WISCONSIN AIR NATIONAL GUARD
HEADQUARTERS 115TH FIGHTER WING (ACC) (ANG)
3110 MITCHELL STREET
MADISON WISCONSIN 53704-2529

21 September 2021

MEMORANDUM FOR WISCONSIN DEPARTMENT OF NATURAL RESOURCES

FROM: 115 CES/CC

SUBJECT: XGFG192004 F-35 Addition Building 426, Truax Field. Materials Management Plan Addendum – BRRTS #: 02-13-585319

1. Pursuant to the 21 July 2021 approved materials management plan, this serves as a project specific addendum for the subject project.

2. Attachment 1 details PFAS sampling results for the subject project. Attachment 2 details the areas which were found to contain PFAS. For materials removed within the 50' x 50' red box associated with Sample Points E-426-1 and E-426-2, material will be managed as PFAS compromised soil. Materials removed within these boundaries (vertically and horizontally) will be managed in accordance with the 21 July 2021 letter, BRRTS #: 02-13-585319. These sample boundaries represent the entirety of the construction area.

3. If you have any additional questions, please feel free to contact me at 608-286-0010 or michael.dunlap@us.af.mil at any time. Thank you in advance for your review of this material management plan.

DUNLAP.MICHAEL.J.1138452693 Digitally signed by DUNLAP.MICHAEL.J.1138452693 Date: 2021.09.21 16:50:17 -05'00'

MICHAEL J. DUNLAP, Lt Col, WI ANG
Commander, 115th Civil Engineer Squadron
Base Civil Engineer, 115th Fighter Wing

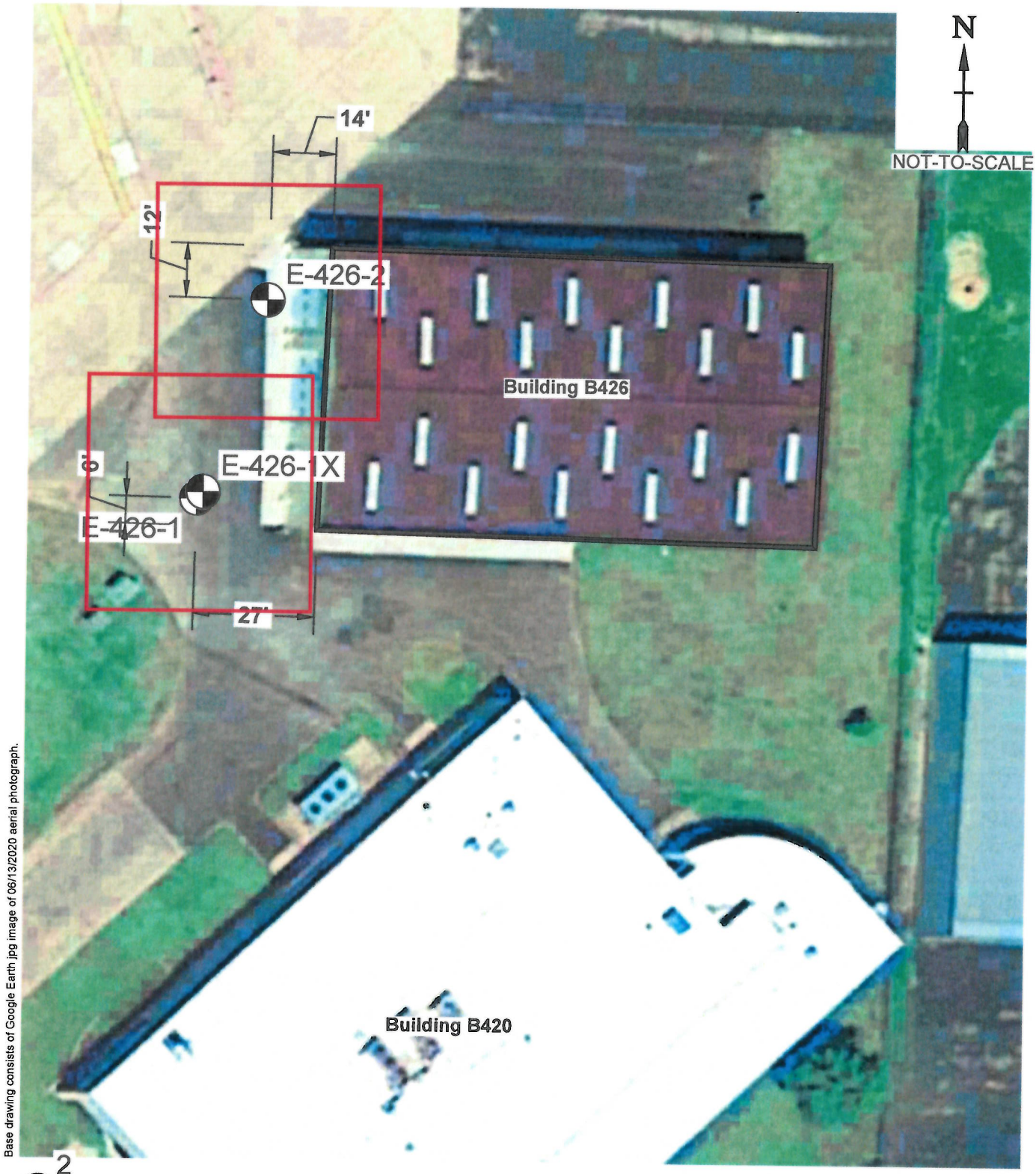
Attachment:
1. B426 Sampling Report Results
2. B426 Sampling Plan

B426 Soil sampling results - PFAS

Site	Analyte	CAS Number	Conc. (ng/g)	MDL	RL	Qualifiers	WI RCL NI (ng/g)	EPA RSL (ng/g)
E426-1,S1,4 1/2'	PFBA	375-22-4	0.277	0.263	0.495	J		
E426-1,S1,4 1/2'	PFPeA	2706-90-3	0.979	0.249	0.495			
E426-1,S1,4 1/2'	PFHxA	307-24-4	0.704	0.632	0.990	J		
E426-1,S1,4 1/2'	PFHpA	375-85-9	0.765	0.329	0.495			
E426-1,S1,4 1/2'	PFHxS	355-46-4	1.15	0.404	0.495			
E426-1,S1,4 1/2'	6:2 FTS	27619-97-2	5.99	0.642	0.990			
E426-1,S1,4 1/2'	PFOS	1763-23-1	181	0.756	0.990		1260	1260
E426-1,S1,4 1/2'	8:2 FTS	39108-34-4	0.760	0.533	0.990	J		
E426-1,S2,4'	PFHpA	375-85-9	0.778	0.316	0.476			
E426-1,S2,4'	PFHxS	355-46-4	3.10	0.389	0.476			
E426-1,S2,4'	6:2 FTS	27619-97-2	23.2	0.618	0.953			
E426-1,S2,4'	PFOA	335-67-1	1.25	0.274	0.476		1260	1260
E426-1,S2,4'	PFNA	375-95-1	1.68	0.358	0.476			
E426-1,S2,4'	PFOS	1763-23-1	1410	3.640	4.760	D	1260	1260
E426-1,S2,4'	8:2 FTS	39108-34-4	12.5	0.513	0.953			
E426-1 DUP	PFHpA	375-85-9	0.696	0.332	0.501			
E426-1 DUP	PFHxS	355-46-4	3.36	0.409	0.501			
E426-1 DUP	6:2 FTS	27619-97-2	22.0	0.649	1.000			
E426-1 DUP	PFOA	335-67-1	1.19	0.288	0.501		1260	1260
E426-1 DUP	PFNA	375-95-1	1.69	0.376	0.501			
E426-1 DUP	PFOS	1763-23-1	1500	3.82	5.01	D	1260	1260
E426-1 DUP	8:2 FTS	39108-34-4	12.4	0.539	1.00			
E426-2,S1,2'	PFHxS	355-46-4	0.592	0.391	0.479			
E426-2,S1,2'	PFOA	335-67-1	0.448	0.276	0.479	J	1260	1260
E426-2,S1,2'	PFOS	1763-23-1	13.20	0.732	0.958		1260	1260
E426-2,S2,4 1/2'	PFOS	1763-23-1	2.84	0.758	0.992		1260	1260

RCL NI - Residual Contaminant Level - non-industrial
RSL - US EPA Regional Screening Level (AF guidance for soils and sediments)
MDL = Method Detection Limit
RL = Reporting Limit

D = Dilution
J = The amount detected is below the Reporting Limit/LOQ
Q = The ion transition ratio is outside of the acceptance criteria.



Base drawing consists of Google Earth jpg image of 06/13/2020 aerial photograph.

2 = Boring 2 (typical)

Soils & Engineering Services, Inc.
1102 STEWART STREET
MADISON, WISCONSIN 53713-4648
Phone: 608-274-7600
CONSULTING CIVIL ENGINEERS SINCE 1966

LOCATION SKETCH
F35: Construct A/SE Cold Storage
Truax Air National Guard Base
City of Madison, Dane Coynty, Wisconsin
Project ID XGFG192004

DRAWING 508.02-2B

Created on 02/25/2021 Revised on

Soils & Engineering Services, Inc.

March 22, 2021 Project 508.02 R02

Mr. Charlie Loudon, RA, LEED AP BD+C, DBIA
Burns & McDonnell
9400 Ward Parkway
Kansas City, Missouri 64114

Subject: Environmental Exploration Report
F-35: Construct A/SE Cold Storage
Truax Air National Guard Base
City of Madison
Dane County, Wisconsin

Dear Mr. Loudon:

We have completed the requested environmental exploration consisting of the performance of three borings at the subject site and the associated chemical laboratory testing. The purpose of these borings was to obtain information about the soil, bedrock, and groundwater conditions at the boring locations. We present our findings and analyses results in the enclosed *Environmental Exploration Report* for the subject project. Engineering analysis of the chemical analyses results was not included in our scope of services for this work.

Respectfully submitted,

SOILS & ENGINEERING SERVICES, INC.

Craig M. Bower

Craig M. Bower, P.E.

CMB:DER:cmb

Enclosure

Delivered by email: cloudon@burnsmcd.com

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ENVIRONMENTAL EXPLORATION REPORT

F-35: CONSTRUCT A/SE COLD STORAGE
TRUAX AIR NATIONAL GUARD BASE
CITY OF MADISON
DANE COUNTY, WISCONSIN

SES Project Number 508.02

Prepared By

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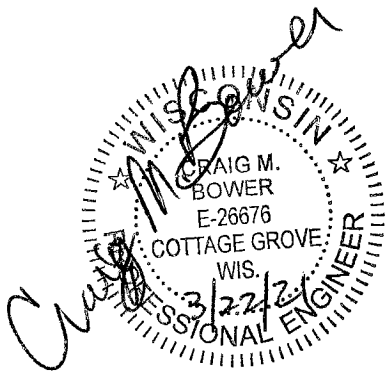
Duane E. Reichel, P.E.



Submitted To

Burns & McDonnell
9400 Ward Parkway
Kansas City, Missouri 64114
Phone: (816) 822-3927

Mr. Charlie Loudon, RA, LEED AP BD+C, DBIA

March 22, 2021

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I. INTRODUCTION

This *Environmental Exploration Report* summarizes the findings of the environmental exploration, and the related laboratory and field tests performed for the design and construction of a proposed addition to Building B426 on the Truax Air National Guard Base (ANGB) located in the City of Madison, in Dane County, Wisconsin. We understand that this work is for the Wisconsin Air National Guard 115th Fighter Wing stationed at the Truax ANGB. We completed this work under the general direction of Burns & McDonnell, who established the general scope of the work.

The intent of this report is to: (1) convey the environmental information obtained from the three borings and (2) present the results of laboratory and field tests. Engineering analysis of the chemical analyses results was not included our current scope of work for this project.

II. PROJECT INFORMATION

The project consists of a proposed addition to Building B426 on the Truax ANGB. The Truax ANGB is located on the north side of the City of Madison in Dane County, Wisconsin.

We understand the subject addition will be an unheated warehouse structure with plan dimensions of approximately 35 feet by 60 feet. It will be supported on a frost-depth spread footing foundation and will have a concrete slab-on-grade floor. No other design information was provided for the addition.

We understand the environmental exploration was requested to meet requirements specified by the State of Wisconsin Department of Natural Resources (WDNR) to determine if environmental contamination is present at the location of the proposed addition to A/SE Cold Storage Building B426, specifically as it related to the proposed site excavations. WDNR prepared a document entitled *Site Chacterization Sampling For Contaminated Material Management Purposes Construct A/SE Cold Storage* dated May 28, 2020. This document specified testing soil and water samples for volatile organic compounds (VOCs) and perfluoroalkyl and polyfluoroalkyl compounds(PFAS). This document provided the following scope of the field work.

- Two borings within the proposed addition area. The relative locations of the borings were provided in the WDNR document.
- Collect two discrete soil samples from each boring at depths of 1 to 2 feet below ground surface and at one foot above the water table and test for VOCs and PFAS.
- Collect and test one groundwater sample from each boring and test for VOCs and PFAS.

III. ENVIRONMENTAL EXPLORATION

The field exploration for the subject structure improvements consisted of the performance of three standard borings, (designated Borings E-426-1, E-426-1X, and E-426-2), at the project site. Due to insufficient recovered soil sample volume at Boring E-426-1, we performed Boring E-426-1X in close proximity to Boring E-426-1.

We present the results of this environmental field exploration on the WDNR Boring Log Information Forms enclosed in Appendix A. The WDNR Boring Log Information Forms present the subsurface stratigraphy and related information obtained by the borings. We provide information pertinent to the WDNR Boring Log Information Forms on the Notes and Legend Record enclosed in Appendix A.

A. Boring Locations

We located Borings E-426-1, E-426-1X, and E-426-2 in the vicinity of the requested locations as indicated on the Location Sketches, Drawings 508.02-2A and 508.02-2B, enclosed in Appendix A. We coordinated with 2nd Lt. Cory R. Corson, Wisconsin Air National Guard, for the placement of the boring locations to minimize disruption to the base operations and to avoid underground utility lines.

B. Boring Elevations

Soils & Engineering Services, Inc. personnel determined the ground surface elevation at the locations of Borings E-426-1, E-426-1X, and E-426-2 using a surveying level and a leveling rod. We used the rim of the sanitary sewer manhole located approximately 20 feet southeast of the southwest corner of the existing building for a benchmark. The benchmark has a given elevation of 858.45 feet per the drawings provided to us.

We include the ground surface elevations for the borings on the WDNR Boring Log Information Forms enclosed in Appendix A. The WDNR Boring Log Information Forms are plotted with a depth scale for reference.

C. Drilling and Sampling Procedures

We drilled and sampled Borings E-426-1, E-426-1X, and E-426-2 to the following depths below ground surface and corresponding elevations:

Boring	Ground Surface Elevation (feet)	Bottom of Boring	
		Depth (feet-inch)	Elevation (feet)
E-426-1	857.6	8'-0"	849.6
E-426-1X	857.6	12'-0"	845.6

Boring	Ground Surface Elevation (feet)	Bottom of Boring	
		Depth (feet-inch)	Elevation (feet)
E-426-2	857.5	12'-0"	845.5

We used a Geoprobe 7822DT drill rig mounted on a rubber-tracked carrier to complete the borings. We used a dual-tube direct push sampler to maintain an open borehole as we advanced the borehole of each boring to the termination depth. We obtained soil samples at 4-foot intervals starting at the ground surface and continued to the stated termination depth. We visually identified the recovered soils in general compliance with the Unified Soil Classification System (USCS) identification procedures as defined in ASTM Designation D2488.

After reaching the termination depth at each boring and removing the inner-tube of the sampler, we installed ¾-inch-diameter polyvinyl chloride (PVC) casing and screen inside of the outer Geoprobe casing at each borehole. We then removed the outer casing to expose the PVC screen to the subsurface water. The PVC casing and screen was manufactured by Monoflex and each section of PVC was factory sealed in plastic sheeting. We then used a Geopump peristaltic pump to obtain a groundwater sample from each borehole using high density polyethylene tubing inserted into each of the temporary wells. We disposed of the tubing following the water sample collection from each boring.

We performed the drilling and sampling for this project at the same time as the ADAL Building B510 project and shipped the samples from this exploration with the B510 samples. Please refer to the B510 project report for a description of the quality assurance samples obtained and submitted.

