



Source Test Report

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

Source Tested: Vinyl Ethers North (VEN) Carbon Bed
Test Date: September 13, 2023

Project No. AST-2023-3974

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

Regulatory Information

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

Source Information

<i>Source Name</i>	<i>Target Parameter</i>
VEN Carbon Bed (Inlet / Outlet)	HFPO-DA

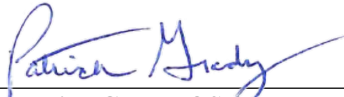
Contact Information

<i>Test Location</i>	<i>Test Company</i>	<i>Analytical Laboratory</i>
The Chemours Company, FC, LLC Fayetteville Works 22828 Highway 87W Fayetteville, North Carolina	Alliance Technical Group, LLC 6515A Basile Rowe East Syracuse, NY 13057	Eurofins TestAmerica 5815 Middlebrook Pike Knoxville, TN 37921 Courtney Adkins
<i>Facility Contact</i> Christel Compton christel.e.compton@chemours.com	<i>Project Manager/Field Team Leader</i> Patrick Grady patrick.grady@alliancetg.com (716) 713-9238	<i>Courtney Adkins</i> Courtney.adkins@testamericainc.com
	<i>QA/QC Manager</i> Kathleen Shonk katie.shonk@alliancetg.com (812) 452-4785	
	<i>Report Coordinator</i> Claudia Ramirez claudia.ramirez@alliancetg.com (575)694-0262	

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

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

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



Patrick Grady, QSTI
Project Manager
Alliance Technical Group, LLC

10/27/2023

Date

TABLE OF CONTENTS

1.0 Introduction 1-1

 1.1 Source and Control System Descriptions..... 1-1

 1.2 Project Team 1-1

2.0 Summary of Results 2-1

3.0 Testing Methodology..... 3-1

 3.1 U.S. EPA Reference Test Methods 1 and 2 – Sampling/Traverse Points and Volumetric Flow Rate 3-1

 3.2 U.S. EPA Reference Test Method 4 – Moisture Content..... 3-1

 3.3 Modified Method 0010 – Hexafluoro-Propylene Oxide-Dimer Acid 3-1

 3.4 HFPO-DA Sample Train and Equipment Preparation 3-2

 3.5 HFPO-DA Sample Train Recovery..... 3-2

LIST OF TABLES

Table 1-1: Project Team 1-1

Table 2-1: Summary of Results 2-1

Table 3-1: Source Testing Methodology 3-1

APPENDICES

- Appendix A Sample Calculations
- Appendix B Field Data
- Appendix C Laboratory Data
- Appendix D Quality Assurance/Quality Control Data
- Appendix E Process Operating/Control System Data

Introduction

1.0 Introduction

Alliance Technical Group, LLC (Alliance) was retained by The Chemours Company (Chemours) to conduct compliance testing at the Fayetteville Works facility in Fayetteville, North Carolina. The facility operates under North Carolina Department of Air Quality (NCDAQ) Title V Air Permit No. 03735T48. 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	Eddie Vega Christel Compton
Regulatory Personnel	Gary Saunders
Alliance Personnel	Patrick Grady Antonio Andersen Jacob Cavallo Jeff Sheldon Lucas Chisser

Summary of Results

2.0 Summary of Results

Alliance conducted compliance testing at the Fayetteville Works Facility in Fayetteville, NC on September 13, 2023. Testing consisted of determining the emission rates of HFPO-DA at the inlet and outlet of the VEN carbon bed.

Table 2-1 provides a summary of the emission testing results. Any difference between the summary results listed in the following 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	9/13/23	9/13/23	9/13/23	--
HFPO-DA Data				
Outlet Emission Rate, lb/hr	3.8E-04	4.0E-04	4.2E-04	4.0E-04
Inlet Emission Rate, lb/hr	2.1E-02	1.8E-02	2.0E-02	2.0E-02
Reduction Efficiency, %	98.2	97.7	97.9	97.9

Testing Methodology

3.0 Testing Methodology

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

Table 3-1: Source Testing Methodology

Parameter	U.S. EPA Reference Test Methods	Notes/Remarks
Volumetric Flow Rate	1 & 2	Full Velocity Traverses
Moisture Content	4	Gravimetric Analysis
Hexafluoro-Propylene Oxide-Dimer Acid	OTM-45	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 two 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. H₂O.
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% NH₄OH) 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% NH₄OH 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% NH₄OH solution and placed in Container #3.

The volume of water collected in the second and third impingers was measured for moisture determinations and then placed in Container #4. Impingers #2 and #3 were then rinsed with the MeOH/ 5% NH₄OH solution and placed in Container #5. The second (breakthrough) XAD-2 resin trap was sealed, labelled and placed in an iced sample cooler. The second condensate trap was rinsed with the MeOH/ 5% NH₄OH solution and placed in Container #5. 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.: AST-2023-3974
 Run No.: 1
 Parameter: HFPO-DA

Meter Pressure (Pm), in. Hg

$$P_m = P_b + \frac{\Delta H}{13.6}$$

where,

P_b	$\frac{29.77}{}$	= barometric pressure, in. Hg
ΔH	$\frac{1.798}{}$	= pressure differential of orifice, in. H ₂ O
P_m	$\frac{29.90}{}$	= in. Hg

Absolute Stack Gas Pressure (Ps), in. Hg

$$P_s = P_b + \frac{P_g}{13.6}$$

where,

P_b	$\frac{29.77}{}$	= barometric pressure, in. Hg
P_g	$\frac{-3.50}{}$	= static pressure, in. H ₂ O
P_s	$\frac{29.51}{}$	= in. Hg

Standard Meter Volume (Vmstd), dscf

$$Vmstd = \frac{17.636 \times Y \times V_m \times P_m}{T_m}$$

where,

Y	$\frac{0.989}{}$	= meter correction factor
V_m	$\frac{71.075}{}$	= meter volume, cf
P_m	$\frac{29.90}{}$	= absolute meter pressure, in. Hg
T_m	$\frac{543.3}{}$	= absolute meter temperature, °R
$Vmstd$	$\frac{68.236}{}$	= dscf

Standard Wet Volume (Vwstd), scf

$$Vwstd = 0.04716 \times V_{lc}$$

where,

V_{lc}	$\frac{59.5}{}$	= volume of H ₂ O collected, ml
$Vwstd$	$\frac{2.806}{}$	= scf

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

$$BWS_{sat} = \frac{10^{6.37 - \left(\frac{2.827}{T_s + 365}\right)}}{P_s}$$

where,

T_s	$\frac{82.6}{}$	= stack temperature, °F
P_s	$\frac{29.51}{}$	= absolute stack gas pressure, in. Hg
BWS_{sat}	$\frac{0.038}{}$	= dimensionless

Moisture Fraction (BWS), dimensionless (measured)

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

where,

$Vwstd$	$\frac{2.806}{}$	= standard wet volume, scf
$Vmstd$	$\frac{68.236}{}$	= standard meter volume, dscf
BWS	$\frac{0.039}{}$	= dimensionless

Moisture Fraction (BWS), dimensionless

$$BWS = BWS_{msd} \text{ unless } BWS_{sat} < BWS_{msd}$$

where,

BWS_{sat}	$\frac{0.038}{}$	= moisture fraction (theoretical at saturated conditions)
BWS_{msd}	$\frac{0.039}{}$	= moisture fraction (measured)
BWS	$\frac{0.038}{}$	

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

$$M_d = (0.44 \times \% CO_2) + (0.32 \times \% O_2) + (0.28 (100 - \% CO_2 - \% O_2))$$

where,

CO_2	$\frac{0.1}{}$	= carbon dioxide concentration, %
O_2	$\frac{20.9}{}$	= oxygen concentration, %
M_d	$\frac{28.85}{}$	= lb/lb mol

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

$$M_s = M_d (1 - BWS) + 18.015 (BWS)$$

where,

M_d	$\frac{28.85}{}$	= molecular weight (DRY), lb/lb mol
BWS	$\frac{0.038}{}$	= moisture fraction, dimensionless
M_s	$\frac{28.44}{}$	= lb/lb mol

Average Velocity (Vs), ft/sec

$$V_s = 85.49 \times C_p \times (\Delta P^{1/2})_{avg} \times \sqrt{\frac{T_s}{P_s \times M_s}}$$

where,

C_p	$\frac{0.840}{}$	= pitot tube coefficient
$\Delta P^{1/2}$	$\frac{0.603}{}$	= velocity head of stack gas, (in. H ₂ O) ^{1/2}
T_s	$\frac{542.3}{}$	= absolute stack temperature, °R
P_s	$\frac{29.51}{}$	= absolute stack gas pressure, in. Hg
M_s	$\frac{28.44}{}$	= molecular weight of stack gas, lb/lb mol
V_s	$\frac{34.8}{}$	= ft/sec

Location: Chemours Company - Fayetteville Works Facility, NC
 Source: VEN Carbon Bed Inlet
 Project No.: AST-2023-3974
 Run No.: I
 Parameter: HFPO-DA

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

$$Q_a = 60 \times V_s \times A_s$$

where,

V_s	<u>34.8</u>	= stack gas velocity, ft/sec
A_s	<u>7.07</u>	= cross-sectional area of stack, ft ²
Q_a	<u>14,769</u>	= acfm

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

$$Q_s = 17.636 \times Q_a \times (1 - BWS) \times \frac{P_s}{T_s}$$

where,

Q_a	<u>14,769</u>	= average stack gas flow at stack conditions, acfm
BWS	<u>0.038</u>	= moisture fraction, dimensionless
P_s	<u>29.51</u>	= absolute stack gas pressure, in. Hg
T_s	<u>542.3</u>	= absolute stack temperature, °R
Q_s	<u>13,641</u>	= dscfm

Dry Gas Meter Calibration Check (Yqa), dimensionless

$$Y_{qa} = \frac{Y - \left(\frac{\theta}{V_m} \sqrt{\frac{0.0319 \times T_m \times 29}{\Delta H @ \times \left(P_b + \frac{\Delta H_{avg}}{13.6} \right) \times M_d}} \sqrt{\Delta H_{avg}} \right)}{v} \times 100$$

where,

Y	<u>0.989</u>	= meter correction factor, dimensionless
θ	<u>96</u>	= run time, min.
V_m	<u>71.075</u>	= total meter volume, dcf
T_m	<u>543.3</u>	= absolute meter temperature, °R
$\Delta H @$	<u>1.85</u>	= orifice meter calibration coefficient, in. H ₂ O
P_b	<u>29.77</u>	= barometric pressure, in. Hg
ΔH_{avg}	<u>1.798</u>	= average pressure differential of orifice, in. H ₂ O
M_d	<u>28.85</u>	= molecular weight (DRY), lb/lb mol
$(\Delta H)^{1/2}$	<u>1.334</u>	= average squareroot pressure differential of orifice, (in. H ₂ O) ^{1/2}
Y_{qa}	<u>-2.2</u>	= percent

Volume of Nozzle (Vn), ft³

$$V_n = \frac{T_s}{P_s} \left(0.002669 \times V_{lc} + \frac{V_m \times P_m \times Y}{T_m} \right)$$

where,

T_s	<u>542.3</u>	= absolute stack temperature, °R
P_s	<u>29.51</u>	= absolute stack gas pressure, in. Hg
V_{lc}	<u>59.5</u>	= volume of H ₂ O collected, ml
V_m	<u>71.075</u>	= meter volume, cf
P_m	<u>29.90</u>	= absolute meter pressure, in. Hg
Y	<u>0.989</u>	= meter correction factor, unitless
T_m	<u>543.3</u>	= absolute meter temperature, °R
V_n	<u>74.008</u>	= volume of nozzle, ft ³

Isokinetic Sampling Rate (I), %

$$I = \left(\frac{V_n}{\theta \times 60 \times A_n \times V_s} \right) \times 100$$

where,

V_n	<u>74.008</u>	= nozzle volume, ft ³
θ	<u>96.0</u>	= run time, minutes
A_n	<u>0.00037</u>	= area of nozzle, ft ²
V_s	<u>34.8</u>	= average velocity, ft/sec
I	<u>99.9</u>	= %

HFPO-DA Concentration (C), ug/dscm

$$C = \frac{M \times 35.3147}{V_{mstd}}$$

where,

M	<u>786</u>	= HFPO-DA mass, ug
V_{mstd}	<u>68,236</u>	= standard meter volume, dscf
C_{NH_3}	<u>407.00</u>	= ug/dscm

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

$$ER = \frac{M \times Q_s \times 60}{V_{mstd} \times 4.54E + 11}$$

where,

M	<u>786</u>	= HFPO-DA mass, ug
Q_s	<u>13,641</u>	= average stack gas flow at standard conditions, dscfm
V_{mstd}	<u>68,236</u>	= standard meter volume, dscf
ER	<u>0.021</u>	= lb/hr

Appendix B

Location Chemours Company - Fayetteville Works Facility, NC

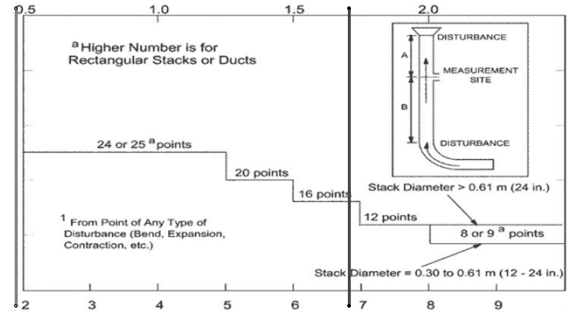
Source VEN Carbon Bed Inlet

Project No. AST-2023-3974

Date: 09/11/23

Stack Parameters

Duct Orientation: Horizontal
 Duct Design: Circular
 Distance from Far Wall to Outside of Port: 51.13 in
 Nipple Length: 15.13 in
 Depth of Duct: 36.00 in
 Cross Sectional Area of Duct: 7.07 ft²
 No. of Test Ports: 2
 Distance A: 5.1 ft
 Distance A Duct Diameters: 1.7 (must be > 0.5)
 Distance B: 5.7 ft
 Distance B Duct Diameters: 1.9 (must be > 2)
 Minimum Number of Traverse Points: 24
 Actual Number of Traverse Points: 24
 Number of Readings per Point: 1
 Measurer (Initial and Date): JS 9/11/23
 Reviewer (Initial and Date): AA 9/11/23



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

Traverse Point	% of Diameter	Distance from inside wall	Distance from outside of port
1	2.1	1.00	16.13
2	6.7	2.41	17.54
3	11.8	4.25	19.38
4	17.7	6.37	21.50
5	25.0	9.00	24.13
6	35.6	12.82	27.95
7	64.4	23.18	38.31
8	75.0	27.00	42.13
9	82.3	29.63	44.76
10	88.2	31.75	46.88
11	93.3	33.59	48.72
12	97.9	35.00	50.13

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

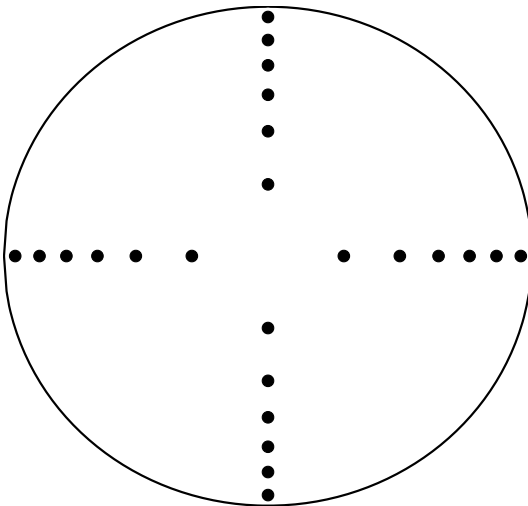
Stack Diagram

A = 5.1 ft.

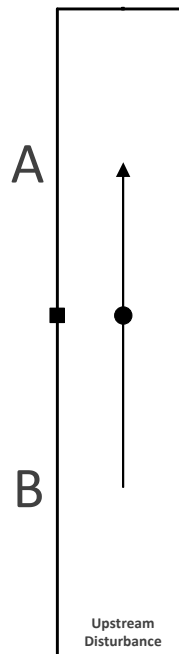
B = 5.7 ft.

Depth of Duct = 36 in.

Cross Sectional Area



Downstream Disturbance



Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Inlet
Project No. AST-2023-3974
Parameter HFPO-DA

Run Number		Run 1	Run 2	Run 3	Average
Date		9/13/23	9/13/23	9/13/23	--
Start Time		8:45	11:25	14:21	--
Stop Time		10:44	13:17	16:15	--
Run Time, min	(θ)	96.0	96.0	96.0	96.0
INPUT DATA					
Barometric Pressure, in. Hg	(Pb)	29.77	29.77	29.77	29.77
Meter Correction Factor	(Y)	0.989	0.989	0.989	0.989
Orifice Calibration Value	($\Delta H @$)	1.85	1.85	1.85	1.85
Meter Volume, ft ³	(Vm)	71.075	66.903	66.981	68.320
Meter Temperature, °F	(Tm)	83.6	92.0	95.0	90.2
Meter Temperature, °R	(Tm)	543.3	551.7	554.6	549.9
Meter Orifice Pressure, in. WC	(ΔH)	1.798	1.557	1.535	1.630
Volume H ₂ O Collected, mL	(Vlc)	59.5	50.6	52.0	54.0
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, ug	M _(HFPODA)	30.1	20.0	21.2	23.8
BH HFPO-DA Mass, ug	M _(HFPODA)	546.0	414.0	571.0	510.3
Imp HFPO-DA Mass, ug	M _(HFPODA)	209.0	225.0	182.0	205.3
Breakthrough HFPO-DA Mass, ug	M _(HFPODA)	1.3	3.1	2.6	2.3
Total HFPO-DA Mass, ug	M _(HFPODA)	786.4	662.1	776.8	741.8
ISOKINETIC DATA					
Standard Meter Volume, ft ³	(Vmstd)	68.236	63.213	62.946	64.798
Standard Water Volume, ft ³	(Vwstd)	2.806	2.386	2.452	2.548
Moisture Fraction Measured	(BWSmsd)	0.039	0.036	0.037	0.038
Moisture Fraction @ Saturation	(BWSsat)	0.038	0.044	0.048	0.043
Moisture Fraction	(BWS)	0.038	0.036	0.037	0.037
Meter Pressure, in Hg	(Pm)	29.90	29.88	29.88	29.89
Volume at Nozzle, ft ³	(Vn)	74.008	68.937	69.061	70.67
Isokinetic Sampling Rate, (%)	(I)	99.9	99.8	100.7	100.1
DGM Calibration Check Value, (+/- 5%)	(Y _{qa})	-2.2	-2.1	-1.5	-2.0
EMISSION CALCULATIONS					
HFPO-DA Concentration, ug/dscm	C _(HFPODA)	4.1E+02	3.7E+02	4.4E+02	404.2
HFPO-DA Emission Rate, lb/hr	ER _(HFPODA)	2.1E-02	1.8E-02	2.0E-02	2.0E-02

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Inlet
Project No. AST-2023-3974
Parameter HFPO-DA

Run Number		Run 1	Run 2	Run 3	Average
Date		9/13/23	9/13/23	9/13/23	--
Start Time		8:45	11:25	14:21	--
Stop Time		10:44	13:17	16:15	--
Run Time, min		96.0	96.0	96.0	96.0
VELOCITY HEAD, in. WC					
Point 1		0.24	0.25	0.22	0.24
Point 2		0.24	0.25	0.21	0.23
Point 3		0.27	0.25	0.22	0.25
Point 4		0.27	0.27	0.25	0.26
Point 5		0.27	0.27	0.25	0.26
Point 6		0.27	0.27	0.25	0.26
Point 7		0.35	0.25	0.34	0.31
Point 8		0.37	0.32	0.34	0.34
Point 9		0.37	0.37	0.34	0.36
Point 10		0.39	0.38	0.37	0.38
Point 11		0.39	0.38	0.37	0.38
Point 12		0.40	0.37	0.37	0.38
Point 13		0.45	0.32	0.32	0.36
Point 14		0.44	0.32	0.32	0.36
Point 15		0.44	0.32	0.32	0.36
Point 16		0.44	0.32	0.33	0.36
Point 17		0.44	0.32	0.32	0.36
Point 18		0.44	0.35	0.31	0.37
Point 19		0.43	0.37	0.38	0.39
Point 20		0.43	0.37	0.38	0.39
Point 21		0.37	0.37	0.30	0.35
Point 22		0.37	0.37	0.32	0.35
Point 23		0.37	0.27	0.32	0.32
Point 24		0.37	0.27	0.32	0.32
CALCULATED DATA					
Square Root of ΔP , (in. WC) ^{1/2}	(ΔP)	0.603	0.561	0.556	0.573
Pitot Tube Coefficient	(Cp)	0.840	0.840	0.840	0.840
Barometric Pressure, in. Hg	(Pb)	29.77	29.77	29.77	29.77
Static Pressure, in. WC	(Pg)	-3.50	-3.50	-3.50	-3.50
Stack Pressure, in. Hg	(Ps)	29.51	29.51	29.51	29.51
Stack Cross-sectional Area, ft ²	(As)	7.07	7.07	7.07	7.07
Temperature, °F	(Ts)	82.6	87.3	90.0	86.6
Temperature, °R	(Ts)	542.3	547.0	549.7	546.3
Moisture Fraction Measured	(BWSmsd)	0.039	0.036	0.037	0.038
Moisture Fraction @ Saturation	(BWSsat)	0.038	0.044	0.048	0.043
Moisture Fraction	(BWS)	0.038	0.036	0.037	0.037
O ₂ Concentration, %	(O ₂)	20.9	20.9	20.9	20.90
CO ₂ Concentration, %	(CO ₂)	0.1	0.1	0.1	0.10
Molecular Weight, lb/lb-mole (dry)	(Md)	28.85	28.85	28.85	28.85
Molecular Weight, lb/lb-mole (wet)	(Ms)	28.44	28.46	28.45	28.45
Velocity, ft/sec	(Vs)	34.8	32.5	32.3	33.2
VOLUMETRIC FLOW RATE					
At Stack Conditions, acfm	(Qa)	14,769	13,791	13,700	14,087
At Standard Conditions, scfm	(Qsw)	14,176	13,123	12,973	13,424
At Standard Conditions, dscfm	(Qs)	13,641	12,645	12,486	12,924

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Inlet
Project No. AST-2023-3974
Date 09/11/23

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

Location Chemours Company - Fayetteville Works Facility, NC

Source VEN Carbon Bed Inlet

Project No. AST-2023-3974

Analysis Type	Assumed Ambient
----------------------	-----------------

The remaining constituent is assumed to be nitrogen.

