB INLET R2 OTM-45 XAD-2 Resin Tube	2	6/30/22		XAD-2 Resin Tube	**XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike the sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using method 8321A-HFPO. Analyze.
T-0345 VEN CB INLET R2 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *T-0344*)	2	6/30/22		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.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require -ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-0346 VEN CB INLET R2 OTM-45 Impingers 1,2 & 3 Condensate	2	6/30/22		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-0347 VEN CB INLET R2 OTM-45 Impinger Glassware MeOH Rinse (Combine with *T-0344*)	2	6/30/22		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-0348 VEN CB INLET R2 OTM-45 Breakthrough XAD-2 Resin Tube	2	6/30/22		XAD-2 Resin Tube	**Breakthrough XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike the 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-0349 VEN CB INLET R3 OTM-45 Particulate Filter (Combine with *T-0350*)	3	6/30/22		Petri Dish	**Tared Particulate Filter (82.6 mm Whatman Glass Microfiber)** OTM-45 / Method 5 Train HFPO-DA / Particulate Analysis	**Knoxville**: Determine Particulate by performing replicate weights until a constant weight is achieved. Spike the 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. Determine Particulate by performing replicate weights until a constant weight is achieved.
T-0395 VEN CB INLET R3 OTM-45 Acetone Probe Rinse	3	6/30/22		250 mL Amber Boston Round	**Acetone Probe Rinse** OTM-45 / Method 5 Train HFPO-DA / Particulate Analysis	**Knoxville:** Evaporate sample to dryness in an oven at 105°C. Determine Particulate by performing replicate weights until a constant weight is achieved. Reconstitute residue with MeOH/5% NH_4OH solution and combine with Front-Half Probe Rinse and Particulate Filter before 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-0350 VEN CB INLET R3 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with *T-0349*)	3	6/30/22		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-0351 VEN CB INLET R3 OTM-45 XAD-2 Resin Tube	3	6/30/22		XAD-2 Resin Tube	**XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike the 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-0352 VEN CB INLET R3 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *T-0351*)	3	6/30/22		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-0353 VEN CB INLET R3 OTM-45 Impingers 1,2 & 3 Condensate	3	6/30/22		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-0354 VEN CB INLET R3 OTM-45 Impinger Glassware MeOH Rinse (Combine with *T-0351*)	3	6/30/22		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-0355 VEN CB INLET R3 OTM-45 Breakthrough XAD-2 Resin Tube	3	6/30/22		XAD-2 Resin Tube	**Breakthrough XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike the 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.	N/A
(2) Record the sample shipping cooler temperature of all coolers transporting samples listed on this RFA:	CBA 7/1/22 ~~N/A~~ 1.6°C NT / 1.7°C CT
(3) Record any apparent sample loss/breakage.	N/A
(4) Record any unidentified samples transported with this shipment of samples:	N/A
(5) Indicate if all samples were received according to the project's required specifications (i.e. no nonconformances):	Yes

Custody Transfer:

	Name	Company	Date/Time
Relinquished By:	[signature]	Alliance	6/30/22 2000
Accepted By:	[signature]	Eurofins	6/30/22 2000
Relinquished By:	[signature]	Eurofins	7/1/22 1400
Accepted By:	[signature]	ETA Eng	7/1/22 14:00
Relinquished By:			
Accepted By:			
Relinquished By:			
Accepted By:			

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

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓			☐ Containers, Broken
2. Were ambient air containers received intact?			✓	☐ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			✓	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID: SC3 Correction factor: +0.1	✓			☐ Cooler Out of Temp, Client Contacted, Proceed/Cancel ☐ Cooler Out of Temp, Same Day Receipt
5. Were all of the sample containers received intact?	✓			☐ Containers, Broken
6. Were samples received in appropriate containers?	✓			☐ Containers, Improper; Client Contacted; Proceed/Cancel
7. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ COC & Samples Do Not Match ☐ COC Incorrect/Incomplete ☐ COC Not Received
8. Were all of the samples listed on the COC received?	✓			☐ Sample Received, Not on COC ☐ Sample on COC, Not Received
9. Is the date/time of sample collection noted?	✓			☐ COC; No Date/Time; Client Contacted
10. Was the sampler identified on the COC?	✓			☐ Sampler Not Listed on COC
11. Is the client and project name/# identified?	✓			☐ COC Incorrect/Incomplete
12. Are tests/parameters listed for each sample?	✓			☐ COC No tests on COC
13. Is the matrix of the samples noted?	✓			☐ COC Incorrect/Incomplete
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ COC Incorrect/Incomplete
15. Were samples received within holding time?	✓			☐ Holding Time - Receipt
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ pH Adjusted, pH Included (See box 16A) ☐ Incorrect Preservative
17. Were VOA samples received without headspace?			✓	☐ Headspace (VOA only)
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			✓	☐ Residual Chlorine
19. For 1613B water samples is pH<9?			✓	☐ If no, notify lab to adjust
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:	Loc: 140	
Time:	27976	

Project #: _____ PM Instructions: _____

Sample Receiving Associate: _____ Date: 7/1/22

QA026R32.doc, 062719

Login Sample Receipt Checklist

Client: The Chemours Company FC, LLC

Job Number: 140-27976-1

Login Number: 27976
List Number: 1
Creator: Adkins, Courtney M

List Source: Eurofins Knoxville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.		
The cooler's custody seal, if present, is intact.		
Sample custody seals, if present, are intact.		
The cooler or samples do not appear to have been compromised or tampered with.		
Samples were received on ice.		
Cooler Temperature is acceptable.		
Cooler Temperature is recorded.		
COC is present.		
COC is filled out in ink and legible.		
COC is filled out with all pertinent information.		
Is the Field Sampler's name present on COC?		
There are no discrepancies between the containers received and the COC.		
Samples are received within Holding Time (excluding tests with immediate HTs)		
Sample containers have legible labels.		
Containers are not broken or leaking.		
Sample collection date/times are provided.		
Appropriate sample containers are used.		
Sample bottles are completely filled.		
Sample Preservation Verified.		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").		
Multiphasic samples are not present.		
Samples do not require splitting or compositing.		
Residual Chlorine Checked.		

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 140-27968-1
Client Project/Site: VEN CB OUTLET Q2

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:
7/13/2022 2:58:22 PM

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

Table of Contents

Definitions/Glossary

Client: The Chemours Company FC, LLC
Project/Site: VEN CB OUTLET Q2

Job ID: 140-27968-1

Qualifiers

LCMS

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

Glossary

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

Job ID: 140-27968-1

Laboratory: Eurofins Knoxville

Narrative

Job Narrative
140-27968-1

Receipt

The samples were received on 7/1/2022 2:00 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.9º 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”

Observation: It appears that sample number 4 (VEN CB OUTLET R1 BH COMPOSITE) and sample number 6 (VEN CB OUTLET R1 BREAKTHROUGH XAD-2) were swapped due to the concentration of the target compound on each fraction. The error may have happened in the field or in the laboratory. The data will be presented as is with this notation.

Method 537 (modified): The following samples were reported with elevated reporting limits for all analytes: T-0358, T-0359, T-0361 VEN CB OUTLET R1 BH COMPOSITE (140-27968-4), T-0362 VEN CB OUTLET R1 BREAKTHROUGH XAD-2 (140-27968-6), T-0365, T-0366, T-0368 VEN CB OUTLET R2 BH COMPOSITE (140-27968-10) and T-0372, T-0373, T-0375 VEN CB OUTLET R3 BH COMPOSITE (140-27968-16). The sample was analyzed at a dilution based on screening results.

Method 537 (modified): Results for samples T-0358, T-0359, T-0361 VEN CB OUTLET R1 BH COMPOSITE (140-27968-4), T-0365, T-0366, T-0368 VEN CB OUTLET R2 BH COMPOSITE (140-27968-10) and T-0372, T-0373, T-0375 VEN CB OUTLET R3 BH COMPOSITE (140-27968-16) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Method 537 (modified): The required dilution factor for the following sample was higher than could be achieved by "in vial" dilution, as it would dilute out the Isotope Dilution Analytes (IDA): T-0362 VEN CB OUTLET R1 BREAKTHROUGH XAD-2 (140-27968-6). 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): Results for samples T-0363,T-0364 VEN CB OUTLET R2 FH COMPOSITE (140-27968-9) and T-0370,T-0371 VEN

Job ID: 140-27968-1 (Continued)

Laboratory: Eurofins Knoxville (Continued)

CB OUTLET R3 FH COMPOSITE (140-27968-15) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Method 537 (modified): The following samples were reported with elevated reporting limits for all analytes: T-0356,T-0357 VEN CB OUTLET R1 FH COMPOSITE (140-27968-3), T-0363,T-0364 VEN CB OUTLET R2 FH COMPOSITE (140-27968-9) and T-0370,T-0371 VEN CB OUTLET R3 FH COMPOSITE (140-27968-15). The sample was analyzed at a dilution based on screening results.

Method 537 (modified): The required dilution factor for the following samples were higher than could be achieved by "in vial" dilution, as it would dilute out the Isotope Dilution Analytes (IDA): T-0356,T-0357 VEN CB OUTLET R1 FH COMPOSITE (140-27968-3). As such, the dilution was achieved by taking a subsample of the undiluted extract, adding sufficient solvent, and re-spiking the extract with IDA.

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

General Chemistry

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

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

Organic Prep

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

Client: The Chemours Company FC, LLC
Project/Site: VEN CB OUTLET Q2

Job ID: 140-27968-1

Client Sample ID: T-0356 VEN CB OUTLET R1 TARED FILTER

Lab Sample ID: 140-27968-1
Matrix: Air
Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00
Sample Container: Air Train

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	ND		0.500	0.500	mg/sample			07/08/22 16:33	1

Client Sample ID: T-0396 VEN CB OUTLET R1 ACETONE PROBE RINSE

Lab Sample ID: 140-27968-2
Matrix: Air
Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00
Sample Container: Air Train

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	0.940		0.500	0.500	mg/sample			07/08/22 16:37	1

Client Sample ID: T-0356,T-0357 VEN CB OUTLET R1 FH COMPOSITE

Lab Sample ID: 140-27968-3
Matrix: Air
Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	6.38		0.500	0.470	ug/Sample		07/08/22 08:38	07/11/22 16:57	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*100*		*25 - 150*	*07/08/22 08:38*	*07/11/22 16:57*	*1*

Client Sample ID: T-0358, T-0359, T-0361 VEN CB OUTLET R1 BH COMPOSITE

Lab Sample ID: 140-27968-4
Matrix: Air
Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.116		0.0400	0.0220	ug/Sample		07/02/22 06:10	07/10/22 03:26	2

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*113*		*25 - 150*	*07/02/22 06:10*	*07/10/22 03:26*	*2*

Client Sample ID: T-0360 VEN CB OUTLET R1 CONDENSATE

Lab Sample ID: 140-27968-5
Matrix: Air
Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0763	0.0305	ug/Sample		07/02/22 08:09	07/02/22 20:01	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*81*		*25 - 150*	*07/02/22 08:09*	*07/02/22 20:01*	*1*