Please refer to the WDNR Boring Log Information Forms enclosed in Appendix A for additional information regarding the sampling of Borings E-426-1, E-426-1X, and E-426-2.

D. Subsurface Stratigraphy

We found the surficial soils/material to be frozen on the day of the sampling to the estimated depths and respective elevations for Borings E-426-1, E-426-1X, and E-426-2 as follows:

Boring	Ground Surface Elevation (feet)	Estimated Frost Top		Estimated Frost Bottom	
		Depth (feet-inch)	Elevation (feet)	Depth (feet-inch)	Elevation (feet)
E-426-1	857.6	0'-0"	857.6	3'-6"	854.1
E-426-1X	857.6	0'-0"	857.6	3'-6"	854.1

Boring	Ground Surface Elevation (feet)	Estimated Frost Top		Estimated Frost Bottom	
		Depth (feet-inch)	Elevation (feet)	Depth (feet-inch)	Elevation (feet)
E-426-2	857.5	0'-0"	857.5	3'-0"	854.5

The soil stratigraphy encountered at Borings E-426-1, E-426-1X, and E-426-2 consisted of fill material overlying native soil strata. None of the borings encountered bedrock below the native soil strata within the depths drilled.

The borings encountered variable fill material strata. We describe the fill material strata encountered at the borings as follows:

- Boring G-426-1 encountered 5¾ inches of hot-mix asphalt (HMA) pavement over 10¼ inches of light yellowish-brown fine to coarse POORLY-GRADED GRAVEL WITH SILT AND SAND (GP-GM) FILL crushed stone base course over 20 inches of dark grayish-brown fine POORLY-GRADED SAND (SP) FILL mixed with TOPSOIL.

- Boring G-426-2 encountered 5¾ inches of hot-mix asphalt (HMA) pavement over 18¼ inches of light yellowish-brown fine to coarse POORLY-GRADED GRAVEL WITH SILT AND SAND (GP-GM) FILL crushed stone base course over 12 inches of black LEAN CLAY (CL) FILL TOPSOIL over 12 inches of brown fine POORLY-GRADED SAND (SP) FILL.

Below the fill material, Borings E-426-1, E-426-1X, and E-426-2 encountered a native soil strata that was variable. We describe the native soil strata encountered at the borings as follows:

- Boring G-426-1 encountered pale brown to brown to gray fine POORLY-GRADED SAND WITH SILT (SP-SM).

- Boring G-426-2 encountered grayish-brown and yellowish-brown mottled SANDY LEAN CLAY (CL) over pale brown to brown to dark gray fine POORLY-GRADED SAND WITH SILT (SP-SM).

We noted that the POORLY-GRADED SAND WITH SILT (SP-SM)) stratum contained a variable amount of gravel from trace to little and also contained occasional fine to medium and fine to coarse seams.

Please refer to the WDNR Boring Log Information Forms enclosed in Appendix A for a further description of the fill material and native soil strata encountered at the boring locations.

E. Subsurface Water

Our drilling crew found the boreholes of the borings to be caved and wet at completion of the drilling and sampling of the borings. Our drilling crew obtained a water level through the temporary well screen before obtaining the water sample at Borings E-426-1X and E-426-2.

We summarize the water and caved level depths and respective elevations at completion for each boring as follows:

Boring	Ground Surface Elevation (feet)	Subsurface Water			Caved Level		
		Depth (feet-inch)	Elevation (feet)	Comments	Depth (feet-inch)	Elevation (feet)	Comments
E-426-1	857.6	—	—	—	5'-8"	851.9	Wet at completion
E-426-1X	857.6	5'-8"	851.9	Through temporary well screen before water sampling	—	—	—
		—	—	—	5'-8"	851.9	Wet at completion
E-426-2	857.5	5'-9"	851.8	Through temporary well screen before water sampling	—	—	—
		—	—	—	5'-9"	851.8	Wet at completion

We expect the subsurface water (groundwater) level to fluctuate as influenced by precipitation, snowmelt, surface water runoff, and other hydrological and hydrogeological factors. The groundwater level at the time of construction of the building improvements may be higher or lower than the groundwater levels encountered on the day that we performed the borings.

IV. CHEMICAL LABORATORY TESTS

We submitted two soil samples and one groundwater sample from each boring for laboratory analyses to CT Laboratories, LLC (CTL). CTL subcontracted with VISTA Analytical Laboratory for the PFAS testing. The requested laboratory analyses consisted of Volatile Organic Compounds (EPA Method 8260C) and Perfluoroalkyl and Polyfluoroalkyl (PFAS Isotope Dilution Method) for both sample matrices. After obtaining the samples, we shipped all of the samples to CTL. CTL then shipped the samples to VISTA.

We provide the following information regarding the soil and groundwater samples obtained from each of the borings:

Boring	Matrix	Sample Number	Approximate Sample Depth (feet)	SES Sample Identification	Samples Obtained	Laboratory Received	
						CTL	VISTA
E-426-1	Soil	1	4 1/2	E426-1,S1,4 1/2'	2/2/2021	2/3/2021	2/5/2021
		2	5 1/2	E426-1,S2,5 1/2'			
E-426-1X	Soil	1	2	E426-1,S1,2'	2/2/2021	2/3/2021	2/5/2021
		2	4	E426-1,S2,4'			
		2 Dup	4	E426-1 Dup			
	Water	—	—	E426-1			
		Dup	—	E426-1 Dup			
E-426-2	Soil	1	2	E426-2,S1,2'	2/2/2021	2/3/2021	2/5/2021
		2	4 1/2	E426-2,S2,4 1/2'			
	Water	—	—	E426-2			

Dup = Duplicate

We present a summary of the results of those analytes detected in at least one sample for each sample matrix in Tables 1 and 2 on pages 7 through 9. A copy of the Analytical Reports from CT Laboratories, LLC and VISTA Analytical Laboratory are included in Appendix B. The analytical reports from these laboratories include the chain of custodies for the samples submitted to them.

An environmental engineering analysis of the laboratory test results is not a part of our scope of work.

Table 1: Summary of the chemical analyses results of individual soil samples.

Analyte †	SES Sample Identification		
	E426-1,S1,4 1/2'	E426-1,S2,4'	E426-1 DUP
Physical analyses. Results in %.			
Solids Content	**92.6**	**91.9**	**90.7**
Moisture Content	**7.4**	**8.1**	**9.3**
Volatile Organic Compounds (VOC) analyses. Results in mg/kg.			
No compounds detected above the method detection limits.			
Perfluoroalkyl and Polyfluoroalkyl (PFAs) analyses. Results in ηg/g.			
Perfluorobutanoic acid (PFBA)	**<0.277>**	<0.253	<0.266
Perfluoropentanoic acid (PFPeA)	**0.979**	<0.240	<0.252
Perfluorohexanoic acid (PFHxA)	**<0.704>**	<0.608	<0.639
Perfluoroheptanoic acid (PFHpA)	**0.765**	**0.778**	**0.696**
Perfluorohexanesulfonic acid (PFHxS)	**1.15**	**3.10**	**3.36**
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	**5.99**	**23.2**	**22.0**
Perfluorooctanoic acid (PFOA)	<0.285	**1.25**	**1.19**
Perfluorononanoic acid (PFNA)	<0.372	**1.68**	**1.69**
Perfluorooctanesulfonic acid (PFOS)	**181**	**1410**	**1500**
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	**<0.760>**	**12.5**	**12.4**

† = Only compounds detected in at least one sample are listed. All other compounds in the analysis scan list were not detected above the Limit of Detection.
< = Values with less than sign (<) indicate a compound that was not detected above the Limit of Detection for the sample.
< > = Estimated value. Analyte detected at a level less than the Limit of Quantification but greater than or equal to the Limit of Detection.
— = No sample submitted for this analysis.
Q = The ion transition ratio is outside of the acceptance criteria.

Table 1: Summary of the chemical analyses results of individual soil samples.
(continued)

Analyte †	SES Sample Identification		
	E426-2,S1,2'	E426-2,S2,4 1/2'	
Physical analyses. Results in %.			
Solids Content	**90.1**	**86.2**	
Moisture Content	**9.9**	**13.8**	
Volatile Organic Compounds (VOC) analyses. Results in mg/kg.			
No compounds detected above the method detection limits.			
Perfluoroalkyl and Polyfluoroalkyl (PFAs) analyses. Results in ηg/g.			
Perfluorobutanoic acid (PFBA)	<0.255	<0.264	
Perfluoropentanoic acid (PFPeA)	<0.241	<0.250	
Perfluorohexanoic acid (PFHxA)	<0.611	<0.633	
Perfluoroheptanoic acid (PFHpA)	<0.318	<0.329	
Perfluorohexanesulfonic acid (PFHxS)	**0.592**	<0.405	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	<0.621	<0.643	
Perfluorooctanoic acid (PFOA)	<0.448>	<0.286	
Perfluorononanoic acid (PFNA)	<0.360	<0.373	
Perfluorooctanesulfonic acid (PFOS)	**13.2**	**2.84**	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	<0.515	<0.534	

† = Only compounds detected in at least one sample are listed. All other compounds in the analysis scan list were not detected above the Limit of Detection.
< = Values with less than sign (<) indicate a compound that was not detected above the Limit of Detection for the sample.
< > = Estimated value. Analyte detected at a level less than the Limit of Quantification but greater than or equal to the Limit of Detection.
— = No sample submitted for this analysis.
Q = The ion transition ratio is outside of the acceptance criteria.

Table 2: Summary of the chemical analyses results of individual groundwater samples.

Analyte †	SES Sample Identification		
	E426-1	E426-1 DUP	E426-2
Volatile Organic Compounds (VOC) analyses. Results in µg/L.			
No compounds detected above the method detection limits.			
Perfluoroalkyl and Polyfluoroalkyl (PFA) analyses. Results in ηg/L.			
Perfluorobutanoic acid (PFBA)	**362**	**358**	**119**
Perfluoropentanoic acid (PFPeA)	**1380**	**1330**	**440**
Perfluorobutanesulfonic acid (PFBS)	**78.5**	**84.7**	**48.2**
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	**106**	**102**	**5.98**
Perfluorohexanoic acid (PFHxA)	**1070**	**1090**	**461**
Perfluoropentane sulfonic acid (PFPeS)	**131**	**131**	**70.4**
Perfluoroheptanoic acid (PFHpA)	**411**	**420**	**294**
Perfluorohexanesulfonic acid (PFHxS)	**1970**	**1660**	**949**
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	**7490**	**6180**	**556**
Perfluorooctanoic acid (PFOA)	**470**	**477**	**201**
Perfluoroheptane sulfonate (PFHpS)	**803**	**805**	**249**
Perfluorononanoic acid (PFNA)	**310**	**307**	**68.9**
Perfluorooctane sulfonamide (PFOSA)	**77.6**	**76.6**	**14.0**
Perfluorooctanesulfonic acid (PFOS)	**38600**	**42200**	**27800**
Perfluorodecanoic acid (PFDA)	**23.1**	**23.8**	**9.43**
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	**8220**	**5370**	**1090**
Perfluorononane sulfonic acid (PFNS)	**77.9**	**76.5**	**32.3**
Perfluoroundecanoic acid (PFUnA)	**<0.648> Q**	**<0.692> Q**	<0.546

† = Only compounds detected in at least one sample are listed. All other compounds in the analysis scan list were not detected above the Limit of Detection.
< = Values with less than sign (<) indicate a compound that was not detected above the Limit of Detection for the sample.
< > = Estimated value. Analyte detected at a level less than the Limit of Quantification but greater than or equal to the Limit of Detection.
— = No sample submitted for this analysis.
Q = The ion transition ratio is outside of the acceptance criteria.

V. DISCUSSION

A. Groundwater Samples

1. PFA Analyses Results

The PFAS analyses detected 18 compounds above the method detection limits for the soil samples submitted.

The Wisconsin Department of Health Services (DHS) Per- and Polyfluoroalkyl Substances (PFAS) webpage [https://www.dhs.wisconsin.gov/chemical/pfas.htm] includes recommended groundwater limits for these substances. This webpage presents the DHS recommended limits for these substances presented to the Wisconsin Department of Natural Resources (WDNR) use in developing the rules for the protection of public health. Per this webpage, DHS recommended a groundwater enforcement standard of 20 ηg/L and a preventative action limit of 2 ηg/L for PFOA and PFOS concentrations individually and combined. DHS issued additional enforcement standards and preventive action limits for PFAS compounds in their *Groundwater Standard Recommendations (Cycle 10)* and *Recommended Groundwater Standards (Cycle 11)* publications.[1 & 2]

Per the DHS webpage and publications, the EPA does not have drinking water standards for any PFAS, but does have a health advisory level of 70 ppt for the combined concentrations of PFOA and PFOS.[3]

Following is a summary of the DHS recommended enforcement standards and preventive action limits for the analytes for which the groundwater samples for A/SE Cold Storage Building B426 encountered detections. All of the standards and limits provided in this table are in nanograms per liter (ηg/L) rather than a combination of micrograms per liter (µg/L) and ηg/L as the DHS website table lists the values.

Compound	Recommended DHS Enforcement Standard (ηg/L)	Recommended DHS Preventive Action Limit (ηg/L)
Perfluorobutanoic acid (PFBA)	10,000	2,000
Perfluoropentanoic acid (PFPeA)	not listed	not listed

[1] "Groundwater Standard Recommendations (Cycle 10)." Wisconsin Department of Health Services, 21 June 2019, last revised 17 Nov. 2020, www.dhs.wisconsin.gov/water/gws-cycle10.htm.

[2] "Recommended Groundwater Standards (Cycle 11)." Wisconsin Department of Health Services, 6 Nov. 2020, last revised 15 Mar. 2021, www.dhs.wisconsin.gov/water/gws-cycle11.htm.

[3] 1 part per trillion (ppt) = 1 nanograms per liter (ηg/L)
1 part per billion (ppb) = 1 micrograms per liter (µg/L)
1 part per million (ppm) = 1 milligrams per liter (mg/L)

Compound	Recommended DHS Enforcement Standard (ηg/L)	Recommended DHS Preventive Action Limit (ηg/L)
Perfluorobutanesulfonic acid (PFBS)	450,000	90,000
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	not listed	not listed
Perfluorohexanoic acid (PFHxA)	150,000	30,000
Perfluoropentane sulfonic acid (PFPeS)	not listed	not listed
Perfluoroheptanoic acid (PFHpA)	not listed	not listed
Perfluorohexanesulfonic acid (PFHxS)	40	4
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	not listed	not listed
Perfluorooctanoic acid (PFOA)	20	2
Perfluoroheptane sulfonate (PFHpS)	not listed	not listed
Perfluorononanoic acid (PFNA)	30	3
Perfluorooctane sulfonamide (PFOSA)	20	2
Perfluorooctanesulfonic acid (PFOS)	20	2
Perfluorodecanoic acid (PFDA)	300	60
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	not listed	not listed
Perfluorononane sulfonic acid (PFNS)	not listed	not listed
Perfluoroundecanoic acid (PFUnA)	3,000	600
Perfluorooctanoic acid (PFOA) and Perfluorooctanesulfonic acid (PFOS)	20	2

Per the DHS recommended standards and limits and EPA level presented above, the groundwater samples from the following borings had results for the following PFAS analytes that exceed either the recommended enforcement standards, preventative action limits, or health advisory level.