Location Chemours Company - Fayetteville Works Facility, NC
 Source VEN Carbon Bed Inlet
 Project No. AST-2023-3974
 Parameter HFPO-DA
 Analysis Gravimetric

Run 1		Date: 9/13/23								
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	290.8	523.8	734.8	793.0	645.3	483.0	288.6	852.2	4611.5	
Final Mass, g	309.0	543.2	732.6	793.2	645.8	485.2	298.0	864.0	4671.0	
Gain	18.2	19.4	-2.2	0.2	0.5	2.2	9.4	11.8	59.5	
Run 2		Date: 9/13/23								
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	290.6	464.0	782.4	706.2	631.6	485.6	300.8	775.6	4436.8	
Final Mass, g	306.2	477.0	779.2	706.6	632.4	489.0	308.8	788.2	4487.4	
Gain	15.6	13.0	-3.2	0.4	0.8	3.4	8.0	12.6	50.6	
Run 3		Date: 9/13/23								
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	292.4	523.6	746.4	780.2	622.4	483.0	299.8	839.8	4587.6	
Final Mass, g	307.8	539.0	745.0	780.8	622.8	485.8	307.2	851.2	4639.6	
Gain	15.4	15.4	-1.4	0.6	0.4	2.8	7.4	11.4	52.0	

Location: Chemours Company - Fayetteville Works Facility, NC			Start Time: 8:45		Source: VEN Carbon Bed Inlet					
Date: 9/13/23		Run 1	VALID	End Time: 10:44		Project No.: AST-2023-3974	Parameter: HFPO-DA			
STACK DATA (EST)		EQUIPMENT		STACK DATA (EST)		FILTER NO.	STACK DATA (FINAL)		MOIST. DATA	
Moisture: 2.0 % est.		Meter Box ID: 5		Est. Tm: 88 °F		OTM 45	Pb: 29.77 in. Hg		Vlc (ml)	
Barometric: 29.77 in. Hg		Y: 0.989		Est. Ts: 90 °F			Pg: -3.50 in. WC		59.5	
Static Press: -2.00 in. WC		AH @ (in.WC): 1.85		Est. AP: 0.39 in. WC			O ₂ : 20.9 %		K-FACTOR	
Stack Press: 29.62 in. Hg		Probe ID: P4-1		Est. Dn: 0.234 in.			CO ₂ : 0.1 %		4.824	
CO ₂ : 0.0 %		Liner Material: glass		Target Rate: 0.63 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) 654.187 654.250 0.063			
N ₂ /CO: 79.1 %		Pitot Cp/Type: 0.840 S-type		Leak Rate (cfm): 0.000 0.000 -- -- 0.000			Mid 2 (cf) --			
Md: 28.84 lb/lb-mole		Nozzle ID: G-2 glass		Vacuum (in Hg): 10 15 -- -- 15			Mid 3 (cf) --			
Ms: 28.62 lb/lb-mole		Nozzle Dn (in.): 0.260		Pitot Tube: Pass -- -- -- Pass			Mid-Point Leak Check Vol (cf): 0.063			

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)
	Begin	End			DGM Average	Stack	Ideal	Actual		Probe	Filter	Imp Exit	Aux		
					Amb.	Amb.				Amb.	Amb.	Amb.	Amb.		
												-			
A1	0.00	4.00	621.662	0.24	74	83	1.14	1.15	5	89	96	66	50	97.1	28.15
2	4.00	8.00	624.000	0.24	74	83	1.14	1.15	5	89	91	55	50	99.7	28.15
3	8.00	12.00	626.400	0.27	75	83	1.29	1.30	5	89	89	55	49	97.7	29.85
4	12.00	16.00	628.900	0.27	76	82	1.29	1.30	5	89	89	55	49	97.5	29.83
5	16.00	20.00	631.400	0.27	78	82	1.30	1.30	5	89	88	55	47	97.1	29.83
6	20.00	24.00	633.900	0.27	78	82	1.30	1.30	5	89	89	55	47	97.1	29.83
7	24.00	28.00	636.400	0.35	80	82	1.69	1.70	5	89	89	54	47	102.1	33.96
8	28.00	32.00	639.400	0.37	80	82	1.78	1.80	5	89	90	55	47	96.0	34.92
9	32.00	36.00	642.300	0.37	81	82	1.79	1.80	6	89	90	55	47	99.1	34.92
10	36.00	40.00	645.300	0.39	83	82	1.89	1.90	7	88	89	56	47	93.0	35.85
11	40.00	44.00	648.200	0.39	83	82	1.89	1.90	7	89	89	57	47	99.4	35.85
12	44.00	48.00	651.300	0.40	83	82	1.94	1.95	7	89	89	58	47	91.4	36.30
B1	48.00	52.00	654.250	0.45	83	82	2.18	2.20	7	89	89	65	40	91.1	38.51
2	52.00	56.00	657.300	0.44	84	83	2.13	2.15	7	89	89	65	40	99.9	38.11
3	56.00	60.00	660.610	0.44	85	83	2.14	2.15	7	89	89	53	41	99.1	38.11
4	60.00	64.00	663.900	0.44	85	83	2.14	2.15	7	89	88	53	40	99.4	38.11
5	64.00	68.00	667.200	0.44	87	83	2.14	2.15	7	89	88	52	40	99.0	38.11
6	68.00	72.00	670.500	0.44	90	83	2.16	2.15	7	89	89	53	41	97.0	38.11
7	72.00	76.00	673.750	0.43	90	83	2.11	2.15	7	89	90	53	42	98.1	37.68
8	76.00	80.00	677.000	0.43	91	83	2.11	2.15	7	89	90	54	42	102.5	37.68
9	80.00	84.00	680.400	0.37	91	83	1.82	1.80	6	89	90	54	42	97.4	34.95
10	84.00	88.00	683.400	0.37	91	83	1.82	1.85	6	89	90	54	42	100.0	34.95
11	88.00	92.00	686.480	0.37	92	83	1.82	1.85	6	89	90	54	42	107.6	34.95
12	92.00	96.00	689.800	0.37	92	83	1.82	1.85	6	89	90	54	42	97.2	34.95

Final DGM: 692.800

RESULTS	Run Time		Vm	AP	Tm	Ts	Max Vac	ΔH	%ISO	BWS	Y _{qa}
	min		ft ³	in. WC	°F	°F		in. WC			
	96.0		71.075	0.37	83.6	82.6	7	1.798	99.9	0.038	-2.2

Location: Chemours Company - Fayetteville Works Facility, NC			Start Time: 11:25		Source: VEN Carbon Bed Inlet					
Date: 9/13/23		Run 2	VALID	End Time: 13:17		Project No.: AST-2023-3974	Parameter: HFPO-DA			
STACK DATA (EST)		EQUIPMENT		STACK DATA (EST)		FILTER NO.	STACK DATA (FINAL)		MOIST. DATA	
Moisture: 2.0 % est.		Meter Box ID: 5		Est. Tm: 84 °F		OTM 45	Pb: 29.77 in. Hg		Vlc (ml)	
Barometric: 29.77 in. Hg		Y: 0.989		Est. Ts: 83 °F			Pg: -3.50 in. WC		50.6	
Static Press: -2.00 in. WC		AH @ (in.WC): 1.85		Est. AP: 0.37 in. WC			O ₂ : 20.9 %		K-FACTOR	
Stack Press: 29.62 in. Hg		Probe ID: P4-1		Est. Dn: 0.238 in.			CO ₂ : 0.1 %		4.85	
CO ₂ : 0.0 %		Liner Material: glass		Target Rate: 0.63 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)		725.555 725.737 0.182	
N ₂ /CO: 79.1 %		Pitot Cp/Type: 0.840 S-type		Leak Rate (cfm): 0.000 0.000 -- -- 0.000			Mid 2 (cf)		--	
Md: 28.84 lb/lb-mole		Nozzle ID: G-2 glass		Vacuum (in Hg): 10 10 -- -- 12			Mid 3 (cf)		--	
Ms: 28.62 lb/lb-mole		Nozzle Dn (in.): 0.260		Pitot Tube: Pass -- -- -- Pass			Mid-Point Leak Check Vol (cf):		0.182	

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	Ideal		Actual	Probe	Filter	Imp Exit		
	Amb.	Amb.			Amb.	Amb.	Amb.				Amb.	Amb.	Amb.		
	Begin	End			--	--	--	--		--	--	--	--		
A1	0.00	4.00	692.920	0.25	87	83	1.22	1.25	7	89	89	66	56	102.5	28.73
2	4.00	8.00	695.500	0.25	89	86	1.22	1.25	7	89	89	66	49	99.2	28.81
3	8.00	12.00	698.000	0.25	90	86	1.22	1.25	7	89	89	64	53	99.0	28.81
4	12.00	16.00	700.500	0.27	90	86	1.32	1.30	7	89	89	62	51	99.1	29.94
5	16.00	20.00	703.100	0.27	92	87	1.32	1.35	7	89	90	60	53	95.1	29.96
6	20.00	24.00	705.600	0.27	92	87	1.32	1.35	7	89	90	60	53	106.5	29.96
7	24.00	28.00	708.400	0.25	93	87	1.23	1.25	7	92	94	60	46	90.7	28.83
8	28.00	32.00	710.700	0.32	93	87	1.57	1.57	7	92	92	59	50	99.8	32.62
9	32.00	36.00	713.560	0.37	93	87	1.81	1.80	7	92	92	59	52	94.8	35.08
10	36.00	40.00	716.480	0.38	93	87	1.86	1.90	8	92	95	59	54	93.6	35.55
11	40.00	44.00	719.400	0.38	94	87	1.86	1.90	8	91	95	59	54	96.6	35.55
12	44.00	48.00	722.420	0.37	95	87	1.82	1.80	10	90	93	60	55	101.4	35.08
B1	48.00	52.00	725.737	0.32	90	88	1.56	1.55	8	90	95	66	55	100.5	32.65
2	52.00	56.00	728.600	0.32	91	89	1.56	1.55	8	89	95	63	50	98.2	32.68
3	56.00	60.00	731.400	0.32	91	89	1.56	1.55	8	93	93	58	47	94.7	32.68
4	60.00	64.00	734.100	0.32	91	89	1.56	1.55	8	93	93	58	47	105.2	32.68
5	64.00	68.00	737.100	0.32	92	88	1.56	1.60	9	91	92	56	47	94.5	32.65
6	68.00	72.00	739.800	0.35	92	88	1.71	1.70	10	91	91	56	50	90.3	34.15
7	72.00	76.00	742.500	0.37	93	88	1.81	1.80	11	91	90	56	45	97.5	35.11
8	76.00	80.00	745.500	0.37	93	88	1.81	1.80	11	91	90	56	45	107.2	35.11
9	80.00	84.00	748.800	0.37	93	88	1.81	1.80	11	91	90	54	51	97.5	35.11
10	84.00	88.00	751.800	0.37	93	88	1.81	1.80	11	91	90	54	51	94.2	35.11
11	88.00	92.00	754.700	0.27	93	88	1.32	1.35	11	91	89	55	51	102.6	29.99
12	92.00	96.00	757.400	0.27	95	88	1.33	1.35	8	91	89	56	48	98.6	29.99

Final DGM: 760.005

RESULTS	Run Time		Vm	AP	Tm	Ts	Max Vac	ΔH	%ISO	BWS	Y _{qa}
	96.0	min	66.903 ft ³	0.32 in. WC	92.0 °F	87.3 °F	11	1.557 in. WC	99.8	0.036	-2.1

Location: Chemours Company - Fayetteville Works Facility, NC				Start Time: 14:21		Source: VEN Carbon Bed Inlet					
Date: 9/13/23		Run 3		VALID		End Time: 16:15		Project No.: AST-2023-3974		Parameter: HFPO-DA	

STACK DATA (EST)			EQUIPMENT			STACK DATA (EST)			FILTER NO.	STACK DATA (FINAL)			MOIST. DATA		
Moisture:	2.0	% est.	Meter Box ID:	5		Est. Tm:	92	°F	OTM 45	Pb:	29.77	in. Hg	Vlc (ml)		
Barometric:	29.77	in. Hg	Y:	0.989		Est. Ts:	87	°F		Pg:	-3.50	in. WC	52.0		
Static Press:	-2.00	in. WC	AH @ (in.WC):	1.85		Est. AP:	0.32	in. WC		O ₂ :	20.9	%	K-FACTOR		
Stack Press:	29.62	in. Hg	Probe ID:	P4-1		Est. Dn:	0.245	in.		CO ₂ :	0.1	%	4.883		
CO ₂ :	0.0	%	Liner Material:	glass		Target Rate:	0.63	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)	792.507	792.577	0.070
N ₂ /CO:	79.1	%	Pitot Cp/Type:	0.840	S-type	Leak Rate (cfm):	0.000	0.000	--	--	0.000	Mid 2 (cf)	--	--	--
Md:	28.84	lb/lb-mole	Nozzle ID:	G-2	glass	Vacuum (in Hg):	10	12	--	--	15	Mid 3 (cf)	--	--	--
Ms:	28.62	lb/lb-mole	Nozzle Dn (in.):	0.260		Pitot Tube:	Pass	--	--	--	Pass	Mid-Point Leak Check Vol (cf):	0.070		

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)				
	Begin	End			DGM Average		Ideal	Actual		Probe	Filter	Imp Exit	Aux						
					Amb.	Stack										Amb.	Amb.	Amb.	Amb.
					--	--										--	--	--	--
A1	0.00	4.00	760.149	0.22	89	90	1.07	1.10	5	92	95	66	53	100.2	27.12				
2	4.00	8.00	762.510	0.21	90	90	1.02	1.05	5	95	94	62	51	104.5	26.50				
3	8.00	12.00	764.920	0.22	91	90	1.07	1.10	5	96	93	60	49	100.7	27.12				
4	12.00	16.00	767.300	0.25	92	90	1.22	1.25	5	94	95	60	53	103.0	28.91				
5	16.00	20.00	769.900	0.25	93	90	1.22	1.25	5	94	95	60	53	106.8	28.91				
6	20.00	24.00	772.600	0.25	95	90	1.22	1.25	5	92	93	60	55	90.6	28.91				
7	24.00	28.00	774.900	0.34	95	90	1.66	1.65	5	92	93	60	55	91.3	33.72				
8	28.00	32.00	777.600	0.34	95	90	1.66	1.65	5	92	93	60	56	98.1	33.72				
9	32.00	36.00	780.500	0.34	95	90	1.66	1.65	6	92	92	59	47	98.1	33.72				
10	36.00	40.00	783.400	0.37	96	90	1.81	1.80	7	92	92	59	47	92.3	35.17				
11	40.00	44.00	786.250	0.37	96	90	1.81	1.80	7	91	91	59	47	98.7	35.17				
12	44.00	48.00	789.300	0.37	96	90	1.81	1.80	7	91	91	56	49	103.8	35.17				
B1	48.00	52.00	792.577	0.32	96	90	1.57	1.60	7	92	91	66	49	101.7	32.71				
2	52.00	56.00	795.500	0.32	96	90	1.57	1.60	7	92	91	66	49	100.9	32.71				
3	56.00	60.00	798.400	0.32	96	90	1.57	1.60	7	96	90	54	44	100.9	32.71				
4	60.00	64.00	801.300	0.33	96	90	1.62	1.60	7	95	92	51	44	96.6	33.22				
5	64.00	68.00	804.120	0.32	96	90	1.57	1.60	7	94	92	51	44	93.3	32.71				
6	68.00	72.00	806.800	0.31	96	90	1.52	1.50	7	92	90	52	44	99.0	32.19				
7	72.00	76.00	809.600	0.38	96	90	1.86	1.85	7	91	89	51	48	99.0	35.64				
8	76.00	80.00	812.700	0.38	96	90	1.86	1.85	7	90	89	54	51	99.0	35.64				
9	80.00	84.00	815.800	0.30	97	90	1.47	1.50	7	90	89	54	50	104.0	31.67				
10	84.00	88.00	818.700	0.32	97	90	1.57	1.60	7	90	89	54	50	93.8	32.71				
11	88.00	92.00	821.400	0.32	97	90	1.57	1.60	7	90	89	54	50	107.7	32.71				
12	92.00	96.00	824.500	0.32	97	90	1.57	1.60	7	90	89	54	50	93.8	32.71				
Final DGM:			827.200																

RESULTS	Run Time		Vm	AP	Tm	Ts	Max Vac	ΔH	%ISO	BWS	Y _{qa}					
		96.0	min	66.981	ft ³	0.31	in. WC	95.0	°F	90.0	°F	7	1.535	in. WC	100.7	0.037

Location Chemours Company - Fayetteville Works Facility, NC

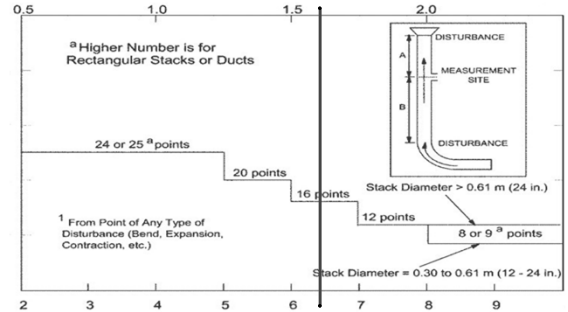
Source VEN Carbon Bed Outlet

Project No. AST-2023-3974

Date: 09/11/23

Stack Parameters

Duct Orientation: Vertical
 Duct Design: Circular
 Distance from Far Wall to Outside of Port: 51.13 in
 Nipple Length: 15.13 in
 Depth of Duct: 36.00 in
 Cross Sectional Area of Duct: 7.07 ft²
 No. of Test Ports: 2
 Distance A Duct Diameters: 4.8 ft
 Distance B: 4.8 ft
 Distance B Duct Diameters: 1.6 (must be > 2)
 Minimum Number of Traverse Points: 24
 Actual Number of Traverse Points: 24
 Number of Readings per Point: 1
 Measurer (Initial and Date): JS 9/11/23
 Reviewer (Initial and Date): AA 9/11/23



CIRCULAR DUCT

LOCATION OF TRAVERSE POINTS

Number of traverse points on a diameter

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

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

Traverse Point	% of Diameter	Distance from inside wall	Distance from outside of port
1	2.1	1.00	16.13
2	6.7	2.41	17.54
3	11.8	4.25	19.38
4	17.7	6.37	21.50
5	25.0	9.00	24.13
6	35.6	12.82	27.95
7	64.4	23.18	38.31
8	75.0	27.00	42.13
9	82.3	29.63	44.76
10	88.2	31.75	46.88
11	93.3	33.59	48.72
12	97.9	35.00	50.13

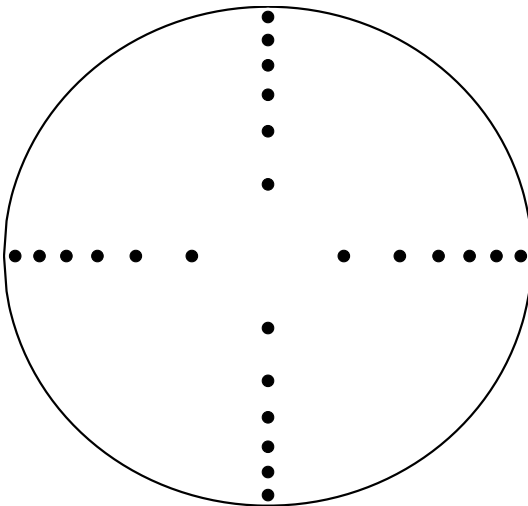
Stack Diagram

A = 4.8 ft.

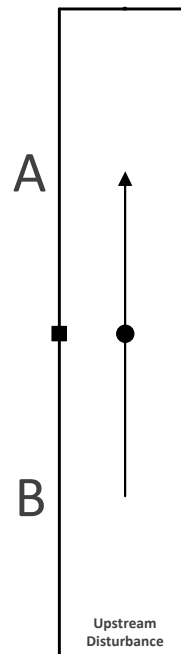
B = 4.8 ft.

Depth of Duct = 36 in.

Cross Sectional Area



Downstream Disturbance



Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Outlet
Project No. AST-2023-3974
Parameter HFPO-DA

Run Number		Run 1	Run 2	Run 3	Average
Date		9/13/23	9/13/23	9/13/23	--
Start Time		8:45	11:25	14:21	--
Stop Time		10:44	13:15	16:15	--
Run Time, min	(θ)	96.0	96.0	96.0	96.0
INPUT DATA					
Barometric Pressure, in. Hg	(Pb)	29.77	29.77	27.99	29.18
Meter Correction Factor	(Y)	0.984	0.984	0.984	0.984
Orifice Calibration Value	($\Delta H @$)	1.579	1.579	1.579	1.579
Meter Volume, ft ³	(Vm)	67.058	69.442	76.527	71.009
Meter Temperature, °F	(Tm)	83.5	96.1	101.1	93.6
Meter Temperature, °R	(Tm)	543.2	555.8	560.8	553.3
Meter Orifice Pressure, in. WC	(ΔH)	1.332	1.308	1.650	1.430
Volume H ₂ O Collected, mL	(Vlc)	57.8	60.8	61.4	60.0
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, ug	M _(HFPODA)	12.4	12.0	13.2	12.5
BH HFPO-DA Mass, ug	M _(HFPODA)	1.93	3.43	2.36	2.6
Imp HFPO-DA Mass, ug	M _(HFPODA)	0.182	0.334	0.0775	0.2
Breakthrough HFPO-DA Mass, ug	M _(HFPODA)	0.0126	0.0156		0.0
Total HFPO-DA Mass, ug	M _(HFPODA)	14.5	15.8	15.6	15.3
ISOKINETIC DATA					
Standard Meter Volume, ft ³	(Vmstd)	63.986	64.756	66.576	65.106
Standard Water Volume, ft ³	(Vwstd)	2.726	2.867	2.896	2.830
Moisture Fraction Measured	(BWSmsd)	0.041	0.042	0.042	0.042
Moisture Fraction @ Saturation	(BWSsat)	0.043	0.046	0.048	0.046
Moisture Fraction	(BWS)	0.041	0.042	0.042	0.042
Meter Pressure, in Hg	(Pm)	29.87	29.87	28.11	29.28
Volume at Nozzle, ft ³	(Vn)	69.127	70.526	76.937	72.20
Isokinetic Sampling Rate, (%)	(I)	100.6	103.8	98.6	101.0
DGM Calibration Check Value, (+/- 5%)	(Y _{qa})	-0.5	2.5	-3.4	-0.4
EMISSION CALCULATIONS					
HFPO-DA Concentration, ug/dscm	C _(HFPODA)	8.0E+00	8.6E+00	8.3E+00	8.31E+00
HFPO-DA Emission Rate, lb/hr	ER _(HFPODA)	3.8E-04	4.0E-04	4.2E-04	4.01E-04
REDUCTION CALCULATIONS					
Inlet HFPO-DA Emission Rate, lb/hr	ER _(HFPODAi)	2.1E-02	1.8E-02	2.0E-02	2.0E-02
Outlet HFPO-DA Emission Rate, lb/hr	ER _(HFPODA)	3.8E-04	4.0E-04	4.2E-04	4.0E-04
Reduction Efficiency, %	RE	98.2	97.7	97.9	97.9

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Outlet
Project No. AST-2023-3974
Parameter HFPO-DA

Run Number		Run 1	Run 2	Run 3	Average
Date		9/13/23	9/13/23	9/13/23	--
Start Time		8:45	11:25	14:21	--
Stop Time		10:44	13:15	16:15	--
Run Time, min		96.0	96.0	96.0	96.0
VELOCITY HEAD, in. WC					
Point 1		0.29	0.27	0.34	0.30
Point 2		0.29	0.28	0.33	0.30
Point 3		0.28	0.28	0.32	0.29
Point 4		0.28	0.27	0.34	0.30
Point 5		0.28	0.27	0.34	0.30
Point 6		0.28	0.28	0.33	0.30
Point 7		0.29	0.25	0.34	0.29
Point 8		0.29	0.25	0.34	0.29
Point 9		0.25	0.24	0.33	0.27
Point 10		0.26	0.24	0.33	0.28
Point 11		0.24	0.24	0.26	0.25
Point 12		0.23	0.26	0.26	0.25
Point 13		0.16	0.20	0.25	0.20
Point 14		0.16	0.21	0.26	0.21
Point 15		0.30	0.20	0.34	0.28
Point 16		0.32	0.31	0.51	0.38
Point 17		0.32	0.31	0.51	0.38
Point 18		0.33	0.31	0.51	0.38
Point 19		0.40	0.31	0.52	0.41
Point 20		0.45	0.40	0.52	0.46
Point 21		0.50	0.45	0.52	0.49
Point 22		0.52	0.58	0.50	0.53
Point 23		0.52	0.57	0.50	0.53
Point 24		0.52	0.57	0.48	0.52
CALCULATED DATA					
Square Root of ΔP , (in. WC) ^{1/2}	(ΔP)	0.562	0.553	0.617	0.577
Pitot Tube Coefficient	(Cp)	0.840	0.840	0.840	0.840
Barometric Pressure, in. Hg	(Pb)	29.77	29.77	27.99	29.18
Static Pressure, in. WC	(Pg)	1.90	1.10	1.10	1.37
Stack Pressure, in. Hg	(Ps)	29.91	29.85	28.07	29.28
Stack Cross-sectional Area, ft ²	(As)	7.07	7.07	7.07	7.07
Temperature, °F	(Ts)	87.0	89.4	88.6	88.3
Temperature, °R	(Ts)	546.6	549.1	548.3	548.0
Moisture Fraction Measured	(BWSmsd)	0.041	0.042	0.042	0.042
Moisture Fraction @ Saturation	(BWSsat)	0.043	0.046	0.048	0.046
Moisture Fraction	(BWS)	0.041	0.042	0.042	0.042
O ₂ Concentration, %	(O ₂)	20.9	20.9	20.9	20.90
CO ₂ Concentration, %	(CO ₂)	0.1	0.1	0.1	0.10
Molecular Weight, lb/lb-mole (dry)	(Md)	28.85	28.85	28.85	28.85
Molecular Weight, lb/lb-mole (wet)	(Ms)	28.41	28.39	28.40	28.40
Velocity, ft/sec	(Vs)	32.3	32.0	36.7	33.7
VOLUMETRIC FLOW RATE					
At Stack Conditions, acfm	(Qa)	13,718	13,565	15,580	14,288
At Standard Conditions, scfm	(Qsw)	13,237	13,006	14,068	13,437
At Standard Conditions, dscfm	(Qs)	12,696	12,454	13,481	12,877

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Outlet
Project No. AST-2023-3974
Date 09/11/23

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

Location Chemours Company - Fayetteville Works Facility, NC

Source VEN Carbon Bed Outlet

Project No. AST-2023-3974

Analysis Type	Assumed Ambient
----------------------	-----------------

The remaining constituent is assumed to be nitrogen.