Client: The Chemours Company FC, LLC
Project/Site: VEN CB OUTLET Q2

Job ID: 140-27968-1

Client Sample ID: T-0362 VEN CB OUTLET R1 BREAKTHROUGH XAD-2

Lab Sample ID: 140-27968-6

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	61.6		10.0	5.50	ug/Sample		07/02/22 06:10	07/10/22 03:35	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*105*		*25 - 150*	*07/02/22 06:10*	*07/10/22 03:35*	*1*

Client Sample ID: T-0363 VEN CB OUTLET R2 TARED FILTER

Lab Sample ID: 140-27968-7

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00
Sample Container: Air Train

Matrix: Air

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	ND		0.500	0.500	mg/sample			07/08/22 16:33	1

Client Sample ID: T-0397 VEN CB OUTLET R2 ACETONE PROBE RINSE

Lab Sample ID: 140-27968-8

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00
Sample Container: Air Train

Matrix: Air

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	1.48		0.500	0.500	mg/sample			07/08/22 16:37	1

Client Sample ID: T-0363,T-0364 VEN CB OUTLET R2 FH COMPOSITE

Lab Sample ID: 140-27968-9

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	1.33		0.250	0.235	ug/Sample		07/08/22 08:38	07/11/22 17:06	50

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*91*		*25 - 150*	*07/08/22 08:38*	*07/11/22 17:06*	*50*

Client Sample ID: T-0365, T-0366, T-0368 VEN CB OUTLET R2 BH COMPOSITE

Lab Sample ID: 140-27968-10

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.223		0.0400	0.0220	ug/Sample		07/02/22 06:10	07/10/22 03:44	2

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*101*		*25 - 150*	*07/02/22 06:10*	*07/10/22 03:44*	*2*

Client: The Chemours Company FC, LLC
Job ID: 140-27968-1
Project/Site: VEN CB OUTLET Q2

Client Sample ID: T-0367 VEN CB OUTLET R2 CONDENSATE
Lab Sample ID: 140-27968-11
Date Collected: 06/29/22 00:00
Matrix: Air
Date Received: 07/01/22 14:00
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.104		0.0713	0.0285	ug/Sample		07/02/22 08:09	07/02/22 20:09	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	85		25 - 150	07/02/22 08:09	07/02/22 20:09	1

Client Sample ID: T-0369 VEN CB OUTLET R2 BREAKTHROUGH XAD-2
Lab Sample ID: 140-27968-12
Date Collected: 06/29/22 00:00
Matrix: Air
Date Received: 07/01/22 14:00
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.0128	J	0.0200	0.0110	ug/Sample		07/02/22 06:10	07/10/22 03:54	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	90		25 - 150	07/02/22 06:10	07/10/22 03:54	1

Client Sample ID: T-0370 VEN CB OUTLET R3 TARED FILTER
Lab Sample ID: 140-27968-13
Date Collected: 06/30/22 00:00
Matrix: Air
Date Received: 07/01/22 14:00
Sample Container: Air Train

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	ND		0.500	0.500	mg/sample			07/08/22 16:33	1

Client Sample ID: T-0398 VEN CB OUTLET R3 ACETONE PROBE RINSE
Lab Sample ID: 140-27968-14
Date Collected: 06/30/22 00:00
Matrix: Air
Date Received: 07/01/22 14:00
Sample Container: Air Train

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Particulates, Total	0.945		0.500	0.500	mg/sample			07/08/22 16:37	1

Client Sample ID: T-0370,T-0371 VEN CB OUTLET R3 FH COMPOSITE
Lab Sample ID: 140-27968-15
Date Collected: 06/30/22 00:00
Matrix: Air
Date Received: 07/01/22 14:00
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	1.46		0.250	0.235	ug/Sample		07/08/22 08:38	07/11/22 17:15	50

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	80		25 - 150	07/08/22 08:38	07/11/22 17:15	50

Client: The Chemours Company FC, LLC
Project/Site: VEN CB OUTLET Q2

Job ID: 140-27968-1

Client Sample ID: T-0372, T-0373, T-0375 VEN CB OUTLET R3 BH COMPOSITE

Lab Sample ID: 140-27968-16

Date Collected: 06/30/22 00:00
Date Received: 07/01/22 14:00
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.143		0.0400	0.0220	ug/Sample		07/02/22 06:10	07/10/22 04:04	2

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*91*		*25 - 150*	*07/02/22 06:10*	*07/10/22 04:04*	*2*

Client Sample ID: T-0374 VEN CB OUTLET R3 CONDENSATE

Lab Sample ID: 140-27968-17

Date Collected: 06/30/22 00:00
Date Received: 07/01/22 14:00
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.0551	J	0.0763	0.0305	ug/Sample		07/02/22 08:09	07/02/22 20:18	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*86*		*25 - 150*	*07/02/22 08:09*	*07/02/22 20:18*	*1*

Client Sample ID: T-0376 VEN CB OUTLET R3 BREAKTHROUGH XAD-2

Lab Sample ID: 140-27968-18

Date Collected: 06/30/22 00:00
Date Received: 07/01/22 14:00
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.0114	J	0.0200	0.0110	ug/Sample		07/02/22 06:10	07/10/22 04:13	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*111*		*25 - 150*	*07/02/22 06:10*	*07/10/22 04:13*	*1*

Default Detection Limits

Client: The Chemours Company FC, LLC
Project/Site: VEN CB OUTLET Q2

Job ID: 140-27968-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Prep: None

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

Method: 537 (modified) - Fluorinated Alkyl Substances

Prep: PFAS Prep

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

General Chemistry

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

Isotope Dilution Summary

Client: The Chemours Company FC, LLC
Project/Site: VEN CB OUTLET Q2

Job ID: 140-27968-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Air

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	HFPODA (25-150)
140-27968-3	T-0356,T-0357 VEN CB OUTLE	100
140-27968-4	T-0358, T-0359, T-0361 VEN CB OUTLET R1 BH COMPOSIT	113
140-27968-5	T-0360 VEN CB OUTLET R1 CONDENSATE	81
140-27968-6	T-0362 VEN CB OUTLET R1 BREAKTHROUGH XAD-2	105
140-27968-9	T-0363,T-0364 VEN CB OUTLET R2 FH COMPOSITE	91
140-27968-10	T-0365, T-0366, T-0368 VEN CB OUTLET R2 BH COMPOSIT	101
140-27968-11	T-0367 VEN CB OUTLET R2 CONDENSATE	85
140-27968-12	T-0369 VEN CB OUTLET R2 BREAKTHROUGH XAD-2	90
140-27968-15	T-0370,T-0371 VEN CB OUTLET R3 FH COMPOSITE	80
140-27968-16	T-0372, T-0373, T-0375 VEN CB OUTLET R3 BH COMPOSIT	91
140-27968-17	T-0374 VEN CB OUTLET R3 CONDENSATE	86
140-27968-18	T-0376 VEN CB OUTLET R3 BREAKTHROUGH XAD-2	111
LCS 140-63110/2-B	Lab Control Sample	95
LCS 140-63111/2-A	Lab Control Sample	91
LCS 140-63237/2-B	Lab Control Sample	67
LCSD 140-63110/3-B	Lab Control Sample Dup	97
LCSD 140-63111/3-A	Lab Control Sample Dup	88
LCSD 140-63237/3-B	Lab Control Sample Dup	82
MB 140-63110/1-B	Method Blank	86
MB 140-63111/1-A	Method Blank	93
MB 140-63237/1-B	Method Blank	72

Surrogate Legend

HFPODA = 13C3 HFPO-DA

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 140-63110/1-B
Matrix: Air
Analysis Batch: 63276

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63110

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		07/02/22 06:10	07/10/22 21:08	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*86*		*25 - 150*	*07/02/22 06:10*	*07/10/22 21:08*	*1*

Lab Sample ID: LCS 140-63110/2-B
Matrix: Air
Analysis Batch: 63274

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 63110

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0200	0.02132		ug/Sample		107	60 - 140		

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

Lab Sample ID: LCSD 140-63110/3-B
Matrix: Air
Analysis Batch: 63274

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 63110

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0200	0.02348		ug/Sample		117	60 - 140	10	30

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

Lab Sample ID: MB 140-63111/1-A
Matrix: Air
Analysis Batch: 63113

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63111

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		07/02/22 08:09	07/02/22 19:25	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*93*		*25 - 150*	*07/02/22 08:09*	*07/02/22 19:25*	*1*

Lab Sample ID: LCS 140-63111/2-A
Matrix: Air
Analysis Batch: 63113

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 63111

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0100	0.01091		ug/Sample		109	60 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*91*		*25 - 150*

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

Lab Sample ID: LCSD 140-63111/3-A
Matrix: Air
Analysis Batch: 63113

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 63111

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0100	0.01074		ug/Sample		107	60 - 140	2	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*88*		*25 - 150*

Lab Sample ID: MB 140-63237/1-B
Matrix: Air
Analysis Batch: 63276

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63237

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		07/08/22 08:38	07/10/22 19:20	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*72*		*25 - 150*	*07/08/22 08:38*	*07/10/22 19:20*	*1*

Lab Sample ID: LCS 140-63237/2-B
Matrix: Air
Analysis Batch: 63276

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 63237

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0200	0.02415		ug/Sample		121	60 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*67*		*25 - 150*

Lab Sample ID: LCSD 140-63237/3-B
Matrix: Air
Analysis Batch: 63276

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 63237

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0200	0.02540		ug/Sample		127	60 - 140	5	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*82*		*25 - 150*

LCMS

Prep Batch: 63110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27968-4	T-0358, T-0359, T-0361 VEN CB OUTLET R1 BH	Total/NA	Air	None	
140-27968-6	T-0362 VEN CB OUTLET R1 BREAKTHROUGH	Total/NA	Air	None	
140-27968-10	T-0365, T-0366, T-0368 VEN CB OUTLET R2 BH	Total/NA	Air	None	
140-27968-12	T-0369 VEN CB OUTLET R2 BREAKTHROUGH	Total/NA	Air	None	
140-27968-16	T-0372, T-0373, T-0375 VEN CB OUTLET R3 BH	Total/NA	Air	None	
140-27968-18	T-0376 VEN CB OUTLET R3 BREAKTHROUGH	Total/NA	Air	None	
MB 140-63110/1-B	Method Blank	Total/NA	Air	None	
LCS 140-63110/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-63110/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Prep Batch: 63111

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27968-5	T-0360 VEN CB OUTLET R1 CONDENSATE	Total/NA	Air	PFAS Prep	
140-27968-11	T-0367 VEN CB OUTLET R2 CONDENSATE	Total/NA	Air	PFAS Prep	
140-27968-17	T-0374 VEN CB OUTLET R3 CONDENSATE	Total/NA	Air	PFAS Prep	
MB 140-63111/1-A	Method Blank	Total/NA	Air	PFAS Prep	
LCS 140-63111/2-A	Lab Control Sample	Total/NA	Air	PFAS Prep	
LCSD 140-63111/3-A	Lab Control Sample Dup	Total/NA	Air	PFAS Prep	