Boring	Test Result (ηg/L)	Comment
Perfluorohexanesulfonic acid (PFHxS) Enforcement Standard = 40 ng/L Preventative Action Limit = 4 ηg/L		
E409-1	1970	Above Enforcement Standard
E409-1 Duplicate	1660	Above Enforcement Standard
E409-2	949	Above Enforcement Standard

Boring	Test Result (ηg/L)	Comment
Perfluorooctanoic acid (PFOA) Enforcement Standard = 20 ηg/L Preventative Action Limit = 2 ηg/L		
E409-1	470	Above Enforcement Standard
E409-1 Duplicate	477	Above Enforcement Standard
E409-2	201	Above Enforcement Standard
Perfluorononanoic acid (PFNA) Enforcement Standard = 30 ηg/L Preventative Action Limit = 3 ηg/L		
E409-1	310	Above Enforcement Standard
E409-1 Duplicate	307	Above Enforcement Standard
E409-2	68.9	Above Enforcement Standard
Perfluorooctane sulfonamide (PFOSA) Enforcement Standard = 20 ηg/L Preventative Action Limit = 2 ηg/L		
E409-1	77.6	Above Enforcement Standard
E409-1 Duplicate	76.6	Above Enforcement Standard
E409-2	14	Above Preventative Action Limit
Perfluorooctanesulfonic acid (PFOS) Enforcement Standard = 20 ηg/L Preventative Action Limit = 2 ηg/L		
E409-1	38600	Above Enforcement Standard
E409-1 Duplicate	42200	Above Enforcement Standard
E409-2	27800	Above Enforcement Standard
Perfluorooctanoic acid (PFOA) and Perfluorooctanesulfonic acid (PFOS) combined Enforcement Standard = 20 ηg/L Preventative Action Limit = 2 ηg/L EPA Health Advisory Level = 70 ppt		
E409-1	39070	Above Enforcement Standard, Above EPA Health Advisory Level
E409-1 Duplicate	42677	Above Enforcement Standard, Above EPA Health Advisory Level
E409-2	28001	Above Enforcement Standard, Above EPA Health Advisory Level

2. VOC Analyses Results

The VOC analyses did not detect any compounds above the method detection limits fore the groundwater samples submitted.

B. Soil Samples

The VOC analyses did not detect any compounds above the method detection limits for the soil samples submitted. The PFAS analyses detected compounds above the method detection limits for the soil samples submitted.

WDNR and DHS do not have any set standards or limits for VOCs or PFAS to apply to soil. WDNR requires that soil residual contaminant levels be determined on a site by site basis based on the type of soils present and the usage of the site per Wisconsin Administrative Code Chapter NR720. Determining soil residual contaminant levels for the VOCs or PFAS is beyond the scope of our work.

We used the Regional Screening Level calculator on the EPA's website [https://epa-prgs.ornl.gov/cgi-bin/chemicals/csl_search] for soil with a Hazard Quotient of 1.0 and a target risk of 10^{-6} for chronic exposure for a resident to compute the following screening levels for the PFAS components detected in the soil samples obtained from the borings performed. The EPA Health Screening Level obtained by using the screening calculator is provided in milligrams per kilogram (mg/kg) which we converted to nanograms per gram (ng/g) to match the units for the results for the soil samples analyzed.[4]

Compound	EPA Health Screening Level (ng/g)
Perfluorobutanoic acid (PFBA)	Not listed
Perfluoropentanoic acid (PFPeA)	Not listed
Perfluorohexanoic acid (PFHxA)	Not listed
Perfluoroheptanoic acid (PFHpA)	Not listed
Perfluorohexanesulfonic acid (PFHxS)	Not listed
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	Not listed
Perfluorooctanoic acid (PFOA)	1,260
Perfluorononanoic acid (PFNA)	Not listed
Perfluorooctanesulfonic acid (PFOS)	1,260
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	Not listed

[4] 1 mg/kg = 1,000 ng/g

Per the EPA level presented above, the soil samples at the indicated depth from the following boring had results for the PFOS analyte that exceed the health advisory level.

Boring	Sample Number	Sample Depth (ft)	Test Result (ng/L)	Comment
Perfluorooctanesulfonic acid (PFOS) EPA Health Advisory Level = 1,260 ng/g				
E-426-1X	2	4	1410	Above EPA Health Advisory Level
E-426-1X	2 Duplicate	4	1500	Above EPA Health Advisory Level

VI. CLOSING COMMENTS

Soils & Engineering Services, Inc. prepared this *Environmental Exploration Report* for the exclusive use of Burns & McDonnell to aid in the design of a proposed addition to Building B426 on the Truax Air National Guard Base located in the City of Madison, Dane County, Wisconsin.

Please read the *Important Information about This Geoenvironmental Report* advisory sheet enclosed in Appendix C which provides comments about how to interpret and use this *Environmental Exploration Report* for the F-35: Construct A/SE Cold Storage Truax Air National Guard Base project.

Soils & Engineering Services, Inc. prepared this report for the subject project in accordance with generally accepted engineering practices at this time. Soils & Engineering Services, Inc. offers no other expressed or implied warranty.

Soils & Engineering Services, Inc. will store the soil samples obtained from the borings performed for this project for a period of 60 calendar days after the date of this report. Please advise us if we should extend this period.

Soils & Engineering Services, Inc. respectfully submits this *Environmental Exploration Report*, dated March 22, 2021, to **Burns & McDonnell**.

APPENDIX A

Appendix A Contents

- Location Sketches, Drawings 508.02-2A and 508.02-2B
- Notes and Legend Record for WDNR Boring Log Information Forms
- WDNR Boring Log Information Forms for Borings E-426-1, E-426-1X, and E-426-2
- WDNR Well/Drillhole/Borehole Abandonment Forms for Borings E-426-1, E-426-1X, and E-426-2

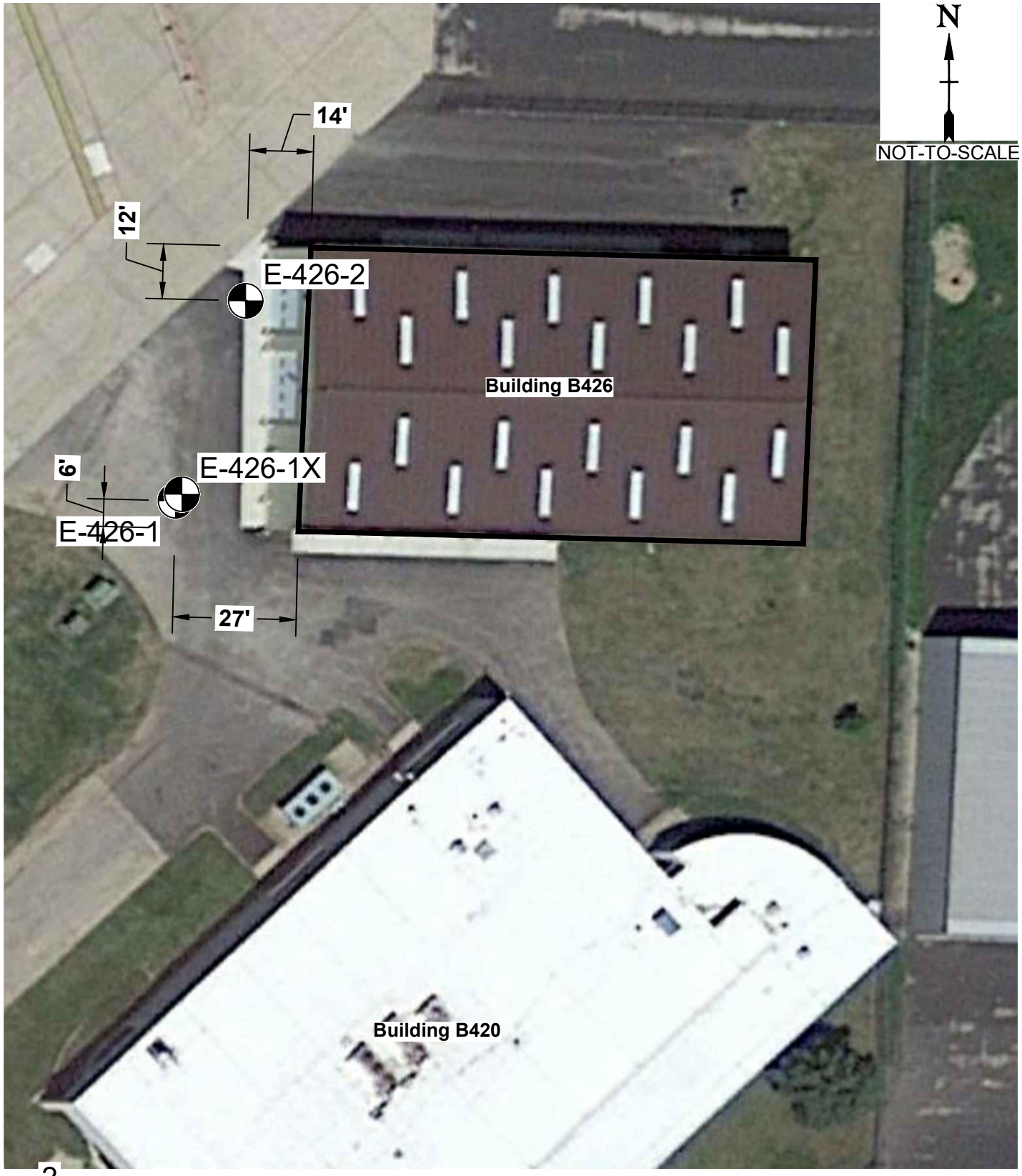
2 = Boring 2 (typical)

Soils & Engineering Services, Inc.
1102 STEWART STREET
MADISON, WISCONSIN 53713-4648
Phone: 608-274-7600
CONSULTING CIVIL ENGINEERS SINCE 1966

LOCATION SKETCH
F35: Construct A/SE Cold Storage
Truax Air National Guard Base
City of Madison, Dane Coynty, Wisconsin
Project ID XGFG192004

DRAWING 508.02-2A

Created on 02/25/2021 Revised on



Base drawing consists of Google Earth jpg image of 06/13/2020 aerial photograph.

2 = Boring 2 (typical)

Soils & Engineering Services, Inc.
1102 STEWART STREET
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Phone: 608-274-7600
CONSULTING CIVIL ENGINEERS SINCE 1966

LOCATION SKETCH
F35: Construct A/SE Cold Storage
Truax Air National Guard Base
City of Madison, Dane Coynty, Wisconsin
Project ID XGFG192004

DRAWING 508.02-2B

Created on 02/25/2021 Revised on

NOTES

1. The boundary lines between different subsurface strata, as shown on the WDNR Soil Boring Log Information Forms 4400-122 and WDNR Soil Boring Log Information Supplement Forms 4400-122a, are approximate and may be gradual.

2. The boring field log contains a description of the subsurface conditions between samples based on the equipment performance and the cuttings returned to the ground surface. The WDNR Soil Boring Log Information Forms 4400-122 and WDNR Soil Boring Log Information Supplement Forms 4400-122a contains the description of the subsurface conditions as interpreted by a geotechnical engineer and/or a geologist after review of the boring field logs and subsurface samples and/or laboratory test results.

3. We define "Caved Level" as the depth below the existing ground surface at a boring location where material has collapsed into the borehole following removal of the drilling tools.

4. We define "Water Level" as the depth below the existing ground surface at a boring location to the level of water in the open borehole at the time indicated unless otherwise defined on the WDNR Soil Boring Log Information Forms 4400-122 or WDNR Soil Boring Log Information Supplement Forms 4400-122a.

5. We define "at completion" for a boring as being the time when our drilling crew has completed the removal of all drilling tools from the borehole.

6. The Notes and Legend Record and the WDNR Soil Boring Log Information Forms 4400-122 and WDNR Soil Boring Log Information Supplement Forms 4400-122a are a part of the environmental report. The environmental report should be included in the bidding or reference documents.

RELATIVE PERCENTAGE TERMS
(Used in Material Descriptions)

no	0%
trace	<5%
few	5 to <10%
little	10 to <30%
some	30 to < 50%

SOIL PROPERTIES LEGEND

Pocket Penetrometer, $^{ton}/_{ft^2}$
Water Content = % moisture by weight
Liquid Limit = % moisture by weight
Plasticity Index = % moisture by weight
P200 = % Passing the No. 200-mesh Sieve

RELATIVE MOISTURE TERMS AT TIME OF SAMPLING

Frozen or F = Frozen material
Dry = Dusty, dry to touch, absence of moisture
Moist or M = Damp to touch, no visible water
Wet or W = Visible free water

DRILLING METHODS LEGEND

DP = Direct push
HSA = Continuous flight hollow-stem augers

SAMPLER TYPE LEGEND

☒ $1^3/_8$-inch-inside-diameter, direct push sampler

Soils & Engineering Services, Inc.
1102 STEWART STREET
MADISON, WISCONSIN 53713-4648
Phone: {608) 274-7600

CONSULTING CIVIL ENGINEERS SINCE 1966

NOTES AND LEGEND RECORD
F-35: Construct A/SE Cold Storage
Truax Air National Guard Base
City of Madison, Dane County, Wisconsin
Project ID XGFG192004

13348

Printed on 3/22/2021

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ _____

SES Project Number **13348**

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
F-35: Construct A/SE Cold Storage, Truax Air National Guard Base		E-426-1

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Scott W. Klumb Soils & Engineering Services, Inc.	February 2, 2021	February 2, 2021	DP, HSA

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
				857.6 Feet	2.25 in, 6.25 in

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane _____ ft. N, _____ ft. E. S / C / N
NW 1/4 of NE 1/4 of Sec. 29, T. 8 N, R. 10 (E) W
Lat ____ ____ ____
Long ____ ____ ____
Local Grid Location ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	City of Madison/Civil Township of Burke

Total Depth = **8'-0"**

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID Readings	Soil Properties: Pocket Penetrometer	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1	45		0–1	***FILL**; hot mix asphalt*-[5¾" thick]										0'-0"to 3'-0" Frozen
			1–2	***POORLY-GRADED GRAVEL WITH SILT AND SAND (GP-GM)** — fine to coarse grained; non-plastic to low plasticity fines; light yellowish-brown (10YR 6/4); frozen; **FILL**; crushed stone base course*-[10¼" thick]	GP-GM									
			2–3	***POORLY-GRADED SAND (SP)** — fine grained; dark grayish-brown (10YR 4/2); frozen; **FILL**; mixed with TOPSOIL*-[20" thick]	SP									
2	36 48		4–8	***POORLY-GRADED SAND WITH SILT (SP-SM)** — fine grained; non-plastic to low plasticity fines; pale brown (10YR 6/3) to brown (10YR 5/3) to dark gray (10YR 4/1); moist to wet; trace to little gravel; with occasional fine to medium and fine to coarse grained seams*	SP-SM		W							M-W W Wet (caved) 5'-8" at completion
			9–10											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature Craig M. Bower | Firm Soils & Engineering Services, Inc. | Tel: {608) 274-7600
1102 Stewart Street Madison, Wisconsin 53713-4648 | Fax: (608) 274-7511

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Printed on 3/22/2021

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A Rev. 7-98

Facility/Project Name F-35: Construct A/SE Cold Storage, Truax Air National Guard Base

SES Project Number **13348**

Boring Number E-426-1 Use only as an attachment to Form 4400-122.

Sample									Soil Properties						
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID Readings	Pocket Penetrometer	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments

NOTE:

1. Due to no sample recovery in first sample, moved 2 feet northeast to Boring E-426-1X and performed boring to depth.

2. The Notes and Legend Record is considered a part of the WDNR Soil Boring Log Information Form 4400-122 for Boring E-426-1.

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ _____

SES Project Number **13348**

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
F-35: Construct A/SE Cold Storage, Truax Air National Guard Base		E-426-1X

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Scott W. Klumb Soils & Engineering Services, Inc.	February 2, 2021	February 2, 2021	DP, HSA

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
				857.6 Feet	2.25 in, 6.25 in

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane _____ ft. N, _____ ft. E. S / C / N
NW 1/4 of NE 1/4 of Sec. 29, T. 8 N, R. 10 (E) W
Lat ____ ____ ____
Long ____ ____ ____
Local Grid Location ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	City of Madison/Civil Township of Burke

Total Depth = **12'-0"**

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID Readings	Soil Properties: Pocket Penetrometer	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
				***FILL**; hot mix asphalt*-[5 3/4" thick]										0'-0"to 3'-0" Frozen
			1	***POORLY-GRADED GRAVEL WITH SILT AND SAND (GP-GM)** — fine to coarse grained; non-plastic to low plasticity fines; light yellowish-brown (10YR 6/4); frozen; **FILL**; crushed stone base course*-[10 1/4" thick]	GP-GM									
1	43	39	2		SP									F-M
			3	***POORLY-GRADED SAND (SP)** — fine grained; dark grayish-brown (10YR 4/2); frozen; **FILL**; mixed with TOPSOIL*-[20" thick]										
			4	***POORLY-GRADED SAND WITH SILT (SP-SM)** — fine grained; non-plastic to low plasticity fines; pale brown (10YR 6/3) to brown (10YR 5/3) to dark gray (10YR 4/1); moist to wet; trace to little gravel; with occasional fine to medium and fine to coarse grained seams*										
			5											
2	48	38	6		SP-SM		W							M-W ▼ 5'-8" through temporary well screen before water sampling W Wet (caved) 5'-8" at completion
			7											
			8											
			9											
			10											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	Tel: {608) 274-7600
Craig M. Bower	Soils & Engineering Services, Inc. 1102 Stewart Street Madison, Wisconsin 53713-4648	Fax: (608) 274-7511

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Printed on 3/22/2021

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A Rev. 7-98

Facility/Project Name F-35: Construct A/SE Cold Storage, Truax Air National Guard Base

SES Project Number **13348**

Boring Number E-426-1X Use only as an attachment to Form 4400-122.