Location Chemours Company - Fayetteville Works Facility, NC
 Source VEN Carbon Bed Outlet
 Project No. AST-2023-3974
 Parameter HFPO-DA
 Analysis Gravimetric

Run 1		Date: 9/13/23								
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	295.2	486.2	737.2	750.8	641.2	472.6	310.4	819.8	4513.4	
Final Mass, g	314.0	501.2	737.4	750.0	642.2	474.8	319.0	832.6	4571.2	
Gain	18.8	15.0	0.2	-0.8	1.0	2.2	8.6	12.8	57.8	
Run 2		Date: 9/13/23								
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	381.0	487.4	734.2	718.8	652.2	501.8	309.0	804.6	4589.0	
Final Mass, g	405.2	500.6	733.0	719.6	652.4	503.8	319.6	815.6	4649.8	
Gain	24.2	13.2	-1.2	0.8	0.2	2.0	10.6	11.0	60.8	
Run 3		Date: 9/13/23								
Impinger No.	1	2	3	4	5	6	7	8	Total	
Contents	XAD Trap	Empty	H2O	H2O	H2O	Empty	XAD Trap	Silica	--	
Initial Mass, g	316.6	486.4	736.0	744.2	624.6	472.8	287.2	816.6	4484.4	
Final Mass, g	338.6	501.4	733.2	744.6	624.8	476.4	296.8	830.0	4545.8	
Gain	22.0	15.0	-2.8	0.4	0.2	3.6	9.6	13.4	61.4	

Location: Chemours Company - Fayetteville Works Facility, NC			Start Time: 8:45		Source: VEN Carbon Bed Outlet				
Date: 9/13/23		Run 1	VALID	End Time: 10:44		Project No.: AST-2023-3974		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 3		Est. Tm: 88 °F		OTM-45	Pb: 29.77 in. Hg		Vlc (ml)
Barometric: 29.77 in. Hg		Y: 0.984		Est. Ts: 87 °F			Pg: 1.90 in. WC		57.8
Static Press: 2.00 in. WC		AH @ (in.WC): 1.579		Est. AP: 0.37 in. WC			O ₂ : 20.9 %		K-FACTOR
Stack Press: 29.92 in. Hg		Probe ID: P4-2		Est. Dn: 0.237 in.			CO ₂ : 0.1 %		4.184
CO ₂ : 0.0 %		Liner Material: glass		Target Rate: 0.63 scfm					
O ₂ : 20.9 %		Pitot ID: P4-2		LEAK CHECK: Pre Mid 1 Mid 2 Mid 3 Post			Check Pt. Initial Final Corr.		
N ₂ /CO: 79.1 %		Pitot Cp/Type: 0.840 S-type		Leak Rate (cfm): 0.000 0.000 0.002 -- 0.002			Mid 1 (cf) ##### ##### 0.602		
Md: 28.84 lb/lb-mole		Nozzle ID: G-7 glass		Vacuum (in Hg): 15 15 15 -- 15			Mid 2 (cf) --		
Ms: 28.62 lb/lb-mole		Nozzle Dn (in.): 0.260		Pitot Tube: Pass -- -- -- Pass			Mid 3 (cf) --		
							Mid-Point Leak Check Vol (cf): 0.602		

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			Ideal	Actual	Probe	Filter		
	Amb.	Amb.			Amb.	Amb.	Amb.	Amb.				Amb.	Amb.		
	Begin	End			68	68	68	68		68	68				
A1	0.00	4.00	974.372	0.29	68	86	1.17	1.15	5	100	98	62	40	99.7	30.87
2	4.00	8.00	977.000	0.29	74	86	1.19	1.20	5	100	99	43	40	100.1	30.87
3	8.00	12.00	979.670	0.28	74	87	1.14	1.15	5	100	100	43	42	100.5	30.36
4	12.00	16.00	982.300	0.28	76	87	1.15	1.15	6	99	99	41	43	102.8	30.36
5	16.00	20.00	985.000	0.28	77	87	1.15	1.15	6	99	98	43	43	98.8	30.36
6	20.00	24.00	987.600	0.28	79	87	1.15	1.15	6	99	98	44	44	102.2	30.36
7	24.00	28.00	990.300	0.29	80	87	1.20	1.20	6	99	99	45	39	100.2	30.90
8	28.00	32.00	993.000	0.29	81	87	1.20	1.20	6	99	100	46	39	101.9	30.90
9	32.00	36.00	995.750	0.25	82	87	1.04	1.05	6	99	99	46	40	102.7	28.69
10	36.00	40.00	998.330	0.26	83	87	1.08	1.10	6	98	99	46	41	96.3	29.26
11	40.00	44.00	1000.800	0.24	84	87	1.00	1.10	6	98	99	46	42	101.2	28.11
12	44.00	48.00	1003.300	0.23	84	87	0.96	0.95	6	98	100	47	42	104.0	27.52
B1	48.00	52.00	1006.418	0.16	85	87	0.67	0.67	5	97	103	55	48	98.0	22.95
2	52.00	56.00	1008.400	0.16	86	87	0.67	0.67	5	98	101	49	44	103.7	22.95
3	56.00	60.00	1010.500	0.30	86	87	1.25	0.67	6	99	100	49	44	97.3	31.43
4	60.00	64.00	1013.200	0.32	86	87	1.33	1.35	7	99	100	48	43	97.9	32.46
5	64.00	68.00	1016.000	0.32	86	87	1.33	1.35	7	97	100	49	43	92.7	32.46
6	68.00	72.00	1018.650	0.33	87	87	1.38	1.40	7	97	100	49	44	98.0	32.96
7	72.00	76.00	1021.500	0.40	88	87	1.67	1.70	9	97	99	51	44	93.6	36.29
8	76.00	80.00	1024.500	0.45	90	87	1.89	1.90	9	97	99	51	45	99.7	38.49
9	80.00	84.00	1027.900	0.50	91	87	2.10	2.10	9	98	99	52	45	94.4	40.57
10	84.00	88.00	1031.300	0.52	92	87	2.19	2.20	9	98	99	52	45	92.4	41.38
11	88.00	92.00	1034.700	0.52	93	87	2.19	2.20	9	99	98	53	45	99.1	41.38
12	92.00	96.00	1038.350	0.52	93	88	2.19	2.20	9	98	98	53	46	100.0	41.42
Final DGM:			1042.032												

RESULTS	Run Time		Vm	AP	Tm	Ts	Max Vac	ΔH	%ISO	BWS	Y _{qa}
	96.0	min	67.058 ft ³	0.32 in. WC	83.5 °F	87.0 °F	9	1.332 in. WC	100.6	0.041	-0.5

Location: Chemours Company - Fayetteville Works Facility, NC			Start Time: 11:25		Source: VEN Carbon Bed Outlet					
Date: 9/13/23		Run 2	VALID	End Time: 13:15		Project No.: AST-2023-3974	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 3		Est. Tm: 84 °F		OTM 45	Pb: 29.77 in. Hg		Vlc (ml)	
Barometric: 29.77 in. Hg		Y: 0.984		Est. Ts: 87 °F			Pg: 1.10 in. WC		60.8	
Static Press: 2.00 in. WC		AH @ (in.WC): 1.579		Est. AP: 0.32 in. WC			O ₂ : 20.9 %		K-FACTOR	
Stack Press: 29.92 in. Hg		Probe ID: P4-2		Est. Dn: 0.245 in.			CO ₂ : 0.1 %		4.15	
CO ₂ : 0.0 %		Liner Material: glass		Target Rate: 0.63 scfm						
O ₂ : 20.9 %		Pitot ID: P4-2		LEAK CHECKS		Pre	Mid 1	Mid 2	Mid 3	Post
N ₂ /CO: 79.1 %		Pitot Cp/Type: 0.840 S-type		Leak Rate (cfm): 0.004	0.004	0.003	--	0.003	Mid 1 (cf)	74.439
Md: 28.84 lb/lb-mole		Nozzle ID: G-7 glass		Vacuum (in Hg): 15	15	15	--	18	Mid 2 (cf)	--
Ms: 28.62 lb/lb-mole		Nozzle Dn (in.): 0.260		Pitot Tube: Pass	--	--	--	Pass	Mid 3 (cf)	--
									Check Pt. Initial Final Corr.	
									Mid 1 (cf) 74.439 74.667 0.228	
									Mid 2 (cf) --	
									Mid 3 (cf) --	
									Mid-Point Leak Check Vol (cf): 0.228	

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	Ideal Actual			Probe	Filter	Imp Exit	Aux		
	Amb.	Amb.					Amb.	Amb.		Amb.	Amb.				
	--	--					--	--		--	--				
A1	0.00	4.00	42.447	0.27	89	89	1.13	1.15	5	99	99	60	51	106.3	29.87
2	4.00	8.00	45.250	0.28	89	89	1.17	1.15	5	99	98	59	51	102.4	30.42
3	8.00	12.00	48.000	0.28	89	89	1.17	1.15	5	99	102	54	54	104.2	30.42
4	12.00	16.00	50.800	0.27	90	89	1.13	1.15	5	98	102	53	51	98.4	29.87
5	16.00	20.00	53.400	0.27	92	89	1.13	1.15	5	99	99	53	51	103.7	29.87
6	20.00	24.00	56.150	0.28	93	89	1.18	1.15	5	100	99	54	51	97.9	30.42
7	24.00	28.00	58.800	0.25	94	89	1.05	1.05	4	100	99	54	52	101.5	28.74
8	28.00	32.00	61.400	0.25	94	89	1.05	1.05	4	99	98	55	52	104.2	28.74
9	32.00	36.00	64.070	0.24	95	89	1.01	1.00	4	99	98	55	52	100.6	28.16
10	36.00	40.00	66.600	0.24	99	89	1.02	1.00	4	100	101	53	55	98.7	28.16
11	40.00	44.00	69.100	0.24	99	90	1.02	1.00	4	100	100	54	54	106.7	28.19
12	44.00	48.00	71.800	0.26	99	90	1.10	1.10	4	99	100	55	53	108.9	29.34
B1	48.00	52.00	74.667	0.20	100	90	0.85	0.85	4	99	100	55	51	97.4	25.73
2	52.00	56.00	77.150	0.21	100	90	0.89	0.90	4	99	100	56	51	101.2	26.37
3	56.00	60.00	79.550	0.20	101	90	0.85	0.85	4	99	100	56	51	104.8	25.73
4	60.00	64.00	81.980	0.31	100	90	1.32	1.30	4	99	100	56	51	101.4	32.04
5	64.00	68.00	84.900	0.31	99	90	1.32	1.30	4	99	100	55	48	100.9	32.04
6	68.00	72.00	87.800	0.31	99	90	1.32	1.30	4	99	100	50	46	100.9	32.04
7	72.00	76.00	90.700	0.31	99	90	1.32	1.30	6	99	100	50	45	107.8	32.04
8	76.00	80.00	93.800	0.40	98	90	1.70	1.30	6	99	99	50	45	107.4	36.39
9	80.00	84.00	97.300	0.45	98	89	1.91	1.90	8	99	99	49	43	101.3	38.56
10	84.00	88.00	100.800	0.58	97	89	2.45	2.50	8	100	98	50	44	98.5	43.78
11	88.00	92.00	104.650	0.57	97	89	2.41	2.40	9	101	98	50	44	98.0	43.40
12	92.00	96.00	108.450	0.57	97	89	2.41	2.40	9	99	99	51	44	94.6	43.40
Final DGM:			112.117												

RESULTS	Run Time		Vm	ΔP	Tm	Ts	Max Vac	ΔH	%ISO	BWS	Y _{qa}				
	96.0	min	69.442	ft ³	0.31	in. WC	96.1	°F	89.4	°F	9	1.308	in. WC	103.8	0.042

Location: Chemours Company - Fayetteville Works Facility, NC			Start Time: 14:21		Source: VEN Carbon Bed Outlet					
Date: 9/13/23		Run 3	VALID	End Time: 16:15		Project No.: AST-2023-3974	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 3		Est. Tm: 96 °F		OTM 45	Pb: 27.99 in. Hg		Vlc (ml)	
Barometric: 29.77 in. Hg		Y: 0.984		Est. Ts: 89 °F			Pg: 1.10 in. WC		61.4	
Static Press: 2.00 in. WC		AH @ (in.WC): 1.579		Est. AP: 0.31 in. WC			O ₂ : 20.9 %		K-FACTOR	
Stack Press: 29.92 in. Hg		Probe ID: P4-2		Est. Dn: 0.244 in.			CO ₂ : 0.1 %		4.227	
CO ₂ : 0.0 %		Liner Material: glass		Target Rate: 0.63 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)		147.653 147.901 0.248	
N ₂ /CO: 79.1 %		Pitot Cp/Type: 0.840 S-type		Leak Rate (cfm): 0.004 0.003 0.002 -- 0.003			Mid 2 (cf)		--	
Md: 28.84 lb/lb-mole		Nozzle ID: G-7 glass		Vacuum (in Hg): 16 15 15 -- 15			Mid 3 (cf)		--	
Ms: 28.62 lb/lb-mole		Nozzle Dn (in.): 0.260		Pitot Tube: Pass -- -- -- Pass			Mid-Point Leak Check Vol (cf):		0.248	

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)
	Begin	End			DGM Average	Stack	Ideal	Actual		Probe	Filter	Imp Exit	Aux		
					Amb.	Amb.				Amb.	Amb.	Amb.	Amb.		
A1	0.00	4.00	112.654	0.34	94	89	1.43	1.45	5	100	100	62	45	95.3	33.52
2	4.00	8.00	115.500	0.33	96	88	1.40	1.40	5	99	100	60	45	101.5	32.99
3	8.00	12.00	118.500	0.32	98	88	1.36	1.35	5	99	99	53	42	99.3	32.49
4	12.00	16.00	121.400	0.34	101	89	1.45	1.45	5	99	98	54	43	99.2	33.52
5	16.00	20.00	124.400	0.34	102	89	1.45	1.45	5	98	99	55	44	99.1	33.52
6	20.00	24.00	127.400	0.33	102	89	1.41	1.40	6	98	98	56	45	98.9	33.02
7	24.00	28.00	130.350	0.34	103	89	1.46	1.45	6	99	98	57	46	100.5	33.52
8	28.00	32.00	133.400	0.34	103	89	1.46	1.45	6	98	99	57	46	102.2	33.52
9	32.00	36.00	136.500	0.33	103	89	1.41	1.40	7	98	98	56	45	103.7	33.02
10	36.00	40.00	139.600	0.33	103	89	1.41	1.40	7	98	99	56	46	93.7	33.02
11	40.00	44.00	142.400	0.26	103	89	1.11	1.10	7	99	98	55	45	94.2	29.31
12	44.00	48.00	144.900	0.26	103	89	1.11	1.10	7	98	98	51	46	103.7	29.31
B1	48.00	52.00	147.901	0.25	97	89	1.06	1.05	7	98	99	52	46	100.9	28.74
2	52.00	56.00	150.500	0.26	101	89	1.11	1.10	7	99	99	52	45	105.8	29.31
3	56.00	60.00	153.300	0.34	102	89	1.45	1.45	8	99	98	51	45	102.4	33.52
4	60.00	64.00	156.400	0.51	102	88	2.18	2.20	9	99	99	51	44	97.2	41.02
5	64.00	68.00	160.000	0.51	102	88	2.18	2.20	9	100	100	52	45	91.8	41.02
6	68.00	72.00	163.400	0.51	102	88	2.18	2.20	10	100	99	52	45	91.8	41.02
7	72.00	76.00	166.800	0.52	102	88	2.22	2.25	10	99	99	51	45	104.2	41.42
8	76.00	80.00	170.700	0.52	102	88	2.22	2.20	11	99	98	51	45	104.2	41.42
9	80.00	84.00	174.600	0.52	102	89	2.22	2.20	11	98	99	52	45	101.7	41.45
10	84.00	88.00	178.400	0.50	102	89	2.13	2.15	11	98	98	52	46	98.2	40.65
11	88.00	92.00	182.000	0.50	101	88	2.13	2.15	11	99	98	53	46	98.3	40.61
12	92.00	96.00	185.600	0.48	100	88	2.05	2.05	11	99	99	53	46	106.9	39.79

Final DGM: 189.429

RESULTS	Run Time		Vm	AP	Tm	Ts	Max Vac	ΔH	%ISO	BWS	Y _{qa}
	96.0	min	76.527 ft ³	0.39 in. WC	101.1 °F	88.6 °F	11	1.650 in. WC	98.6	0.042	-3.4

Appendix C

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

ANALYTICAL REPORT

PREPARED FOR

Attn: Michael Aucoin
The Chemours Company FC, LLC
c/o AECOM
248 Chapman Rd.
Suite 101
Newark, Delaware 19702
Generated 10/26/2023 10:08:23 AM

JOB DESCRIPTION

PPA Carbon Bed Inlet - OTM45

JOB NUMBER

140-33525-1

Eurofins Knoxville

Job Notes

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

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

Authorization



Generated
10/26/2023 10:08:23 AM

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



Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Default Detection Limits	9
Isotope Dilution Summary	10
QC Sample Results	11
QC Association Summary	13
Lab Chronicle	15
Certification Summary	20
Method Summary	21
Sample Summary	22
Chain of Custody	23

Definitions/Glossary

Client: The Chemours Company FC, LLC
Project/Site: PPA Carbon Bed Inlet - OTM45

Job ID: 140-33525-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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

Case Narrative

Client: The Chemours Company FC, LLC
Project/Site: PPA Carbon Bed Inlet - OTM45

Job ID: 140-33525-1

Job ID: 140-33525-1

Laboratory: Eurofins Knoxville

Narrative

Job Narrative 140-33525-1

Receipt

The samples were received on 9/14/2023 2:30 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.9° C.

LCMS

Method Dilution: 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): S-1101,1102 PPA CB INLET R1 OTM-45 FH (140-33525-1), S-1103,1104,1106 PPA CB INLET R1 OTM-45 BH (140-33525-2), S-1108,1109 PPA CB INLET R2 OTM-45 FH (140-33525-5), S-1110,1111,1113 PPA CB INLET R2 OTM-45 BH (140-33525-6), S-1115,1116 PPA CB INLET R3 OTM-45 FH (140-33525-9) and S-1117,1118,1120 PPA CB INLET R3 OTM-45 BH (140-33525-10). As such, the dilution was achieved by taking a subsample of the undiluted extract, adding sufficient solvent, and re-spiking the extract with IDA.

Method 537 (modified): Results for samples S-1119 PPA CB INLET R3 OTM-45 IMPINGERS 1,2&3 CONDENSATE (140-33525-11) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Method 537 (modified): The following samples were reported with elevated reporting limits for all analytes: S-1119 PPA CB INLET R3 OTM-45 IMPINGERS 1,2&3 CONDENSATE (140-33525-11). The sample was analyzed at a dilution based on screening results.

Method 537 (modified): The following samples were reported with elevated reporting limits for all analytes: S-1115,1116 PPA CB INLET R3 OTM-45 FH (140-33525-9). The sample was analyzed at a dilution based on screening results.

Method 537 (modified): Results for samples S-1107 PPA CB INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-33525-4), S-1114 PPA CB INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-33525-8) and S-1121 PPA CB INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-33525-12) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Method 537 (modified): The following samples were reported with elevated reporting limits for all analytes: S-1101,1102 PPA CB INLET R1 OTM-45 FH (140-33525-1), S-1103,1104,1106 PPA CB INLET R1 OTM-45 BH (140-33525-2), S-1107 PPA CB INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-33525-4), S-1108,1109 PPA CB INLET R2 OTM-45 FH (140-33525-5), S-1110,1111,1113 PPA CB INLET R2 OTM-45 BH (140-33525-6), S-1114 PPA CB INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-33525-8), S-1117,1118,1120 PPA CB INLET R3 OTM-45 BH (140-33525-10) and S-1121 PPA CB INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-33525-12). The sample was analyzed at a dilution based on screening results.

Method 537 (modified): Results for sample (MB 140-77883/14-B) 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 sample was reported with elevated reporting limits for all analytes: (MB 140-77883/14-B). The sample was analyzed at a dilution based on screening results.

Method 537 (modified): The method blank for preparation batch 140-77883 and 140-78024 contained HFPO-DA above the reporting limit (RL). The MB had to be ran at a dilution due to suspected contamination during sample prep. The entire sample was consumed during analysis or extraction, therefore, the data have been reported.