Analysis Batch: 63113

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27968-5	T-0360 VEN CB OUTLET R1 CONDENSATE	Total/NA	Air	537 (modified)	63111
140-27968-11	T-0367 VEN CB OUTLET R2 CONDENSATE	Total/NA	Air	537 (modified)	63111
140-27968-17	T-0374 VEN CB OUTLET R3 CONDENSATE	Total/NA	Air	537 (modified)	63111
MB 140-63111/1-A	Method Blank	Total/NA	Air	537 (modified)	63111
LCS 140-63111/2-A	Lab Control Sample	Total/NA	Air	537 (modified)	63111
LCSD 140-63111/3-A	Lab Control Sample Dup	Total/NA	Air	537 (modified)	63111

Cleanup Batch: 63161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27968-4	T-0358, T-0359, T-0361 VEN CB OUTLET R1 BH	Total/NA	Air	Split	63110
140-27968-6	T-0362 VEN CB OUTLET R1 BREAKTHROUGH	Total/NA	Air	Split	63110
140-27968-10	T-0365, T-0366, T-0368 VEN CB OUTLET R2 BH	Total/NA	Air	Split	63110
140-27968-12	T-0369 VEN CB OUTLET R2 BREAKTHROUGH	Total/NA	Air	Split	63110
140-27968-16	T-0372, T-0373, T-0375 VEN CB OUTLET R3 BH	Total/NA	Air	Split	63110
140-27968-18	T-0376 VEN CB OUTLET R3 BREAKTHROUGH	Total/NA	Air	Split	63110
MB 140-63110/1-B	Method Blank	Total/NA	Air	Split	63110
LCS 140-63110/2-B	Lab Control Sample	Total/NA	Air	Split	63110
LCSD 140-63110/3-B	Lab Control Sample Dup	Total/NA	Air	Split	63110

Prep Batch: 63237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27968-3	T-0356,T-0357 VEN CB OUTLET R1 FH COMPC	Total/NA	Air	None	
140-27968-9	T-0363,T-0364 VEN CB OUTLET R2 FH COMPC	Total/NA	Air	None	
140-27968-15	T-0370,T-0371 VEN CB OUTLET R3 FH COMPC	Total/NA	Air	None	
MB 140-63237/1-B	Method Blank	Total/NA	Air	None	
LCS 140-63237/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-63237/3-B	Lab Control Sample Dup	Total/NA	Air	None	

QC Association Summary

Client: The Chemours Company FC, LLC
Project/Site: VEN CB OUTLET Q2

Job ID: 140-27968-1

LCMS

Cleanup Batch: 63266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27968-3	T-0356,T-0357 VEN CB OUTLET R1 FH COMPC	Total/NA	Air	Split	63237
140-27968-9	T-0363,T-0364 VEN CB OUTLET R2 FH COMPC	Total/NA	Air	Split	63237
140-27968-15	T-0370,T-0371 VEN CB OUTLET R3 FH COMPC	Total/NA	Air	Split	63237
MB 140-63237/1-B	Method Blank	Total/NA	Air	Split	63237
LCS 140-63237/2-B	Lab Control Sample	Total/NA	Air	Split	63237
LCSD 140-63237/3-B	Lab Control Sample Dup	Total/NA	Air	Split	63237

Cleanup Batch: 63272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27968-6	T-0362 VEN CB OUTLET R1 BREAKTHROUGH	Total/NA	Air	Dilution	63161

Analysis Batch: 63274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27968-4	T-0358, T-0359, T-0361 VEN CB OUTLET R1 BH	Total/NA	Air	537 (modified)	63161
140-27968-6	T-0362 VEN CB OUTLET R1 BREAKTHROUGH	Total/NA	Air	537 (modified)	63272
140-27968-10	T-0365, T-0366, T-0368 VEN CB OUTLET R2 BH	Total/NA	Air	537 (modified)	63161
140-27968-12	T-0369 VEN CB OUTLET R2 BREAKTHROUGH	Total/NA	Air	537 (modified)	63161
140-27968-16	T-0372, T-0373, T-0375 VEN CB OUTLET R3 BH	Total/NA	Air	537 (modified)	63161
140-27968-18	T-0376 VEN CB OUTLET R3 BREAKTHROUGH	Total/NA	Air	537 (modified)	63161
LCS 140-63110/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	63161
LCSD 140-63110/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	63161

Analysis Batch: 63276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 140-63110/1-B	Method Blank	Total/NA	Air	537 (modified)	63161
MB 140-63237/1-B	Method Blank	Total/NA	Air	537 (modified)	63266
LCS 140-63237/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	63266
LCSD 140-63237/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	63266

Cleanup Batch: 63311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27968-3	T-0356,T-0357 VEN CB OUTLET R1 FH COMPC	Total/NA	Air	Dilution	63266

Analysis Batch: 63313

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27968-3	T-0356,T-0357 VEN CB OUTLET R1 FH COMPC	Total/NA	Air	537 (modified)	63311
140-27968-9	T-0363,T-0364 VEN CB OUTLET R2 FH COMPC	Total/NA	Air	537 (modified)	63266
140-27968-15	T-0370,T-0371 VEN CB OUTLET R3 FH COMPC	Total/NA	Air	537 (modified)	63266

General Chemistry

Analysis Batch: 63261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-27968-1	T-0356 VEN CB OUTLET R1 TARED FILTER	Total/NA	Air	5	
140-27968-2	T-0396 VEN CB OUTLET R1 ACETONE PROBE	Total/NA	Air	5	
140-27968-7	T-0363 VEN CB OUTLET R2 TARED FILTER	Total/NA	Air	5	
140-27968-8	T-0397 VEN CB OUTLET R2 ACETONE PROBE	Total/NA	Air	5	
140-27968-13	T-0370 VEN CB OUTLET R3 TARED FILTER	Total/NA	Air	5	
140-27968-14	T-0398 VEN CB OUTLET R3 ACETONE PROBE	Total/NA	Air	5	

Client Sample ID: T-0356 VEN CB OUTLET R1 TARED FILTER

Lab Sample ID: 140-27968-1

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			63261	07/08/22 16:33	JXP	TAL KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-0396 VEN CB OUTLET R1 ACETONE PROBE RINSE

Lab Sample ID: 140-27968-2

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			63261	07/08/22 16:37	JXP	TAL KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-0356,T-0357 VEN CB OUTLET R1 FH COMPOSITE

Lab Sample ID: 140-27968-3

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	64 mL	63237	07/08/22 08:38	CAC	TAL KNX
Total/NA	Cleanup	Split			32 mL	10 mL	63266	07/09/22 11:14	CAC	TAL KNX
Total/NA	Cleanup	Dilution			100 uL	10000 uL	63311	07/11/22 15:06	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63313	07/11/22 16:57	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0358, T-0359, T-0361 VEN CB OUTLET R1 BH COMPOSITE

Lab Sample ID: 140-27968-4

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		2			63274	07/10/22 03:26	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0360 VEN CB OUTLET R1 CONDENSATE

Lab Sample ID: 140-27968-5

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			0.006557 Sample	10 mL	63111	07/02/22 08:09	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			63113	07/02/22 20:01	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0362 VEN CB OUTLET R1 BREAKTHROUGH XAD-2

Lab Sample ID: 140-27968-6

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Cleanup	Dilution			20 uL	10000 uL	63272	07/09/22 16:02	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63274	07/10/22 03:35	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0363 VEN CB OUTLET R2 TARED FILTER

Lab Sample ID: 140-27968-7

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			63261	07/08/22 16:33	JXP	TAL KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-0397 VEN CB OUTLET R2 ACETONE PROBE RINSE

Lab Sample ID: 140-27968-8

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			63261	07/08/22 16:37	JXP	TAL KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-0363,T-0364 VEN CB OUTLET R2 FH COMPOSITE

Lab Sample ID: 140-27968-9

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	63237	07/08/22 08:38	CAC	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	63266	07/09/22 11:14	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		50			63313	07/11/22 17:06	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0365, T-0366, T-0368 VEN CB OUTLET R2 BH COMPOSITE

Lab Sample ID: 140-27968-10

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		2			63274	07/10/22 03:44	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0367 VEN CB OUTLET R2 CONDENSATE

Lab Sample ID: 140-27968-11

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			0.0070175 Sample	10 mL	63111	07/02/22 08:09	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			63113	07/02/22 20:09	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0369 VEN CB OUTLET R2 BREAKTHROUGH XAD-2

Lab Sample ID: 140-27968-12

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63274	07/10/22 03:54	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0370 VEN CB OUTLET R3 TARED FILTER

Lab Sample ID: 140-27968-13

Date Collected: 06/30/22 00:00
Date Received: 07/01/22 14:00

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			63261	07/08/22 16:33	JXP	TAL KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-0398 VEN CB OUTLET R3 ACETONE PROBE RINSE

Lab Sample ID: 140-27968-14

Date Collected: 06/30/22 00:00
Date Received: 07/01/22 14:00

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5		1			63261	07/08/22 16:37	JXP	TAL KNX
	Instrument ID: NOEQUIP									

Client Sample ID: T-0370,T-0371 VEN CB OUTLET R3 FH COMPOSITE

Lab Sample ID: 140-27968-15

Date Collected: 06/30/22 00:00
Date Received: 07/01/22 14:00

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	63237	07/08/22 08:38	CAC	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	63266	07/09/22 11:14	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		50			63313	07/11/22 17:15	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0372, T-0373, T-0375 VEN CB OUTLET R3 BH COMPOSITE

Lab Sample ID: 140-27968-16

Date Collected: 06/30/22 00:00
Date Received: 07/01/22 14:00

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		2			63274	07/10/22 04:04	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0374 VEN CB OUTLET R3 CONDENSATE

Lab Sample ID: 140-27968-17

Date Collected: 06/30/22 00:00
Date Received: 07/01/22 14:00

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			0.006557 Sample	10 mL	63111	07/02/22 08:09	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			63113	07/02/22 20:18	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0376 VEN CB OUTLET R3 BREAKTHROUGH XAD-2

Lab Sample ID: 140-27968-18

Date Collected: 06/30/22 00:00
Date Received: 07/01/22 14:00

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63274	07/10/22 04:13	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank

Lab Sample ID: MB 140-63110/1-B

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

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63276	07/10/22 21:08	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank

Lab Sample ID: MB 140-63111/1-A

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

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			1 Sample	10 mL	63111	07/02/22 08:09	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			63113	07/02/22 19:25	JRC	TAL KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: VEN CB OUTLET Q2

Job ID: 140-27968-1

Client Sample ID: Method Blank
Lab Sample ID: MB 140-63237/1-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	63237	07/08/22 08:38	CAC	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	63266	07/09/22 11:14	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63276	07/10/22 19:20	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-63110/2-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	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63274	07/10/22 02:42	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-63111/2-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	63111	07/02/22 08:09	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			63113	07/02/22 19:34	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-63237/2-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	63237	07/08/22 08:38	CAC	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	63266	07/09/22 11:14	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63276	07/10/22 19:29	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-63110/3-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	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63274	07/10/22 03:09	JRC	TAL KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: VEN CB OUTLET Q2

Job ID: 140-27968-1

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

Lab Sample ID: LCSD 140-63111/3-A
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			1 Sample	10 mL	63111	07/02/22 08:09	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			63113	07/02/22 19:43	JRC	TAL KNX
	Instrument ID: LCA									