Sample									Soil Properties					
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID Readings	Pocket Penetrometer	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			11		SP-SM									
			12											
			13											

NOTE:

1. Set temporary $^{3}/_{4}$-inch-diameter PVC well with 5 feet of screen to 12'-0" depth. Used peristaltic pump to purge an approximate rate of 1 liter per 2.05 minutes. Purged approximately 20.5 liters (5.4 gallons) of water in approximately 42 minutes. Then collected water samples from peristaltic pump discharge. First collected PFOS/PFOA sample, then VOC sample, and finally a sample for field testing for the following measurements:
   Temperature = 7.5 ºC
   Dissolved Oxygen = 1.62 mg/L
   Specific Conductance = 4.18 µS/cm
   pH = 7.56
   Turbidity = 3.97 NTU

2. The Notes and Legend Record is considered a part of the WDNR Soil Boring Log Information Form 4400-122 and WDNR Soil Boring Log Information Supplement Form 4400-122A for Boring E-426-1X.

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ _____

SES Project Number **13348**

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
F-35: Construct A/SE Cold Storage, Truax Air National Guard Base		E-426-2

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Scott W. Klumb Soils & Engineering Services, Inc.	February 2, 2021	February 2, 2021	DP, HSA

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
				857.5 Feet	2.25 in, 6.25 in

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane _____ ft. N, _____ ft. E. S / C / N
NW 1/4 of NE 1/4 of Sec. 29, T. 8 N, R. 10 (E) W
Lat ____ ____ ____ Long ____ ____ ____
Local Grid Location ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	City of Madison/Civil Township of Burke

Total Depth = **12'-0"**

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID Readings	Soil Properties: Pocket Penetrometer	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			0	***FILL**; hot mix asphalt*-[5 3/4" thick]										0'-0"to 2'-0" Frozen
1	43	37	1	***POORLY-GRADED GRAVEL WITH SILT AND SAND (GP-GM)** — fine to coarse grained; non-plastic to low plasticity fines; light yellowish-brown (10YR 6/4); frozen; **FILL**; crushed stone base course*-[18 1/4" thick]	GP-GM									F-M
			2	***LEAN CLAY (CL)** — medium plasticity; black (10YR 2/1); moist; **FILL TOPSOIL***-[12" thick]	CL									
			3	***POORLY-GRADED SAND (SP)** — fine grained; brown (10YR 5/3); moist; **FILL***-[12" thick]	SP									
			4	***SANDY LEAN CLAY (CL)** — medium plasticity; grayish-brown (10YR 5/2) and yellowish-brown (10YR 5/6) mottled; moist*	CL									
2	48	38	6	***POORLY-GRADED SAND WITH SILT (SP-SM)** — fine grained; non-plastic to low plasticity fines; pale brown (10YR 6/3) to brown (10YR 5/3) to dark gray (10YR 4/1); moist to wet; trace to little gravel; with occasional fine to medium and fine to coarse grained seams*	SP-SM		W							M-W ▼ 5'-9" through temporary well screen before water sampling W Wet (caved) 5'-9" at completion
			10											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	Tel: {608) 274-7600
Craig M. Bower	Soils & Engineering Services, Inc. 1102 Stewart Street Madison, Wisconsin 53713-4648	Fax: (608) 274-7511

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Printed on 3/22/2021

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A Rev. 7-98

Facility/Project Name F-35: Construct A/SE Cold Storage, Truax Air National Guard Base

SES Project Number **13348**

Boring Number E-426-2 Use only as an attachment to Form 4400-122. Page 2 of 2

Sample									Soil Properties					
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID Readings	Pocket Penetrometer	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			11		SP-SM									
			12											
			13											

NOTE:

1. Set temporary $^{3}/_{4}$-inch-diameter PVC well with 5 feet of screen to 12'-0" depth. Used peristaltic pump to purge an approximate rate of 1 liter per 1.9 minutes. Purged approximately 13.2 liters (3.5 gallons) of water in approximately 25 minutes. Then collected water samples from peristaltic pump discharge. First collected PFOS/PFOA sample, then VOC sample, and finally a sample for field testing for the following measurements:
   Temperature = 7.6 ºC
   Dissolved Oxygen = 6.77 mg/L
   Specific Conductance = 689 µS/cm
   pH = 7.11
   Turbidity = 3.08 NTU

2. The Notes and Legend Record is considered a part of the WDNR Soil Boring Log Information Form 4400-122 and WDNR Soil Boring Log Information Supplement Form 4400-122A for Boring E-426-2.

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State of Wis., Dept. of Natural Resources
dnr.wi.govb

Well / Drillhole / Borehole Abandonment

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

SES Project Number 13348

Route to:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other:

1. ~~Well Location Information~~ Boring Location Information

County: **Dane**

Boring Number: **E-426-1**

Latitude / Longitude (Degrees and Minutes):

Format Code: ☐ DD ☐ DDM

Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼ **NW** ¼ **NE**

or Gov't Lot #

Section: **29**

Township: **8** N

Range: ■ E ☐ W

~~Well~~ Street Address Boring:

~~Well~~ City, Village or Town Boring: **City of Madison/Civil Township of Burke**

~~Well~~ ZIP Code Boring:

Subdivision Name:

Lot #:

Reason For Removal ~~From Service~~: **Soil Boring for GEOTECHNICAL sampling.**

WI Unique Well # of Replacement Well: **NA**

2. Facility / Owner Information

Facility Name: **F-35: Construct A/SE Cold Storage, Truax Air National Guard Base**

Facility ID (FID or PWS): **NA**

License/Permit/Monitoring No: **NA**

Original Well Owner: **NA**

~~Present Well Owner~~ **Present Property Owner**: **Unknown**

Mailing Address of Present Owner:

City of Present Owner:

State:

Zip Code:

3. Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
■ Drillhole / Borehole

~~Original Construction~~ Date (mm/dd/yyyy) Boring Completion: **02/02/2021**

If a Well Construction Report is available, please attach: **NA**

Construction Type:
■ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (specify):

Formation Type:
■ Unconsolidated Formation ☐ Bedrock

Total ~~Well~~ Boring Depth From Ground Surface (ft.): **8.0**

Casing Diameter (in.): **NA**

~~Lower~~ Drillhole Diameter (in.): **6.3" to 0.4', 2.3" to 8.0'**

Casing Depth (ft.): **NA**

Was well annular space grouted? **NA** ☐ Yes ☐ No ☐ Unknown

If yes, to what depth (feet)?

Depth to Water (Feet): **Wet**

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	■ N/A
Liner(s) removed?	☐ Yes	☐ No	■ N/A
Screen removed?	☐ Yes	☐ No	■ N/A
Casing left in place?	☐ Yes	☐ No	■ N/A
Was casing cut off below surface?	☐ Yes	☐ No	■ N/A
Did sealing material rise to surface?	■ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	■ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	■ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☐ Yes	■ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
■ Screened & Poured (Bentonite Chips) ☐ Other (Explain):

Sealings Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ■ Bentonite Chips

For monitoring wells and monitoring well boreholes only
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used To Fill Well / Drillhole

Material	From (Ft.)	To (Ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Cold Mix Asphalt Patching Compound	Surface	0.25	0.053 ft^3	
Auger Cuttings	0.25	2.00	0.080 ft^3	
Bentonite Chips	2.00	5.67	0.2 - 50 lb Bag	
Caved Soil	5.67	8.00	0.064 ft^3	

6. Comments

NA = Not applicable to soil borings.

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing: **SOILS & ENGINEERING SERVICES, INC.**

License #:

Date of Filling & Sealing (mm/dd/yyyy): **02/02/2021**

Street or Route: **1102 Stewart Street**

Telephone Number: **(608) 274-7600**

City: **Madison**

State: **WI**

ZIP Code: **53713**

Signature of Person Doing Work: Craig M. Bower

Date Signed: **03/22/2021**

DNR Use Only

Date Received:

Noted By:

Comments:

State of Wis., Dept. of Natural Resources
dnr.wi.govb

Well / Drillhole / Borehole Abandonment

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

SES Project Number 13348

Route to:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other:

1. ~~Well Location Information~~ Boring Location Information

County: **Dane**

Boring Number: **E-426-1X**

Latitude / Longitude (Degrees and Minutes):

Format Code: ☐ DD ☐ DDM

Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼ **NW** ¼ **NE**

Section: **29** Township: **8** N Range: **10** ■ E ☐ W

or Gov't Lot #

~~Well~~ Street Address Boring:

~~Well~~ City, Village or Town Boring: **City of Madison/Civil Township of Burke**

~~Well~~ ZIP Code Boring:

Subdivision Name:

Lot #:

Reason For Removal ~~From Service~~: **Soil Boring for GEOTECHNICAL sampling.**

WI Unique Well # of Replacement Well: **NA**

2. Facility / Owner Information

Facility Name: **F-35: Construct A/SE Cold Storage, Truax Air National Guard Base**

Facility ID (FID or PWS): **NA**

License/Permit/Monitoring No: **NA**

Original Well Owner: **NA**

~~Present Well Owner~~ **Present Property Owner**: **Unknown**

Mailing Address of Present Owner:

City of Present Owner: State: Zip Code:

3. Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
■ Drillhole / Borehole

~~Original Construction~~ Date (mm/dd/yyyy) Boring Completion: **02/02/2021**

If a Well Construction Report is available, please attach. **NA**

Construction Type:
■ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (specify):

Formation Type:
■ Unconsolidated Formation ☐ Bedrock

Total ~~Well~~ Boring Depth From Ground Surface (ft.): **12.0**

Casing Diameter (in.): **NA**

~~Lower~~ Drillhole Diameter (in.): **6.3" to 0.4', 2.3" to 12.0'**

Casing Depth (ft.): **NA**

Was well annular space grouted? **NA** ☐ Yes ☐ No ☐ Unknown

If yes, to what depth (feet)?

Depth to Water (Feet): **5.67**

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	■ N/A
Liner(s) removed?	☐ Yes	☐ No	■ N/A
Screen removed?	☐ Yes	☐ No	■ N/A
Casing left in place?	☐ Yes	☐ No	■ N/A
Was casing cut off below surface?	☐ Yes	☐ No	■ N/A
Did sealing material rise to surface?	■ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	■ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	■ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☐ Yes	■ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
■ Screened & Poured (Bentonite Chips) ☐ Other (Explain):

Sealings Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ■ Bentonite Chips

For monitoring wells and monitoring well boreholes only
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used To Fill Well / Drillhole

Material	From (Ft.)	To (Ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Cold Mix Asphalt Patching Compound	Surface	0.50	0.092 ft^3	
Auger Cuttings	0.50	2.00	0.041 ft^3	
Bentonite Chips	2.00	5.67	0.2 - 50 lb Bag	
Caved Soil	5.67	12.00	0.17 ft^3	

6. Comments

NA = Not applicable to soil borings.

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing: **SOILS & ENGINEERING SERVICES, INC.**

License #:

Date of Filling & Sealing (mm/dd/yyyy): **02/02/2021**

Street or Route: **1102 Stewart Street**

Telephone Number: **(608) 274-7600**

City: **Madison** State: **WI** ZIP Code: **53713**

Signature of Person Doing Work: Craig M. Bower

Date Signed: **03/22/2021**

DNR Use Only
Date Received: Noted By:
Comments:

State of Wis., Dept. of Natural Resources
dnr.wi.govb

Well / Drillhole / Borehole Abandonment

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

SES Project Number 13348

Route to:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other:

1. ~~Well Location Information~~ Boring Location Information

County: **Dane**

Boring Number: **E-426-2**

Latitude / Longitude (Degrees and Minutes):

Format Code: ☐ DD ☐ DDM

Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼ **NW** ¼ **NE**

or Gov't Lot #

Section: **29**

Township: **8** N

Range: **10** ■ E ☐ W

~~Well~~ Street Address Boring:

~~Well~~ City, Village or Town Boring: **City of Madison/Civil Township of Burke**

~~Well~~ ZIP Code Boring:

Subdivision Name:

Lot #:

Reason For Removal ~~From Service~~: **Soil Boring for GEOTECHNICAL sampling.**

WI Unique Well # of Replacement Well: **NA**

2. Facility / Owner Information

Facility Name: **F-35: Construct A/SE Cold Storage, Truax Air National Guard Base**

Facility ID (FID or PWS): **NA**

License/Permit/Monitoring No: **NA**

Original Well Owner: **NA**

~~Present Well Owner~~ **Present Property Owner**: **Unknown**

Mailing Address of Present Owner:

City of Present Owner:

State:

Zip Code:

3. Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
■ Drillhole / Borehole

~~Original Construction~~ Date (mm/dd/yyyy) Boring Completion: **02/02/2021**

If a Well Construction Report is available, please attach: **NA**

Construction Type:
■ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (specify):

Formation Type:
■ Unconsolidated Formation ☐ Bedrock

Total ~~Well~~ Boring Depth From Ground Surface (ft.): **12.0**

Casing Diameter (in.): **NA**

~~Lower~~ Drillhole Diameter (in.): **6.3" to 0.4', 2.3" to 12.0'**

Casing Depth (ft.): **NA**

Was well annular space grouted? **NA** ☐ Yes ☐ No ☐ Unknown

If yes, to what depth (feet)?

Depth to Water (Feet): **5.75**

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	■ N/A
Liner(s) removed?	☐ Yes	☐ No	■ N/A
Screen removed?	☐ Yes	☐ No	■ N/A
Casing left in place?	☐ Yes	☐ No	■ N/A
Was casing cut off below surface?	☐ Yes	☐ No	■ N/A
Did sealing material rise to surface?	■ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	■ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	■ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☐ Yes	■ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
■ Screened & Poured (Bentonite Chips) ☐ Other (Explain):

Sealings Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ■ Bentonite Chips

For monitoring wells and monitoring well boreholes only
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used To Fill Well / Drillhole

Material	From (Ft.)	To (Ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Cold Mix Asphalt Patching Compound	Surface	0.42	0.086 ft^3	
Auger Cuttings	0.42	2.00	0.044 ft^3	
Bentonite Chips	2.00	5.75	0.2 - 50 lb Bag	
Caved Soil	5.75	12.00	0.17 ft^3	

6. Comments

NA = Not applicable to soil borings.