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 Results

Client: The Chemours Company FC, LLC
 Project/Site: PPA Carbon Bed Inlet - OTM45

Job ID: 140-33525-1

Client Sample ID: S-1101,1102 PPA CB INLET R1 OTM-45 FH

Lab Sample ID: 140-33525-1

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	175		5.06	4.75	ug/Sample		09/20/23 16:24	10/11/23 21:11	1
<i>Isotope Dilution</i>		<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>			<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA		80		25 - 150			09/20/23 16:24	10/11/23 21:11	1
13C4 PFOA		99		25 - 150			09/20/23 16:24	10/11/23 21:11	1

Client Sample ID: S-1103,1104,1106 PPA CB INLET R1 OTM-45

Lab Sample ID: 140-33525-2

BH

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	108		50.0	27.5	ug/Sample		09/19/23 09:07	10/11/23 15:10	1
<i>Isotope Dilution</i>		<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>			<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA		92		25 - 150			09/19/23 09:07	10/11/23 15:10	1
13C4 PFOA		114		25 - 150			09/19/23 09:07	10/11/23 15:10	1

Client Sample ID: S-1105 PPA CB INLET R1 OTM-45

Lab Sample ID: 140-33525-3

IMPINGERS 1,2&3 CONDENSATE

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	9.25		0.0750	0.0300	ug/Sample		09/26/23 08:42	09/28/23 13:12	1
<i>Isotope Dilution</i>		<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>			<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA		77		25 - 150			09/26/23 08:42	09/28/23 13:12	1

Client Sample ID: S-1107 PPA CB INLET R1 OTM-45

Lab Sample ID: 140-33525-4

BREAKTHROUGH XAD-2 RESIN TUBE

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.664		0.200	0.110	ug/Sample		09/19/23 09:07	10/11/23 21:46	10
<i>Isotope Dilution</i>		<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>			<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA		76		25 - 150			09/19/23 09:07	10/11/23 21:46	10

Client Sample Results

Client: The Chemours Company FC, LLC
 Project/Site: PPA Carbon Bed Inlet - OTM45

Job ID: 140-33525-1

Client Sample ID: S-1108,1109 PPA CB INLET R2 OTM-45 FH

Lab Sample ID: 140-33525-5

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	216		10.0	9.40	ug/Sample		09/20/23 16:24	10/11/23 21:20	1
<i>Isotope Dilution</i>		<i>%Recovery</i>	<i>Qualifier</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA		75	25 - 150				09/20/23 16:24	10/11/23 21:20	1
13C4 PFOA		98	25 - 150				09/20/23 16:24	10/11/23 21:20	1

Client Sample ID: S-1110,1111,1113 PPA CB INLET R2 OTM-45

Lab Sample ID: 140-33525-6

BH

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	111		50.0	27.5	ug/Sample		09/19/23 09:07	10/11/23 15:28	1
<i>Isotope Dilution</i>		<i>%Recovery</i>	<i>Qualifier</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA		86	25 - 150				09/19/23 09:07	10/11/23 15:28	1
13C4 PFOA		111	25 - 150				09/19/23 09:07	10/11/23 15:28	1

Client Sample ID: S-1112 PPA CB INLET R2 OTM-45

Lab Sample ID: 140-33525-7

IMPINGERS 1,2&3 CONDENSATE

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	5.50		0.0800	0.0320	ug/Sample		09/26/23 08:42	09/28/23 13:29	1
<i>Isotope Dilution</i>		<i>%Recovery</i>	<i>Qualifier</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA		79	25 - 150				09/26/23 08:42	09/28/23 13:29	1

Client Sample ID: S-1114 PPA CB INLET R2 OTM-45

Lab Sample ID: 140-33525-8

BREAKTHROUGH XAD-2 RESIN TUBE

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.260		0.100	0.0550	ug/Sample		09/19/23 09:07	10/11/23 21:55	5
<i>Isotope Dilution</i>		<i>%Recovery</i>	<i>Qualifier</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA		75	25 - 150				09/19/23 09:07	10/11/23 21:55	5

Client Sample Results

Client: The Chemours Company FC, LLC
 Project/Site: PPA Carbon Bed Inlet - OTM45

Job ID: 140-33525-1

Client Sample ID: S-1115,1116 PPA CB INLET R3 OTM-45 FH

Lab Sample ID: 140-33525-9

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	361		9.86	9.27	ug/Sample		09/20/23 16:24	10/10/23 20:57	1
Isotope Dilution									
	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	91		25 - 150				09/20/23 16:24	10/10/23 20:57	1
13C4 PFOA	96		25 - 150				09/20/23 16:24	10/10/23 20:57	1

Client Sample ID: S-1117,1118,1120 PPA CB INLET R3 OTM-45

Lab Sample ID: 140-33525-10

BH

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	187		50.0	27.5	ug/Sample		09/19/23 09:07	10/11/23 15:54	1
Isotope Dilution									
	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	85		25 - 150				09/19/23 09:07	10/11/23 15:54	1
13C4 PFOA	116		25 - 150				09/19/23 09:07	10/11/23 15:54	1

Client Sample ID: S-1119 PPA CB INLET R3 OTM-45

Lab Sample ID: 140-33525-11

IMPINGERS 1,2&3 CONDENSATE

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	63.3		0.800	0.320	ug/Sample		09/26/23 08:42	09/28/23 13:38	10
Isotope Dilution									
	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	81		25 - 150				09/26/23 08:42	09/28/23 13:38	10

Client Sample ID: S-1121 PPA CB INLET R3 OTM-45

Lab Sample ID: 140-33525-12

BREAKTHROUGH XAD-2 RESIN TUBE

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	2.38		0.400	0.220	ug/Sample		09/19/23 09:07	10/11/23 16:03	20
Isotope Dilution									
	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	79		25 - 150				09/19/23 09:07	10/11/23 16:03	20

Eurofins Knoxville

Default Detection Limits

Client: The Chemours Company FC, LLC
Project/Site: PPA Carbon Bed Inlet - OTM45

Job ID: 140-33525-1

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

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

Isotope Dilution Summary

Client: The Chemours Company FC, LLC
 Project/Site: PPA Carbon Bed Inlet - OTM45

Job ID: 140-33525-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Air

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)	
		HFPODA (25-150)	PFOA (25-150)
140-33525-1	S-1101,1102 PPA CB INLET R1	80	99
140-33525-2	S-1103,1104,1106 PPA CB INLET R1 OTM-45 BH	92	114
140-33525-3	S-1105 PPA CB INLET R1 OTM-45 IMPINGERS 1,2&3 CONDENSATE	77	
140-33525-4	S-1107 PPA CB INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	76	
140-33525-5	S-1108,1109 PPA CB INLET R2 OTM-45 FH	75	98
140-33525-6	S-1110,1111,1113 PPA CB INLET R2 OTM-45 BH	86	111
140-33525-7	S-1112 PPA CB INLET R2 OTM-45 IMPINGERS 1,2&3 CONDENSATE	79	
140-33525-8	S-1114 PPA CB INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	75	
140-33525-9	S-1115,1116 PPA CB INLET R3 OTM-45 FH	91	96
140-33525-10	S-1117,1118,1120 PPA CB INLET R3 OTM-45 BH	85	116
140-33525-11	S-1119 PPA CB INLET R3 OTM-45 IMPINGERS 1,2&3 CONDENSATE	81	
140-33525-12	S-1121 PPA CB INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	79	
LCS 140-77883/2-B	Lab Control Sample	70	89
LCS 140-77978/2-B	Lab Control Sample	61	69
LCS 140-78174/2-A	Lab Control Sample	82	
LCSD 140-77883/3-B	Lab Control Sample Dup	75	86
LCSD 140-77978/3-B	Lab Control Sample Dup	72	74
LCSD 140-78174/3-A	Lab Control Sample Dup	78	
MB 140-77883/1-B	Method Blank	66	87
MB 140-77978/1-B	Method Blank	63	68
MB 140-78174/14-A	Method Blank	77	
MB 140-78174/1-A	Method Blank	82	

Surrogate Legend

HFPODA = 13C3 HFPO-DA

PFOA = 13C4 PFOA

QC Sample Results

Client: The Chemours Company FC, LLC
 Project/Site: PPA Carbon Bed Inlet - OTM45

Job ID: 140-33525-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 140-77883/1-B
Matrix: Air
Analysis Batch: 78868

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 77883

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		09/19/23 09:07	10/11/23 13:33	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	66		25 - 150				09/19/23 09:07	10/11/23 13:33	1
13C4 PFOA	87		25 - 150				09/19/23 09:07	10/11/23 13:33	1

Lab Sample ID: LCS 140-77883/2-B
Matrix: Air
Analysis Batch: 78868

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 77883

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HFPO-DA	0.0200	0.02317		ug/Sample		116	60 - 140
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	70		25 - 150				
13C4 PFOA	89		25 - 150				

Lab Sample ID: LCSD 140-77883/3-B
Matrix: Air
Analysis Batch: 78868

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 77883

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA	0.0200	0.02426		ug/Sample		121	60 - 140	5	30
Isotope Dilution	%Recovery	Qualifier	Limits						
13C3 HFPO-DA	75		25 - 150						
13C4 PFOA	86		25 - 150						

Lab Sample ID: MB 140-77978/1-B
Matrix: Air
Analysis Batch: 78837

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 77978

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		09/20/23 16:24	10/10/23 19:47	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	63		25 - 150				09/20/23 16:24	10/10/23 19:47	1
13C4 PFOA	68		25 - 150				09/20/23 16:24	10/10/23 19:47	1

Lab Sample ID: LCS 140-77978/2-B
Matrix: Air
Analysis Batch: 78837

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 77978

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HFPO-DA	0.0200	0.02109		ug/Sample		105	60 - 140
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	61		25 - 150				
13C4 PFOA	69		25 - 150				

Eurofins Knoxville

QC Sample Results

Client: The Chemours Company FC, LLC
 Project/Site: PPA Carbon Bed Inlet - OTM45

Job ID: 140-33525-1

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

Lab Sample ID: LCSD 140-77978/3-B

Matrix: Air
Analysis Batch: 78837

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA
Prep Batch: 77978

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA	0.0200	0.02032		ug/Sample		102	60 - 140	4	30
		LCSD	LCSD						
Isotope Dilution	%Recovery	Qualifier	Limits						
13C3 HFPO-DA	72		25 - 150						
13C4 PFOA	74		25 - 150						

Lab Sample ID: MB 140-78174/14-A

Matrix: Air
Analysis Batch: 78294

Client Sample ID: Method Blank

Prep Type: Total/NA
Prep Batch: 78174

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		09/26/23 08:42	09/28/23 13:21	1
		MB	MB						
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
13C3 HFPO-DA	77		25 - 150	09/26/23 08:42	09/28/23 13:21	1			

Lab Sample ID: MB 140-78174/1-A

Matrix: Air
Analysis Batch: 78294

Client Sample ID: Method Blank

Prep Type: Total/NA
Prep Batch: 78174

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		09/26/23 08:42	09/28/23 11:08	1
		MB	MB						
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
13C3 HFPO-DA	82		25 - 150	09/26/23 08:42	09/28/23 11:08	1			

Lab Sample ID: LCS 140-78174/2-A

Matrix: Air
Analysis Batch: 78294

Client Sample ID: Lab Control Sample

Prep Type: Total/NA
Prep Batch: 78174

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
HFPO-DA	0.0100	0.009299		ug/Sample		93	60 - 140		
		LCS	LCS						
Isotope Dilution	%Recovery	Qualifier	Limits						
13C3 HFPO-DA	82		25 - 150						

Lab Sample ID: LCSD 140-78174/3-A

Matrix: Air
Analysis Batch: 78294

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA
Prep Batch: 78174

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA	0.0100	0.009740		ug/Sample		97	60 - 140	5	30
		LCSD	LCSD						
Isotope Dilution	%Recovery	Qualifier	Limits						
13C3 HFPO-DA	78		25 - 150						

QC Association Summary

Client: The Chemours Company FC, LLC
 Project/Site: PPA Carbon Bed Inlet - OTM45

Job ID: 140-33525-1

LCMS

Prep Batch: 77883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33525-2	S-1103,1104,1106 PPA CB INLET R1 OTM-45 BH	Total/NA	Air	None	
140-33525-4	S-1107 PPA CB INLET R1 OTM-45 BREAKTHRC	Total/NA	Air	None	
140-33525-6	S-1110,1111,1113 PPA CB INLET R2 OTM-45 BH	Total/NA	Air	None	
140-33525-8	S-1114 PPA CB INLET R2 OTM-45 BREAKTHRC	Total/NA	Air	None	
140-33525-10	S-1117,1118,1120 PPA CB INLET R3 OTM-45 BH	Total/NA	Air	None	
140-33525-12	S-1121 PPA CB INLET R3 OTM-45 BREAKTHRC	Total/NA	Air	None	
MB 140-77883/1-B	Method Blank	Total/NA	Air	None	
LCS 140-77883/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-77883/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Prep Batch: 77978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33525-1	S-1101,1102 PPA CB INLET R1 OTM-45 FH	Total/NA	Air	None	
140-33525-5	S-1108,1109 PPA CB INLET R2 OTM-45 FH	Total/NA	Air	None	
140-33525-9	S-1115,1116 PPA CB INLET R3 OTM-45 FH	Total/NA	Air	None	
MB 140-77978/1-B	Method Blank	Total/NA	Air	None	
LCS 140-77978/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-77978/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Cleanup Batch: 78013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33525-1	S-1101,1102 PPA CB INLET R1 OTM-45 FH	Total/NA	Air	Split	77978
140-33525-5	S-1108,1109 PPA CB INLET R2 OTM-45 FH	Total/NA	Air	Split	77978
140-33525-9	S-1115,1116 PPA CB INLET R3 OTM-45 FH	Total/NA	Air	Split	77978
MB 140-77978/1-B	Method Blank	Total/NA	Air	Split	77978
LCS 140-77978/2-B	Lab Control Sample	Total/NA	Air	Split	77978
LCSD 140-77978/3-B	Lab Control Sample Dup	Total/NA	Air	Split	77978

Cleanup Batch: 78024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33525-2	S-1103,1104,1106 PPA CB INLET R1 OTM-45 BH	Total/NA	Air	Split	77883
140-33525-4	S-1107 PPA CB INLET R1 OTM-45 BREAKTHRC	Total/NA	Air	Split	77883
140-33525-6	S-1110,1111,1113 PPA CB INLET R2 OTM-45 BH	Total/NA	Air	Split	77883
140-33525-8	S-1114 PPA CB INLET R2 OTM-45 BREAKTHRC	Total/NA	Air	Split	77883
140-33525-10	S-1117,1118,1120 PPA CB INLET R3 OTM-45 BH	Total/NA	Air	Split	77883
140-33525-12	S-1121 PPA CB INLET R3 OTM-45 BREAKTHRC	Total/NA	Air	Split	77883
MB 140-77883/1-B	Method Blank	Total/NA	Air	Split	77883
LCS 140-77883/2-B	Lab Control Sample	Total/NA	Air	Split	77883
LCSD 140-77883/3-B	Lab Control Sample Dup	Total/NA	Air	Split	77883

Prep Batch: 78174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33525-3	S-1105 PPA CB INLET R1 OTM-45 IMPINGERS	Total/NA	Air	PFAS Prep	
140-33525-7	S-1112 PPA CB INLET R2 OTM-45 IMPINGERS	Total/NA	Air	PFAS Prep	
140-33525-11	S-1119 PPA CB INLET R3 OTM-45 IMPINGERS	Total/NA	Air	PFAS Prep	
MB 140-78174/14-A	Method Blank	Total/NA	Air	PFAS Prep	
MB 140-78174/1-A	Method Blank	Total/NA	Air	PFAS Prep	
LCS 140-78174/2-A	Lab Control Sample	Total/NA	Air	PFAS Prep	
LCSD 140-78174/3-A	Lab Control Sample Dup	Total/NA	Air	PFAS Prep	

Eurofins Knoxville

QC Association Summary

Client: The Chemours Company FC, LLC
 Project/Site: PPA Carbon Bed Inlet - OTM45

Job ID: 140-33525-1

LCMS

Analysis Batch: 78294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33525-3	S-1105 PPA CB INLET R1 OTM-45 IMPINGERS	Total/NA	Air	537 (modified)	78174
140-33525-7	S-1112 PPA CB INLET R2 OTM-45 IMPINGERS	Total/NA	Air	537 (modified)	78174
140-33525-11	S-1119 PPA CB INLET R3 OTM-45 IMPINGERS	Total/NA	Air	537 (modified)	78174
MB 140-78174/14-A	Method Blank	Total/NA	Air	537 (modified)	78174
MB 140-78174/1-A	Method Blank	Total/NA	Air	537 (modified)	78174
LCS 140-78174/2-A	Lab Control Sample	Total/NA	Air	537 (modified)	78174
LCSD 140-78174/3-A	Lab Control Sample Dup	Total/NA	Air	537 (modified)	78174

Cleanup Batch: 78835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33525-1	S-1101,1102 PPA CB INLET R1 OTM-45 FH	Total/NA	Air	Dilution	78013
140-33525-2	S-1103,1104,1106 PPA CB INLET R1 OTM-45 BH	Total/NA	Air	Dilution	78024
140-33525-5	S-1108,1109 PPA CB INLET R2 OTM-45 FH	Total/NA	Air	Dilution	78013
140-33525-6	S-1110,1111,1113 PPA CB INLET R2 OTM-45 BH	Total/NA	Air	Dilution	78024
140-33525-9	S-1115,1116 PPA CB INLET R3 OTM-45 FH	Total/NA	Air	Dilution	78013
140-33525-10	S-1117,1118,1120 PPA CB INLET R3 OTM-45 BH	Total/NA	Air	Dilution	78024

Analysis Batch: 78837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33525-9	S-1115,1116 PPA CB INLET R3 OTM-45 FH	Total/NA	Air	537 (modified)	78835
MB 140-77978/1-B	Method Blank	Total/NA	Air	537 (modified)	78013
LCS 140-77978/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	78013
LCSD 140-77978/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	78013

Analysis Batch: 78868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33525-1	S-1101,1102 PPA CB INLET R1 OTM-45 FH	Total/NA	Air	537 (modified)	78835
140-33525-2	S-1103,1104,1106 PPA CB INLET R1 OTM-45 BH	Total/NA	Air	537 (modified)	78835
140-33525-4	S-1107 PPA CB INLET R1 OTM-45 BREAKTHRC	Total/NA	Air	537 (modified)	78024
140-33525-5	S-1108,1109 PPA CB INLET R2 OTM-45 FH	Total/NA	Air	537 (modified)	78835
140-33525-6	S-1110,1111,1113 PPA CB INLET R2 OTM-45 BH	Total/NA	Air	537 (modified)	78835
140-33525-8	S-1114 PPA CB INLET R2 OTM-45 BREAKTHRC	Total/NA	Air	537 (modified)	78024
140-33525-10	S-1117,1118,1120 PPA CB INLET R3 OTM-45 BH	Total/NA	Air	537 (modified)	78835
140-33525-12	S-1121 PPA CB INLET R3 OTM-45 BREAKTHRC	Total/NA	Air	537 (modified)	78024
MB 140-77883/1-B	Method Blank	Total/NA	Air	537 (modified)	78024
LCS 140-77883/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	78024
LCSD 140-77883/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	78024

Lab Chronicle

Client: The Chemours Company FC, LLC
 Project/Site: PPA Carbon Bed Inlet - OTM45

Job ID: 140-33525-1

Client Sample ID: S-1101,1102 PPA CB INLET R1 OTM-45 FH

Lab Sample ID: 140-33525-1

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	91 mL	77978	09/20/23 16:24	RPT	EET KNX
Total/NA	Cleanup	Split			45 mL	10 mL	78013	09/21/23 11:50	RPT	EET KNX
Total/NA	Cleanup	Dilution			10 uL	10000 uL	78835	10/10/23 16:18	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78868	10/11/23 21:11	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: S-1103,1104,1106 PPA CB INLET R1 OTM-45

Lab Sample ID: 140-33525-2

BH

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	77883	09/19/23 09:07	RPT	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78024	09/21/23 13:04	RPT	EET KNX
Total/NA	Cleanup	Dilution			4 uL	10000 uL	78835	10/10/23 16:18	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78868	10/11/23 15:10	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: S-1105 PPA CB INLET R1 OTM-45

Lab Sample ID: 140-33525-3

IMPINGERS 1,2&3 CONDENSATE

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			.00667	10 mL	78174	09/26/23 08:42	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78294	09/28/23 13:12	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: S-1107 PPA CB INLET R1 OTM-45

Lab Sample ID: 140-33525-4

BREAKTHROUGH XAD-2 RESIN TUBE

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	77883	09/19/23 09:07	RPT	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78024	09/21/23 13:04	RPT	EET KNX
Total/NA	Analysis	537 (modified)		10	1 mL	1 mL	78868	10/11/23 21:46	CAC	EET KNX
Instrument ID: LCA										

Lab Chronicle

Client: The Chemours Company FC, LLC
 Project/Site: PPA Carbon Bed Inlet - OTM45

Job ID: 140-33525-1

Client Sample ID: S-1108,1109 PPA CB INLET R2 OTM-45 FH

Lab Sample ID: 140-33525-5

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	86 mL	77978	09/20/23 16:24	RPT	EET KNX
Total/NA	Cleanup	Split			43 mL	10 mL	78013	09/21/23 11:50	RPT	EET KNX
Total/NA	Cleanup	Dilution			5 uL	10000 uL	78835	10/10/23 16:18	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78868	10/11/23 21:20	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: S-1110,1111,1113 PPA CB INLET R2 OTM-45 BH

Lab Sample ID: 140-33525-6

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	77883	09/19/23 09:07	RPT	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78024	09/21/23 13:04	RPT	EET KNX
Total/NA	Cleanup	Dilution			4 uL	10000 uL	78835	10/11/23 10:56	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78868	10/11/23 15:28	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: S-1112 PPA CB INLET R2 OTM-45 IMPINGERS 1,2&3 CONDENSATE

Lab Sample ID: 140-33525-7

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			.00625 Sample	10 mL	78174	09/26/23 08:42	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78294	09/28/23 13:29	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: S-1114 PPA CB INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-33525-8

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	77883	09/19/23 09:07	RPT	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78024	09/21/23 13:04	RPT	EET KNX
Total/NA	Analysis	537 (modified)		5	1 mL	1 mL	78868	10/11/23 21:55	CAC	EET KNX
Instrument ID: LCA										

Lab Chronicle

Client: The Chemours Company FC, LLC
 Project/Site: PPA Carbon Bed Inlet - OTM45

Job ID: 140-33525-1

Client Sample ID: S-1115,1116 PPA CB INLET R3 OTM-45 FH

Lab Sample ID: 140-33525-9

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	73 mL	77978	09/20/23 16:24	RPT	EET KNX
Total/NA	Cleanup	Split			37 mL	10 mL	78013	09/21/23 11:50	RPT	EET KNX
Total/NA	Cleanup	Dilution			5 uL	10000 uL	78835	10/10/23 16:18	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78837	10/10/23 20:57	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: S-1117,1118,1120 PPA CB INLET R3 OTM-45 BH

Lab Sample ID: 140-33525-10

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	77883	09/19/23 09:07	RPT	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78024	09/21/23 13:04	RPT	EET KNX
Total/NA	Cleanup	Dilution			4 uL	10000 uL	78835	10/11/23 10:56	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78868	10/11/23 15:54	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: S-1119 PPA CB INLET R3 OTM-45 IMPINGERS 1,2&3 CONDENSATE

Lab Sample ID: 140-33525-11

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			.00625 Sample	10 mL	78174	09/26/23 08:42	RPT	EET KNX
Total/NA	Analysis	537 (modified)		10	1 mL	1 mL	78294	09/28/23 13:38	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: S-1121 PPA CB INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-33525-12

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	77883	09/19/23 09:07	RPT	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78024	09/21/23 13:04	RPT	EET KNX
Total/NA	Analysis	537 (modified)		20	1 mL	1 mL	78868	10/11/23 16:03	CAC	EET KNX
Instrument ID: LCA										

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: PPA Carbon Bed Inlet - OTM45

Job ID: 140-33525-1

Client Sample ID: Method Blank

Lab Sample ID: MB 140-77883/1-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	77883	09/19/23 09:07	RPT	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78024	09/21/23 13:04	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78868	10/11/23 13:33	CAC	EET KNX

Instrument ID: LCA

Client Sample ID: Method Blank

Lab Sample ID: MB 140-77978/1-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	77978	09/20/23 16:24	RPT	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	78013	09/21/23 11:50	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78837	10/10/23 19:47	CAC	EET KNX

Instrument ID: LCA

Client Sample ID: Method Blank

Lab Sample ID: MB 140-78174/14-A

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			1 Sample	10 mL	78174	09/26/23 08:42	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78294	09/28/23 13:21	CAC	EET KNX

Instrument ID: LCA

Client Sample ID: Method Blank

Lab Sample ID: MB 140-78174/1-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	78174	09/26/23 08:42	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78294	09/28/23 11:08	CAC	EET KNX