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

Lab Sample ID: LCSD 140-63237/3-B
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	63237	07/08/22 08:38	CAC	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	63266	07/09/22 11:14	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63276	07/10/22 19:39	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: 140-27968-1
Project/Site: VEN CB OUTLET Q2

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	06-30-23
Georgia (DW)	State	906	12-11-22
Hawaii	State	NA	12-11-22
Kansas	NELAP	E-10349	10-31-22
Kentucky (DW)	State	90101	12-31-22
Louisiana	NELAP	83979	06-30-23
Louisiana (All)	NELAP	83979	06-30-23
Louisiana (DW)	State	LA019	12-31-22
Maryland	State	277	03-31-23
Michigan	State	9933	12-11-22
Nevada	State	TN00009	07-31-22
New Hampshire	NELAP	299919	01-17-23
New Jersey	NELAP	TN001	06-30-23
New York	NELAP	10781	03-31-23
North Carolina (DW)	State	21705	07-31-22
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

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

Method Summary

Client: The Chemours Company FC, LLC
Project/Site: VEN CB OUTLET Q2

Job ID: 140-27968-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL KNX
5	Particulates	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
Project/Site: VEN CB OUTLET Q2

Job ID: 140-27968-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-27968-1	T-0356 VEN CB OUTLET R1 TARED FILTER	Air	06/29/22 00:00	07/01/22 14:00
140-27968-2	T-0396 VEN CB OUTLET R1 ACETONE PROBE RINSE	Air	06/29/22 00:00	07/01/22 14:00
140-27968-3	T-0356,T-0357 VEN CB OUTLET R1 FH COMPOSITE	Air	06/29/22 00:00	07/01/22 14:00
140-27968-4	T-0358, T-0359, T-0361 VEN CB OUTLET R1 BH COMPOSITE	Air	06/29/22 00:00	07/01/22 14:00
140-27968-5	T-0360 VEN CB OUTLET R1 CONDENSATE	Air	06/29/22 00:00	07/01/22 14:00
140-27968-6	T-0362 VEN CB OUTLET R1 BREAKTHROUGH XAD-2	Air	06/29/22 00:00	07/01/22 14:00
140-27968-7	T-0363 VEN CB OUTLET R2 TARED FILTER	Air	06/29/22 00:00	07/01/22 14:00
140-27968-8	T-0397 VEN CB OUTLET R2 ACETONE PROBE RINSE	Air	06/29/22 00:00	07/01/22 14:00
140-27968-9	T-0363,T-0364 VEN CB OUTLET R2 FH COMPOSITE	Air	06/29/22 00:00	07/01/22 14:00
140-27968-10	T-0365, T-0366, T-0368 VEN CB OUTLET R2 BH COMPOSITE	Air	06/29/22 00:00	07/01/22 14:00
140-27968-11	T-0367 VEN CB OUTLET R2 CONDENSATE	Air	06/29/22 00:00	07/01/22 14:00
140-27968-12	T-0369 VEN CB OUTLET R2 BREAKTHROUGH XAD-2	Air	06/29/22 00:00	07/01/22 14:00
140-27968-13	T-0370 VEN CB OUTLET R3 TARED FILTER	Air	06/30/22 00:00	07/01/22 14:00
140-27968-14	T-0398 VEN CB OUTLET R3 ACETONE PROBE RINSE	Air	06/30/22 00:00	07/01/22 14:00
140-27968-15	T-0370,T-0371 VEN CB OUTLET R3 FH COMPOSITE	Air	06/30/22 00:00	07/01/22 14:00
140-27968-16	T-0372, T-0373, T-0375 VEN CB OUTLET R3 BH COMPOSITE	Air	06/30/22 00:00	07/01/22 14:00
140-27968-17	T-0374 VEN CB OUTLET R3 CONDENSATE	Air	06/30/22 00:00	07/01/22 14:00
140-27968-18	T-0376 VEN CB OUTLET R3 BREAKTHROUGH XAD-2	Air	06/30/22 00:00	07/01/22 14:00

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

eurofins | Environment Testing TestAmerica

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

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:	Hand Deliver

Project Deliverables:
Report analytical results on TALS Report form Std_Tal_L4. Include "Field Sample Number", "Sample Type", and "Run Number" on all TALS Reports.

Analytical Parameter:	Holding Time Requirements:	Preservation Requirements:
HFPO-DA (CAS No. 13252-13-6)	28 Days to Extraction; 28 Days to Analysis	Cool, 4°C

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require-ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-0356 VEN CB OUTLET R1 OTM-45 Tared Particulate Filter (Combine with *T-0357*)	1	6/29/22		Petri Dish	**Tared Particulate Filter (82.6 mm Whatman Glass Microfiber)** OTM-45 / Method 5 Train HFPO-DA / Particulate Analysis	**Knoxville**: Determine Particulate by performing replicate weights until a constant weight is achieved. Spike the 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. Determine Particulate by performing replicate weights until a constant weight is achieved.
T-0396 VEN CB OUTLET R1 OTM-45 Acetone Probe Rinse	1	6/29/22		250 mL Amber Boston Round	**Acetone Probe Rinse** OTM-45 / Method 5 Train HFPO-DA / Particulate Analysis	**Knoxville:** Evaporate sample to dryness in an oven at 105°C. Determine Particulate by performing replicate weights until a constant weight is achieved. Reconstitute residue with MeOH/5% NH_4OH solution and combine with Front-Half Probe Rinse and Particulate Filter before extraction.

140-27968 Chain of Custody

O:\Users Folders\LedesmaA\ACS PROJECT FILES\Chemours\CB Testing\2
Last saved by Ledesma, Alicia Last printed 6/22/2022 2:16 PM

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require -ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-0357 VEN CB OUTLET R1 OTM-45 FH of Filter Holder & Probe Methanol Rinse (Combine with *T-0356*)	1	6/29/22		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-0358 VEN CB OUTLET R1 OTM-45 XAD-2 Resin Tube	1	6/29/22		XAD-2 Resin Tube	**XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike the 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-0359 VEN CB OUTLET R1 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *T-0358*)	1	6/29/22		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-0360 VEN CB OUTLET R1 OTM-45 Impingers 1,2 & 3 Condensate	1	6/29/22		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-0361 VEN CB OUTLET R1 OTM-45 Impinger Glassware MeOH Rinse (Combine with *T-0358*)	1	6/29/22		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-0362 VEN CB OUTLET R1 OTM-45 Breakthrough XAD-2 Resin Tube	1	6/29/22		XAD-2 Resin Tube	**Breakthrough XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike the sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using Method 8321A-HFPO.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require -ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-0363 VEN CB OUTLET R2 OTM-45 Tared Particulate Filter (Combine with *T-0364*)	2	6/30/22		Petri Dish	**Tared Particulate Filter (82.6 mm Whatman Glass Microfiber)** OTM-45 / Method 5 Train HFPO-DA / Particulate Analysis	**Knoxville**: Determine Particulate by performing replicate weights until a constant weight is achieved. Spike the 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. Determine Particulate by performing replicate weights until a constant weight is achieved.
T-0397 VEN CB OUTLET R2 OTM-45 Acetone Probe Rinse	2	6/30/22		250 mL Amber Boston Round	**Acetone Probe Rinse** OTM-45 / Method 5 Train HFPO-DA / Particulate Analysis	**Knoxville:** Evaporate sample to dryness in an oven at 105°C. Determine Particulate by performing replicate weights until a constant weight is achieved. Reconstitute residue with MeOH/5% NH_4OH solution and combine with Front-Half Probe Rinse and Particulate Filter before extraction.
T-0364 VEN CB OUTLET R2 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with *T-0363*)	2	6/30/22		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-0365 VEN CB OUTLET R2 OTM-45 XAD-2 Resin Tube	2	6/30/22		XAD-2 Resin Tube	**XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike the 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-0366 VEN CB OUTLET R2 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *T-0365*)	2	6/30/22		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-0367 VEN CB OUTLET R2 OTM-45 Impingers 1,2 & 3 Condensate	2	6/30/22		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-0368 VEN CB OUTLET R2 OTM-45 Impinger Glassware MeOH Rinse (Combine with *T-0365*)	2	6/30/22		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-0369 VEN CB OUTLET R2 OTM-45 Breakthrough XAD-2 Resin Tube	2	6/30/22		XAD-2 Resin Tube	**Breakthrough XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike the 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-0370 VEN CB OUTLET R3 OTM-45 Tared Particulate Filter (Combine with *T-0371*)	3	6/30/22		Petri Dish	**Tared Particulate Filter (82.6 mm Whatman Glass Microfiber)** OTM-45 / Method 5 Train HFPO-DA / Particulate Analysis	**Knoxville**: Determine Particulate by performing replicate weights until a constant weight is achieved. Spike the 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. Determine Particulate by performing replicate weights until a constant weight is achieved.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require -ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-0398 VEN CB OUTLET R3 OTM-45 Acetone Probe Rinse	3	6/30/22		250 mL Amber Boston Round	**Acetone Probe Rinse** OTM-45 / Method 5 Train HFPO-DA / Particulate Analysis	**Knoxville:** Evaporate sample to dryness in an oven at 105°C. Determine Particulate by performing replicate weights until a constant weight is achieved. Reconstitute residue with MeOH/5% NH_4OH solution and combine with Front-Half Probe Rinse and Particulate Filter before extraction.
T-0371 VEN CB OUTLET R3 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with *T-0370*)	3	6/30/22		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-0372 VEN CB OUTLET R3 OTM-45 XAD-2 Resin Tube	3	6/30/22		XAD-2 Resin Tube	**XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike the 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-0373 VEN CB OUTLET R3 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with *T-0372*)	3	6/30/22		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-0374 VEN CB OUTLET R3 OTM-45 Impingers 1,2 & 3 Condensate	3	6/30/22		500 mL HDPE Wide-Mouth Bottle	**Impinger #1, #2 & #3 Condensate** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Analyze the sample for HFPO-DA.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require -ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-0375 VEN CB OUTLET R3 OTM-45 Impinger Glassware MeOH Rinse (Combine with *T-0372*)	3	6/30/22		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-0376 VEN CB OUTLET R3 OTM-45 Breakthrough XAD-2 Resin Tube	3	6/30/22		XAD-2 Resin Tube	**Breakthrough XAD-2 Resin Tube** OTM-45 Train HFPO-DA Analysis	**Knoxville**: Spike the 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.	N/A
(2) Record the sample shipping cooler temperature of all coolers transporting samples listed on this RFA:	3.8°c IR / 3.9°c CF
(3) Record any apparent sample loss/breakage.	N/A
(4) Record any unidentified samples transported with this shipment of samples:	N/A
(5) Indicate if all samples were received according to the project's required specifications (i.e. no nonconformances):	yes

Custody Transfer:

	Name	Company	Date/Time
Relinquished By:	Caitlin Gerdy	Alliance	6/30/22 / 2000
Accepted By:	Wm. C. Anderson	Eurofins	6/30/22 2000
Relinquished By:	Wm. C. Anderson	Eurofins	7/1/22 1400
Accepted By:	Courtney Hobbs	ETA LV	7/1/22 14:00
Relinquished By:			
Accepted By:			
Relinquished By:			
Accepted By:			