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing: **SOILS & ENGINEERING SERVICES, INC.**

License #:

Date of Filling & Sealing (mm/dd/yyyy): **02/02/2021**

Street or Route: **1102 Stewart Street**

Telephone Number: **(608) 274-7600**

City: **Madison**

State: **WI**

ZIP Code: **53713**

Signature of Person Doing Work: Craig M. Bower

Date Signed: **03/22/2021**

DNR Use Only

Date Received:

Noted By:

Comments:

APPENDIX B

Appendix B Contents

- CT Laboratories, LLC Analytical Report dated March 4, 2021.
- VISTA Analytical Laboratory Analytical Report dated March 3, 2021

CT LABORATORIES
delivering more than data from your environmental analyses

CT Laboratories LLC • 1230 Lange Ct • Baraboo, WI 53913
608-356-2760 • www.ctlaboratories.com

ANALYTICAL REPORT

SOILS & ENGINEERING SERVICES
DUANE REICHEL
1102 STEWART ST
MADISON, WI 53713

Project Name: TRUAX FIELD
Project Phase: COLD STORAGE
Contract #: 1560
Project #: XGFG 192004
Folder #: 159552
Purchase Order #: SES# 508.02

Arrival Temperature: 4.3
Report Date: 03/04/2021
Date Received: 02/03/2021
Reprint Date: 03/04/2021

CT LAB Sample#: 530651 Sample Description: E426-1,S1,2' Sampled: 02/02/2021 1005

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results										
Solids, Percent	**92.6**	%	0.1	0.1	1			02/04/2021 11:57	BMM	EPA 8000C
Organic Results										
1,1,1,2-Tetrachloroethane	<0.064	mg/kg	0.064	0.21	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
1,1,1-Trichloroethane	<0.017	mg/kg	0.017	0.055	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
1,1,2,2-Tetrachloroethane	<0.021	mg/kg	0.021	0.074	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
1,1,2-Trichloroethane	<0.011	mg/kg	0.011	0.042	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
1,1-Dichloroethane	<0.0074	mg/kg	0.0074	0.024	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
1,1-Dichloroethene	<0.022	mg/kg	0.022	0.075	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
1,1-Dichloropropene	<0.032	mg/kg	0.032	0.095	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
1,2,3-Trichlorobenzene	<0.012	mg/kg	0.012	0.039	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
1,2,3-Trichloropropane	<0.042	mg/kg	0.042	0.15	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
1,2,4-Trichlorobenzene	<0.018	mg/kg	0.018	0.061	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
1,2,4-Trimethylbenzene	<0.012	mg/kg	0.012	0.037	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
1,2-Dibromo-3-chloropropane	<0.074	mg/kg	0.074	0.25	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
1,2-Dibromoethane	<0.011	mg/kg	0.011	0.042	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530651 Sample Description: E426-1,S1,2' Sampled: 02/02/2021 1005

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
1,2-Dichlorobenzene	<0.016	mg/kg	0.016	0.052	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
1,2-Dichloroethane	<0.023	mg/kg	0.023	0.078	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
1,2-Dichloropropane	<0.028	mg/kg	0.028	0.091	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
1,3,5-Trimethylbenzene	<0.014	mg/kg	0.014	0.047	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
1,3-Dichlorobenzene	<0.015	mg/kg	0.015	0.048	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
1,3-Dichloropropane	<0.015	mg/kg	0.015	0.051	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
1,4-Dichlorobenzene	<0.016	mg/kg	0.016	0.054	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
2,2-Dichloropropane	<0.022	mg/kg	0.022	0.074	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
2-Butanone	<0.42	mg/kg	0.42	1.3	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
2-Chlorotoluene	<0.019	mg/kg	0.019	0.062	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
2-Hexanone	<0.21	mg/kg	0.21	0.74	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
4-Chlorotoluene	<0.016	mg/kg	0.016	0.052	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
4-Methyl-2-pentanone	<0.19	mg/kg	0.19	0.65	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Acetone	<0.42	mg/kg	0.42	1.4	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Benzene	<0.012	mg/kg	0.012	0.037	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Bromobenzene	<0.017	mg/kg	0.017	0.055	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Bromochloromethane	<0.018	mg/kg	0.018	0.061	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Bromodichloromethane	<0.015	mg/kg	0.015	0.049	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Bromoform	<0.064	mg/kg	0.064	0.20	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Bromomethane	<0.095	mg/kg	0.095	0.32	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Carbon disulfide	<0.042	mg/kg	0.042	0.13	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Carbon tetrachloride	<0.015	mg/kg	0.015	0.048	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Chlorobenzene	<0.011	mg/kg	0.011	0.034	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Chloroethane	<0.032	mg/kg	0.032	0.13	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Chloroform	<0.017	mg/kg	0.017	0.056	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530651 Sample Description: E426-1,S1,2' Sampled: 02/02/2021 1005

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Chloromethane	<0.032	mg/kg	0.032	0.11	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
cis-1,2-Dichloroethene	<0.029	mg/kg	0.029	0.095	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
cis-1,3-Dichloropropene	<0.015	mg/kg	0.015	0.051	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Dibromochloromethane	<0.042	mg/kg	0.042	0.15	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Dibromomethane	<0.022	mg/kg	0.022	0.074	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Dichlorodifluoromethane	<0.053	mg/kg	0.053	0.18	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Diisopropyl ether	<0.019	mg/kg	0.019	0.065	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Ethylbenzene	<0.012	mg/kg	0.012	0.037	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Hexachlorobutadiene	<0.024	mg/kg	0.024	0.083	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Isopropylbenzene	<0.014	mg/kg	0.014	0.046	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
m & p-Xylene	<0.026	mg/kg	0.026	0.087	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Methyl tert-butyl ether	<0.017	mg/kg	0.017	0.056	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Methylene chloride	<0.064	mg/kg	0.064	0.22	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
n-Butylbenzene	<0.018	mg/kg	0.018	0.058	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
n-Propylbenzene	<0.014	mg/kg	0.014	0.044	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Naphthalene	<0.016	mg/kg	0.016	0.052	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
o-Xylene	<0.0074	mg/kg	0.0074	0.023	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
p-Isopropyltoluene	<0.014	mg/kg	0.014	0.047	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
sec-Butylbenzene	<0.012	mg/kg	0.012	0.037	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Styrene	<0.017	mg/kg	0.017	0.055	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
tert-Butylbenzene	<0.013	mg/kg	0.013	0.043	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Tetrachloroethene	<0.012	mg/kg	0.012	0.039	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Tetrahydrofuran	<0.26	mg/kg	0.26	0.88	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Toluene	<0.017	mg/kg	0.017	0.056	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
trans-1,2-Dichloroethene	<0.015	mg/kg	0.015	0.050	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530651 Sample Description: E426-1,S1,2' Sampled: 02/02/2021 1005

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
trans-1,3-Dichloropropene	<0.042	mg/kg	0.042	0.13	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Trichloroethene	<0.020	mg/kg	0.020	0.066	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Trichlorofluoromethane	<0.042	mg/kg	0.042	0.13	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C
Vinyl chloride	<0.020	mg/kg	0.020	0.068	1		02/04/2021 13:30	02/05/2021 10:43	RLD	EPA 8260C

CT LAB Sample#: 530654 Sample Description: E426-1,S2,4' Sampled: 02/02/2021 1015

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results										
Solids, Percent	**91.9**	%	0.1	0.1	1			02/04/2021 11:57	BMM	EPA 8000C
Organic Results										
1,1,1,2-Tetrachloroethane	<0.074	mg/kg	0.074	0.25	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
1,1,1-Trichloroethane	<0.020	mg/kg	0.020	0.064	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
1,1,2,2-Tetrachloroethane	<0.025	mg/kg	0.025	0.087	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
1,1,2-Trichloroethane	<0.012	mg/kg	0.012	0.050	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
1,1-Dichloroethane	<0.0087	mg/kg	0.0087	0.029	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
1,1-Dichloroethene	<0.026	mg/kg	0.026	0.088	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
1,1-Dichloropropene	<0.037	mg/kg	0.037	0.11	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
1,2,3-Trichlorobenzene	<0.014	mg/kg	0.014	0.046	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
1,2,3-Trichloropropane	<0.050	mg/kg	0.050	0.17	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
1,2,4-Trichlorobenzene	<0.021	mg/kg	0.021	0.072	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
1,2,4-Trimethylbenzene	<0.014	mg/kg	0.014	0.043	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
1,2-Dibromo-3-chloropropane	<0.087	mg/kg	0.087	0.30	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
1,2-Dibromoethane	<0.012	mg/kg	0.012	0.050	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530654 Sample Description: E426-1,S2,4' Sampled: 02/02/2021 1015

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
1,2-Dichlorobenzene	<0.019	mg/kg	0.019	0.061	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
1,2-Dichloroethane	<0.027	mg/kg	0.027	0.092	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
1,2-Dichloropropane	<0.032	mg/kg	0.032	0.11	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
1,3,5-Trimethylbenzene	<0.016	mg/kg	0.016	0.055	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
1,3-Dichlorobenzene	<0.017	mg/kg	0.017	0.056	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
1,3-Dichloropropane	<0.017	mg/kg	0.017	0.059	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
1,4-Dichlorobenzene	<0.019	mg/kg	0.019	0.063	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
2,2-Dichloropropane	<0.026	mg/kg	0.026	0.087	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
2-Butanone	<0.50	mg/kg	0.50	1.5	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
2-Chlorotoluene	<0.022	mg/kg	0.022	0.073	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
2-Hexanone	<0.25	mg/kg	0.25	0.87	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
4-Chlorotoluene	<0.019	mg/kg	0.019	0.061	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
4-Methyl-2-pentanone	<0.22	mg/kg	0.22	0.76	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Acetone	<0.50	mg/kg	0.50	1.6	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Benzene	<0.014	mg/kg	0.014	0.043	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Bromobenzene	<0.020	mg/kg	0.020	0.064	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Bromochloromethane	<0.021	mg/kg	0.021	0.072	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Bromodichloromethane	<0.017	mg/kg	0.017	0.057	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Bromoform	<0.074	mg/kg	0.074	0.24	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Bromomethane	<0.11	mg/kg	0.11	0.37	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Carbon disulfide	<0.050	mg/kg	0.050	0.15	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Carbon tetrachloride	<0.017	mg/kg	0.017	0.056	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Chlorobenzene	<0.012	mg/kg	0.012	0.040	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Chloroethane	<0.037	mg/kg	0.037	0.15	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Chloroform	<0.020	mg/kg	0.020	0.066	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530654 Sample Description: E426-1,S2,4' Sampled: 02/02/2021 1015

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Chloromethane	<0.037	mg/kg	0.037	0.12	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
cis-1,2-Dichloroethene	<0.033	mg/kg	0.033	0.11	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
cis-1,3-Dichloropropene	<0.017	mg/kg	0.017	0.059	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Dibromochloromethane	<0.050	mg/kg	0.050	0.17	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Dibromomethane	<0.026	mg/kg	0.026	0.087	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Dichlorodifluoromethane	<0.062	mg/kg	0.062	0.21	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Diisopropyl ether	<0.022	mg/kg	0.022	0.076	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Ethylbenzene	<0.014	mg/kg	0.014	0.043	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Hexachlorobutadiene	<0.029	mg/kg	0.029	0.097	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Isopropylbenzene	<0.016	mg/kg	0.016	0.053	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
m & p-Xylene	<0.031	mg/kg	0.031	0.10	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Methyl tert-butyl ether	<0.020	mg/kg	0.020	0.066	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Methylene chloride	<0.074	mg/kg	0.074	0.26	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
n-Butylbenzene	<0.021	mg/kg	0.021	0.068	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
n-Propylbenzene	<0.016	mg/kg	0.016	0.052	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Naphthalene	<0.019	mg/kg	0.019	0.061	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
o-Xylene	<0.0087	mg/kg	0.0087	0.027	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
p-Isopropyltoluene	<0.016	mg/kg	0.016	0.055	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
sec-Butylbenzene	<0.014	mg/kg	0.014	0.043	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Styrene	<0.020	mg/kg	0.020	0.064	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
tert-Butylbenzene	<0.015	mg/kg	0.015	0.051	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Tetrachloroethene	<0.014	mg/kg	0.014	0.046	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Tetrahydrofuran	<0.31	mg/kg	0.31	1.0	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Toluene	<0.020	mg/kg	0.020	0.066	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
trans-1,2-Dichloroethene	<0.017	mg/kg	0.017	0.058	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530654 Sample Description: E426-1,S2,4' Sampled: 02/02/2021 1015

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
trans-1,3-Dichloropropene	<0.050	mg/kg	0.050	0.15	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Trichloroethene	<0.024	mg/kg	0.024	0.077	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Trichlorofluoromethane	<0.050	mg/kg	0.050	0.15	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Vinyl chloride	<0.024	mg/kg	0.024	0.079	1		02/04/2021 13:30	02/05/2021 11:13	RLD	EPA 8260C
Sub Lab Results										
PFOA	**attached**	mg/kg	N/A	N/A	1			03/04/2021 00:00	SUB	
PFOS	**attached**	mg/kg	N/A	N/A	1			03/04/2021 00:00	SUB	

CT LAB Sample#: 530655 Sample Description: E426-1 DUP Sampled: 02/02/2021 1015

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results										
Solids, Percent	**90.7**	%	0.1	0.1	1			02/04/2021 11:57	BMM	EPA 8000C
Organic Results										
1,1,1,2-Tetrachloroethane	<0.065	mg/kg	0.065	0.22	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
1,1,1-Trichloroethane	<0.017	mg/kg	0.017	0.056	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
1,1,2,2-Tetrachloroethane	<0.022	mg/kg	0.022	0.076	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
1,1,2-Trichloroethane	<0.011	mg/kg	0.011	0.043	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
1,1-Dichloroethane	<0.0076	mg/kg	0.0076	0.025	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
1,1-Dichloroethene	<0.023	mg/kg	0.023	0.077	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
1,1-Dichloropropene	<0.033	mg/kg	0.033	0.098	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
1,2,3-Trichlorobenzene	<0.012	mg/kg	0.012	0.040	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
1,2,3-Trichloropropane	<0.043	mg/kg	0.043	0.15	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
1,2,4-Trichlorobenzene	<0.018	mg/kg	0.018	0.063	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530655 Sample Description: E426-1 DUP Sampled: 02/02/2021 1015

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
1,2,4-Trimethylbenzene	<0.012	mg/kg	0.012	0.038	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
1,2-Dibromo-3-chloropropane	<0.076	mg/kg	0.076	0.26	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
1,2-Dibromoethane	<0.011	mg/kg	0.011	0.043	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
1,2-Dichlorobenzene	<0.016	mg/kg	0.016	0.053	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
1,2-Dichloroethane	<0.024	mg/kg	0.024	0.080	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
1,2-Dichloropropane	<0.028	mg/kg	0.028	0.093	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
1,3,5-Trimethylbenzene	<0.014	mg/kg	0.014	0.048	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
1,3-Dichlorobenzene	<0.015	mg/kg	0.015	0.049	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
1,3-Dichloropropane	<0.015	mg/kg	0.015	0.052	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
1,4-Dichlorobenzene	<0.016	mg/kg	0.016	0.055	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
2,2-Dichloropropane	<0.023	mg/kg	0.023	0.076	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
2-Butanone	<0.43	mg/kg	0.43	1.3	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
2-Chlorotoluene	<0.020	mg/kg	0.020	0.064	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
2-Hexanone	<0.22	mg/kg	0.22	0.76	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
4-Chlorotoluene	<0.016	mg/kg	0.016	0.053	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
4-Methyl-2-pentanone	<0.20	mg/kg	0.20	0.66	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Acetone	<0.43	mg/kg	0.43	1.4	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Benzene	<0.012	mg/kg	0.012	0.038	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Bromobenzene	<0.017	mg/kg	0.017	0.056	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Bromochloromethane	<0.018	mg/kg	0.018	0.063	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Bromodichloromethane	<0.015	mg/kg	0.015	0.050	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Bromoform	<0.065	mg/kg	0.065	0.21	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Bromomethane	<0.098	mg/kg	0.098	0.33	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Carbon disulfide	<0.043	mg/kg	0.043	0.13	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Carbon tetrachloride	<0.015	mg/kg	0.015	0.049	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530655 Sample Description: E426-1 DUP Sampled: 02/02/2021 1015

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Chlorobenzene	<0.011	mg/kg	0.011	0.035	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Chloroethane	<0.033	mg/kg	0.033	0.13	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Chloroform	<0.017	mg/kg	0.017	0.058	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Chloromethane	<0.033	mg/kg	0.033	0.11	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
cis-1,2-Dichloroethene	<0.029	mg/kg	0.029	0.098	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
cis-1,3-Dichloropropene	<0.015	mg/kg	0.015	0.052	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Dibromochloromethane	<0.043	mg/kg	0.043	0.15	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Dibromomethane	<0.023	mg/kg	0.023	0.076	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Dichlorodifluoromethane	<0.054	mg/kg	0.054	0.18	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Diisopropyl ether	<0.020	mg/kg	0.020	0.066	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Ethylbenzene	<0.012	mg/kg	0.012	0.038	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Hexachlorobutadiene	<0.025	mg/kg	0.025	0.085	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Isopropylbenzene	<0.014	mg/kg	0.014	0.047	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
m & p-Xylene	<0.027	mg/kg	0.027	0.089	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Methyl tert-butyl ether	<0.017	mg/kg	0.017	0.058	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Methylene chloride	<0.065	mg/kg	0.065	0.23	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
n-Butylbenzene	<0.018	mg/kg	0.018	0.060	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
n-Propylbenzene	<0.014	mg/kg	0.014	0.046	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Naphthalene	<0.016	mg/kg	0.016	0.053	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
o-Xylene	<0.0076	mg/kg	0.0076	0.024	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
p-Isopropyltoluene	<0.014	mg/kg	0.014	0.048	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
sec-Butylbenzene	<0.012	mg/kg	0.012	0.038	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Styrene	<0.017	mg/kg	0.017	0.056	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
tert-Butylbenzene	<0.013	mg/kg	0.013	0.044	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Tetrachloroethene	<0.012	mg/kg	0.012	0.040	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530655 Sample Description: E426-1 DUP Sampled: 02/02/2021 1015