Instrument ID: LCA

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-77883/2-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	77883	09/19/23 09:07	RPT	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78024	09/21/23 13:04	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78868	10/11/23 13:42	CAC	EET KNX

Instrument ID: LCA

Lab Chronicle

Client: The Chemours Company FC, LLC
 Project/Site: PPA Carbon Bed Inlet - OTM45

Job ID: 140-33525-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-77978/2-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	77978	09/20/23 16:24	RPT	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	78013	09/21/23 11:50	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78837	10/10/23 19:56	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-78174/2-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	78174	09/26/23 08:42	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78294	09/28/23 11:16	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-77883/3-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	77883	09/19/23 09:07	RPT	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78024	09/21/23 13:04	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78868	10/11/23 13:51	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-77978/3-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	77978	09/20/23 16:24	RPT	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	78013	09/21/23 11:50	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78837	10/10/23 20:05	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-78174/3-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	78174	09/26/23 08:42	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78294	09/28/23 11:25	CAC	EET KNX
Instrument ID: LCA										

Laboratory References:

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

Accreditation/Certification Summary

Client: The Chemours Company FC, LLC
 Project/Site: PPA Carbon Bed Inlet - OTM45

Job ID: 140-33525-1

Laboratory: Eurofins Knoxville

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

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-25
ANAB	Dept. of Energy	L2311.01	02-13-25
ANAB	ISO/IEC 17025	L2311	02-13-25
Arkansas DEQ	State	88-0688	06-16-24
Colorado	State	TN00009	02-29-24
Connecticut	State	PH-0223	09-30-25
Florida	NELAP	E87177	06-30-24
Georgia (DW)	State	906	07-27-25
Hawaii	State	NA	07-27-24
Kansas	NELAP	E-10349	10-31-23
Kentucky (DW)	State	90101	12-31-23
Louisiana (All)	NELAP	83979	06-30-24
Louisiana (DW)	State	LA019	12-31-23
Maryland	State	277	03-31-24
Michigan	State	9933	07-27-25
Nevada	State	TN00009	07-31-24
New Hampshire	NELAP	2999	01-17-24
New Jersey	NELAP	TN001	07-01-24
New York	NELAP	10781	03-31-24
North Carolina (DW)	State	21705	07-31-24
North Carolina (WW/SW)	State	64	12-31-23
Oklahoma	State	9415	12-31-23
Oregon	NELAP	TNI0189	01-01-24
Pennsylvania	NELAP	68-00576	12-01-23
Tennessee	State	02014	07-27-25
Texas	NELAP	T104704380-23-18	08-31-24
US Fish & Wildlife	US Federal Programs	058448	07-31-24
USDA	US Federal Programs	525-22-279-18762	10-06-25
Utah	NELAP	TN00009	07-31-24
Virginia	NELAP	460176	09-14-24
Washington	State	C593	01-19-24
West Virginia (DW)	State	9955C	12-31-23
West Virginia DEP	State	345	04-30-24
Wisconsin	State	998044300	08-31-24

Method Summary

Client: The Chemours Company FC, LLC
Project/Site: PPA Carbon Bed Inlet - OTM45

Job ID: 140-33525-1

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

Protocol References:

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

Laboratory References:

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



Sample Summary

Client: The Chemours Company FC, LLC
Project/Site: PPA Carbon Bed Inlet - OTM45

Job ID: 140-33525-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-33525-1	S-1101,1102 PPA CB INLET R1 OTM-45 FH	Air	09/12/23 00:00	09/14/23 14:30
140-33525-2	S-1103,1104,1106 PPA CB INLET R1 OTM-45 BH	Air	09/12/23 00:00	09/14/23 14:30
140-33525-3	S-1105 PPA CB INLET R1 OTM-45 IMPINGERS 1,2&3 CONDENSATE	Air	09/12/23 00:00	09/14/23 14:30
140-33525-4	S-1107 PPA CB INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	09/12/23 00:00	09/14/23 14:30
140-33525-5	S-1108,1109 PPA CB INLET R2 OTM-45 FH	Air	09/12/23 00:00	09/14/23 14:30
140-33525-6	S-1110,1111,1113 PPA CB INLET R2 OTM-45 BH	Air	09/12/23 00:00	09/14/23 14:30
140-33525-7	S-1112 PPA CB INLET R2 OTM-45 IMPINGERS 1,2&3 CONDENSATE	Air	09/12/23 00:00	09/14/23 14:30
140-33525-8	S-1114 PPA CB INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	09/12/23 00:00	09/14/23 14:30
140-33525-9	S-1115,1116 PPA CB INLET R3 OTM-45 FH	Air	09/12/23 00:00	09/14/23 14:30
140-33525-10	S-1117,1118,1120 PPA CB INLET R3 OTM-45 BH	Air	09/12/23 00:00	09/14/23 14:30
140-33525-11	S-1119 PPA CB INLET R3 OTM-45 IMPINGERS 1,2&3 CONDENSATE	Air	09/12/23 00:00	09/14/23 14:30
140-33525-12	S-1121 PPA CB INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	09/12/23 00:00	09/14/23 14:30



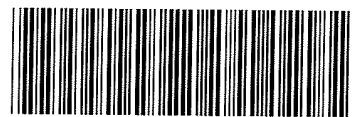
Project Identification:	Chemours Emissions Test
Client Name:	Chemours Company
Client Contact:	Eddie Vega (910) 678-1938
TestAmerica Contact:	Courtney Adkins (865) 291-3019
TestAmerica Project Manager:	Billy Anderson (865) 291-3080

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

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

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)	14 Days to Extraction; 40 Days to Analysis	Cool, 4°C

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
S-1101 VES CB INLET R1 OTM-45 Particulate Filter (Combine with S-1102)	1	9/12/23		125 mL HDPE Wide-Mouth Bottle	Particulate Filter (82.6 mm Whatman Glass Microfiber) OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using method 8321A-HFPO.
S-1102 VES CB INLET R1 OTM-45 FH of Filter Holder & Probe Methanol Rinse (Combine with S-1101)	1	9/12/23		125 mL HDPE Wide-Mouth Bottle	Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample in the Particulate Filter extraction.  140-33525 Chain of Custody
S-1103 VES CB INLET R1 OTM-45 XAD-2 Resin Tube	1	9/12/23		XAD-2 Resin Tube	XAD-2 Resin Tube OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using method 8321A-HFPO.

PPA ~~VES~~ Carbon Bed Inlet

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
S-1104 VES CB INLET R1 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with S-1103)	1	9/12/23		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.
S-1105 VES CB INLET R1 OTM-45 Impingers 1,2 & 3 Condensate	1	9/12/23		500 mL HDPE Wide-Mouth Bottle	Impinger #1, #2 & #3 Condensate OTM-45 Train HFPO-DA Analysis	Knoxville: Analyze the sample for HFPO-DA.
S-1106 VES CB INLET R1 OTM-45 Impinger Glassware MeOH Rinse (Combine with S-1103)	1	9/12/23		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.
S-1107 VES CB INLET R1 OTM-45 Breakthrough XAD-2 Resin Tube	1	9/12/23		XAD-2 Resin Tube	Breakthrough XAD-2 Resin Tube OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using method 8321A-HFPO.
S-1108 VES CB INLET R2 OTM-45 Particulate Filter (Combine with S-1109)	2	9/12/23		125 mL HDPE Wide-Mouth Bottle	Particulate Filter (82.6 mm Whatman Glass Microfiber) OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using method 8321A-HFPO.
S-1109 VES CB INLET R2 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with S-1108)	2	9/12/23		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.

PPA ~~VES~~ Carbon Bed Inlet

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
S-1110 VES CB INLET R2 OTM-45 XAD-2 Resin Tube	2	9/12/23		XAD-2 Resin Tube	XAD-2 Resin Tube OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using method 8321A-HFPO. Analyze.
S-1111 VES CB INLET R2 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with S-1110)	2	9/12/23		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.
S-1112 VES CB INLET R2 OTM-45 Impingers 1,2 & 3 Condensate	2	9/12/23		500 mL HDPE Wide-Mouth Bottle	Impinger #1, #2 & #3 Condensate OTM-45 Train HFPO-DA Analysis	Knoxville: Analyze the sample for HFPO-DA.
S-1113 VES CB INLET R2 OTM-45 Impinger Glassware MeOH Rinse (Combine with S-1110)	2	9/12/23		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.
S-1114 VES CB INLET R2 OTM-45 Breakthrough XAD-2 Resin Tube	2	9/12/23		XAD-2 Resin Tube	Breakthrough XAD-2 Resin Tube OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using method 8321A-HFPO.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
S-1115 VES CB INLET R3 OTM-45 Particulate Filter (Combine with S-1116)	3	9/12/23		125 mL HDPE Wide- Mouth Bottle	Particulate Filter (82.6 mm Whatman Glass Microfiber) OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using method 8321A-HFPO.
S-1116 VES CB INLET R3 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with S-1115)	3	9/12/23		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.
S-1117 VES CB INLET R3 OTM-45 XAD-2 Resin Tube	3	9/12/23		XAD-2 Resin Tube	XAD-2 Resin Tube OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using method 8321A-HFPO.
S-1118 VES CB INLET R3 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with S-1117)	3	9/12/23		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.
S-1119 VES CB INLET R3 OTM-45 Impingers 1,2 & 3 Condensate	3	9/12/23		500 mL HDPE Wide- Mouth Bottle	Impinger #1, #2 & #3 Condensate OTM-45 Train HFPO-DA Analysis	Knoxville: Analyze the sample for HFPO-DA.
S-1120 VES CB INLET R3 OTM-45 Impinger Glassware MeOH Rinse (Combine with S-1117)	3	9/12/23		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.

PPR ~~VES~~ Carbon Bed Inlet

Field Sample No./Sample Coding/ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
S-1121 VES CB INLET R3 OTM-45 Breakthrough XAD-2 Resin Tube	3	9/12/23		XAD-2 Resin Tube	Breakthrough XAD-2 Resin Tube OTM-45 Train HFPO-DA Analysis	<u>Knoxville</u> : Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using method 8321A-HFPO.

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

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

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:

RT 1.8 / CT 1.7 °C

(3) Record any apparent 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 nonconformance):

WANA DELIVERED, NO CUSTODY SEAL

Custody Transfer:

Relinquished By:

Patricia Meyer
Name

Alliance TG
Company

9/14/23/1430
Date/Time

Accepted By:

Ryan...
Name

ETA KW X
Company

9-14-23
9-14-23 14:30
Date/Time

Relinquished By:

Name

Company

Date/Time

Accepted By:

Name

Company

Date/Time

Relinquished By:

Name

Company

Date/Time

Accepted By:

Name

Company

Date/Time

Relinquished By:

Name

Company

Date/Time

Accepted By:

Name

Company

Date/Time

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

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Containers, Broken	
2. Were ambient air containers received intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp, of water to 6°C, VOST: 10°C) Thermometer ID : <u>56716</u> Correction factor: <u>-0.1 °C</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received <input type="checkbox"/> COC; No Date/Time; Client Contacted	
9. Is the date/time of sample collection noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> COC; No Date/Time; Client Contacted	
10. Was the sampler identified on the COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> Sampler Not Listed on COC	
11. Is the client and project name/# identified?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> COC Incorrect/Incomplete	
15. Were samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Holding Time - Receipt	
16. Were samples received with correct chemical preservative (excluding Encore)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	Preservative: _____ Lot Number: _____ Exp Date: _____ Analyst: _____
17. Were VOA samples received without headspace?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Headspace (VOA only) <input type="checkbox"/> Residual Chlorine	Date: _____ Time: _____
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Box 16A: pH Preservation Box 18A: Residual Chlorine
19. For 1613B water samples is pH<9?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Project missing info	
Project #: _____	PM Instructions: _____				

Sample Receiving Associate: *[Signature]* Date: 9-15-23 QA026R32.doc, 062719

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

ANALYTICAL REPORT

PREPARED FOR

Attn: Michael Aucoin
The Chemours Company FC, LLC
c/o AECOM
248 Chapman Rd.
Suite 101
Newark, Delaware 19702
Generated 10/26/2023 9:48:59 AM

JOB DESCRIPTION

VEN Carbon Bed Outlet - OTM-45

JOB NUMBER

140-33524-1

Eurofins Knoxville

Job Notes

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

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

Authorization



Generated
10/26/2023 9:48:59 AM

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



Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Default Detection Limits	9
Isotope Dilution Summary	10
QC Sample Results	11
QC Association Summary	13
Lab Chronicle	15
Certification Summary	20
Method Summary	21
Sample Summary	22
Chain of Custody	23

Definitions/Glossary

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

Job ID: 140-33524-1

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.
α	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

Case Narrative

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

Job ID: 140-33524-1

Job ID: 140-33524-1

Laboratory: Eurofins Knoxville

Narrative

Job Narrative 140-33524-1

Receipt

The samples were received on 9/14/2023 2:30 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.5° C.

LCMS

Method Dilution: The required dilution factor for the following samples were higher than could be achieved by "in vial" dilution, as it would dilute out the Isotope Dilution Analytes (IDA): V-1129,1130 VEN CB OUTLET R1 FH (140-33524-1), V-1136,1137 VEN CB OUTLET R2 FH (140-33524-5) and V-1143,1144 VEN CB OUTLET R3 FH (140-33524-9). As such, the dilution was achieved by taking a subsample of the undiluted extract, adding sufficient solvent, and re-spiking the extract with IDA.

Method 537 (modified): The following samples were reported with elevated reporting limits for all analytes: V-1129,1130 VEN CB OUTLET R1 FH (140-33524-1), V-1136,1137 VEN CB OUTLET R2 FH (140-33524-5) and V-1143,1144 VEN CB OUTLET R3 FH (140-33524-9). The sample was analyzed at a dilution based on screening results.

Method 537 (modified): Results for samples V-1131,1132,1134 VEN CB OUTLET R1 BH (140-33524-2), V-1138,1139,1141 VEN CB OUTLET R2 BH (140-33524-6) and V-1145,1146,1148 VEN CB OUTLET R3 BH (140-33524-10) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Method 537 (modified): The following samples were reported with elevated reporting limits for all analytes: V-1131,1132,1134 VEN CB OUTLET R1 BH (140-33524-2), V-1138,1139,1141 VEN CB OUTLET R2 BH (140-33524-6) and V-1145,1146,1148 VEN CB OUTLET R3 BH (140-33524-10). The sample was analyzed at a dilution based on screening results.

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

Organic Prep

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

Client Sample Results

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

Job ID: 140-33524-1

Client Sample ID: V-1129,1130 VEN CB OUTLET R1 FH
 Date Collected: 09/13/23 00:00
 Date Received: 09/14/23 14:30
 Sample Container: Air Train

Lab Sample ID: 140-33524-1
 Matrix: Air

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	12.4		0.492	0.463	ug/Sample		09/21/23 15:55	10/10/23 18:54	1
Isotope Dilution	%Recovery	Qualifier	Limits						
¹³ C3 HFPO-DA	90		25 - 150						
							Prepared	Analyzed	Dil Fac
							09/21/23 15:55	10/10/23 18:54	1

Client Sample ID: V-1131,1132,1134 VEN CB OUTLET R1 BH
 Date Collected: 09/13/23 00:00
 Date Received: 09/14/23 14:30
 Sample Container: Air Train

Lab Sample ID: 140-33524-2
 Matrix: Air

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	1.93		0.200	0.110	ug/Sample		09/19/23 09:12	10/11/23 17:57	10
Isotope Dilution	%Recovery	Qualifier	Limits						
¹³ C3 HFPO-DA	87		25 - 150						
							Prepared	Analyzed	Dil Fac
							09/19/23 09:12	10/11/23 17:57	10

**Client Sample ID: V-1133 VEN CB OUTLET R1 IMPINGERS
 1,2&3 CONDENSATE**
 Date Collected: 09/13/23 00:00
 Date Received: 09/14/23 14:30
 Sample Container: Air Train

Lab Sample ID: 140-33524-3
 Matrix: Air

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.182		0.0813	0.0325	ug/Sample		09/26/23 08:42	09/28/23 12:27	1
Isotope Dilution	%Recovery	Qualifier	Limits						
¹³ C3 HFPO-DA	79		25 - 150						
							Prepared	Analyzed	Dil Fac
							09/26/23 08:42	09/28/23 12:27	1

**Client Sample ID: V-1135 VEN CB OUTLET R1
 BREAKTHROUGH XAD-2 RESIN TUBE**
 Date Collected: 09/13/23 00:00
 Date Received: 09/14/23 14:30
 Sample Container: Air Train

Lab Sample ID: 140-33524-4
 Matrix: Air

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.0126	J	0.0200	0.0110	ug/Sample		09/19/23 09:12	10/11/23 18:06	1
Isotope Dilution	%Recovery	Qualifier	Limits						
¹³ C3 HFPO-DA	87		25 - 150						
							Prepared	Analyzed	Dil Fac
							09/19/23 09:12	10/11/23 18:06	1

Client Sample ID: V-1136,1137 VEN CB OUTLET R2 FH
 Date Collected: 09/13/23 00:00
 Date Received: 09/14/23 14:30
 Sample Container: Air Train

Lab Sample ID: 140-33524-5
 Matrix: Air

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	12.0		0.495	0.465	ug/Sample		09/21/23 15:55	10/10/23 19:03	1
Isotope Dilution	%Recovery	Qualifier	Limits						
¹³ C3 HFPO-DA	92		25 - 150						
							Prepared	Analyzed	Dil Fac
							09/21/23 15:55	10/10/23 19:03	1

Eurofins Knoxville

Client Sample Results

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

Job ID: 140-33524-1

Client Sample ID: V-1138,1139,1141 VEN CB OUTLET R2 BH

Lab Sample ID: 140-33524-6

Date Collected: 09/13/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	3.43		0.400	0.220	ug/Sample		09/19/23 09:12	10/11/23 18:15	20
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	114		25 - 150				09/19/23 09:12	10/11/23 18:15	20

**Client Sample ID: V-1140 VEN CB OUTLET R2 IMPINGERS
 1,2&3 CONDENSATE**

Lab Sample ID: 140-33524-7

Date Collected: 09/13/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.334		0.0787	0.0315	ug/Sample		09/26/23 08:42	09/28/23 12:54	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	75		25 - 150				09/26/23 08:42	09/28/23 12:54	1

**Client Sample ID: V-1142 VEN CB OUTLET R2
 BREAKTHROUGH XAD-2 RESIN TUBE**

Lab Sample ID: 140-33524-8

Date Collected: 09/13/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.0156	J	0.0200	0.0110	ug/Sample		09/19/23 09:12	10/12/23 11:28	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	71		25 - 150				09/19/23 09:12	10/12/23 11:28	1

Client Sample ID: V-1143,1144 VEN CB OUTLET R3 FH

Lab Sample ID: 140-33524-9

Date Collected: 09/13/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	13.2		0.494	0.464	ug/Sample		09/21/23 15:55	10/10/23 19:29	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	92		25 - 150				09/21/23 15:55	10/10/23 19:29	1

Client Sample ID: V-1145,1146,1148 VEN CB OUTLET R3 BH

Lab Sample ID: 140-33524-10

Date Collected: 09/13/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	2.36		0.400	0.220	ug/Sample		09/19/23 09:12	10/11/23 18:59	20
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	87		25 - 150				09/19/23 09:12	10/11/23 18:59	20

Eurofins Knoxville

Client Sample Results

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

Job ID: 140-33524-1

**Client Sample ID: V-1147 VEN CB OUTLET R3 IMPINGERS
 1,2&3 CONDENSATE**

Lab Sample ID: 140-33524-11

Date Collected: 09/13/23 00:00
 Date Received: 09/14/23 14:30
 Sample Container: Air Train

Matrix: Air

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.0775	J	0.0787	0.0315	ug/Sample		09/26/23 08:42	09/28/23 13:03	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	82		25 - 150				09/26/23 08:42	09/28/23 13:03	1

**Client Sample ID: V-1149 VEN CB OUTLET R3
 BREAKTHROUGH XAD-2 RESIN TUBE**

Lab Sample ID: 140-33524-12

Date Collected: 09/13/23 00:00
 Date Received: 09/14/23 14:30
 Sample Container: Air Train

Matrix: Air

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		09/19/23 09:14	10/11/23 19:08	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	90		25 - 150				09/19/23 09:14	10/11/23 19:08	1

Default Detection Limits

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

Job ID: 140-33524-1

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

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

Isotope Dilution Summary

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

Job ID: 140-33524-1

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)	
140-33524-1	V-1129,1130 VEN CB OUTLET I	90	
140-33524-2	V-1131,1132,1134 VEN CB OUTLET R1 BH	87	
140-33524-3	V-1133 VEN CB OUTLET R1 IMPINGERS 1,2&3 CONDENSATE	79	
140-33524-4	V-1135 VEN CB OUTLET R1 BREAKTHROUGH XAD-2 RESI TUBE	87	
140-33524-5	V-1136,1137 VEN CB OUTLET R2 FH	92	
140-33524-6	V-1138,1139,1141 VEN CB OUTLET R2 BH	114	
140-33524-7	V-1140 VEN CB OUTLET R2 IMPINGERS 1,2&3 CONDENSATE	75	
140-33524-8	V-1142 VEN CB OUTLET R2 BREAKTHROUGH XAD-2 RESI TUBE	71	
140-33524-9	V-1143,1144 VEN CB OUTLET R3 FH	92	
140-33524-10	V-1145,1146,1148 VEN CB OUTLET R3 BH	87	
140-33524-11	V-1147 VEN CB OUTLET R3 IMPINGERS 1,2&3 CONDENSATE	82	
140-33524-12	V-1149 VEN CB OUTLET R3 BREAKTHROUGH XAD-2 RESI TUBE	90	
LCS 140-77885/2-B	Lab Control Sample	68	
LCS 140-78034/2-B	Lab Control Sample	70	
LCS 140-78174/2-A	Lab Control Sample	82	
LCSD 140-77885/3-B	Lab Control Sample Dup	65	
LCSD 140-78034/3-B	Lab Control Sample Dup	64	
LCSD 140-78174/3-A	Lab Control Sample Dup	78	
MB 140-77885/14-B	Method Blank	73	
MB 140-77885/1-B	Method Blank	65	
MB 140-78034/1-B	Method Blank	78	
MB 140-78174/1-A	Method Blank	82	

Surrogate Legend

HFPODA = 13C3 HFPO-DA

QC Sample Results

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

Job ID: 140-33524-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 140-77885/14-B
Matrix: Air
Analysis Batch: 78868

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 77885

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		09/19/23 09:12	10/11/23 18:50	1
Isotope Dilution	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	73		25 - 150				09/19/23 09:12	10/11/23 18:50	1

Lab Sample ID: MB 140-77885/1-B
Matrix: Air
Analysis Batch: 78868

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 77885

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		09/19/23 09:12	10/11/23 16:20	1
Isotope Dilution	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	65		25 - 150				09/19/23 09:12	10/11/23 16:20	1

Lab Sample ID: LCS 140-77885/2-B
Matrix: Air
Analysis Batch: 78868

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 77885

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HFPO-DA	0.0200	0.02533		ug/Sample		127	60 - 140
Isotope Dilution	%Recovery	LCS Qualifier	Limits				
13C3 HFPO-DA	68		25 - 150				

Lab Sample ID: LCSD 140-77885/3-B
Matrix: Air
Analysis Batch: 78868

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 77885

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
HFPO-DA	0.0200	0.02453		ug/Sample		123	60 - 140	3	30
Isotope Dilution	%Recovery	LCSD Qualifier	Limits						
13C3 HFPO-DA	65		25 - 150						

Lab Sample ID: MB 140-78034/1-B
Matrix: Air
Analysis Batch: 78837

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 78034

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		09/21/23 15:55	10/10/23 18:01	1
Isotope Dilution	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	78		25 - 150				09/21/23 15:55	10/10/23 18:01	1