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

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓			☐ Containers, Broken
2. Were ambient air containers received intact?			✓	☐ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			✓	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : SC7 Correction factor: +0.1	✓			☐ Cooler Out of Temp, Client Contacted, Proceed/Cancel ☐ Cooler Out of Temp, Same Day Receipt
5. Were all of the sample containers received intact?			✓	☐ Containers, Broken
6. Were samples received in appropriate containers?	✓		.	☐ Containers, Improper; Client Contacted; Proceed/Cancel
7. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ COC & Samples Do Not Match ☐ COC Incorrect/Incomplete ☐ COC Not Received
8. Were all of the samples listed on the COC received?	✓			☐ Sample Received, Not on COC ☐ Sample on COC, Not Received
9. Is the date/time of sample collection noted?	✓			☐ COC; No Date/Time; Client Contacted
10. Was the sampler identified on the COC?	✓			☐ Sampler Not Listed on COC
11. Is the client and project name/# identified?	✓			☐ COC Incorrect/Incomplete
12. Are tests/parameters listed for each sample?	✓			☐ COC No tests on COC
13. Is the matrix of the samples noted?	✓			☐ COC Incorrect/Incomplete
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ COC Incorrect/Incomplete
15. Were samples received within holding time?	✓			☐ Holding Time - Receipt
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ pH Adjusted, pH Included (See box 16A) ☐ Incorrect Preservative
17. Were VOA samples received without headspace?			✓	☐ Headspace (VOA only)
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			✓	☐ Residual Chlorine
19. For 1613B water samples is pH<9?			✓	☐ If no, notify lab to adjust
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

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

Project #: PM Instructions:

Sample Receiving Associate: Date: 7/1/22

QA026R32.doc, 062719

Login Sample Receipt Checklist

Client: The Chemours Company FC, LLC

Job Number: 140-27968-1

Login Number: 27968
List Number: 1
Creator: Adkins, Courtney M

List Source: Eurofins Knoxville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.		
The cooler's custody seal, if present, is intact.		
Sample custody seals, if present, are intact.		
The cooler or samples do not appear to have been compromised or tampered with.		
Samples were received on ice.		
Cooler Temperature is acceptable.		
Cooler Temperature is recorded.		
COC is present.		
COC is filled out in ink and legible.		
COC is filled out with all pertinent information.		
Is the Field Sampler's name present on COC?		
There are no discrepancies between the containers received and the COC.		
Samples are received within Holding Time (excluding tests with immediate HTs)		
Sample containers have legible labels.		
Containers are not broken or leaking.		
Sample collection date/times are provided.		
Appropriate sample containers are used.		
Sample bottles are completely filled.		
Sample Preservation Verified.		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").		
Multiphasic samples are not present.		
Samples do not require splitting or compositing.		
Residual Chlorine Checked.		

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 140-28013-1
Client Project/Site: VEN Q2 FIELD QC

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

Attn: Michael Aucoin

Authorized for release by:
7/18/2022 3:27:38 PM

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

Table of Contents

Definitions/Glossary

Client: The Chemours Company FC, LLC
Project/Site: VEN Q2 FIELD QC

Job ID: 140-28013-1

Qualifiers

LCMS

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

Glossary

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

Job ID: 140-28013-1

Laboratory: Eurofins Knoxville

Narrative

Job Narrative
140-28013-1

Receipt

The samples were received on 7/1/2022 2:00 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.2º 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”

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-0377, T-0378 QC CB OTM-45 PBT FH

Lab Sample ID: 140-28013-1

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		07/11/22 08:23	07/12/22 17:38	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*76*		*25 - 150*	*07/11/22 08:23*	*07/12/22 17:38*	*1*

Client Sample ID: T-0379, T-0380, T-0382 QC CB OTM-45 PBT BH

Lab Sample ID: 140-28013-2

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		07/02/22 06:10	07/10/22 05:41	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*107*		*25 - 150*	*07/02/22 06:10*	*07/10/22 05:41*	*1*

Client Sample ID: T-0381 QC CB OTM-45 PBT CONDENSATE

Lab Sample ID: 140-28013-3

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		07/02/22 08:09	07/02/22 21:11	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*90*		*25 - 150*	*07/02/22 08:09*	*07/02/22 21:11*	*1*

Client Sample ID: T-0383 QC CB OTM-45 PBT BREAKTHROUGH XAD-2

Lab Sample ID: 140-28013-4

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		07/02/22 06:10	07/10/22 05:50	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*118*		*25 - 150*	*07/02/22 06:10*	*07/10/22 05:50*	*1*

Client Sample ID: T-0384 QC CB OTM-45 DI WATER RB

Lab Sample ID: 140-28013-5

Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00
Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		07/02/22 08:09	07/02/22 21:20	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*91*		*25 - 150*	*07/02/22 08:09*	*07/02/22 21:20*	*1*

Client Sample ID: T-0385 QC CB OTM-45 MEOH/5%NH4OH RB

Lab Sample ID: 140-28013-6

Date Collected: 06/29/22 00:00
Matrix: Air
Date Received: 07/01/22 14:00
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		07/02/22 06:10	07/10/22 05:59	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*95*		*25 - 150*	*07/02/22 06:10*	*07/10/22 05:59*	*1*

Client Sample ID: T-0386, T-0387 QC CB OTM-45 FBT FH

Lab Sample ID: 140-28013-7

Date Collected: 06/29/22 00:00
Matrix: Air
Date Received: 07/01/22 14:00
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	**0.0196**		0.00493	0.00463	ug/Sample		07/11/22 08:23	07/12/22 17:47	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*75*		*25 - 150*	*07/11/22 08:23*	*07/12/22 17:47*	*1*

Client Sample ID: T-0388, T-0389, T-0391 QC CB OTM-45 FBT BH

Lab Sample ID: 140-28013-8

Date Collected: 06/29/22 00:00
Matrix: Air
Date Received: 07/01/22 14:00
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	**0.0195**	**J**	0.0200	0.0110	ug/Sample		07/02/22 06:10	07/10/22 06:07	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*105*		*25 - 150*	*07/02/22 06:10*	*07/10/22 06:07*	*1*

Client Sample ID: T-0390 QC CB OTM-45 CONDENSATE

Lab Sample ID: 140-28013-9

Date Collected: 06/29/22 00:00
Matrix: Air
Date Received: 07/01/22 14:00
Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	**0.000207**	**J**	0.000500	0.000200	ug/Sample		07/02/22 08:09	07/02/22 21:29	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*88*		*25 - 150*	*07/02/22 08:09*	*07/02/22 21:29*	*1*

Client Sample ID: T-0392 QC CB OTM-45 BREAKTHROUGH XAD-2

Lab Sample ID: 140-28013-10

Date Collected: 06/29/22 00:00
Matrix: Air
Date Received: 07/01/22 14:00
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		07/02/22 06:10	07/10/22 06:16	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*98*		*25 - 150*	*07/02/22 06:10*	*07/10/22 06:16*	*1*

Client: The Chemours Company FC, LLC
Project/Site: VEN Q2 FIELD QC

Job ID: 140-28013-1

Client Sample ID: MEDIA CHECK FILTER

Lab Sample ID: 140-28013-11
Matrix: Air
Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00
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		07/11/22 08:23	07/12/22 17:56	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*65*		*25 - 150*	*07/11/22 08:23*	*07/12/22 17:56*	*1*

Client Sample ID: MEDIA CHECK XAD

Lab Sample ID: 140-28013-12
Matrix: Air
Date Collected: 06/29/22 00:00
Date Received: 07/01/22 14:00
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		07/02/22 06:10	07/10/22 06:42	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*97*		*25 - 150*	*07/02/22 06:10*	*07/10/22 06:42*	*1*

Default Detection Limits

Client: The Chemours Company FC, LLC
Project/Site: VEN Q2 FIELD QC

Job ID: 140-28013-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Prep: None

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

Method: 537 (modified) - Fluorinated Alkyl Substances

Prep: PFAS Prep

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

Isotope Dilution Summary

Client: The Chemours Company FC, LLC
Project/Site: VEN Q2 FIELD QC

Job ID: 140-28013-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Air

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HFPODA (25-150)						
140-28013-1	T-0377, T-0378 QC CB OTM-45	76						
140-28013-2	T-0379, T-0380, T-0382 QC CB OTM-45 PBT BH	107						
140-28013-3	T-0381 QC CB OTM-45 PBT CONDENSATE	90						
140-28013-4	T-0383 QC CB OTM-45 PBT BREAKTHROUGH XAD-2	118						
140-28013-5	T-0384 QC CB OTM-45 DI WATER RB	91						
140-28013-6	T-0385 QC CB OTM-45 MEOH/5%NH4OH RB	95						
140-28013-7	T-0386, T-0387 QC CB OTM-45 FBT FH	75						
140-28013-8	T-0388, T-0389, T-0391 QC CB OTM-45 FBT BH	105						
140-28013-9	T-0390 QC CB OTM-45 CONDENSATE	88						
140-28013-10	T-0392 QC CB OTM-45 BREAKTHROUGH XAD-2	98						
140-28013-11	MEDIA CHECK FILTER	65						
140-28013-12	MEDIA CHECK XAD	97						
LCS 140-63110/2-B	Lab Control Sample	95						
LCS 140-63111/2-A	Lab Control Sample	91						
LCS 140-63294/2-B	Lab Control Sample	75						
LCSD 140-63110/3-B	Lab Control Sample Dup	97						
LCSD 140-63111/3-A	Lab Control Sample Dup	88						
LCSD 140-63294/3-B	Lab Control Sample Dup	69						
MB 140-63110/14-B	Method Blank	101						
MB 140-63110/1-B	Method Blank	86						
MB 140-63111/1-A	Method Blank	93						
MB 140-63294/1-B	Method Blank	78						

Surrogate Legend

HFPODA = 13C3 HFPO-DA

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 140-63110/14-B
Matrix: Air
Analysis Batch: 63274

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63110

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		07/02/22 06:10	07/10/22 05:06	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*101*		*25 - 150*	*07/02/22 06:10*	*07/10/22 05:06*	*1*

Lab Sample ID: MB 140-63110/1-B
Matrix: Air
Analysis Batch: 63276

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63110

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		07/02/22 06:10	07/10/22 21:08	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*86*		*25 - 150*	*07/02/22 06:10*	*07/10/22 21:08*	*1*

Lab Sample ID: LCS 140-63110/2-B
Matrix: Air
Analysis Batch: 63274

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 63110

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0200	0.02132		ug/Sample		107	60 - 140		

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

Lab Sample ID: LCSD 140-63110/3-B
Matrix: Air
Analysis Batch: 63274

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 63110

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0200	0.02348		ug/Sample		117	60 - 140	10	30

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

Lab Sample ID: MB 140-63111/1-A
Matrix: Air
Analysis Batch: 63113

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63111

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		07/02/22 08:09	07/02/22 19:25	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*93*		*25 - 150*	*07/02/22 08:09*	*07/02/22 19:25*	*1*

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

Lab Sample ID: LCS 140-63111/2-A
Matrix: Air
Analysis Batch: 63113

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 63111

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0100	0.01091		ug/Sample		109	60 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*91*		*25 - 150*

Lab Sample ID: LCSD 140-63111/3-A
Matrix: Air
Analysis Batch: 63113

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 63111

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0100	0.01074		ug/Sample		107	60 - 140	2	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*88*		*25 - 150*