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Tetrahydrofuran	<0.27	mg/kg	0.27	0.90	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Toluene	<0.017	mg/kg	0.017	0.058	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
trans-1,2-Dichloroethene	<0.015	mg/kg	0.015	0.051	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
trans-1,3-Dichloropropene	<0.043	mg/kg	0.043	0.13	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Trichloroethene	<0.021	mg/kg	0.021	0.067	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Trichlorofluoromethane	<0.043	mg/kg	0.043	0.13	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Vinyl chloride	<0.021	mg/kg	0.021	0.069	1		02/04/2021 13:30	02/05/2021 11:43	RLD	EPA 8260C
Sub Lab Results										
PFOA	**attached**	mg/kg	N/A	N/A	1			03/04/2021 00:00	SUB	
PFOS	**attached**	mg/kg	N/A	N/A	1			03/04/2021 00:00	SUB	

CT LAB Sample#: 530656 Sample Description: E426-2,S1,2' Sampled: 02/02/2021 1045

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results										
Solids, Percent	**90.1**	%	0.1	0.1	1			02/04/2021 11:57	BMM	EPA 8000C
Organic Results										
1,1,1,2-Tetrachloroethane	<0.081	mg/kg	0.081	0.27	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
1,1,1-Trichloroethane	<0.021	mg/kg	0.021	0.070	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
1,1,2,2-Tetrachloroethane	<0.027	mg/kg	0.027	0.094	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
1,1,2-Trichloroethane	<0.013	mg/kg	0.013	0.054	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
1,1-Dichloroethane	<0.0094	mg/kg	0.0094	0.031	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
1,1-Dichloroethene	<0.028	mg/kg	0.028	0.095	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
1,1-Dichloropropene	<0.040	mg/kg	0.040	0.12	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530656 Sample Description: E426-2,S1,2' Sampled: 02/02/2021 1045

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
1,2,3-Trichlorobenzene	<0.015	mg/kg	0.015	0.050	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
1,2,3-Trichloropropane	<0.054	mg/kg	0.054	0.19	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
1,2,4-Trichlorobenzene	<0.023	mg/kg	0.023	0.078	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
1,2,4-Trimethylbenzene	<0.015	mg/kg	0.015	0.047	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
1,2-Dibromo-3-chloropropane	<0.094	mg/kg	0.094	0.32	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
1,2-Dibromoethane	<0.013	mg/kg	0.013	0.054	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
1,2-Dichlorobenzene	<0.020	mg/kg	0.020	0.066	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
1,2-Dichloroethane	<0.030	mg/kg	0.030	0.099	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
1,2-Dichloropropane	<0.035	mg/kg	0.035	0.12	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
1,3,5-Trimethylbenzene	<0.017	mg/kg	0.017	0.059	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
1,3-Dichlorobenzene	<0.019	mg/kg	0.019	0.060	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
1,3-Dichloropropane	<0.019	mg/kg	0.019	0.064	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
1,4-Dichlorobenzene	<0.020	mg/kg	0.020	0.069	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
2,2-Dichloropropane	<0.028	mg/kg	0.028	0.094	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
2-Butanone	<0.54	mg/kg	0.54	1.6	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
2-Chlorotoluene	<0.024	mg/kg	0.024	0.079	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
2-Hexanone	<0.27	mg/kg	0.27	0.94	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
4-Chlorotoluene	<0.020	mg/kg	0.020	0.066	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
4-Methyl-2-pentanone	<0.24	mg/kg	0.24	0.82	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Acetone	<0.54	mg/kg	0.54	1.7	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Benzene	<0.015	mg/kg	0.015	0.047	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Bromobenzene	<0.021	mg/kg	0.021	0.070	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Bromochloromethane	<0.023	mg/kg	0.023	0.078	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Bromodichloromethane	<0.019	mg/kg	0.019	0.062	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Bromoform	<0.081	mg/kg	0.081	0.26	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530656 Sample Description: E426-2,S1,2' Sampled: 02/02/2021 1045

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Bromomethane	<0.12	mg/kg	0.12	0.40	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Carbon disulfide	<0.054	mg/kg	0.054	0.16	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Carbon tetrachloride	<0.019	mg/kg	0.019	0.060	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Chlorobenzene	<0.013	mg/kg	0.013	0.043	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Chloroethane	<0.040	mg/kg	0.040	0.16	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Chloroform	<0.021	mg/kg	0.021	0.071	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Chloromethane	<0.040	mg/kg	0.040	0.13	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
cis-1,2-Dichloroethene	<0.036	mg/kg	0.036	0.12	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
cis-1,3-Dichloropropene	<0.019	mg/kg	0.019	0.064	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Dibromochloromethane	<0.054	mg/kg	0.054	0.19	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Dibromomethane	<0.028	mg/kg	0.028	0.094	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Dichlorodifluoromethane	<0.067	mg/kg	0.067	0.23	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Diisopropyl ether	<0.024	mg/kg	0.024	0.082	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Ethylbenzene	<0.015	mg/kg	0.015	0.047	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Hexachlorobutadiene	<0.031	mg/kg	0.031	0.10	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Isopropylbenzene	<0.017	mg/kg	0.017	0.058	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
m & p-Xylene	<0.034	mg/kg	0.034	0.11	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Methyl tert-butyl ether	<0.021	mg/kg	0.021	0.071	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Methylene chloride	<0.081	mg/kg	0.081	0.28	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
n-Butylbenzene	<0.023	mg/kg	0.023	0.074	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
n-Propylbenzene	<0.017	mg/kg	0.017	0.056	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Naphthalene	<0.020	mg/kg	0.020	0.066	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
o-Xylene	<0.0094	mg/kg	0.0094	0.030	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
p-Isopropyltoluene	<0.017	mg/kg	0.017	0.059	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
sec-Butylbenzene	<0.015	mg/kg	0.015	0.047	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530656 Sample Description: E426-2,S1,2' Sampled: 02/02/2021 1045

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Styrene	<0.021	mg/kg	0.021	0.070	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
tert-Butylbenzene	<0.016	mg/kg	0.016	0.055	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Tetrachloroethene	<0.015	mg/kg	0.015	0.050	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Tetrahydrofuran	<0.34	mg/kg	0.34	1.1	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Toluene	<0.021	mg/kg	0.021	0.071	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
trans-1,2-Dichloroethene	<0.019	mg/kg	0.019	0.063	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
trans-1,3-Dichloropropene	<0.054	mg/kg	0.054	0.16	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Trichloroethene	<0.026	mg/kg	0.026	0.083	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Trichlorofluoromethane	<0.054	mg/kg	0.054	0.16	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Vinyl chloride	<0.026	mg/kg	0.026	0.086	1		02/04/2021 13:30	02/05/2021 12:13	RLD	EPA 8260C
Sub Lab Results										
PFOA	**attached**	mg/kg	N/A	N/A	1			03/04/2021 00:00	SUB	
PFOS	**attached**	mg/kg	N/A	N/A	1			03/04/2021 00:00	SUB	

CT LAB Sample#: 530657 Sample Description: E426-2,S2,4 1/2' Sampled: 02/02/2021 1100

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results										
Solids, Percent	**86.2**	%	0.1	0.1	1			02/04/2021 11:57	BMM	EPA 8000C
Organic Results										
1,1,1,2-Tetrachloroethane	<0.063	mg/kg	0.063	0.21	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
1,1,1-Trichloroethane	<0.017	mg/kg	0.017	0.054	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
1,1,2,2-Tetrachloroethane	<0.021	mg/kg	0.021	0.073	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
1,1,2-Trichloroethane	<0.010	mg/kg	0.010	0.042	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530657 Sample Description: E426-2,S2,4 1/2' Sampled: 02/02/2021 1100

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
1,1-Dichloroethane	<0.0073	mg/kg	0.0073	0.024	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
1,1-Dichloroethene	<0.022	mg/kg	0.022	0.074	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
1,1-Dichloropropene	<0.031	mg/kg	0.031	0.094	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
1,2,3-Trichlorobenzene	<0.011	mg/kg	0.011	0.039	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
1,2,3-Trichloropropane	<0.042	mg/kg	0.042	0.15	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
1,2,4-Trichlorobenzene	<0.018	mg/kg	0.018	0.061	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
1,2,4-Trimethylbenzene	<0.011	mg/kg	0.011	0.037	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
1,2-Dibromo-3-chloropropane	<0.073	mg/kg	0.073	0.25	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
1,2-Dibromoethane	<0.010	mg/kg	0.010	0.042	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
1,2-Dichlorobenzene	<0.016	mg/kg	0.016	0.051	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
1,2-Dichloroethane	<0.023	mg/kg	0.023	0.077	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
1,2-Dichloropropane	<0.027	mg/kg	0.027	0.090	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
1,3,5-Trimethylbenzene	<0.014	mg/kg	0.014	0.046	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
1,3-Dichlorobenzene	<0.015	mg/kg	0.015	0.047	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
1,3-Dichloropropane	<0.015	mg/kg	0.015	0.050	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
1,4-Dichlorobenzene	<0.016	mg/kg	0.016	0.053	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
2,2-Dichloropropane	<0.022	mg/kg	0.022	0.073	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
2-Butanone	<0.42	mg/kg	0.42	1.3	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
2-Chlorotoluene	<0.019	mg/kg	0.019	0.062	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
2-Hexanone	<0.21	mg/kg	0.21	0.73	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
4-Chlorotoluene	<0.016	mg/kg	0.016	0.051	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
4-Methyl-2-pentanone	<0.19	mg/kg	0.19	0.64	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Acetone	<0.42	mg/kg	0.42	1.4	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Benzene	<0.011	mg/kg	0.011	0.037	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Bromobenzene	<0.017	mg/kg	0.017	0.054	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530657 Sample Description: E426-2,S2,4 1/2' Sampled: 02/02/2021 1100

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Bromochloromethane	<0.018	mg/kg	0.018	0.061	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Bromodichloromethane	<0.015	mg/kg	0.015	0.048	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Bromoform	<0.063	mg/kg	0.063	0.20	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Bromomethane	<0.094	mg/kg	0.094	0.31	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Carbon disulfide	<0.042	mg/kg	0.042	0.13	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Carbon tetrachloride	<0.015	mg/kg	0.015	0.047	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Chlorobenzene	<0.010	mg/kg	0.010	0.033	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Chloroethane	<0.031	mg/kg	0.031	0.13	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Chloroform	<0.017	mg/kg	0.017	0.055	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Chloromethane	<0.031	mg/kg	0.031	0.10	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
cis-1,2-Dichloroethene	<0.028	mg/kg	0.028	0.094	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
cis-1,3-Dichloropropene	<0.015	mg/kg	0.015	0.050	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Dibromochloromethane	<0.042	mg/kg	0.042	0.15	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Dibromomethane	<0.022	mg/kg	0.022	0.073	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Dichlorodifluoromethane	<0.052	mg/kg	0.052	0.18	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Diisopropyl ether	<0.019	mg/kg	0.019	0.064	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Ethylbenzene	<0.011	mg/kg	0.011	0.037	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Hexachlorobutadiene	<0.024	mg/kg	0.024	0.081	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Isopropylbenzene	<0.014	mg/kg	0.014	0.045	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
m & p-Xylene	<0.026	mg/kg	0.026	0.086	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Methyl tert-butyl ether	<0.017	mg/kg	0.017	0.055	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Methylene chloride	<0.063	mg/kg	0.063	0.22	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
n-Butylbenzene	<0.018	mg/kg	0.018	0.057	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
n-Propylbenzene	<0.014	mg/kg	0.014	0.044	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Naphthalene	<0.016	mg/kg	0.016	0.051	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530657 Sample Description: E426-2,S2,4 1/2' Sampled: 02/02/2021 1100

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
o-Xylene	<0.0073	mg/kg	0.0073	0.023	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
p-Isopropyltoluene	<0.014	mg/kg	0.014	0.046	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
sec-Butylbenzene	<0.011	mg/kg	0.011	0.037	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Styrene	<0.017	mg/kg	0.017	0.054	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
tert-Butylbenzene	<0.013	mg/kg	0.013	0.043	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Tetrachloroethene	<0.011	mg/kg	0.011	0.039	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Tetrahydrofuran	<0.26	mg/kg	0.26	0.87	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Toluene	<0.017	mg/kg	0.017	0.055	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
trans-1,2-Dichloroethene	<0.015	mg/kg	0.015	0.049	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
trans-1,3-Dichloropropene	<0.042	mg/kg	0.042	0.13	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Trichloroethene	<0.020	mg/kg	0.020	0.065	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Trichlorofluoromethane	<0.042	mg/kg	0.042	0.13	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Vinyl chloride	<0.020	mg/kg	0.020	0.067	1		02/04/2021 13:30	02/05/2021 12:44	RLD	EPA 8260C
Sub Lab Results										
PFOA	**attached**	mg/kg	N/A	N/A	1			03/04/2021 00:00	SUB	
PFOS	**attached**	mg/kg	N/A	N/A	1			03/04/2021 00:00	SUB	

CT LAB Sample#: 530658 Sample Description: E426-1 Sampled: 02/02/2021 1205

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Organic Results										
1,1,1,2-Tetrachloroethane	<0.40	ug/L	0.40	1.4	1			02/09/2021 16:07	DGS	EPA 8260C
1,1,1-Trichloroethane	<0.29	ug/L	0.29	0.98	1			02/09/2021 16:07	DGS	EPA 8260C
1,1,2,2-Tetrachloroethane	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:07	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530658 Sample Description: E426-1 Sampled: 02/02/2021 1205

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
1,1,2-Trichloroethane	<0.30	ug/L	0.30	0.99	1			02/09/2021 16:07	DGS	EPA 8260C
1,1-Dichloroethane	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:07	DGS	EPA 8260C
1,1-Dichloroethene	<0.40	ug/L	0.40	1.2	1			02/09/2021 16:07	DGS	EPA 8260C
1,1-Dichloropropene	<0.30	ug/L	0.30	1.0	1			02/09/2021 16:07	DGS	EPA 8260C
1,2,3-Trichlorobenzene	<0.23	ug/L	0.23	0.77	1			02/09/2021 16:07	DGS	EPA 8260C
1,2,3-Trichloropropane	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:07	DGS	EPA 8260C
1,2,4-Trichlorobenzene	<0.28	ug/L	0.28	0.93	1			02/09/2021 16:07	DGS	EPA 8260C
1,2,4-Trimethylbenzene	<0.29	ug/L	0.29	0.96	1			02/09/2021 16:07	DGS	EPA 8260C
1,2-Dibromo-3-chloropropane	<0.25	ug/L	0.25	0.82	1			02/09/2021 16:07	DGS	EPA 8260C
1,2-Dibromoethane	<0.30	ug/L	0.30	1.0	1			02/09/2021 16:07	DGS	EPA 8260C
1,2-Dichlorobenzene	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:07	DGS	EPA 8260C
1,2-Dichloroethane	<0.24	ug/L	0.24	0.81	1			02/09/2021 16:07	DGS	EPA 8260C
1,2-Dichloropropane	<0.18	ug/L	0.18	0.61	1			02/09/2021 16:07	DGS	EPA 8260C
1,3,5-Trimethylbenzene	<0.27	ug/L	0.27	0.89	1			02/09/2021 16:07	DGS	EPA 8260C
1,3-Dichlorobenzene	<0.26	ug/L	0.26	0.87	1			02/09/2021 16:07	DGS	EPA 8260C
1,3-Dichloropropane	<0.17	ug/L	0.17	0.57	1			02/09/2021 16:07	DGS	EPA 8260C
1,4-Dichlorobenzene	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:07	DGS	EPA 8260C
2,2-Dichloropropane	<0.30	ug/L	0.30	0.99	1			02/09/2021 16:07	DGS	EPA 8260C
2-Butanone	<2.6	ug/L	2.6	8.8	1			02/09/2021 16:07	DGS	EPA 8260C
2-Chlorotoluene	<0.25	ug/L	0.25	0.84	1			02/09/2021 16:07	DGS	EPA 8260C
2-Hexanone	<3.0	ug/L	3.0	10	1			02/09/2021 16:07	DGS	EPA 8260C
4-Chlorotoluene	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:07	DGS	EPA 8260C
4-Methyl-2-pentanone	<2.2	ug/L	2.2	7.4	1			02/09/2021 16:07	DGS	EPA 8260C
Acetone	<4.0	ug/L	4.0	12	1			02/09/2021 16:07	DGS	EPA 8260C
Benzene	<0.40	ug/L	0.40	1.4	1			02/09/2021 16:07	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530658 Sample Description: E426-1 Sampled: 02/02/2021 1205