Eurofins Knoxville

QC Sample Results

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

Job ID: 140-33524-1

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

Lab Sample ID: LCS 140-78034/2-B
Matrix: Air
Analysis Batch: 78837

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 78034

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HFPO-DA	0.0200	0.02214		ug/Sample		111	60 - 140
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				
13C3 HFPO-DA	70		25 - 150				

Lab Sample ID: LCSD 140-78034/3-B
Matrix: Air
Analysis Batch: 78837

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 78034

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA	0.0200	0.02196		ug/Sample		110	60 - 140	1	30
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>						
13C3 HFPO-DA	64		25 - 150						

Lab Sample ID: MB 140-78174/1-A
Matrix: Air
Analysis Batch: 78294

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 78174

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		09/26/23 08:42	09/28/23 11:08	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	82		25 - 150				09/26/23 08:42	09/28/23 11:08	1

Lab Sample ID: LCS 140-78174/2-A
Matrix: Air
Analysis Batch: 78294

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 78174

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HFPO-DA	0.0100	0.009299		ug/Sample		93	60 - 140
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				
13C3 HFPO-DA	82		25 - 150				

Lab Sample ID: LCSD 140-78174/3-A
Matrix: Air
Analysis Batch: 78294

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 78174

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA	0.0100	0.009740		ug/Sample		97	60 - 140	5	30
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>						
13C3 HFPO-DA	78		25 - 150						

QC Association Summary

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

Job ID: 140-33524-1

LCMS

Prep Batch: 77885

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33524-2	V-1131,1132,1134 VEN CB OUTLET R1 BH	Total/NA	Air	None	
140-33524-4	V-1135 VEN CB OUTLET R1 BREAKTHROUGH	Total/NA	Air	None	
140-33524-6	V-1138,1139,1141 VEN CB OUTLET R2 BH	Total/NA	Air	None	
140-33524-8	V-1142 VEN CB OUTLET R2 BREAKTHROUGH	Total/NA	Air	None	
140-33524-10	V-1145,1146,1148 VEN CB OUTLET R3 BH	Total/NA	Air	None	
140-33524-12	V-1149 VEN CB OUTLET R3 BREAKTHROUGH	Total/NA	Air	None	
MB 140-77885/14-B	Method Blank	Total/NA	Air	None	
MB 140-77885/1-B	Method Blank	Total/NA	Air	None	
LCS 140-77885/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-77885/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Prep Batch: 78034

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33524-1	V-1129,1130 VEN CB OUTLET R1 FH	Total/NA	Air	None	
140-33524-5	V-1136,1137 VEN CB OUTLET R2 FH	Total/NA	Air	None	
140-33524-9	V-1143,1144 VEN CB OUTLET R3 FH	Total/NA	Air	None	
MB 140-78034/1-B	Method Blank	Total/NA	Air	None	
LCS 140-78034/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-78034/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Cleanup Batch: 78072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33524-1	V-1129,1130 VEN CB OUTLET R1 FH	Total/NA	Air	Split	78034
140-33524-5	V-1136,1137 VEN CB OUTLET R2 FH	Total/NA	Air	Split	78034
140-33524-9	V-1143,1144 VEN CB OUTLET R3 FH	Total/NA	Air	Split	78034
MB 140-78034/1-B	Method Blank	Total/NA	Air	Split	78034
LCS 140-78034/2-B	Lab Control Sample	Total/NA	Air	Split	78034
LCSD 140-78034/3-B	Lab Control Sample Dup	Total/NA	Air	Split	78034

Cleanup Batch: 78115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33524-2	V-1131,1132,1134 VEN CB OUTLET R1 BH	Total/NA	Air	Split	77885
140-33524-4	V-1135 VEN CB OUTLET R1 BREAKTHROUGH	Total/NA	Air	Split	77885
140-33524-6	V-1138,1139,1141 VEN CB OUTLET R2 BH	Total/NA	Air	Split	77885
140-33524-8	V-1142 VEN CB OUTLET R2 BREAKTHROUGH	Total/NA	Air	Split	77885
140-33524-10	V-1145,1146,1148 VEN CB OUTLET R3 BH	Total/NA	Air	Split	77885
140-33524-12	V-1149 VEN CB OUTLET R3 BREAKTHROUGH	Total/NA	Air	Split	77885
MB 140-77885/14-B	Method Blank	Total/NA	Air	Split	77885
MB 140-77885/1-B	Method Blank	Total/NA	Air	Split	77885
LCS 140-77885/2-B	Lab Control Sample	Total/NA	Air	Split	77885
LCSD 140-77885/3-B	Lab Control Sample Dup	Total/NA	Air	Split	77885

Prep Batch: 78174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33524-3	V-1133 VEN CB OUTLET R1 IMPINGERS 1,2&3	Total/NA	Air	PFAS Prep	
140-33524-7	V-1140 VEN CB OUTLET R2 IMPINGERS 1,2&3	Total/NA	Air	PFAS Prep	
140-33524-11	V-1147 VEN CB OUTLET R3 IMPINGERS 1,2&3	Total/NA	Air	PFAS Prep	
MB 140-78174/1-A	Method Blank	Total/NA	Air	PFAS Prep	
LCS 140-78174/2-A	Lab Control Sample	Total/NA	Air	PFAS Prep	
LCSD 140-78174/3-A	Lab Control Sample Dup	Total/NA	Air	PFAS Prep	

Eurofins Knoxville

QC Association Summary

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

Job ID: 140-33524-1

LCMS

Analysis Batch: 78294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33524-3	V-1133 VEN CB OUTLET R1 IMPINGERS 1,2&3	Total/NA	Air	537 (modified)	78174
140-33524-7	V-1140 VEN CB OUTLET R2 IMPINGERS 1,2&3	Total/NA	Air	537 (modified)	78174
140-33524-11	V-1147 VEN CB OUTLET R3 IMPINGERS 1,2&3	Total/NA	Air	537 (modified)	78174
MB 140-78174/1-A	Method Blank	Total/NA	Air	537 (modified)	78174
LCS 140-78174/2-A	Lab Control Sample	Total/NA	Air	537 (modified)	78174
LCSD 140-78174/3-A	Lab Control Sample Dup	Total/NA	Air	537 (modified)	78174

Cleanup Batch: 78835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33524-1	V-1129,1130 VEN CB OUTLET R1 FH	Total/NA	Air	Dilution	78072
140-33524-5	V-1136,1137 VEN CB OUTLET R2 FH	Total/NA	Air	Dilution	78072
140-33524-9	V-1143,1144 VEN CB OUTLET R3 FH	Total/NA	Air	Dilution	78072

Analysis Batch: 78837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33524-1	V-1129,1130 VEN CB OUTLET R1 FH	Total/NA	Air	537 (modified)	78835
140-33524-5	V-1136,1137 VEN CB OUTLET R2 FH	Total/NA	Air	537 (modified)	78835
140-33524-9	V-1143,1144 VEN CB OUTLET R3 FH	Total/NA	Air	537 (modified)	78835
MB 140-78034/1-B	Method Blank	Total/NA	Air	537 (modified)	78072
LCS 140-78034/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	78072
LCSD 140-78034/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	78072

Analysis Batch: 78868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33524-2	V-1131,1132,1134 VEN CB OUTLET R1 BH	Total/NA	Air	537 (modified)	78115
140-33524-4	V-1135 VEN CB OUTLET R1 BREAKTHROUGH	Total/NA	Air	537 (modified)	78115
140-33524-6	V-1138,1139,1141 VEN CB OUTLET R2 BH	Total/NA	Air	537 (modified)	78115
140-33524-10	V-1145,1146,1148 VEN CB OUTLET R3 BH	Total/NA	Air	537 (modified)	78115
140-33524-12	V-1149 VEN CB OUTLET R3 BREAKTHROUGH	Total/NA	Air	537 (modified)	78115
MB 140-77885/14-B	Method Blank	Total/NA	Air	537 (modified)	78115
MB 140-77885/1-B	Method Blank	Total/NA	Air	537 (modified)	78115
LCS 140-77885/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	78115
LCSD 140-77885/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	78115

Analysis Batch: 78899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33524-8	V-1142 VEN CB OUTLET R2 BREAKTHROUGH	Total/NA	Air	537 (modified)	78115

Lab Chronicle

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

Job ID: 140-33524-1

Client Sample ID: V-1129,1130 VEN CB OUTLET R1 FH
Date Collected: 09/13/23 00:00
Date Received: 09/14/23 14:30

Lab Sample ID: 140-33524-1
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	63 mL	78034	09/21/23 15:55	RPT	EET KNX
Total/NA	Cleanup	Split			32 mL	10 mL	78072	09/22/23 12:34	PRR	EET KNX
Total/NA	Cleanup	Dilution			100 uL	10000 uL	78835	10/10/23 16:18	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78837	10/10/23 18:54	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: V-1131,1132,1134 VEN CB OUTLET R1 BH
Date Collected: 09/13/23 00:00
Date Received: 09/14/23 14:30

Lab Sample ID: 140-33524-2
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	77885	09/19/23 09:12	RPT	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78115	09/25/23 08:22	RPT	EET KNX
Total/NA	Analysis	537 (modified)		10	1 mL	1 mL	78868	10/11/23 17:57	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: V-1133 VEN CB OUTLET R1 IMPINGERS
1,2&3 CONDENSATE
Date Collected: 09/13/23 00:00
Date Received: 09/14/23 14:30

Lab Sample ID: 140-33524-3
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			.00615 Sample	10 mL	78174	09/26/23 08:42	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78294	09/28/23 12:27	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: V-1135 VEN CB OUTLET R1
BREAKTHROUGH XAD-2 RESIN TUBE
Date Collected: 09/13/23 00:00
Date Received: 09/14/23 14:30

Lab Sample ID: 140-33524-4
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	77885	09/19/23 09:12	RPT	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78115	09/25/23 08:22	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78868	10/11/23 18:06	CAC	EET KNX
Instrument ID: LCA										

Lab Chronicle

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

Job ID: 140-33524-1

Client Sample ID: V-1136,1137 VEN CB OUTLET R2 FH

Lab Sample ID: 140-33524-5

Date Collected: 09/13/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	93 mL	78034	09/21/23 15:55	RPT	EET KNX
Total/NA	Cleanup	Split			47 mL	10 mL	78072	09/22/23 12:34	PRR	EET KNX
Total/NA	Cleanup	Dilution			100 uL	10000 uL	78835	10/10/23 16:18	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78837	10/10/23 19:03	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: V-1138,1139,1141 VEN CB OUTLET R2 BH

Lab Sample ID: 140-33524-6

Date Collected: 09/13/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	77885	09/19/23 09:12	RPT	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78115	09/25/23 08:22	RPT	EET KNX
Total/NA	Analysis	537 (modified)		20	1 mL	1 mL	78868	10/11/23 18:15	CAC	EET KNX
Instrument ID: LCA										

**Client Sample ID: V-1140 VEN CB OUTLET R2 IMPINGERS
 1,2&3 CONDENSATE**

Lab Sample ID: 140-33524-7

Date Collected: 09/13/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			.00635 Sample	10 mL	78174	09/26/23 08:42	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78294	09/28/23 12:54	CAC	EET KNX
Instrument ID: LCA										

**Client Sample ID: V-1142 VEN CB OUTLET R2
 BREAKTHROUGH XAD-2 RESIN TUBE**

Lab Sample ID: 140-33524-8

Date Collected: 09/13/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	77885	09/19/23 09:12	RPT	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78115	09/25/23 08:22	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78899	10/12/23 11:28	CAC	EET KNX
Instrument ID: LCA										

Lab Chronicle

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

Job ID: 140-33524-1

Client Sample ID: V-1143,1144 VEN CB OUTLET R3 FH

Lab Sample ID: 140-33524-9

Date Collected: 09/13/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	79 mL	78034	09/21/23 15:55	RPT	EET KNX
Total/NA	Cleanup	Split			40 mL	10 mL	78072	09/22/23 12:34	PRR	EET KNX
Total/NA	Cleanup	Dilution			100 uL	10000 uL	78835	10/10/23 16:18	CAC	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78837	10/10/23 19:29	CAC	EET KNX

Instrument ID: LCA

Client Sample ID: V-1145,1146,1148 VEN CB OUTLET R3 BH

Lab Sample ID: 140-33524-10

Date Collected: 09/13/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	77885	09/19/23 09:12	RPT	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78115	09/25/23 08:22	RPT	EET KNX
Total/NA	Analysis	537 (modified)		20	1 mL	1 mL	78868	10/11/23 18:59	CAC	EET KNX

Instrument ID: LCA

**Client Sample ID: V-1147 VEN CB OUTLET R3 IMPINGERS
1,2&3 CONDENSATE**

Lab Sample ID: 140-33524-11

Date Collected: 09/13/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			.00635 Sample	10 mL	78174	09/26/23 08:42	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78294	09/28/23 13:03	CAC	EET KNX

Instrument ID: LCA

**Client Sample ID: V-1149 VEN CB OUTLET R3
BREAKTHROUGH XAD-2 RESIN TUBE**

Lab Sample ID: 140-33524-12

Date Collected: 09/13/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	77885	09/19/23 09:14	RPT	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78115	09/25/23 08:22	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78868	10/11/23 19:08	CAC	EET KNX

Instrument ID: LCA

Client Sample ID: Method Blank

Lab Sample ID: MB 140-77885/14-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	77885	09/19/23 09:12	RPT	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78115	09/25/23 08:22	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78868	10/11/23 18:50	CAC	EET KNX

Instrument ID: LCA

Eurofins Knoxville

Lab Chronicle

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

Job ID: 140-33524-1

Client Sample ID: Method Blank

Lab Sample ID: MB 140-77885/1-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	77885	09/19/23 09:12	RPT	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78115	09/25/23 08:22	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78868	10/11/23 16:20	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-78034/1-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	78034	09/21/23 15:55	RPT	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	78072	09/22/23 12:34	PRR	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78837	10/10/23 18:01	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-78174/1-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	78174	09/26/23 08:42	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78294	09/28/23 11:08	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-77885/2-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	77885	09/19/23 09:12	RPT	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78115	09/25/23 08:22	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78868	10/11/23 16:29	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-78034/2-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	78034	09/21/23 15:55	RPT	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	78072	09/22/23 12:34	PRR	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78837	10/10/23 18:10	CAC	EET KNX
Instrument ID: LCA										

Eurofins Knoxville

Lab Chronicle

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

Job ID: 140-33524-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-78174/2-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	78174	09/26/23 08:42	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78294	09/28/23 11:16	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-77885/3-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	77885	09/19/23 09:12	RPT	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78115	09/25/23 08:22	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78868	10/11/23 16:56	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-78034/3-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	78034	09/21/23 15:55	RPT	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	78072	09/22/23 12:34	PRR	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78837	10/10/23 18:19	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-78174/3-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	78174	09/26/23 08:42	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78294	09/28/23 11:25	CAC	EET KNX
Instrument ID: LCA										

Laboratory References:

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

Accreditation/Certification Summary

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

Job ID: 140-33524-1

Laboratory: Eurofins Knoxville

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

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-25
ANAB	Dept. of Energy	L2311.01	02-13-25
ANAB	ISO/IEC 17025	L2311	02-13-25
Arkansas DEQ	State	88-0688	06-16-24
Colorado	State	TN00009	02-29-24
Connecticut	State	PH-0223	09-30-25
Florida	NELAP	E87177	06-30-24
Georgia (DW)	State	906	07-27-25
Hawaii	State	NA	07-27-24
Kansas	NELAP	E-10349	10-31-23
Kentucky (DW)	State	90101	12-31-23
Louisiana (All)	NELAP	83979	06-30-24
Louisiana (DW)	State	LA019	12-31-23
Maryland	State	277	03-31-24
Michigan	State	9933	07-27-25
Nevada	State	TN00009	07-31-24
New Hampshire	NELAP	2999	01-17-24
New Jersey	NELAP	TN001	07-01-24
New York	NELAP	10781	03-31-24
North Carolina (DW)	State	21705	07-31-24
North Carolina (WW/SW)	State	64	12-31-23
Oklahoma	State	9415	12-31-23
Oregon	NELAP	TNI0189	01-01-24
Pennsylvania	NELAP	68-00576	12-01-23
Tennessee	State	02014	07-27-25
Texas	NELAP	T104704380-23-18	08-31-24
US Fish & Wildlife	US Federal Programs	058448	07-31-24
USDA	US Federal Programs	525-22-279-18762	10-06-25
Utah	NELAP	TN00009	07-31-24
Virginia	NELAP	460176	09-14-24
Washington	State	C593	01-19-24
West Virginia (DW)	State	9955C	12-31-23
West Virginia DEP	State	345	04-30-24
Wisconsin	State	998044300	08-31-24

Method Summary

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

Job ID: 140-33524-1

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

Job ID: 140-33524-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-33524-1	V-1129,1130 VEN CB OUTLET R1 FH	Air	09/13/23 00:00	09/14/23 14:30
140-33524-2	V-1131,1132,1134 VEN CB OUTLET R1 BH	Air	09/13/23 00:00	09/14/23 14:30
140-33524-3	V-1133 VEN CB OUTLET R1 IMPINGERS 1,2&3 CONDENSATE	Air	09/13/23 00:00	09/14/23 14:30
140-33524-4	V-1135 VEN CB OUTLET R1 BREAKTHROUGH XAD-2 RESIN TUBE	Air	09/13/23 00:00	09/14/23 14:30
140-33524-5	V-1136,1137 VEN CB OUTLET R2 FH	Air	09/13/23 00:00	09/14/23 14:30
140-33524-6	V-1138,1139,1141 VEN CB OUTLET R2 BH	Air	09/13/23 00:00	09/14/23 14:30
140-33524-7	V-1140 VEN CB OUTLET R2 IMPINGERS 1,2&3 CONDENSATE	Air	09/13/23 00:00	09/14/23 14:30
140-33524-8	V-1142 VEN CB OUTLET R2 BREAKTHROUGH XAD-2 RESIN TUBE	Air	09/13/23 00:00	09/14/23 14:30
140-33524-9	V-1143,1144 VEN CB OUTLET R3 FH	Air	09/13/23 00:00	09/14/23 14:30
140-33524-10	V-1145,1146,1148 VEN CB OUTLET R3 BH	Air	09/13/23 00:00	09/14/23 14:30
140-33524-11	V-1147 VEN CB OUTLET R3 IMPINGERS 1,2&3 CONDENSATE	Air	09/13/23 00:00	09/14/23 14:30
140-33524-12	V-1149 VEN CB OUTLET R3 BREAKTHROUGH XAD-2 RESIN TUBE	Air	09/13/23 00:00	09/14/23 14:30

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

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



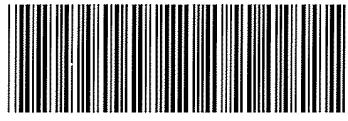
Environment Testing
 TestAmerica

Project Identification:	Chemours Emissions Test
Client Name:	The Chemours Company FC, LLC
Client Contact:	Eddie Vega (910) 678-1938
TestAmerica Project Manager:	Ms. Courtney Adkins Office: (865) 291-3019
TestAmerica Program Manager:	Mr. Billy Anderson Office: (865) 291-3080 Cell: (865) 206-9004

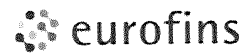
Analytical Testing QC Requirements:
 The Legend for ProjecV-Specific Quality Control Testing is designated in the "QC" column as follows: "BT" = Blank Train, "RB" = Reagent Blank, "MS" = Matrix Spike, "MSD" = Matrix Spike Duplicate, "DUP" = Duplicate, "PB" = Proof Blank, "TB" = Trip Blank

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

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

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
V-1129 VEN CB OUTLET R1 OTM-45 Filter (Combine with V-1130)	1	9/13/23		125 mL HDPE Wide-Mouth Bottle	Particulate Filter (82.6 mm Whatman Glass Microfiber) OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using Method 8321A-HFPO.
V-1130 VEN CB OUTLET R1 OTM-45 FH of Filter Holder & Probe Methanol Rinse (Combine with V-1129)	1	9/13/23		125 mL HDPE Wide-Mouth Bottle	Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample in the Particulate Filter extraction.  140-33524 Chain of Custody
V-1131 VEN CB OUTLET R1 OTM-45 XAD-2 Resin Tube	1	9/13/23		XAD-2 Resin Tube	XAD-2 Resin Tube OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using Method 8321A-HFPO.

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



Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
V-1132 VEN CB OUTLET R1 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with V-1131)	1	9/13/23		125 mL HDPE Wide-Mouth Bottle	Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction. Analyze for HFPO-DA using Method 8321A-HFPO.
V-1133 VEN CB OUTLET R1 OTM-45 Impingers 1,2 & 3 Condensate	1	9/13/23		500 mL HDPE Wide-Mouth Bottle	Impinger #1, #2 & #3 Condensate OTM-45 Train HFPO-DA Analysis	Knoxville: Analyze the sample for HFPO-DA.
V-1134 VEN CB OUTLET R1 OTM-45 Impinger Glassware MeOH Rinse (Combine with V-1131)	1	9/13/23		250 mL HDPE Wide-Mouth Bottle	Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample in the XAD-2 Resin Extraction.
V-1135 VEN CB OUTLET R1 OTM-45 Breakthrough XAD-2 Resin Tube	1	9/13/23		XAD-2 Resin Tube	Breakthrough XAD-2 Resin Tube OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using Method 8321A-HFPO.
V-1136 VEN CB OUTLET R2 OTM-45 Filter (Combine with V-1137)	2	9/13/23		125 mL HDPE Wide-Mouth Bottle	Particulate Filter (82.6 mm Whatman Glass Microfiber) OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using Method 8321A-HFPO.
V-1137 VEN CB OUTLET R2 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with V-1136)	2	9/13/23		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.

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



Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
V-1138 VEN CB OUTLET R2 OTM-45 XAD-2 Resin Tube	2	9/13/23		XAD-2 Resin Tube	XAD-2 Resin Tube OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using Method 8321A-HFPO.
V-1139 VEN CB OUTLET R2 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with V-1138)	2	9/13/23		125 mL HDPE Wide-Mouth Bottle	Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction. Analyze for HFPO-DA using Method 8321A-HFPO.
V-1140 VEN CB OUTLET R2 OTM-45 Impingers 1,2 & 3 Condensate	2	9/13/23		500 mL HDPE Wide-Mouth Bottle	Impinger #1, #2 & #3 Condensate OTM-45 Train HFPO-DA Analysis	Knoxville: Analyze the sample for HFPO-DA.
V-1141 VEN CB OUTLET R2 OTM-45 Impinger Glassware MeOH Rinse (Combine with V-1138)	2	9/13/23		250 mL HDPE Wide-Mouth Bottle	Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample in the XAD-2 Resin Extraction.
V-1142 VEN CB OUTLET R2 OTM-45 Breakthrough XAD-2 Resin Tube	2	9/13/23		XAD-2 Resin Tube	Breakthrough XAD-2 Resin Tube OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using Method 8321A-HFPO.
V-1143 VEN CB OUTLET R3 OTM-45 Filter (Combine with V-1144)	3	9/13/23		125 mL HDPE Wide-Mouth Bottle	Particulate Filter (82.6 mm Whatman Glass Microfiber) OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using Method 8321A-HFPO.