Lab Sample ID: MB 140-63294/1-B
Matrix: Air
Analysis Batch: 63372

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63294

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		07/11/22 08:23	07/12/22 17:12	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*78*		*25 - 150*	*07/11/22 08:23*	*07/12/22 17:12*	*1*

Lab Sample ID: LCS 140-63294/2-B
Matrix: Air
Analysis Batch: 63372

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 63294

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA			0.0200	0.02388		ug/Sample		119	60 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*75*		*25 - 150*

Lab Sample ID: LCSD 140-63294/3-B
Matrix: Air
Analysis Batch: 63372

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 63294

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA			0.0200	0.02243		ug/Sample		112	60 - 140	6	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*69*		*25 - 150*

LCMS

Prep Batch: 63110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28013-2	T-0379, T-0380, T-0382 QC CB OTM-45 PBT BH	Total/NA	Air	None	
140-28013-4	T-0383 QC CB OTM-45 PBT BREAKTHROUGH	Total/NA	Air	None	
140-28013-6	T-0385 QC CB OTM-45 MEOH/5%NH4OH RB	Total/NA	Air	None	
140-28013-8	T-0388, T-0389, T-0391 QC CB OTM-45 FBT BH	Total/NA	Air	None	
140-28013-10	T-0392 QC CB OTM-45 BREAKTHROUGH XAD·	Total/NA	Air	None	
140-28013-12	MEDIA CHECK XAD	Total/NA	Air	None	
MB 140-63110/14-B	Method Blank	Total/NA	Air	None	
MB 140-63110/1-B	Method Blank	Total/NA	Air	None	
LCS 140-63110/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-63110/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Prep Batch: 63111

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28013-3	T-0381 QC CB OTM-45 PBT CONDENSATE	Total/NA	Air	PFAS Prep	
140-28013-5	T-0384 QC CB OTM-45 DI WATER RB	Total/NA	Air	PFAS Prep	
140-28013-9	T-0390 QC CB OTM-45 CONDENSATE	Total/NA	Air	PFAS Prep	
MB 140-63111/1-A	Method Blank	Total/NA	Air	PFAS Prep	
LCS 140-63111/2-A	Lab Control Sample	Total/NA	Air	PFAS Prep	
LCSD 140-63111/3-A	Lab Control Sample Dup	Total/NA	Air	PFAS Prep	

Analysis Batch: 63113

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28013-3	T-0381 QC CB OTM-45 PBT CONDENSATE	Total/NA	Air	537 (modified)	63111
140-28013-5	T-0384 QC CB OTM-45 DI WATER RB	Total/NA	Air	537 (modified)	63111
140-28013-9	T-0390 QC CB OTM-45 CONDENSATE	Total/NA	Air	537 (modified)	63111
MB 140-63111/1-A	Method Blank	Total/NA	Air	537 (modified)	63111
LCS 140-63111/2-A	Lab Control Sample	Total/NA	Air	537 (modified)	63111
LCSD 140-63111/3-A	Lab Control Sample Dup	Total/NA	Air	537 (modified)	63111

Cleanup Batch: 63161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28013-2	T-0379, T-0380, T-0382 QC CB OTM-45 PBT BH	Total/NA	Air	Split	63110
140-28013-4	T-0383 QC CB OTM-45 PBT BREAKTHROUGH	Total/NA	Air	Split	63110
140-28013-6	T-0385 QC CB OTM-45 MEOH/5%NH4OH RB	Total/NA	Air	Split	63110
140-28013-8	T-0388, T-0389, T-0391 QC CB OTM-45 FBT BH	Total/NA	Air	Split	63110
140-28013-10	T-0392 QC CB OTM-45 BREAKTHROUGH XAD·	Total/NA	Air	Split	63110
140-28013-12	MEDIA CHECK XAD	Total/NA	Air	Split	63110
MB 140-63110/14-B	Method Blank	Total/NA	Air	Split	63110
MB 140-63110/1-B	Method Blank	Total/NA	Air	Split	63110
LCS 140-63110/2-B	Lab Control Sample	Total/NA	Air	Split	63110
LCSD 140-63110/3-B	Lab Control Sample Dup	Total/NA	Air	Split	63110

Analysis Batch: 63274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28013-2	T-0379, T-0380, T-0382 QC CB OTM-45 PBT BH	Total/NA	Air	537 (modified)	63161
140-28013-4	T-0383 QC CB OTM-45 PBT BREAKTHROUGH	Total/NA	Air	537 (modified)	63161
140-28013-6	T-0385 QC CB OTM-45 MEOH/5%NH4OH RB	Total/NA	Air	537 (modified)	63161
140-28013-8	T-0388, T-0389, T-0391 QC CB OTM-45 FBT BH	Total/NA	Air	537 (modified)	63161
140-28013-10	T-0392 QC CB OTM-45 BREAKTHROUGH XAD·	Total/NA	Air	537 (modified)	63161
140-28013-12	MEDIA CHECK XAD	Total/NA	Air	537 (modified)	63161
MB 140-63110/14-B	Method Blank	Total/NA	Air	537 (modified)	63161

LCMS (Continued)

Analysis Batch: 63274 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 140-63110/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	63161
LCSD 140-63110/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	63161

Analysis Batch: 63276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 140-63110/1-B	Method Blank	Total/NA	Air	537 (modified)	63161

Prep Batch: 63294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28013-1	T-0377, T-0378 QC CB OTM-45 PBT FH	Total/NA	Air	None	
140-28013-7	T-0386, T-0387 QC CB OTM-45 FBT FH	Total/NA	Air	None	
140-28013-11	MEDIA CHECK FILTER	Total/NA	Air	None	
MB 140-63294/1-B	Method Blank	Total/NA	Air	None	
LCS 140-63294/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-63294/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Cleanup Batch: 63332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28013-1	T-0377, T-0378 QC CB OTM-45 PBT FH	Total/NA	Air	Split	63294
140-28013-7	T-0386, T-0387 QC CB OTM-45 FBT FH	Total/NA	Air	Split	63294
140-28013-11	MEDIA CHECK FILTER	Total/NA	Air	Split	63294
MB 140-63294/1-B	Method Blank	Total/NA	Air	Split	63294
LCS 140-63294/2-B	Lab Control Sample	Total/NA	Air	Split	63294
LCSD 140-63294/3-B	Lab Control Sample Dup	Total/NA	Air	Split	63294

Analysis Batch: 63372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-28013-1	T-0377, T-0378 QC CB OTM-45 PBT FH	Total/NA	Air	537 (modified)	63332
140-28013-7	T-0386, T-0387 QC CB OTM-45 FBT FH	Total/NA	Air	537 (modified)	63332
140-28013-11	MEDIA CHECK FILTER	Total/NA	Air	537 (modified)	63332
MB 140-63294/1-B	Method Blank	Total/NA	Air	537 (modified)	63332
LCS 140-63294/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	63332
LCSD 140-63294/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	63332

Client Sample ID: T-0377, T-0378 QC CB OTM-45 PBT FH

Lab Sample ID: 140-28013-1

Date Collected: 06/29/22 00:00
Matrix: Air
Date Received: 07/01/22 14:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	62 mL	63294	07/11/22 08:23	CAC	TAL KNX
Total/NA	Cleanup	Split			31 mL	10 mL	63332	07/12/22 07:29	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63372	07/12/22 17:38	CAC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0379, T-0380, T-0382 QC CB OTM-45 PBT BH

Lab Sample ID: 140-28013-2

Date Collected: 06/29/22 00:00
Matrix: Air
Date Received: 07/01/22 14:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63274	07/10/22 05:41	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0381 QC CB OTM-45 PBT CONDENSATE

Lab Sample ID: 140-28013-3

Date Collected: 06/29/22 00:00
Matrix: Air
Date Received: 07/01/22 14:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			1 Sample	10 mL	63111	07/02/22 08:09	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			63113	07/02/22 21:11	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0383 QC CB OTM-45 PBT BREAKTHROUGH XAD-2

Lab Sample ID: 140-28013-4

Date Collected: 06/29/22 00:00
Matrix: Air
Date Received: 07/01/22 14:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63274	07/10/22 05:50	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0384 QC CB OTM-45 DI WATER RB

Lab Sample ID: 140-28013-5

Date Collected: 06/29/22 00:00
Matrix: Air
Date Received: 07/01/22 14:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			1 Sample	10 mL	63111	07/02/22 08:09	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			63113	07/02/22 21:20	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0385 QC CB OTM-45 MEOH/5%NH4OH RB

Lab Sample ID: 140-28013-6

Date Collected: 06/29/22 00:00
Matrix: Air
Date Received: 07/01/22 14:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63274	07/10/22 05:59	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0386, T-0387 QC CB OTM-45 FBT FH

Lab Sample ID: 140-28013-7

Date Collected: 06/29/22 00:00
Matrix: Air
Date Received: 07/01/22 14:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	69 mL	63294	07/11/22 08:23	CAC	TAL KNX
Total/NA	Cleanup	Split			35 mL	10 mL	63332	07/12/22 07:29	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63372	07/12/22 17:47	CAC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0388, T-0389, T-0391 QC CB OTM-45 FBT BH

Lab Sample ID: 140-28013-8

Date Collected: 06/29/22 00:00
Matrix: Air
Date Received: 07/01/22 14:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63274	07/10/22 06:07	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0390 QC CB OTM-45 CONDENSATE

Lab Sample ID: 140-28013-9

Date Collected: 06/29/22 00:00
Matrix: Air
Date Received: 07/01/22 14:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			1 Sample	10 mL	63111	07/02/22 08:09	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			63113	07/02/22 21:29	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: T-0392 QC CB OTM-45 BREAKTHROUGH XAD-2

Lab Sample ID: 140-28013-10

Date Collected: 06/29/22 00:00
Matrix: Air
Date Received: 07/01/22 14:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63274	07/10/22 06:16	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: MEDIA CHECK FILTER

Lab Sample ID: 140-28013-11

Date Collected: 06/29/22 00:00

Matrix: Air

Date Received: 07/01/22 14:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	63294	07/11/22 08:23	CAC	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	63332	07/12/22 07:29	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63372	07/12/22 17:56	CAC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: MEDIA CHECK XAD

Lab Sample ID: 140-28013-12

Date Collected: 06/29/22 00:00

Matrix: Air

Date Received: 07/01/22 14:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63274	07/10/22 06:42	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank

Lab Sample ID: MB 140-63110/14-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	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63274	07/10/22 05:06	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank

Lab Sample ID: MB 140-63110/1-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	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63276	07/10/22 21:08	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Method Blank

Lab Sample ID: MB 140-63111/1-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	63111	07/02/22 08:09	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			63113	07/02/22 19:25	JRC	TAL KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: VEN Q2 FIELD QC

Job ID: 140-28013-1

Client Sample ID: Method Blank
Lab Sample ID: MB 140-63294/1-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	63294	07/11/22 08:23	CAC	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	63332	07/12/22 07:29	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63372	07/12/22 17:12	CAC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-63110/2-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	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63274	07/10/22 02:42	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-63111/2-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	63111	07/02/22 08:09	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			63113	07/02/22 19:34	JRC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-63294/2-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	63294	07/11/22 08:23	CAC	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	63332	07/12/22 07:29	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63372	07/12/22 17:20	CAC	TAL KNX
	Instrument ID: LCA									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-63110/3-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	63110	07/02/22 06:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	63161	07/06/22 09:24	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63274	07/10/22 03:09	JRC	TAL KNX
	Instrument ID: LCA									