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Bromobenzene	<0.40	ug/L	0.40	1.3	1			02/09/2021 16:07	DGS	EPA 8260C
Bromochloromethane	<0.30	ug/L	0.30	1.0	1			02/09/2021 16:07	DGS	EPA 8260C
Bromodichloromethane	<0.29	ug/L	0.29	0.95	1			02/09/2021 16:07	DGS	EPA 8260C
Bromoform	<0.40	ug/L	0.40	1.3	1			02/09/2021 16:07	DGS	EPA 8260C
Bromomethane	<0.90	ug/L	0.90	3.1	1			02/09/2021 16:07	DGS	EPA 8260C
Carbon disulfide	<0.60	ug/L	0.60	1.9	1			02/09/2021 16:07	DGS	EPA 8260C
Carbon tetrachloride	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:07	DGS	EPA 8260C
Chlorobenzene	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:07	DGS	EPA 8260C
Chloroethane	<0.50	ug/L	0.50	1.6	1			02/09/2021 16:07	DGS	EPA 8260C
Chloroform	<0.30	ug/L	0.30	1.2	1			02/09/2021 16:07	DGS	EPA 8260C
Chloromethane	<0.60	ug/L	0.60	2.1	1			02/09/2021 16:07	DGS	EPA 8260C
cis-1,2-Dichloroethene	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:07	DGS	EPA 8260C
cis-1,3-Dichloropropene	<0.16	ug/L	0.16	0.54	1			02/09/2021 16:07	DGS	EPA 8260C
Dibromochloromethane	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:07	DGS	EPA 8260C
Dibromomethane	<0.22	ug/L	0.22	0.73	1			02/09/2021 16:07	DGS	EPA 8260C
Dichlorodifluoromethane	<0.40	ug/L	0.40	1.3	1			02/09/2021 16:07	DGS	EPA 8260C
Diisopropyl ether	<0.40	ug/L	0.40	1.3	1			02/09/2021 16:07	DGS	EPA 8260C
Ethylbenzene	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:07	DGS	EPA 8260C
Hexachlorobutadiene	<0.40	ug/L	0.40	1.2	1			02/09/2021 16:07	DGS	EPA 8260C
Isopropylbenzene	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:07	DGS	EPA 8260C
m & p-Xylene	<0.70	ug/L	0.70	2.4	1			02/09/2021 16:07	DGS	EPA 8260C
Methyl tert-butyl ether	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:07	DGS	EPA 8260C
Methylene chloride	<0.40	ug/L	0.40	1.5	1			02/09/2021 16:07	DGS	EPA 8260C
n-Butylbenzene	<0.29	ug/L	0.29	0.98	1			02/09/2021 16:07	DGS	EPA 8260C
n-Propylbenzene	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:07	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530658 Sample Description: E426-1 Sampled: 02/02/2021 1205

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Naphthalene	<0.30	ug/L	0.30	1.0	1			02/09/2021 16:07	DGS	EPA 8260C
o-Xylene	<0.26	ug/L	0.26	0.88	1			02/09/2021 16:07	DGS	EPA 8260C
p-Isopropyltoluene	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:07	DGS	EPA 8260C
sec-Butylbenzene	<0.40	ug/L	0.40	1.2	1			02/09/2021 16:07	DGS	EPA 8260C
Styrene	<0.29	ug/L	0.29	0.95	1			02/09/2021 16:07	DGS	EPA 8260C
tert-Butylbenzene	<0.40	ug/L	0.40	1.2	1			02/09/2021 16:07	DGS	EPA 8260C
Tetrachloroethene	<0.27	ug/L	0.27	0.89	1			02/09/2021 16:07	DGS	EPA 8260C
Tetrahydrofuran	<3.0	ug/L	3.0	10	1			02/09/2021 16:07	DGS	EPA 8260C
Toluene	<0.21	ug/L	0.21	0.69	1			02/09/2021 16:07	DGS	EPA 8260C
trans-1,2-Dichloroethene	<0.30	ug/L	0.30	1.2	1			02/09/2021 16:07	DGS	EPA 8260C
trans-1,3-Dichloropropene	<0.23	ug/L	0.23	0.77	1			02/09/2021 16:07	DGS	EPA 8260C
Trichloroethene	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:07	DGS	EPA 8260C
Trichlorofluoromethane	<0.40	ug/L	0.40	1.4	1			02/09/2021 16:07	DGS	EPA 8260C
Vinyl chloride	<0.14	ug/L	0.14	0.46	1			02/09/2021 16:07	DGS	EPA 8260C
Sub Lab Results										
PFOA	**attached**	ug/L	N/A	N/A	1			03/04/2021 00:00	SUB	
PFOS	**attached**	ug/L	N/A	N/A	1			03/04/2021 00:00	SUB	

CT LAB Sample#: 530659 Sample Description: E426-1 DUP Sampled: 02/02/2021 1205

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Organic Results										
1,1,1,2-Tetrachloroethane	<0.40	ug/L	0.40	1.4	1			02/09/2021 16:39	DGS	EPA 8260C
1,1,1-Trichloroethane	<0.29	ug/L	0.29	0.98	1			02/09/2021 16:39	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530659 Sample Description: E426-1 DUP Sampled: 02/02/2021 1205

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
1,1,2,2-Tetrachloroethane	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:39	DGS	EPA 8260C
1,1,2-Trichloroethane	<0.30	ug/L	0.30	0.99	1			02/09/2021 16:39	DGS	EPA 8260C
1,1-Dichloroethane	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:39	DGS	EPA 8260C
1,1-Dichloroethene	<0.40	ug/L	0.40	1.2	1			02/09/2021 16:39	DGS	EPA 8260C
1,1-Dichloropropene	<0.30	ug/L	0.30	1.0	1			02/09/2021 16:39	DGS	EPA 8260C
1,2,3-Trichlorobenzene	<0.23	ug/L	0.23	0.77	1			02/09/2021 16:39	DGS	EPA 8260C
1,2,3-Trichloropropane	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:39	DGS	EPA 8260C
1,2,4-Trichlorobenzene	<0.28	ug/L	0.28	0.93	1			02/09/2021 16:39	DGS	EPA 8260C
1,2,4-Trimethylbenzene	<0.29	ug/L	0.29	0.96	1			02/09/2021 16:39	DGS	EPA 8260C
1,2-Dibromo-3-chloropropane	<0.25	ug/L	0.25	0.82	1			02/09/2021 16:39	DGS	EPA 8260C
1,2-Dibromoethane	<0.30	ug/L	0.30	1.0	1			02/09/2021 16:39	DGS	EPA 8260C
1,2-Dichlorobenzene	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:39	DGS	EPA 8260C
1,2-Dichloroethane	<0.24	ug/L	0.24	0.81	1			02/09/2021 16:39	DGS	EPA 8260C
1,2-Dichloropropane	<0.18	ug/L	0.18	0.61	1			02/09/2021 16:39	DGS	EPA 8260C
1,3,5-Trimethylbenzene	<0.27	ug/L	0.27	0.89	1			02/09/2021 16:39	DGS	EPA 8260C
1,3-Dichlorobenzene	<0.26	ug/L	0.26	0.87	1			02/09/2021 16:39	DGS	EPA 8260C
1,3-Dichloropropane	<0.17	ug/L	0.17	0.57	1			02/09/2021 16:39	DGS	EPA 8260C
1,4-Dichlorobenzene	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:39	DGS	EPA 8260C
2,2-Dichloropropane	<0.30	ug/L	0.30	0.99	1			02/09/2021 16:39	DGS	EPA 8260C
2-Butanone	<2.6	ug/L	2.6	8.8	1			02/09/2021 16:39	DGS	EPA 8260C
2-Chlorotoluene	<0.25	ug/L	0.25	0.84	1			02/09/2021 16:39	DGS	EPA 8260C
2-Hexanone	<3.0	ug/L	3.0	10	1			02/09/2021 16:39	DGS	EPA 8260C
4-Chlorotoluene	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:39	DGS	EPA 8260C
4-Methyl-2-pentanone	<2.2	ug/L	2.2	7.4	1			02/09/2021 16:39	DGS	EPA 8260C
Acetone	<4.0	ug/L	4.0	12	1			02/09/2021 16:39	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530659 Sample Description: E426-1 DUP Sampled: 02/02/2021 1205

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Benzene	<0.40	ug/L	0.40	1.4	1			02/09/2021 16:39	DGS	EPA 8260C
Bromobenzene	<0.40	ug/L	0.40	1.3	1			02/09/2021 16:39	DGS	EPA 8260C
Bromochloromethane	<0.30	ug/L	0.30	1.0	1			02/09/2021 16:39	DGS	EPA 8260C
Bromodichloromethane	<0.29	ug/L	0.29	0.95	1			02/09/2021 16:39	DGS	EPA 8260C
Bromoform	<0.40	ug/L	0.40	1.3	1			02/09/2021 16:39	DGS	EPA 8260C
Bromomethane	<0.90	ug/L	0.90	3.1	1			02/09/2021 16:39	DGS	EPA 8260C
Carbon disulfide	<0.60	ug/L	0.60	1.9	1			02/09/2021 16:39	DGS	EPA 8260C
Carbon tetrachloride	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:39	DGS	EPA 8260C
Chlorobenzene	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:39	DGS	EPA 8260C
Chloroethane	<0.50	ug/L	0.50	1.6	1			02/09/2021 16:39	DGS	EPA 8260C
Chloroform	<0.30	ug/L	0.30	1.2	1			02/09/2021 16:39	DGS	EPA 8260C
Chloromethane	<0.60	ug/L	0.60	2.1	1			02/09/2021 16:39	DGS	EPA 8260C
cis-1,2-Dichloroethene	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:39	DGS	EPA 8260C
cis-1,3-Dichloropropene	<0.16	ug/L	0.16	0.54	1			02/09/2021 16:39	DGS	EPA 8260C
Dibromochloromethane	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:39	DGS	EPA 8260C
Dibromomethane	<0.22	ug/L	0.22	0.73	1			02/09/2021 16:39	DGS	EPA 8260C
Dichlorodifluoromethane	<0.40	ug/L	0.40	1.3	1			02/09/2021 16:39	DGS	EPA 8260C
Diisopropyl ether	<0.40	ug/L	0.40	1.3	1			02/09/2021 16:39	DGS	EPA 8260C
Ethylbenzene	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:39	DGS	EPA 8260C
Hexachlorobutadiene	<0.40	ug/L	0.40	1.2	1			02/09/2021 16:39	DGS	EPA 8260C
Isopropylbenzene	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:39	DGS	EPA 8260C
m & p-Xylene	<0.70	ug/L	0.70	2.4	1			02/09/2021 16:39	DGS	EPA 8260C
Methyl tert-butyl ether	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:39	DGS	EPA 8260C
Methylene chloride	<0.40	ug/L	0.40	1.5	1			02/09/2021 16:39	DGS	EPA 8260C
n-Butylbenzene	<0.29	ug/L	0.29	0.98	1			02/09/2021 16:39	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530659 Sample Description: E426-1 DUP Sampled: 02/02/2021 1205

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
n-Propylbenzene	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:39	DGS	EPA 8260C
Naphthalene	<0.30	ug/L	0.30	1.0	1			02/09/2021 16:39	DGS	EPA 8260C
o-Xylene	<0.26	ug/L	0.26	0.88	1			02/09/2021 16:39	DGS	EPA 8260C
p-Isopropyltoluene	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:39	DGS	EPA 8260C
sec-Butylbenzene	<0.40	ug/L	0.40	1.2	1			02/09/2021 16:39	DGS	EPA 8260C
Styrene	<0.29	ug/L	0.29	0.95	1			02/09/2021 16:39	DGS	EPA 8260C
tert-Butylbenzene	<0.40	ug/L	0.40	1.2	1			02/09/2021 16:39	DGS	EPA 8260C
Tetrachloroethene	<0.27	ug/L	0.27	0.89	1			02/09/2021 16:39	DGS	EPA 8260C
Tetrahydrofuran	<3.0	ug/L	3.0	10	1			02/09/2021 16:39	DGS	EPA 8260C
Toluene	<0.21	ug/L	0.21	0.69	1			02/09/2021 16:39	DGS	EPA 8260C
trans-1,2-Dichloroethene	<0.30	ug/L	0.30	1.2	1			02/09/2021 16:39	DGS	EPA 8260C
trans-1,3-Dichloropropene	<0.23	ug/L	0.23	0.77	1			02/09/2021 16:39	DGS	EPA 8260C
Trichloroethene	<0.30	ug/L	0.30	1.1	1			02/09/2021 16:39	DGS	EPA 8260C
Trichlorofluoromethane	<0.40	ug/L	0.40	1.4	1			02/09/2021 16:39	DGS	EPA 8260C
Vinyl chloride	<0.14	ug/L	0.14	0.46	1			02/09/2021 16:39	DGS	EPA 8260C
Sub Lab Results										
PFOA	**attached**	ug/L	N/A	N/A	1			03/04/2021 00:00	SUB	
PFOS	**attached**	ug/L	N/A	N/A	1			03/04/2021 00:00	SUB	

CT LAB Sample#: 530660 Sample Description: E426-2 Sampled: 02/02/2021 1255

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Organic Results										
1,1,1,2-Tetrachloroethane	<0.40	ug/L	0.40	1.4	1			02/09/2021 17:10	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530660 Sample Description: E426-2 Sampled: 02/02/2021 1255

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
1,1,1-Trichloroethane	<0.29	ug/L	0.29	0.98	1			02/09/2021 17:10	DGS	EPA 8260C
1,1,2,2-Tetrachloroethane	<0.30	ug/L	0.30	1.1	1			02/09/2021 17:10	DGS	EPA 8260C
1,1,2-Trichloroethane	<0.30	ug/L	0.30	0.99	1			02/09/2021 17:10	DGS	EPA 8260C
1,1-Dichloroethane	<0.30	ug/L	0.30	1.1	1			02/09/2021 17:10	DGS	EPA 8260C
1,1-Dichloroethene	<0.40	ug/L	0.40	1.2	1			02/09/2021 17:10	DGS	EPA 8260C
1,1-Dichloropropene	<0.30	ug/L	0.30	1.0	1			02/09/2021 17:10	DGS	EPA 8260C
1,2,3-Trichlorobenzene	<0.23	ug/L	0.23	0.77	1			02/09/2021 17:10	DGS	EPA 8260C
1,2,3-Trichloropropane	<0.30	ug/L	0.30	1.1	1			02/09/2021 17:10	DGS	EPA 8260C
1,2,4-Trichlorobenzene	<0.28	ug/L	0.28	0.93	1			02/09/2021 17:10	DGS	EPA 8260C
1,2,4-Trimethylbenzene	<0.29	ug/L	0.29	0.96	1			02/09/2021 17:10	DGS	EPA 8260C
1,2-Dibromo-3-chloropropane	<0.25	ug/L	0.25	0.82	1			02/09/2021 17:10	DGS	EPA 8260C
1,2-Dibromoethane	<0.30	ug/L	0.30	1.0	1			02/09/2021 17:10	DGS	EPA 8260C
1,2-Dichlorobenzene	<0.30	ug/L	0.30	1.1	1			02/09/2021 17:10	DGS	EPA 8260C
1,2-Dichloroethane	<0.24	ug/L	0.24	0.81	1			02/09/2021 17:10	DGS	EPA 8260C
1,2-Dichloropropane	<0.18	ug/L	0.18	0.61	1			02/09/2021 17:10	DGS	EPA 8260C
1,3,5-Trimethylbenzene	<0.27	ug/L	0.27	0.89	1			02/09/2021 17:10	DGS	EPA 8260C
1,3-Dichlorobenzene	<0.26	ug/L	0.26	0.87	1			02/09/2021 17:10	DGS	EPA 8260C
1,3-Dichloropropane	<0.17	ug/L	0.17	0.57	1			02/09/2021 17:10	DGS	EPA 8260C
1,4-Dichlorobenzene	<0.30	ug/L	0.30	1.1	1			02/09/2021 17:10	DGS	EPA 8260C
2,2-Dichloropropane	<0.30	ug/L	0.30	0.99	1			02/09/2021 17:10	DGS	EPA 8260C
2-Butanone	<2.6	ug/L	2.6	8.8	1			02/09/2021 17:10	DGS	EPA 8260C
2-Chlorotoluene	<0.25	ug/L	0.25	0.84	1			02/09/2021 17:10	DGS	EPA 8260C
2-Hexanone	<3.0	ug/L	3.0	10	1			02/09/2021 17:10	DGS	EPA 8260C
4-Chlorotoluene	<0.30	ug/L	0.30	1.1	1			02/09/2021 17:10	DGS	EPA 8260C
4-Methyl-2-pentanone	<2.2	ug/L	2.2	7.4	1			02/09/2021 17:10	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530660 Sample Description: E426-2 Sampled: 02/02/2021 1255