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

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
V-1144 VEN CB OUTLET R3 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with V-1143)	3	9/13/23		125 mL HDPE Wide-Mouth Bottle	Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample in the Particulate Filter extraction.
V-1145 VEN CB OUTLET R3 OTM-45 XAD-2 Resin Tube	3	9/13/23		XAD-2 Resin Tube	XAD-2 Resin Tube OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using Method 8321A-HFPO.
V-1146 VEN CB OUTLET R3 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with V-1145)	3	9/13/23		125 mL HDPE Wide-Mouth Bottle	Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction. Analyze for HFPO-DA using Method 8321A-HFPO.
V-1147 VEN CB OUTLET R3 OTM-45 Impingers 1,2 & 3 Condensate	3	9/13/23		500 mL HDPE Wide-Mouth Bottle	Impinger #1, #2 & #3 Condensate OTM-45 Train HFPO-DA Analysis	Knoxville: Analyze the sample for HFPO-DA.
V-1148 VEN CB OUTLET R3 OTM-45 Impinger Glassware MeOH Rinse (Combine with V-1145)	3	9/13/23		250 mL HDPE Wide-Mouth Bottle	Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample in the XAD-2 Resin Extraction.
V-1149 VEN CB OUTLET R3 OTM-45 Breakthrough XAD-2 Resin Tube	3	9/13/23		XAD-2 Resin Tube	Breakthrough XAD-2 Resin Tube OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using Method 8321A-HFPO.

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

Sample Receipt Log and Condition of the Samples Upon Receipt:

Please fill in the following information:	Comments
(Please write "NONE" if no comment applicable)	
(1) Record the identities of any samples that were listed on the RFA but were not found in the sample shipment.	NONE
(2) Record the sample shipping cooler temperature of all coolers transporting samples listed on this RFA:	RT 1.0 / CT 1.5 C
(3) Record any apparent sample loss/breakage.	NONE
(4) Record any unidentified samples transported with this shipment of samples:	NONE
(5) Indicate if all samples were received according to the project's required specifications (i.e. no nonconformances):	HAND DELIVERED / NO CUSTODY SEALS

Custody Transfer:

Relinquished By:		Alliance TG	9/14/23 / 1430
	Name	Company	Date/Time
Accepted By:		ETA KW	9-14-23 14:30
	Name	Company	Date/Time
Relinquished By:			
	Name	Company	Date/Time
Accepted By:			
	Name	Company	Date/Time
Relinquished By:			
	Name	Company	Date/Time
Accepted By:			
	Name	Company	Date/Time
Relinquished By:			
	Name	Company	Date/Time
Accepted By:			
	Name	Company	Date/Time

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

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	
2. Were ambient air containers received intact?			/	<input type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?			/	<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : <u>5676</u> Correction factor: <u>-0.1°C</u>	/			<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	
10. Was the sampler identified on the COC?			/	<input type="checkbox"/> Sampler Not Listed on COC	Labeling Verified by: _____ Date: _____
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	pH test strip lot number: _____
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	Box 16A: pH Preservation Box 18A: Residual Chlorine
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	Preservative: _____ Lot Number: _____ Exp Date: _____ Analyst: _____ Date: _____ Time: _____
16. Were samples received with correct chemical preservative (excluding Encore)?			/	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	
17. Were VOA samples received without headspace?			/	<input type="checkbox"/> Headspace (VOA only)	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			/	<input type="checkbox"/> Residual Chlorine	
19. For 1613B water samples is pH<9?			/	<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?			/	<input type="checkbox"/> Project missing info	
Project #: _____ PM Instructions: _____					

Sample Receiving Associate: [Signature] Date: 9-15-23

QA026R32.doc, 062719

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

ANALYTICAL REPORT

PREPARED FOR

Attn: Michael Aucoin
The Chemours Company FC, LLC
c/o AECOM
248 Chapman Rd.
Suite 101
Newark, Delaware 19702
Generated 10/27/2023 8:14:33 AM

JOB DESCRIPTION

Carbon Bed Field QC - OTM-45

JOB NUMBER

140-33526-1

Eurofins Knoxville

Job Notes

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

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

Authorization



Generated
10/27/2023 8:14:33 AM

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



Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Default Detection Limits	9
Isotope Dilution Summary	10
QC Sample Results	11
QC Association Summary	13
Lab Chronicle	15
Certification Summary	20
Method Summary	21
Sample Summary	22
Chain of Custody	23

Definitions/Glossary

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

Job ID: 140-33526-1

Qualifiers

LCMS

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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

Case Narrative

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

Job ID: 140-33526-1

Job ID: 140-33526-1

Laboratory: Eurofins Knoxville

Narrative

Job Narrative 140-33526-1

Receipt

The samples were received on 9/14/2023 2:30 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.3° C.

LCMS

Method 537 (modified): After initial analysis analyst notice sample was not spiked with IDA during prep however did contain internal standard. Sample was post-spiked with IDA and re-analyzed. Project manager was notified and results have been reported.
N-1165 QC OTM-45 MEOH WITH 5% NH4OH RB (140-33526-6)

Method 537 (modified): Reanalysis of the following sample was performed outside of the analytical holding time due to not being spiked with IDA during prep. Sample was post-spiked and re-analyzed. : N-1165 QC OTM-45 MEOH WITH 5% NH4OH RB (140-33526-6).

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 Results

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

Job ID: 140-33526-1

Client Sample ID: N-1157,1158 QC OTM-45 FH PBT

Lab Sample ID: 140-33526-1

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.00553		0.00494	0.00464	ug/Sample		09/20/23 16:24	10/10/23 21:24	1
Isotope Dilution	%Recovery	Qualifier	Limits						
¹³ C3 HFPO-DA	73		25 - 150						
							Prepared	Analyzed	Dil Fac
							09/20/23 16:24	10/10/23 21:24	1

Client Sample ID: N-1159,1160,1162 QC OTM-45 BH PBT

Lab Sample ID: 140-33526-2

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		09/25/23 11:01	10/11/23 19:52	1
Isotope Dilution	%Recovery	Qualifier	Limits						
¹³ C3 HFPO-DA	90		25 - 150						
							Prepared	Analyzed	Dil Fac
							09/25/23 11:01	10/11/23 19:52	1

Client Sample ID: N-1161 QC OTM-45 IMPINGERS 1,2&3 CONDENSATE PBT

Lab Sample ID: 140-33526-3

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0775	0.0310	ug/Sample		09/26/23 08:42	09/28/23 13:47	1
Isotope Dilution	%Recovery	Qualifier	Limits						
¹³ C3 HFPO-DA	76		25 - 150						
							Prepared	Analyzed	Dil Fac
							09/26/23 08:42	09/28/23 13:47	1

Client Sample ID: N-1163 QC OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE PBT

Lab Sample ID: 140-33526-4

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		09/25/23 11:01	10/11/23 20:01	1
Isotope Dilution	%Recovery	Qualifier	Limits						
¹³ C3 HFPO-DA	87		25 - 150						
							Prepared	Analyzed	Dil Fac
							09/25/23 11:01	10/11/23 20:01	1

Client Sample ID: N-1164 QC OTM-45 DI WATER RB

Lab Sample ID: 140-33526-5

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0250	0.0100	ug/Sample		09/26/23 08:42	09/28/23 13:56	1
Isotope Dilution	%Recovery	Qualifier	Limits						
¹³ C3 HFPO-DA	83		25 - 150						
							Prepared	Analyzed	Dil Fac
							09/26/23 08:42	09/28/23 13:56	1

Eurofins Knoxville

Client Sample Results

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

Job ID: 140-33526-1

**Client Sample ID: N-1165 QC OTM-45 MEOH WITH 5% NH4OH
 RB**

Lab Sample ID: 140-33526-6

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND	H	0.0200	0.0110	ug/Sample		09/25/23 11:01	10/25/23 09:51	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	78		25 - 150				09/25/23 11:01	10/25/23 09:51	1

Client Sample ID: N-1166,1167 QC OTM-45 FH BT

Lab Sample ID: 140-33526-7

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00492	0.00463	ug/Sample		09/20/23 16:24	10/10/23 21:33	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	70		25 - 150				09/20/23 16:24	10/10/23 21:33	1

Client Sample ID: N-1168,1169,1171 QC OTM-45 BH BT

Lab Sample ID: 140-33526-8

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		09/25/23 11:01	10/11/23 20:36	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	86		25 - 150				09/25/23 11:01	10/11/23 20:36	1

**Client Sample ID: N-1170 QC OTM-45 IMPINGERS 1,2&3
 CONDENSATE BT**

Lab Sample ID: 140-33526-9

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0775	0.0310	ug/Sample		09/26/23 08:42	09/28/23 14:05	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	81		25 - 150				09/26/23 08:42	09/28/23 14:05	1

**Client Sample ID: N-1172 QC OTM-45 BREAKTHROUGH
 XAD-2 RESIN TUBE BT**

Lab Sample ID: 140-33526-10

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Sample Container: Air Train

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		09/25/23 11:01	10/11/23 20:45	1

Eurofins Knoxville

Client Sample Results

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

Job ID: 140-33526-1

**Client Sample ID: N-1172 QC OTM-45 BREAKTHROUGH
 XAD-2 RESIN TUBE BT**

Lab Sample ID: 140-33526-10

Date Collected: 09/12/23 00:00
 Date Received: 09/14/23 14:30
 Sample Container: Air Train

Matrix: Air

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	73		25 - 150	09/25/23 11:01	10/11/23 20:45	1

Client Sample ID: A-1766 OTM-45 MEDIA CHECK XAD

Lab Sample ID: 140-33526-11

Date Collected: 09/12/23 00:00
 Date Received: 09/14/23 14:30
 Sample Container: Air Train

Matrix: Air

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		09/25/23 11:01	10/11/23 20:54	1
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
13C3 HFPO-DA	79		25 - 150	09/25/23 11:01	10/11/23 20:54	1			

Client Sample ID: A-1767 OTM-45 MEDIA CHECK FILTER

Lab Sample ID: 140-33526-12

Date Collected: 09/12/23 00:00
 Date Received: 09/14/23 14:30
 Sample Container: Air Train

Matrix: Air

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		09/20/23 16:24	10/10/23 21:41	1
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
13C3 HFPO-DA	65		25 - 150	09/20/23 16:24	10/10/23 21:41	1			

Default Detection Limits

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

Job ID: 140-33526-1

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

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

Isotope Dilution Summary

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

Job ID: 140-33526-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Air

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)	
		HFPODA (25-150)	
140-33526-1	N-1157,1158 QC OTM-45 FH PE	73	
140-33526-2	N-1159,1160,1162 QC OTM-45 BH PBT	90	
140-33526-3	N-1161 QC OTM-45 IMPINGER: 1,2&3 CONDENSATE PBT	76	
140-33526-4	N-1163 QC OTM-45 BREAKTHROUGH XAD-2 RESI TUBE PBT	87	
140-33526-5	N-1164 QC OTM-45 DI WATER RB	83	
140-33526-6	N-1165 QC OTM-45 MEOH WITH 5% NH4OH RB	78	
140-33526-7	N-1166,1167 QC OTM-45 FH BT	70	
140-33526-8	N-1168,1169,1171 QC OTM-45 BH BT	86	
140-33526-9	N-1170 QC OTM-45 IMPINGER: 1,2&3 CONDENSATE BT	81	
140-33526-10	N-1172 QC OTM-45 BREAKTHROUGH XAD-2 RESI TUBE BT	73	
140-33526-11	A-1766 OTM-45 MEDIA CHECK XAD	79	
140-33526-12	A-1767 OTM-45 MEDIA CHECK FILTER	65	
LCS 140-77978/2-B	Lab Control Sample	61	
LCS 140-78136/2-B	Lab Control Sample	70	
LCS 140-78174/2-A	Lab Control Sample	82	
LCSD 140-77978/3-B	Lab Control Sample Dup	72	
LCSD 140-78136/3-B	Lab Control Sample Dup	66	
LCSD 140-78174/3-A	Lab Control Sample Dup	78	
MB 140-77978/1-B	Method Blank	63	
MB 140-78136/1-B	Method Blank	66	
MB 140-78174/14-A	Method Blank	77	
MB 140-78174/1-A	Method Blank	82	

Surrogate Legend

HFPODA = 13C3 HFPO-DA

QC Sample Results

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

Job ID: 140-33526-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 140-77978/1-B
Matrix: Air
Analysis Batch: 78837

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 77978

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00500	0.00470	ug/Sample		09/20/23 16:24	10/10/23 19:47	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
¹³ C3 HFPO-DA	63		25 - 150				09/20/23 16:24	10/10/23 19:47	1

Lab Sample ID: LCS 140-77978/2-B
Matrix: Air
Analysis Batch: 78837

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 77978

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HFPO-DA	0.0200	0.02109		ug/Sample		105	60 - 140
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits				
¹³ C3 HFPO-DA	61		25 - 150				

Lab Sample ID: LCSD 140-77978/3-B
Matrix: Air
Analysis Batch: 78837

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 77978

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA	0.0200	0.02032		ug/Sample		102	60 - 140	4	30
Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits						
¹³ C3 HFPO-DA	72		25 - 150						

Lab Sample ID: MB 140-78136/1-B
Matrix: Air
Analysis Batch: 78868

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 78136

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.0200	0.0110	ug/Sample		09/25/23 11:01	10/11/23 19:26	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
¹³ C3 HFPO-DA	66		25 - 150				09/25/23 11:01	10/11/23 19:26	1

Lab Sample ID: LCS 140-78136/2-B
Matrix: Air
Analysis Batch: 78868

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 78136

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HFPO-DA	0.0200	0.02061		ug/Sample		103	60 - 140
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits				
¹³ C3 HFPO-DA	70		25 - 150				

QC Sample Results

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

Job ID: 140-33526-1

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

Lab Sample ID: LCSD 140-78136/3-B
Matrix: Air
Analysis Batch: 78868

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 78136

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA	0.0200	0.02169		ug/Sample		108	60 - 140	5	30
		LCSD	LCSD						
Isotope Dilution	%Recovery	Qualifier	Limits						
13C3 HFPO-DA	66		25 - 150						

Lab Sample ID: MB 140-78174/14-A
Matrix: Air
Analysis Batch: 78294

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 78174

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		09/26/23 08:42	09/28/23 13:21	1
		MB	MB						
Isotope Dilution	%Recovery	Qualifier	Limits						
13C3 HFPO-DA	77		25 - 150						
		MB	MB						
				Prepared		Analyzed			
				09/26/23 08:42		09/28/23 13:21			

Lab Sample ID: MB 140-78174/1-A
Matrix: Air
Analysis Batch: 78294

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 78174

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.000200	ug/Sample		09/26/23 08:42	09/28/23 11:08	1
		MB	MB						
Isotope Dilution	%Recovery	Qualifier	Limits						
13C3 HFPO-DA	82		25 - 150						
		MB	MB						
				Prepared		Analyzed			
				09/26/23 08:42		09/28/23 11:08			

Lab Sample ID: LCS 140-78174/2-A
Matrix: Air
Analysis Batch: 78294

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 78174

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA	0.0100	0.009299		ug/Sample		93	60 - 140		
		LCS	LCS						
Isotope Dilution	%Recovery	Qualifier	Limits						
13C3 HFPO-DA	82		25 - 150						

Lab Sample ID: LCSD 140-78174/3-A
Matrix: Air
Analysis Batch: 78294

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 78174

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HFPO-DA	0.0100	0.009740		ug/Sample		97	60 - 140	5	30
		LCSD	LCSD						
Isotope Dilution	%Recovery	Qualifier	Limits						
13C3 HFPO-DA	78		25 - 150						

QC Association Summary

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

Job ID: 140-33526-1

LCMS

Prep Batch: 77978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33526-1	N-1157,1158 QC OTM-45 FH PBT	Total/NA	Air	None	
140-33526-7	N-1166,1167 QC OTM-45 FH BT	Total/NA	Air	None	
140-33526-12	A-1767 OTM-45 MEDIA CHECK FILTER	Total/NA	Air	None	
MB 140-77978/1-B	Method Blank	Total/NA	Air	None	
LCS 140-77978/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-77978/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Cleanup Batch: 78013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33526-1	N-1157,1158 QC OTM-45 FH PBT	Total/NA	Air	Split	77978
140-33526-7	N-1166,1167 QC OTM-45 FH BT	Total/NA	Air	Split	77978
140-33526-12	A-1767 OTM-45 MEDIA CHECK FILTER	Total/NA	Air	Split	77978
MB 140-77978/1-B	Method Blank	Total/NA	Air	Split	77978
LCS 140-77978/2-B	Lab Control Sample	Total/NA	Air	Split	77978
LCSD 140-77978/3-B	Lab Control Sample Dup	Total/NA	Air	Split	77978

Prep Batch: 78136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33526-2	N-1159,1160,1162 QC OTM-45 BH PBT	Total/NA	Air	None	
140-33526-4	N-1163 QC OTM-45 BREAKTHROUGH XAD-2 R	Total/NA	Air	None	
140-33526-6	N-1165 QC OTM-45 MEOH WITH 5% NH4OH RI	Total/NA	Air	None	
140-33526-8	N-1168,1169,1171 QC OTM-45 BH BT	Total/NA	Air	None	
140-33526-10	N-1172 QC OTM-45 BREAKTHROUGH XAD-2 R	Total/NA	Air	None	
140-33526-11	A-1766 OTM-45 MEDIA CHECK XAD	Total/NA	Air	None	
MB 140-78136/1-B	Method Blank	Total/NA	Air	None	
LCS 140-78136/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-78136/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Prep Batch: 78174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33526-3	N-1161 QC OTM-45 IMPINGERS 1,2&3 CONDEI	Total/NA	Air	PFAS Prep	
140-33526-5	N-1164 QC OTM-45 DI WATER RB	Total/NA	Air	PFAS Prep	
140-33526-9	N-1170 QC OTM-45 IMPINGERS 1,2&3 CONDEI	Total/NA	Air	PFAS Prep	
MB 140-78174/14-A	Method Blank	Total/NA	Air	PFAS Prep	
MB 140-78174/1-A	Method Blank	Total/NA	Air	PFAS Prep	
LCS 140-78174/2-A	Lab Control Sample	Total/NA	Air	PFAS Prep	
LCSD 140-78174/3-A	Lab Control Sample Dup	Total/NA	Air	PFAS Prep	

Cleanup Batch: 78264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33526-2	N-1159,1160,1162 QC OTM-45 BH PBT	Total/NA	Air	Split	78136
140-33526-4	N-1163 QC OTM-45 BREAKTHROUGH XAD-2 R	Total/NA	Air	Split	78136
140-33526-6	N-1165 QC OTM-45 MEOH WITH 5% NH4OH RI	Total/NA	Air	Split	78136
140-33526-8	N-1168,1169,1171 QC OTM-45 BH BT	Total/NA	Air	Split	78136
140-33526-10	N-1172 QC OTM-45 BREAKTHROUGH XAD-2 R	Total/NA	Air	Split	78136
140-33526-11	A-1766 OTM-45 MEDIA CHECK XAD	Total/NA	Air	Split	78136
MB 140-78136/1-B	Method Blank	Total/NA	Air	Split	78136
LCS 140-78136/2-B	Lab Control Sample	Total/NA	Air	Split	78136
LCSD 140-78136/3-B	Lab Control Sample Dup	Total/NA	Air	Split	78136

Eurofins Knoxville

QC Association Summary

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

Job ID: 140-33526-1

LCMS

Analysis Batch: 78294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33526-3	N-1161 QC OTM-45 IMPINGERS 1,2&3 CONDEI	Total/NA	Air	537 (modified)	78174
140-33526-5	N-1164 QC OTM-45 DI WATER RB	Total/NA	Air	537 (modified)	78174
140-33526-9	N-1170 QC OTM-45 IMPINGERS 1,2&3 CONDEI	Total/NA	Air	537 (modified)	78174
MB 140-78174/14-A	Method Blank	Total/NA	Air	537 (modified)	78174
MB 140-78174/1-A	Method Blank	Total/NA	Air	537 (modified)	78174
LCS 140-78174/2-A	Lab Control Sample	Total/NA	Air	537 (modified)	78174
LCSD 140-78174/3-A	Lab Control Sample Dup	Total/NA	Air	537 (modified)	78174

Analysis Batch: 78837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33526-1	N-1157,1158 QC OTM-45 FH PBT	Total/NA	Air	537 (modified)	78013
140-33526-7	N-1166,1167 QC OTM-45 FH BT	Total/NA	Air	537 (modified)	78013
140-33526-12	A-1767 OTM-45 MEDIA CHECK FILTER	Total/NA	Air	537 (modified)	78013
MB 140-77978/1-B	Method Blank	Total/NA	Air	537 (modified)	78013
LCS 140-77978/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	78013
LCSD 140-77978/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	78013

Analysis Batch: 78868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33526-2	N-1159,1160,1162 QC OTM-45 BH PBT	Total/NA	Air	537 (modified)	78264
140-33526-4	N-1163 QC OTM-45 BREAKTHROUGH XAD-2 R	Total/NA	Air	537 (modified)	78264
140-33526-8	N-1168,1169,1171 QC OTM-45 BH BT	Total/NA	Air	537 (modified)	78264
140-33526-10	N-1172 QC OTM-45 BREAKTHROUGH XAD-2 R	Total/NA	Air	537 (modified)	78264
140-33526-11	A-1766 OTM-45 MEDIA CHECK XAD	Total/NA	Air	537 (modified)	78264
MB 140-78136/1-B	Method Blank	Total/NA	Air	537 (modified)	78264
LCS 140-78136/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	78264
LCSD 140-78136/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	78264

Analysis Batch: 79451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-33526-6	N-1165 QC OTM-45 MEOH WITH 5% NH4OH RI	Total/NA	Air	537 (modified)	78264

Lab Chronicle

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

Job ID: 140-33526-1

Client Sample ID: N-1157,1158 QC OTM-45 FH PBT

Lab Sample ID: 140-33526-1

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	81 mL	77978	09/20/23 16:24	RPT	EET KNX
Total/NA	Cleanup	Split			41 mL	10 mL	78013	09/21/23 11:50	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78837	10/10/23 21:24	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: N-1159,1160,1162 QC OTM-45 BH PBT

Lab Sample ID: 140-33526-2

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	78136	09/25/23 11:01	PRR	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78264	09/27/23 11:49	PRR	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78868	10/11/23 19:52	CAC	EET KNX
Instrument ID: LCA										

**Client Sample ID: N-1161 QC OTM-45 IMPINGERS 1,2&3
 CONDENSATE PBT**

Lab Sample ID: 140-33526-3

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			.00645 Sample	10 mL	78174	09/26/23 08:42	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78294	09/28/23 13:47	CAC	EET KNX
Instrument ID: LCA										

**Client Sample ID: N-1163 QC OTM-45 BREAKTHROUGH
 XAD-2 RESIN TUBE PBT**

Lab Sample ID: 140-33526-4

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	78136	09/25/23 11:01	PRR	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78264	09/27/23 11:49	PRR	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78868	10/11/23 20:01	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: N-1164 QC OTM-45 DI WATER RB

Lab Sample ID: 140-33526-5

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			.02 Sample	10 mL	78174	09/26/23 08:42	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78294	09/28/23 13:56	CAC	EET KNX
Instrument ID: LCA										

Eurofins Knoxville

Lab Chronicle

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

Job ID: 140-33526-1

**Client Sample ID: N-1165 QC OTM-45 MEOH WITH 5% NH4OH
 RB**

Lab Sample ID: 140-33526-6

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	78136	09/25/23 11:01	PRR	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	78264	09/27/23 11:49	PRR	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	79451	10/25/23 09:51	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: N-1166,1167 QC OTM-45 FH BT

Lab Sample ID: 140-33526-7

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	63 mL	77978	09/20/23 16:24	RPT	EET KNX
Total/NA	Cleanup	Split			32 mL	10 mL	78013	09/21/23 11:50	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78837	10/10/23 21:33	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: N-1168,1169,1171 QC OTM-45 BH BT

Lab Sample ID: 140-33526-8

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	78136	09/25/23 11:01	PRR	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78264	09/27/23 11:49	PRR	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78868	10/11/23 20:36	CAC	EET KNX
Instrument ID: LCA										