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: VEN Q2 FIELD QC

Job ID: 140-28013-1

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

Lab Sample ID: LCSD 140-63111/3-A
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			1 Sample	10 mL	63111	07/02/22 08:09	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			63113	07/02/22 19:43	JRC	TAL KNX
	Instrument ID: LCA									

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

Lab Sample ID: LCSD 140-63294/3-B
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	63294	07/11/22 08:23	CAC	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	63332	07/12/22 07:29	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			63372	07/12/22 17:29	CAC	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: 140-28013-1
Project/Site: VEN Q2 FIELD QC

Laboratory: Eurofins Knoxville

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

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-25
ANAB	Dept. of Energy	L2311.01	02-13-25
ANAB	ISO/IEC 17025	L2311	02-13-25
Arkansas DEQ	State	88-0688	06-17-22 *
California	State	2423	06-30-22 *
Colorado	State	TN00009	02-28-23
Connecticut	State	PH-0223	09-30-23
Florida	NELAP	E87177	06-30-23
Georgia (DW)	State	906	12-11-22
Hawaii	State	NA	12-11-22
Kansas	NELAP	E-10349	10-31-22
Kentucky (DW)	State	90101	12-31-22
Louisiana	NELAP	83979	06-30-23
Louisiana (All)	NELAP	83979	06-30-23
Louisiana (DW)	State	LA019	12-31-22
Maryland	State	277	03-31-23
Michigan	State	9933	12-11-22
Nevada	State	TN00009	07-31-22
New Hampshire	NELAP	299919	01-17-23
New Jersey	NELAP	TN001	06-30-23
New York	NELAP	10781	03-31-23
North Carolina (DW)	State	21705	07-31-22
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	07-13-22
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

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

Method Summary

Client: The Chemours Company FC, LLC
Project/Site: VEN Q2 FIELD QC

Job ID: 140-28013-1

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: VEN Q2 FIELD QC

Job ID: 140-28013-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-28013-1	T-0377, T-0378 QC CB OTM-45 PBT FH	Air	06/29/22 00:00	07/01/22 14:00
140-28013-2	T-0379, T-0380, T-0382 QC CB OTM-45 PBT BH	Air	06/29/22 00:00	07/01/22 14:00
140-28013-3	T-0381 QC CB OTM-45 PBT CONDENSATE	Air	06/29/22 00:00	07/01/22 14:00
140-28013-4	T-0383 QC CB OTM-45 PBT BREAKTHROUGH XAD-2	Air	06/29/22 00:00	07/01/22 14:00
140-28013-5	T-0384 QC CB OTM-45 DI WATER RB	Air	06/29/22 00:00	07/01/22 14:00
140-28013-6	T-0385 QC CB OTM-45 MEOH/5%NH4OH RB	Air	06/29/22 00:00	07/01/22 14:00
140-28013-7	T-0386, T-0387 QC CB OTM-45 FBT FH	Air	06/29/22 00:00	07/01/22 14:00
140-28013-8	T-0388, T-0389, T-0391 QC CB OTM-45 FBT BH	Air	06/29/22 00:00	07/01/22 14:00
140-28013-9	T-0390 QC CB OTM-45 CONDENSATE	Air	06/29/22 00:00	07/01/22 14:00
140-28013-10	T-0392 QC CB OTM-45 BREAKTHROUGH XAD-2	Air	06/29/22 00:00	07/01/22 14:00
140-28013-11	MEDIA CHECK FILTER	Air	06/29/22 00:00	07/01/22 14:00
140-28013-12	MEDIA CHECK XAD	Air	06/29/22 00:00	07/01/22 14:00

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

eurofins | Environment Testing America

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

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:	Hand Deliver

Project Deliverables:
Report analytical results on TALS Report form Std_Tal_L4. Include "Field Sample Number", "Sample Type", and "Run Number" on all TALS Reports.

Analytical Parameter:	Holding Time Requirements:	Preservation Requirements:
HFPO-DA (CAS No. 13252-13-6) & PFOA (CAS No. 335-67-1)	28 Days to Extraction; 28 Days to Analysis	Cool, 4°C

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require-ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-0377 QC CB OTM-45 Tared Particulate Filter PBT (Combine with *T-0378*)	QC	~~6/29/22~~ 6/29/22 PSG	Proof Blank Train	Petri Dish	**Tared Particulate Filter (82.6 mm Whatman Glass Microfiber)** OTM-45 / Method 5 Train HFPO-DA / Particulate Analysis	**Knoxville**: Determine Particulate by performing replicate weights until a constant weight is achieved. 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. Determine Particulate by performing replicate weights until a constant weight is achieved.
T-0399 QC CB OTM-45 Acetone Probe Rinse PBT	QC	~~6/29/22~~ N/A	Proof Blank Train	250 mL Amber Boston Round	**Acetone Probe Rinse** OTM-45 / Method 5 Train HFPO-DA / Particulate Analysis	**Knoxville:** Evaporate sample to dryness in an oven at 105°C. Determine Particulate by performing replicate weights until a constant weight is achieved. Reconstitute residue with MeOH/5% NH_4OH solution and combine with Front-Half Probe Rinse and Particulate Filter before 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-0378 QC CB OTM-45 FH of Filter Holder & Probe MeOH Rinse PBT (Combine with *T-0377*)	QC	6/29/22	Proof Blank Train	250 mL HDPE Wide-Mouth Bottle	**Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse** OTM-45 Proof Blank Train HFPO-DA Analysis	**Knoxville**: Use this solvent sample in the Filter extraction.
T-0379 QC CB OTM-45 XAD-2 Resin Tube PBT	QC	6/29/22	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-0380 QC CB OTM-45 BH of Filter Holder & Coil Condenser MeOH Rinse PBT (Combine with *T-0379*)	QC	6/29/22	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-0381 QC CB OTM-45 Impingers 1,2 & 3 Condensate PBT	QC	6/29/22	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-0382 QC CB OTM-45 Impinger Glassware MeOH Rinse PBT (Combine with *T-0379)*	QC	6/29/22	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.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require-ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-0383 QC CB OTM-45 Breakthrough XAD-2 Resin Tube PBT	QC	6/29/22	Proof Blank Train	XAD-2 Resin Tube	**Breakthrough XAD-2 Resin Tube** OTM-45 Proof Blank Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA.
T-0384 QC CB OTM-45 DI Water RB	QC	6/29/22	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-0385 QC CB OTM-45 MeOH with 5% NH_4OH RB	QC	6/29/22	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-0386 QC CB OTM-45 Tared Particulate Filter FBT (Combine with *T-0387*)	QC	6/29/22	Field Blank Train	Petri Dish	**Tared Particulate Filter (82.6 mm Whatman Glass Microfiber)** OTM-45 / Method 5 Train HFPO-DA / Particulate Analysis	**Knoxville**: Determine Particulate by performing replicate weights until a constant weight is achieved. 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. Determine Particulate by performing replicate weights until a constant weight is achieved.
T-0400 QC CB OTM-45 Acetone Probe Rinse FBT		N/A	Field Blank Train	250 mL Amber Boston Round	**Acetone Probe Rinse** OTM-45 / Method 5 Train HFPO-DA / Particulate Analysis	**Knoxville:** Evaporate sample to dryness in an oven at 105°C. Determine Particulate by performing replicate weights until a constant weight is achieved. Reconstitute residue with MeOH/5% NH_4OH solution and combine with Front-Half Probe Rinse and Particulate Filter before 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-0387 QC CB OTM-45 FH of Filter Holder & Probe MeOH Rinse FBT (Combine with *T-0386*)	QC	6/29/22	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-0388 QC CB OTM-45 XAD-2 Resin Tube FBT	QC	6/29/22	Field Blank Train	XAD-2 Resin Tube	**XAD-2 Resin Tube** OTM-45 Field Blank Train HFPO-DA Analysis	**Knoxville**: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA.
T-0389 QC CB OTM-45 BH of Filter Holder & Coil Condenser MeOH Rinse FBT (Combine with *T-0388*)	QC	6/29/22	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-1602 QC CB OTM-45 Impingers 1,2 & 3 Condensate FBT	QC	6/29/22	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-0391 QC CB OTM-45 Impinger Glassware MeOH Rinse FBT (Combine with *T-0388)*	QC	6/29/22	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.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Require-ments	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
T-0392 QC CB OTM-45 Breakthrough XAD-2 Resin Tube FBT	QC	6/29/22	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.	
(2) Record the sample shipping cooler temperature of all coolers transporting samples listed on this RFA:	
(3) Record any aQ2rent sample loss/breakage.	
(4) Record any unidentified samples transported with this shipment of samples:	
(5) Indicate if all samples were received according to the project's required specifications (i.e. no nonconformances):	

Custody Transfer:

	Name	Company	Date/Time
Relinquished By:	[signature]	Alliance	6/30/22 2000
Accepted By:	Wm. C Anderson	Eurofins	6/30/22 2000
Relinquished By:	Wm. C Anderson	Eurofins	7/1/22 1400
Accepted By:	[signature]	STA-TX	7/1/22 1400
Relinquished By:			
Accepted By:			
Relinquished By:			
Accepted By:			

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

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

Comments/Actions Taken

Loc: 140
28013

Labeling Verified by: **Date:**

pH test strip lot number:

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

Project #: _____ PM Instructions: _____

Sample Receiving Associate: _____ Date: _____

QA026R32.doc, 062719

Login Sample Receipt Checklist

Client: The Chemours Company FC, LLC

Job Number: 140-28013-1

Login Number: 28013
List Number: 1
Creator: Adkins, Courtney M

List Source: Eurofins Knoxville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.		
The cooler's custody seal, if present, is intact.		
Sample custody seals, if present, are intact.		
The cooler or samples do not appear to have been compromised or tampered with.		
Samples were received on ice.		
Cooler Temperature is acceptable.		
Cooler Temperature is recorded.		
COC is present.		
COC is filled out in ink and legible.		
COC is filled out with all pertinent information.		
Is the Field Sampler's name present on COC?		
There are no discrepancies between the containers received and the COC.		
Samples are received within Holding Time (excluding tests with immediate HTs)		
Sample containers have legible labels.		
Containers are not broken or leaking.		
Sample collection date/times are provided.		
Appropriate sample containers are used.		
Sample bottles are completely filled.		
Sample Preservation Verified.		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").		
Multiphasic samples are not present.		
Samples do not require splitting or compositing.		
Residual Chlorine Checked.		