**Client Sample ID: N-1170 QC OTM-45 IMPINGERS 1,2&3
 CONDENSATE BT**

Lab Sample ID: 140-33526-9

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			.00645 Sample	10 mL	78174	09/26/23 08:42	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78294	09/28/23 14:05	CAC	EET KNX
Instrument ID: LCA										

**Client Sample ID: N-1172 QC OTM-45 BREAKTHROUGH
 XAD-2 RESIN TUBE BT**

Lab Sample ID: 140-33526-10

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	78136	09/25/23 11:01	PRR	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78264	09/27/23 11:49	PRR	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78868	10/11/23 20:45	CAC	EET KNX
Instrument ID: LCA										

Eurofins Knoxville

Lab Chronicle

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

Job ID: 140-33526-1

Client Sample ID: A-1766 OTM-45 MEDIA CHECK XAD

Lab Sample ID: 140-33526-11

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	78136	09/25/23 11:01	PRR	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78264	09/27/23 11:49	PRR	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78868	10/11/23 20:54	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: A-1767 OTM-45 MEDIA CHECK FILTER

Lab Sample ID: 140-33526-12

Date Collected: 09/12/23 00:00

Matrix: Air

Date Received: 09/14/23 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	77978	09/20/23 16:24	RPT	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	78013	09/21/23 11:50	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78837	10/10/23 21:41	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-77978/1-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	77978	09/20/23 16:24	RPT	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	78013	09/21/23 11:50	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78837	10/10/23 19:47	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-78136/1-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	78136	09/25/23 11:01	PRR	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78264	09/27/23 11:49	PRR	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78868	10/11/23 19:26	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-78174/14-A

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			1 Sample	10 mL	78174	09/26/23 08:42	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78294	09/28/23 13:21	CAC	EET KNX
Instrument ID: LCA										

Eurofins Knoxville

Lab Chronicle

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

Job ID: 140-33526-1

Client Sample ID: Method Blank

Lab Sample ID: MB 140-78174/1-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	78174	09/26/23 08:42	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78294	09/28/23 11:08	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-77978/2-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	77978	09/20/23 16:24	RPT	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	78013	09/21/23 11:50	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78837	10/10/23 19:56	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-78136/2-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	78136	09/25/23 11:01	PRR	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78264	09/27/23 11:49	PRR	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78868	10/11/23 19:34	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-78174/2-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	78174	09/26/23 08:42	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78294	09/28/23 11:16	CAC	EET KNX
Instrument ID: LCA										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-77978/3-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	77978	09/20/23 16:24	RPT	EET KNX
Total/NA	Cleanup	Split			25 mL	10 mL	78013	09/21/23 11:50	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78837	10/10/23 20:05	CAC	EET KNX
Instrument ID: LCA										

Lab Chronicle

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

Job ID: 140-33526-1

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-78136/3-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	78136	09/25/23 11:01	PRR	EET KNX
Total/NA	Cleanup	Split			180 mL	10 mL	78264	09/27/23 11:49	PRR	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78868	10/11/23 19:43	CAC	EET KNX

Instrument ID: LCA

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-78174/3-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	78174	09/26/23 08:42	RPT	EET KNX
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	78294	09/28/23 11:25	CAC	EET KNX

Instrument ID: LCA

Laboratory References:

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

Accreditation/Certification Summary

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

Job ID: 140-33526-1

Laboratory: Eurofins Knoxville

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

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-25
ANAB	Dept. of Energy	L2311.01	02-13-25
ANAB	ISO/IEC 17025	L2311	02-13-25
Arkansas DEQ	State	88-0688	06-16-24
Colorado	State	TN00009	02-29-24
Connecticut	State	PH-0223	09-30-25
Florida	NELAP	E87177	06-30-24
Georgia (DW)	State	906	07-27-25
Hawaii	State	NA	07-27-24
Kansas	NELAP	E-10349	10-31-23
Kentucky (DW)	State	90101	12-31-23
Louisiana (All)	NELAP	83979	06-30-24
Louisiana (DW)	State	LA019	12-31-23
Maryland	State	277	03-31-24
Michigan	State	9933	07-27-25
Nevada	State	TN00009	07-31-24
New Hampshire	NELAP	2999	01-17-24
New Jersey	NELAP	TN001	07-01-24
New York	NELAP	10781	03-31-24
North Carolina (DW)	State	21705	07-31-24
North Carolina (WW/SW)	State	64	12-31-23
Oklahoma	State	9415	12-31-23
Oregon	NELAP	TNI0189	01-01-24
Pennsylvania	NELAP	68-00576	12-01-23
Tennessee	State	02014	07-27-25
Texas	NELAP	T104704380-23-18	08-31-24
US Fish & Wildlife	US Federal Programs	058448	07-31-24
USDA	US Federal Programs	525-22-279-18762	10-06-25
Utah	NELAP	TN00009	07-31-24
Virginia	NELAP	460176	09-14-24
Washington	State	C593	01-19-24
West Virginia (DW)	State	9955C	12-31-23
West Virginia DEP	State	345	04-30-24
Wisconsin	State	998044300	08-31-24

Method Summary

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

Job ID: 140-33526-1

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

Job ID: 140-33526-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-33526-1	N-1157,1158 QC OTM-45 FH PBT	Air	09/12/23 00:00	09/14/23 14:30
140-33526-2	N-1159,1160,1162 QC OTM-45 BH PBT	Air	09/12/23 00:00	09/14/23 14:30
140-33526-3	N-1161 QC OTM-45 IMPINGERS 1,2&3 CONDENSATE PBT	Air	09/12/23 00:00	09/14/23 14:30
140-33526-4	N-1163 QC OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE PBT	Air	09/12/23 00:00	09/14/23 14:30
140-33526-5	N-1164 QC OTM-45 DI WATER RB	Air	09/12/23 00:00	09/14/23 14:30
140-33526-6	N-1165 QC OTM-45 MEOH WITH 5% NH4OH Rf	Air	09/12/23 00:00	09/14/23 14:30
140-33526-7	N-1166,1167 QC OTM-45 FH BT	Air	09/12/23 00:00	09/14/23 14:30
140-33526-8	N-1168,1169,1171 QC OTM-45 BH BT	Air	09/12/23 00:00	09/14/23 14:30
140-33526-9	N-1170 QC OTM-45 IMPINGERS 1,2&3 CONDENSATE BT	Air	09/12/23 00:00	09/14/23 14:30
140-33526-10	N-1172 QC OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE BT	Air	09/12/23 00:00	09/14/23 14:30
140-33526-11	A-1766 OTM-45 MEDIA CHECK XAD	Air	09/12/23 00:00	09/14/23 14:30
140-33526-12	A-1767 OTM-45 MEDIA CHECK FILTER	Air	09/12/23 00:00	09/14/23 14:30



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



Environment Testing
 America

Project Identification:	Chemours Emissions Test
Client Name:	The Chemours Company FC, LLC
Client Contact:	Eddie Vega (910) 678-1938
TestAmerica Project Manager:	Courtney Adkins Office: (865) 291-3019
TestAmerica Program Manager:	Billy Anderson Office: (865) 291-3080 Cell: (865) 206-9004
Analytical Testing QC Requirements:	The Legend for ProjectB-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

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:	HFP-DA (CAS No. 13252-13-6) & PFOA (CAS No. 335-67-1)
Holding Time Requirements:	14 Days to Extraction; 40 Days to Analysis
Preservation Requirements:	Cool, 4°C

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

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
N-1157 QC OTM-45 Filter PBT	QC	9/12/23	Proof Blank Train	250 mL HDPE Wide-Mouth Bottle	Particulate Filter (82.6 mm Whatman Glass Microfiber)	Knoxville: Spike sample with the Isotope Dilution Internal Standard (DIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Filter sample. Analyze for HFP-DA.
(Combine with N-1157)						
N-1158 QC OTM-45 FH of Filter Holder & Probe MeOH Rinse PBT	QC	9/12/23	Proof Blank Train	250 mL HDPE Wide-Mouth Bottle	Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse	Knoxville: Use this solvent sample in the Filter extraction.
N-1159 QC OTM-45 XAD-2 Resin Tube PBT	QC	9/12/23	Proof Blank Train	XAD-2 Resin Tube	XAD-2 Resin Tube	Knoxville: Spike sample with the Isotope Dilution Internal Standard (DIS) 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 HFP-DA.



140-33526 Chain of Custody



Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Container/Bottle	Sample Type/Analysis	Analytical Specifications
N-1160 QC OTM-45 BH of Filter Holder & Coil Condenser MeOH Rinse PBT (Combine with N-1159)	QC	9/12/23	Blank Train	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.
N-1161 QC OTM-45 Impingers 1,2 & 3 Condensate PBT	QC	9/12/23	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.
N-1162 QC OTM-45 Impinger Glassware MeOH Rinse PBT (Combine with N-1159)	QC	9/12/23	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.
N-1163 QC OTM-45 Breakthrough XAD-2 Resin Tube PBT	QC	9/12/23	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 (DIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA.
N-1164 QC OTM-45 DI Water RB	QC	9/12/23	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.
N-1165 QC OTM-45 MeOH with 5% NH4OH RB	QC	9/12/23	Reagent Blank	250 mL HDPE Wide-Mouth Bottle	Methanol with 5% NH4OH Reagent Blank OTM-45 Reagent Blank HFPO-DA Analysis	Knoxville: Analyze for HFPO-DA.

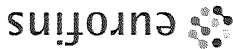
Request for Analysis/Chain-of-Custody – RFA/COC #003
 The Chemours Company – Fayetteville NC
 Carbon Bed Field QC Samples



Environment Testing
 America

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Container/Bottle/	Sample Type/Analysis	Analytical Specifications
N-1166 QC OTM-45 Filter BT (Combine with N-1167)	QC	9/12/23	Field Blank Train	250 mL HDPE Wide-Mouth Bottle	Particulate Filter (8.6 mm Whatman Glass Microfiber) OTM-45 Field Blank Train HFP0-DA Analysis	Knoxville: Spike sample with the Front-Half Probe Rinse to assist the solvent extraction of the Filter sample. Analyze for HFP0-DA.
N-1167 QC OTM-45 FH of Filter Holder & Probe Rinse BT (Combine with N-1166)	QC	9/12/23	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 HFP0-DA Analysis	Knoxville: Use this solvent sample in the Filter extraction.
N-1168 QC OTM-45 XAD-2 Resin Tube BT	QC	9/12/23	Field Blank Train	XAD-2 Resin Tube	XAD-2 Resin Tube OTM-45 Field Blank Train HFP0-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (DIS) 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 HFP0-DA.
N-1169 QC OTM-45 BH of Filter Holder & Coil Condenser MeOH Rinse BT (Combine with N-1168)	QC	9/12/23	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 HFP0-DA Analysis	Knoxville: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction. Analyze for HFP0-DA.
N-1170 QC OTM-45 Impingers 1,2 & 3 Condensate BT	QC	9/12/23	Field Blank Train	1 Liter HDPE Wide-Mouth Bottle	Impinger #1, #2 & #3 OTM-45 Field Blank Train HFP0-DA Analysis	Knoxville: Analyze for HFP0-DA.

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



Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Bottle/Container	Sample Type/Analysis	Analytical Specifications
N-1171 QC OTM-45 Impinger Glassware MeOH Rinse BT (Combine with N-1168)	QC	9/12/23	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.
N-1172 QC OTM-45 Breakthrough XAD-2 Resin Tube BT	QC	9/12/23	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 (DIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA.

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



Sample Receipt Log and Condition of the Samples Upon Receipt:

Please fill in the following information:

Comments

(Please write "NONE" if no comment applicable)

(1) Record the identities of any samples that were listed on the RFA but were not found in the sample shipment.

NONE

(2) Record the sample shipping cooler temperature of all coolers transporting samples listed on this RFA:

RT a.h/ta.s.c

(3) Record any a2rent sample loss/breakage.

NONE

(4) Record any unidentified samples transported with this shipment of samples:

NONE

(5) Indicate if all samples were received according to the project's required specifications (i.e. no nonconformances):

ALL DELIVERED AND CUSTODY SEALS

Custody Transfer:

Relinquished By:	<i>John M. [Signature]</i>	Name	Company	Date/Time
Accepted By:	<i>[Signature]</i>	Name	Company	9/14/23 (14:30)
Relinquished By:		Name	Company	
Accepted By:		Name	Company	
Relinquished By:		Name	Company	
Accepted By:		Name	Company	
Relinquished By:		Name	Company	
Accepted By:		Name	Company	
Relinquished By:		Name	Company	
Accepted By:		Name	Company	
Relinquished By:		Name	Company	
Accepted By:		Name	Company	

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

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	
2. Were ambient air containers received intact?		/		<input type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?		/		<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : <u>S716</u> Correction factor: <u>-0.1°C</u>	/			<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	Labeling Verified by: _____ Date: _____
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> Sampler Not Listed on COC	
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	Box 16A: pH Preservation Box 18A: Residual Chlorine
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	Preservative: _____
16. Were samples received with correct chemical preservative (excluding Encore)?	/			<input type="checkbox"/> pH Adjusted, pH Included (See box 16A)	Lot Number: _____
17. Were VOA samples received without headspace?	/			<input type="checkbox"/> Incorrect Preservative	Exp Date: _____
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____	/			<input type="checkbox"/> Headspace (VOA only) <input type="checkbox"/> Residual Chlorine	Analyst: _____ Date: _____ Time: _____
19. For 1613B water samples is pH<9?	/			<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?	/			<input type="checkbox"/> Project missing info	
Project #: _____				PM Instructions: _____	

QA026R32.doc, 062719

Date: 9/15/23

Sample Receiving Associate: *[Signature]*



Appendix D

Location Chemours Company - Fayetteville Works Facility, NC
 Source VEN Carbon Bed Inlet
 Project No. AST-2023-3974
 Parameter HFPO-DA


Date	Nozzle ID	Nozzle Diameter (in.)			Dn (Average)	Difference	Criteria	Material
		#1	#2	#3				
9/13/23	G-2	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?				
9/13/23	P4-1	no	no	no				
Date	Probe or Thermocouple ID	Reference Temp. (°F)	Indicated Temp. (°F)	Difference	Criteria	Probe Length		
9/13/23	P4-1	68.0	68.0	0.0%	± 1.5 % (absolute)	5'		
Field Balance Check								
Date	09/13/23							
Balance ID:	Citizen							
Test Weight ID:	SYR-1000							
Certified Weight (g):	1000.0							
Measured Weight (g):	999.6							
Weight Difference (g):	0.4	--	--	--	--	--		
Date	Barometric Pressure	Evidence of damage?	Reading Verified	Calibration or Repair required?	Weather Station Location			
9/13/23	Weather Station	NA	NA	NA	Fayetteville, NC			
Date	Meter Box ID	Positive Pressure Leak Check						
9/13/23	5	Pass						
Reagent	Lot#	Field Prep performed	Field Lot	Date	By			
Ammonia/MeOH Mix	Eurofins	No	N/A	N/A	N/A			
DIUF	Eurofins	No	N/A	N/A	N/A			

Balance Check must be conducted each day
Acceptable Balance Tolerance is measurement within +/- 0.5g of certified weight

Location Chemours Company - Fayetteville Works Facility, NC
 Source VEN Carbon Bed Outlet
 Project No. AST-2023-3974
 Parameter HFPO-DA

Date	Nozzle ID	Nozzle Diameter (in.)			Dn (Average)	Difference	Criteria	Material
		#1	#2	#3				
9/13/23	G-7	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?				
9/13/23	P4-2	no	no	no				
Date	Probe or Thermocouple ID	Reference Temp. (°F)	Indicated Temp. (°F)	Difference	Criteria	Probe Length		
9/13/23	P4-2	68.0	68.0	0.0%	± 1.5 % (absolute)	5'		
Field Balance Check								
Date	09/13/23							
Balance ID:	Citizen							
Test Weight ID:	SYR-1000							
Certified Weight (g):	1000.0							
Measured Weight (g):	999.6							
Weight Difference (g):	0.4	--	--	--	--	--		
Date	Barometric Pressure	Evidence of damage?	Reading Verified	Calibration or Repair required?	Weather Station Location			
9/13/23	Weather Station	NA	NA	NA	Fayetteville, NC			
Date	Meter Box ID	Positive Pressure Leak Check						
9/13/23	MB 3	Pass						
Reagent	Lot#	Field Prep performed	Field Lot	Date	By			
Ammonia/MeOH	Eurofins	No	N/A	N/A	N/A			
DIUF	Eurofins	No	N/A	N/A	N/A			

Balance Check must be conducted each day
Acceptable Balance Tolerance is measurement within +/- 0.5g of certified weight

	DGM Calibration-Orifices	Document ID	620.004
		Revision	20.1
		Effective Date	
Issuing Department	Tech Services	Page	1 of 1

Equipment Detail - Dry Gas Meter

Console ID: 3
 Meter S/N: 15042588
 Critical Orifice S/N: 1393

Calibration Detail

Initial Barometric Pressure, in. Hg (P _{b_i})		30.21					
Final Barometric Pressure, in. Hg (P _{b_f})		30.21					
Average Barometric Pressure, in. Hg (P _b)		30.21					
Critical Orifice ID (Y)	11	11	18	18	31	31	
K' Factor, ft ³ ·R ^{1/2} / in. WC·min (K')	0.3073	0.3073	0.5023	0.5023	0.8358	0.8358	
Vacuum Pressure, in. Hg (V _p)	24.0	24.0	20.5	20.5	17.5	17.5	
Initial DGM Volume, ft ³ (V _{m_i})	121.975	128.160	134.256	144.263	154.285	171.843	
Final DGM Volume, ft ³ (V _{m_f})	128.059	134.256	144.263	154.285	170.732	188.329	
Total DGM Volume, ft ³ (V _m)	6.084	6.096	10.007	10.022	16.447	16.486	
Ambient Temperature, °F (T _a)	63	63	63	63	63	63	
Initial DGM Temperature, °F (T _{m_i})	64	65	65	67	67	68	
Final DGM Temperature, °F (T _{m_f})	65	65	66	68	69	71	
Average DGM Temperature, °F (T _m)	65	65	66	68	68	70	
Elapsed Time (Θ)	15.00	15.00	15.00	15.00	15.00	15.00	
Meter Orifice Pressure, in. WC (ΔH)	0.43	0.43	1.20	1.20	3.60	3.60	
Standard Meter volume, ft ³ (V _{mstd})	6.1916	6.1979	10.1836	10.1602	16.7551	16.7472	
Standard Critical Orifice Volume, ft ³ (V _{c_r})	6.0909	6.0909	9.9560	9.9560	16.5662	16.5662	
Meter Correction Factor (Y)	0.984	0.983	0.978	0.980	0.989	0.989	
Tolerance --	0.000	0.001	0.006	0.004	0.005	0.006	
Orifice Calibration Value (ΔH @)	1.493	1.491	1.559	1.553	1.691	1.687	
Tolerance --	0.086	0.088	0.020	0.026	0.112	0.107	
Orifice Cal Check --	0.58		1.03		1.04		
Meter Correction Factor (Y)	0.984						
Orifice Calibration Value (ΔH @)	1.579						
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	98	558	0.4	2
200	660	199	659	0.2	1
300	760	299	759	0.1	1
400	860	396	856	0.5	4
500	960	496	956	0.4	4
600	1,060	599	1,059	0.1	1
700	1,160	696	1,156	0.3	4
800	1,260	800	1,260	0.0	0
900	1,360	896	1,356	0.3	4
1,000	1,460	1,000	1,460	0.0	0
1,100	1,560	1,100	1,560	0.0	0
1,200	1,660	1,198	1,658	0.1	2

Personnel

Calibration By: Jacob Cavallo
 Calibration Date: 06/09/23
 Expiration Date: 12/09/23

	DGM Calibration-Orifices	Document ID	620.004
		Revision	20.1
Issuing Department	Tech Services	Effective Date	1/28/22
		Page	1 of 1

Equipment Detail - Dry Gas Meter

Console ID: 5
 Meter S/N: 20035532
 Critical Orifice S/N: co-1393

Calibration Detail

Initial Barometric Pressure, in. Hg (P _b)		29.85					
Final Barometric Pressure, in. Hg (P _f)		29.10					
Average Barometric Pressure, in. Hg (P _b)		29.48					
Critical Orifice ID (Y)		18	18	16	16	26	26
K' Factor, ft ³ ·R ^{1/2} / in. WC·min (K')		0.5023	0.5023	0.4273	0.4273	0.7060	0.7060
Vacuum Pressure, in. Hg (V _p)		22.0	20.0	19.5	19.5	16.0	16.0
Initial DGM Volume, ft ³ (V _m)		729.819	739.881	749.835	758.361	766.722	780.623
Final DGM Volume, ft ³ (V _m)		739.881	749.835	758.361	766.722	780.623	794.518
Total DGM Volume, ft ³ (V _m)		10.062	9.954	8.526	8.361	13.901	13.895
Ambient Temperature, °F (T _a)		72	72	72	73	73	73
Initial DGM Temperature, °F (T _m)		72	72	73	74	74	74
Final DGM Temperature, °F (T _m)		72	73	74	74	74	75
Average DGM Temperature, °F (T _m)		72	73	74	74	74	75
Elapsed Time (Θ)		15.00	15.00	15.00	15.00	15.00	15.00
Meter Orifice Pressure, in. WC (ΔH)		1.40	1.30	1.00	1.00	2.80	2.80
Standard Meter volume, ft ³ (V _{mstd})		9.8740	9.7564	8.3348	8.1659	13.6374	13.6188
Standard Critical Orifice Volume, ft ³ (V _c)		9.6312	9.6312	8.1931	8.1854	13.5242	13.5242
Meter Correction Factor (Y)		0.975	0.987	0.983	1.002	0.992	0.993
Tolerance	--	0.013	0.002	0.006	0.014	0.003	0.004
Orifice Calibration Value (ΔH @)		1.874	1.739	1.843	1.845	1.901	1.899
Tolerance	--	0.024	0.112	0.007	0.005	0.051	0.049
Orifice Cal Check	--	1.15		1.16		1.13	
Meter Correction Factor (Y)		0.989					
Orifice Calibration Value (ΔH @)		1.850					
Positive Pressure Leak Check		Yes					

Equipment Detail - Thermocouple Sensor

Reference Calibrator Make: Altek
 Reference Calibrator Model: Series 22
 Reference Calibrator S/N: 845031

Calibration Detail

Reference Temp.		Display Temp.		Accuracy	Difference
°F	°R	°F	°R	%	°F
0	460	0	460	0.0	0
100	560	99	559	0.2	1
200	660	199	659	0.2	1
300	760	298	758	0.3	2
400	860	398	858	0.2	2
500	960	497	957	0.3	3
600	1,060	596	1,056	0.4	4
700	1,160	699	1,159	0.1	1
800	1,260	797	1,257	0.2	3
900	1,360	898	1,358	0.1	2
1,000	1,460	999	1,459	0.1	1
1,100	1,560	1,097	1,557	0.2	3
1,200	1,660	1,195	1,655	0.3	5
1,300	1,760	1,299	1,759	0.1	1
1,400	1,860	1,398	1,858	0.1	2
1,500	1,960	1,497	1,957	0.2	3

Personnel

Calibration By: Jeffrey Sheldon
 Calibration Date: 6/27/2023
 Expiration Date: 12/27/2023

Appendix E

VEN Operations Data

Date 9/13/2023

Time	800	900	1000	1100	1200	1300	1400	1500	1600
Stack Testing		Run 1: 8:45-10:44		Run 2: 11:25-13:17			Run 3: 14:21-16:15		
VEN Produ	EVE								
VEN Precu									
VEN Conde									
VEN ABR									
VEN Refini									
Stripper Cd									

Last Page of Report