Appendix D

QA/QC Data

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Inlet
Project No. 2022-2345
Parameter HFPO-DA

Date	Nozzle ID	Nozzle Diameter (in.) #1	#2	#3	Dn (Average)	Difference	Criteria	Material
6/28/22	G-5	0.260	0.260	0.260	0.260	0.000	≤ 0.004 in.	glass

Date	Pitot ID	Evidence of damage?	Evidence of mis-alignment?	Calibration or Repair required?
6/28/22	P4-1	no	no	no

Date	Probe or Thermocouple ID	Reference Temp. (°F)	Indicated Temp. (°F)	Difference	Criteria	Probe Length
6/29/22	TC 7D	78.0	78.0	0.0%	± 1.5 % (absolute)	--

Field Balance Check

Date	06/28/22	06/29/22	06/30/22			
Balance ID:	MyWeigh 5500	MyWeigh 5500	MyWeigh 5500			
Test Weight ID:	SYR-1	SYR-1	SYR-1			
Certified Weight (g):	1000.0	1000.0	1000.0			
Measured Weight (g):	999.7	999.8	999.8			
Weight Difference (g):	0.3	0.2	0.2	--	--	--

Date	Barometric Pressure	Evidence of damage?	Reading Verified	Calibration or Repair required?	Weather Station Location
6/29/22	Weather Station	NA	NA	NA	Fayetteville, NC

Date	Meter Box ID	Positive Pressure Leak Check
6/29/22	MB #7	Pass

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

Equipment Detail - Dry Gas Meter

Console ID: 7
Meter S/N: OBG032014
Critical Orifice S/N: 1393

Calibration Detail

Initial Barometric Pressure, in. Hg	(Pb_I)	29.81					
Final Barometric Pressure, in. Hg	(Pb_F)	29.81					
Average Barometric Pressure, in. Hg	(Pb)	29.81					
Critifcal Orifice ID	(Y)	18	18	16	16	26	26
K' Factor, $ft^3 \cdot R^{1/2}$ / in. WC·min	(K')	0.4961	0.4961	0.4268	0.4268	0.7131	0.7131
Vacuum Pressure, in. Hg	(V_P)	20.0	20.0	21.0	21.0	17.0	17.0
Initial DGM Volume, ft^3	(Vm_I)	739.041	748.700	758.364	771.352	711.005	724.940
Final DGM Volume, ft^3	(Vm_F)	748.700	758.364	766.777	779.777	724.940	738.914
Total DGM Volume, ft^3	(Vm)	9.659	9.664	8.413	8.425	13.935	13.974
Ambient Temperature, °F	(Ta)	54	54	55	55	55	55
Initial DGM Temperature, °F	(Tm_I)	57	57	57	57	57	58
Final DGM Temperature, °F	(Tm_F)	57	57	57	57	58	58
Average DGM Temperature, °F	(Tm)	57	57	57	57	58	58
Elapsed Time	(Θ)	15.00	15.00	15.00	15.00	15.00	15.00
Meter Orifice Pressure, in. WC	(ΔH)	1.30	1.30	1.00	1.00	2.90	2.90
Standard Meter volume, ft^3	(Vmstd)	9.8617	9.8668	8.5832	8.5955	14.2696	14.2958
Standard Critical Orifice Volume, ft^3	(Vcr)	9.7875	9.7875	8.4121	8.4121	14.0550	14.0550
Meter Correction Factor	(Y)	0.992	0.992	0.980	0.979	0.985	0.983
Tolerance	--	0.007	0.007	0.005	0.007	0.000	0.002
Orifice Calibration Value	(ΔH @)	1.754	1.754	1.825	1.825	1.903	1.901
Tolerance	--	0.073	0.073	0.002	0.002	0.076	0.074
Orifice Cal Check	--	1.31		1.30		0.82	
Meter Correction Factor	**(Y)**	**0.985**					
Orifice Calibration Value	**(ΔH @)**	**1.827**					
Positive Pressure Leak Check		**Yes**					

Equipment Detail - Thermocouple Sensor

Reference Calibrator Make: Altek
Reference Calibrator Model: Series 22
Reference Calibrator S/N: 8475031

Calibration Detail

Reference Temp.		Display Temp.		Accuracy	Difference
°F	°R	°F	°R	%	°F
0	460	0	460	0.0	0
100	560	100	560	0.0	0
300	760	300	760	0.0	0
400	860	401	861	-0.1	1
500	960	500	960	0.0	0
600	1,060	598	1,058	0.2	2
700	1,160	700	1,160	0.0	0
800	1,260	798	1,258	0.2	2
900	1,360	901	1,361	-0.1	1
1,000	1,460	999	1,459	0.1	1

Personnel

Calibration By: Jeffrey Sheldon
Calibration Date: 1/19/2022
Expiration Date: 7/19/2022

QA/QC Data

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Outlet
Project No. 2022-2345
Parameter HFPO-DA

Date	Nozzle ID	Nozzle Diameter (in.) #1	#2	#3	Dn (Average)	Difference	Criteria	Material
6/28/22	G-4	0.255	0.255	0.258	0.256	0.003	≤ 0.004 in.	glass

Date	Pitot ID	Evidence of damage?	Evidence of mis-alignment?	Calibration or Repair required?
6/28/22	P4-2	no	no	no

Date	Probe or Thermocouple ID	Reference Temp. (°F)	Indicated Temp. (°F)	Difference	Criteria	Probe Length
6/29/22	TC-5D	78.0	79.0	0.2%	± 1.5 % (absolute)	5'

Field Balance Check

Date	06/28/22	06/29/22	06/30/22			
Balance ID:	MyWeigh 5500	MyWeigh 5500	MyWeigh 5500			
Test Weight ID:	SYR-1	SYR-1	SYR-1			
Certified Weight (g):	1000.0	1000.0	1000.0			
Measured Weight (g):	999.7	999.8	999.8			
Weight Difference (g):	0.3	0.2	0.2	--	--	--

Date	Barometric Pressure	Evidence of damage?	Reading Verified	Calibration or Repair required?	Weather Station Location
6/29/22	Weather Station	NA	NA	NA	Fayetteville, NC

Date	Meter Box ID	Positive Pressure Leak Check
6/28/22	MB #10	Pass

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

Equipment Detail - Dry Gas Meter

Console ID: MB 10
Meter S/N: 13858011
Critical Orifice S/N: 1393

Calibration Detail

Initial Barometric Pressure, in. Hg	(Pb_I)	30.09					
Final Barometric Pressure, in. Hg	(Pb_F)	30.09					
Average Barometric Pressure, in. Hg	(Pb)	30.09					
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	0.496	0.8358	0.836
Vacuum Pressure, in. Hg	(V_P)	24.0	24.0	21.0	21.0	16.5	16.5
Initial DGM Volume, ft^3	(Vm_I)	146.828	152.790	134.0	140.395	101.649	121.176
Final DGM Volume, ft^3	(Vm_F)	152.790	158.768	140.395	146.828	112.508	132.021
Total DGM Volume, ft^3	(Vm)	5.962	5.978	6.424	6.433	10.859	10.845
Ambient Temperature, °F	(Ta)	69	69	68	68	69	66
Initial DGM Temperature, °F	(Tm_I)	70	71	70	70	70	69
Final DGM Temperature, °F	(Tm_F)	71	71	70	70	71	70
Average DGM Temperature, °F	(Tm)	71	71	70	70	71	70
Elapsed Time	(Θ)	15.00	15.00	10.00	10.00	10.00	10.00
Meter Orifice Pressure, in. WC	(ΔH)	0.46	0.46	1.20	1.20	3.60	3.60
Standard Meter volume, ft^3	(Vmstd)	5.9754	5.9858	6.4562	6.4652	10.9669	10.9734
Standard Critical Orifice Volume, ft^3	(Vcr)	6.0067	6.0067	6.4983	6.4983	10.9376	10.9688
Meter Correction Factor	(Y)	1.005	1.003	1.007	1.005	0.997	1.000
Tolerance	--	0.002	0.001	0.004	0.002	0.006	0.003
Orifice Calibration Value	(ΔH @)	1.617	1.616	1.606	1.606	1.710	1.703
Tolerance	--	0.026	0.027	0.037	0.037	0.066	0.060
Orifice Cal Check	--	0.59		0.74		0.73	
Meter Correction Factor	**(Y)**	**1.003**					
Orifice Calibration Value	**(ΔH @)**	**1.643**					
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	2	462	-0.4	2
100	560	102	562	-0.4	2
300	760	304	764	-0.5	4
400	860	401	861	-0.1	1
500	960	501	961	-0.1	1
600	1,060	604	1,064	-0.4	4
700	1,160	704	1,164	-0.3	4
800	1,260	805	1,265	-0.4	5
900	1,360	904	1,364	-0.3	4
1,000	1,460	1,005	1,465	-0.3	5
1,100	1,560	1,104	1,564	-0.3	4
1,200	1,660	1,203	1,663	-0.2	3

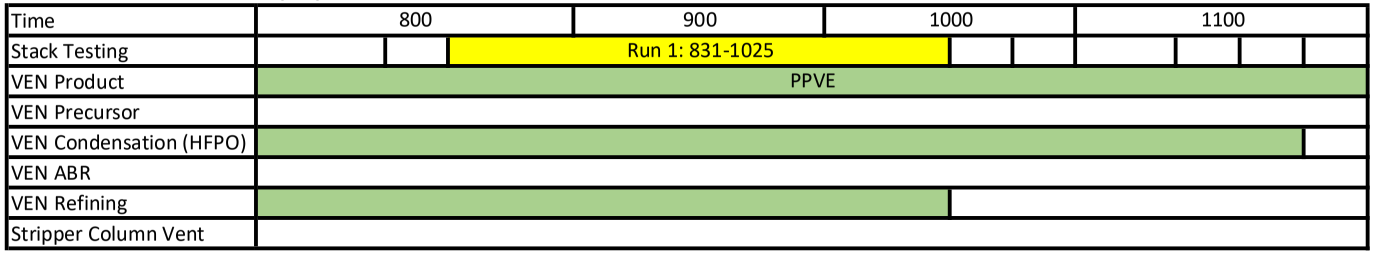
Personnel

Calibration By: Antonio Anderson
Calibration Date: 3/3/2022
Expiration Date: 6/3/2022

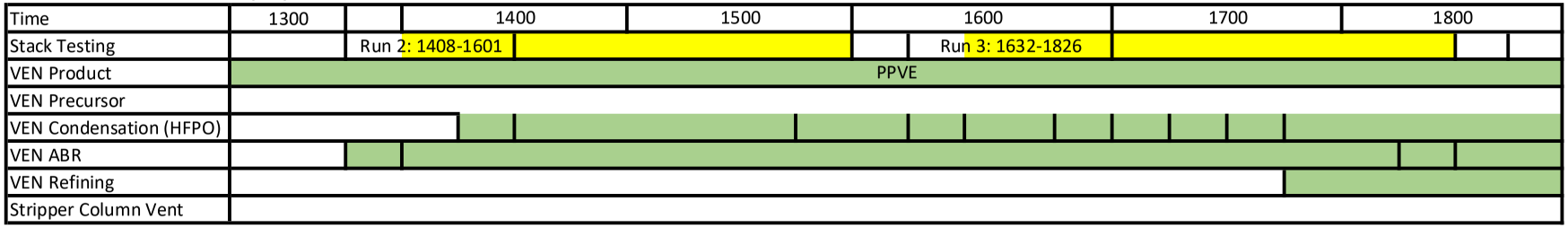
Appendix E

Summary of Vinyl Ethers North Operations Data

Date **6/29/2022**



Date **6/30/2022**



Last Page of Report