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Acetone	<4.0	ug/L	4.0	12	1			02/09/2021 17:10	DGS	EPA 8260C
Benzene	<0.40	ug/L	0.40	1.4	1			02/09/2021 17:10	DGS	EPA 8260C
Bromobenzene	<0.40	ug/L	0.40	1.3	1			02/09/2021 17:10	DGS	EPA 8260C
Bromochloromethane	<0.30	ug/L	0.30	1.0	1			02/09/2021 17:10	DGS	EPA 8260C
Bromodichloromethane	<0.29	ug/L	0.29	0.95	1			02/09/2021 17:10	DGS	EPA 8260C
Bromoform	<0.40	ug/L	0.40	1.3	1			02/09/2021 17:10	DGS	EPA 8260C
Bromomethane	<0.90	ug/L	0.90	3.1	1			02/09/2021 17:10	DGS	EPA 8260C
Carbon disulfide	<0.60	ug/L	0.60	1.9	1			02/09/2021 17:10	DGS	EPA 8260C
Carbon tetrachloride	<0.30	ug/L	0.30	1.1	1			02/09/2021 17:10	DGS	EPA 8260C
Chlorobenzene	<0.30	ug/L	0.30	1.1	1			02/09/2021 17:10	DGS	EPA 8260C
Chloroethane	<0.50	ug/L	0.50	1.6	1			02/09/2021 17:10	DGS	EPA 8260C
Chloroform	<0.30	ug/L	0.30	1.2	1			02/09/2021 17:10	DGS	EPA 8260C
Chloromethane	<0.60	ug/L	0.60	2.1	1			02/09/2021 17:10	DGS	EPA 8260C
cis-1,2-Dichloroethene	<0.30	ug/L	0.30	1.1	1			02/09/2021 17:10	DGS	EPA 8260C
cis-1,3-Dichloropropene	<0.16	ug/L	0.16	0.54	1			02/09/2021 17:10	DGS	EPA 8260C
Dibromochloromethane	<0.30	ug/L	0.30	1.1	1			02/09/2021 17:10	DGS	EPA 8260C
Dibromomethane	<0.22	ug/L	0.22	0.73	1			02/09/2021 17:10	DGS	EPA 8260C
Dichlorodifluoromethane	<0.40	ug/L	0.40	1.3	1			02/09/2021 17:10	DGS	EPA 8260C
Diisopropyl ether	<0.40	ug/L	0.40	1.3	1			02/09/2021 17:10	DGS	EPA 8260C
Ethylbenzene	<0.30	ug/L	0.30	1.1	1			02/09/2021 17:10	DGS	EPA 8260C
Hexachlorobutadiene	<0.40	ug/L	0.40	1.2	1			02/09/2021 17:10	DGS	EPA 8260C
Isopropylbenzene	<0.30	ug/L	0.30	1.1	1			02/09/2021 17:10	DGS	EPA 8260C
m & p-Xylene	<0.70	ug/L	0.70	2.4	1			02/09/2021 17:10	DGS	EPA 8260C
Methyl tert-butyl ether	<0.30	ug/L	0.30	1.1	1			02/09/2021 17:10	DGS	EPA 8260C
Methylene chloride	<0.40	ug/L	0.40	1.5	1			02/09/2021 17:10	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530660 Sample Description: E426-2 Sampled: 02/02/2021 1255

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
n-Butylbenzene	<0.29	ug/L	0.29	0.98	1			02/09/2021 17:10	DGS	EPA 8260C
n-Propylbenzene	<0.30	ug/L	0.30	1.1	1			02/09/2021 17:10	DGS	EPA 8260C
Naphthalene	<0.30	ug/L	0.30	1.0	1			02/09/2021 17:10	DGS	EPA 8260C
o-Xylene	<0.26	ug/L	0.26	0.88	1			02/09/2021 17:10	DGS	EPA 8260C
p-Isopropyltoluene	<0.30	ug/L	0.30	1.1	1			02/09/2021 17:10	DGS	EPA 8260C
sec-Butylbenzene	<0.40	ug/L	0.40	1.2	1			02/09/2021 17:10	DGS	EPA 8260C
Styrene	<0.29	ug/L	0.29	0.95	1			02/09/2021 17:10	DGS	EPA 8260C
tert-Butylbenzene	<0.40	ug/L	0.40	1.2	1			02/09/2021 17:10	DGS	EPA 8260C
Tetrachloroethene	<0.27	ug/L	0.27	0.89	1			02/09/2021 17:10	DGS	EPA 8260C
Tetrahydrofuran	<3.0	ug/L	3.0	10	1			02/09/2021 17:10	DGS	EPA 8260C
Toluene	<0.21	ug/L	0.21	0.69	1			02/09/2021 17:10	DGS	EPA 8260C
trans-1,2-Dichloroethene	<0.30	ug/L	0.30	1.2	1			02/09/2021 17:10	DGS	EPA 8260C
trans-1,3-Dichloropropene	<0.23	ug/L	0.23	0.77	1			02/09/2021 17:10	DGS	EPA 8260C
Trichloroethene	<0.30	ug/L	0.30	1.1	1			02/09/2021 17:10	DGS	EPA 8260C
Trichlorofluoromethane	<0.40	ug/L	0.40	1.4	1			02/09/2021 17:10	DGS	EPA 8260C
Vinyl chloride	<0.14	ug/L	0.14	0.46	1			02/09/2021 17:10	DGS	EPA 8260C

Sub Lab Results

PFOA	**attached**	ug/L	N/A	N/A	1			03/04/2021 00:00	SUB	
PFOS	**attached**	ug/L	N/A	N/A	1			03/04/2021 00:00	SUB	

CT LAB Sample#: 530661 Sample Description: E426-1,S1,4 1/2' Sampled: 02/02/2021 0945

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method

Sub Lab Results

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB Sample#: 530661 Sample Description: E426-1,S1,4 1/2' Sampled: 02/02/2021 0945

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
PFOA	**attached**	mg/kg	N/A	N/A	1			03/04/2021 00:00	SUB	
PFOS	**attached**	mg/kg	N/A	N/A	1			03/04/2021 00:00	SUB	

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

Notes regarding entire Chain of Custody:

Notes: * Indicates a value in between the LOD (limit of detection) and the LOQ (limit of quantitation). All LOD/LOQs are adjusted to reflect dilution and also any differences in the sample weight / volume as compared to standard amounts.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without written approval of this laboratory. The Chain of Custody is attached.

Submitted by: Eric T. Korthals
Project Manager
608-356-2760

Current CT Laboratories Certifications

Wisconsin (WDNR) Chemistry ID# 157066030
Wisconsin (DATCP) Bacteriology ID# 289
Louisiana NELAP (primary) ID# ACC20190002
Illinois NELAP Lab ID# 200073
Kansas NELAP Lab ID# E-10368
Virginia NELAP Lab ID# 460203
ISO/IEC 17025-2005 A2LA Cert # 3806.01
DoD-ELAP A2LA 3806.01
GA EPD Stipulation ID ACC20190002

March 03, 2021

Vista Work Order No. 2102108

Mr. Dennis Linley
C T Laboratories
1230 Lange Court
Baraboo, WI 53913-3109

Dear Mr. Linley,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on February 05, 2021 under your Project Name 'TRUAX FIELD / 159552 VISTA'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director

Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 2102108
Case Narrative

Sample Condition on Receipt:

Five soil samples and three groundwater samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. The samples were received in good condition and within the recommended temperature requirements.

Analytical Notes:

PFAS Isotope Dilution Method - Solid

The soil samples were extracted and analyzed for a selected list of PFAS using Vista's Isotope Dilution Method. The results for PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Results for all other analytes include the linear isomers only.

Holding Times

The samples were extracted and analyzed within the hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above the Reporting Limit (RL). The OPR recoveries were within the method acceptance criteria.

As requested, an MS/MSD was performed on sample "E426-2,S1,2'". The MS/MSD recoveries and/or RPDs were outside of the acceptance criteria for PFOS, 8:2 FTS, 11Cl-PF3OUdS and MeFOSA.

The labeled standard recoveries outside the acceptance criteria are flagged with an "H" qualifier. The responses of the internal standards with low recoveries were greater than 10:1 signal-to-noise, which is the limit generally considered acceptable for accurate quantitation by isotope dilution analysis.

PFAS Isotope Dilution Method - Aqueous

Sample "E426-2" contained particulate and was centrifuged prior to extraction.

The groundwater samples were extracted and analyzed for a selected list of PFAS using Vista's PFAS Isotope Dilution Method. The results for PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Results for all other analytes include the linear isomers only.

Holding Times

The samples were extracted and analyzed within the hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above the Reporting Limit. The recovery of PFOS was greater than 150% in the OPR. This analyte was detected in the MS/MSD samples. The recoveries of all other analytes were within the acceptance criteria.

As requested, an MS/MSD was performed on sample "E426-2". The MS/MSD recoveries and/or RPDs outside of the acceptance criteria are flagged with an H-qualifier.

The labeled standard recoveries outside the acceptance criteria are flagged with an "H" qualifier. The responses of the internal standards with low recoveries were greater than 10:1 signal-to-noise, which is the limit generally considered acceptable for accurate quantitation by isotope dilution analysis.

TABLE OF CONTENTS

Sample Inventory Report

Vista Sample ID	Client Sample ID		Sampled	Received	Components/Containers
2102108-01	E426-1,S2,4'		02-Feb-21 10:15	05-Feb-21 09:40	HDPE Jar, 6 oz
2102108-02	E426-1 DUP		02-Feb-21 10:15	05-Feb-21 09:40	HDPE Jar, 6 oz
2102108-03	E426-2,S1,2'	MS/MSD	02-Feb-21 10:45	05-Feb-21 09:40	HDPE Jar, 6 oz
					HDPE Jar, 6 oz
2102108-04	E426-2,S2,4 1/2'		02-Feb-21 11:00	05-Feb-21 09:40	HDPE Jar, 6 oz
2102108-05	E426-1		02-Feb-21 12:05	05-Feb-21 09:40	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2102108-06	E426-1 DUP		02-Feb-21 12:05	05-Feb-21 09:40	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2102108-07	E426-2	MS/MSD	02-Feb-21 12:55	05-Feb-21 09:40	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2102108-08	E426-1,S1,4 1/2'		02-Feb-21 09:45	05-Feb-21 09:40	HDPE Jar, 6 oz

ANALYTICAL RESULTS

Sample ID: Method Blank

PFAS Isotope Dilution Method

Client Data

Name: C T Laboratories
Project: TRUAX FIELD / 159552 VISTA
Matrix: Solid

Laboratory Data

Lab Sample: B1B0106-BLK1
Column: BEH C18

Analyte	CAS Number	Conc. (ng/g)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	<0.266	0.266	0.500		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
PFPeA	2706-90-3	<0.252	0.252	0.500		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
PFBS	375-73-5	<0.438	0.438	0.500		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
4:2 FTS	757124-72-4	<0.416	0.416	0.500		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
PFHxA	307-24-4	<0.638	0.638	1.00		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
PFPeS	2706-91-4	<0.324	0.324	0.500		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
HFPO-DA	13252-13-6	<0.548	0.548	1.00		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
PFHpA	375-85-9	<0.332	0.332	0.500		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
ADONA	919005-14-4	<0.350	0.350	0.500		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
PFHxS	355-46-4	<0.408	0.408	0.500		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
6:2 FTS	27619-97-2	<0.648	0.648	1.00		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
PFOA	335-67-1	<0.288	0.288	0.500		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
PFHpS	375-92-8	<0.630	0.630	1.00		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
PFNA	375-95-1	<0.376	0.376	0.500		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
PFOSA	754-91-6	<0.452	0.452	0.500		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
PFOS	1763-23-1	<0.764	0.764	1.00		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
9Cl-PF3ONS	756426-58-1	<0.714	0.714	1.00		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
PFDA	335-76-2	<0.652	0.652	1.00		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
8:2 FTS	39108-34-4	<0.538	0.538	1.00		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
PFNS	68259-12-1	<0.622	0.622	1.00		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
MeFOSAA	2355-31-9	<0.384	0.384	0.500		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
EtFOSAA	2991-50-6	<0.704	0.704	1.00		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
PFUnA	2058-94-8	<0.312	0.312	0.500		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
PFDS	335-77-3	<0.752	0.752	1.00		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
11Cl-PF3OUdS	763051-92-9	<1.13	1.13	1.50		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
10:2 FTS	120226-60-0	<0.522	0.522	1.00		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
PFDoA	307-55-1	<0.408	0.408	0.500		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
MeFOSA	31506-32-8	<3.16	3.16	10.0		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
PFTrDA	72629-94-8	<0.618	0.618	1.00		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
PFDoS	79780-39-5	<1.01	1.01	1.50		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
PFTeDA	376-06-7	<0.608	0.608	1.00		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
EtFOSA	4151-50-2	<5.00	5.00	10.0		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
PFHxDA	67905-19-5	<0.250	0.250	0.500		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
PFODA	16517-11-6	<0.970	0.970	1.00		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
MeFOSE	24448-09-7	<3.08	3.08	10.0		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
EtFOSE	1691-99-2	<3.52	3.52	10.0		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	99.6	25 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1

Sample ID: Method Blank

PFAS Isotope Dilution Method

Client Data

Name: C T Laboratories
Project: TRUAX FIELD / 159552 VISTA
Matrix: Solid

Laboratory Data

Lab Sample: B1B0106-BLK1
Column: BEH C18

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	95.9	25 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
13C3-PFBS	IS	104	25 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
13C3-HFPO-DA	IS	85.7	25 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
13C2-4:2 FTS	IS	92.7	25 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
13C2-PFHxA	IS	91.7	25 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
13C4-PFHpA	IS	92.4	25 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
13C3-PFHxS	IS	99.4	25 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
13C2-6:2 FTS	IS	102	25 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
13C5-PFNA	IS	81.1	25 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
13C8-PFOSA	IS	38.9	10 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
13C2-PFOA	IS	82.3	25 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
13C8-PFOS	IS	95.7	25 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
13C2-PFDA	IS	66.9	25 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
13C2-8:2 FTS	IS	97.2	25 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
d3-MeFOSAA	IS	57.5	25 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
13C2-PFUnA	IS	50.7	25 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
d5-EtFOSAA	IS	65.7	25 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
13C2-10:2 FTS	IS	91.1	25 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
13C2-PFDoA	IS	49.0	25 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
d3-MeFOSA	IS	10.7	10 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
13C2-PFTeDA	IS	66.2	25 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
d5-EtFOSA	IS	9.30	10 - 150	H	B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
13C2-PFHxDA	IS	66.0	25 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
d7-MeFOSE	IS	28.6	10 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1
d9-EtFOSE	IS	30.4	10 - 150		B1B0106	18-Feb-21	1.00 g	22-Feb-21 22:35	1

MDL - Method Detection Limit

RL - Reporting limit

The results are reported in dry weight.
The sample size is reported in wet weight.
Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OPR **PFAS Isotope Dilution Method**

Client Data

Name: C T Laboratories
Project: TRUAX FIELD / 159552 VISTA
Matrix: Solid

Laboratory Data

Lab Sample: B1B0106-BS1
Column: BEH C18

Analyte	CAS Number	Amt Found (ng/g)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	1.81	2.00	90.6	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
PFPeA	2706-90-3	2.13	2.00	106	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
PFBS	375-73-5	2.24	2.00	112	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
4:2 FTS	757124-72-4	2.21	2.00	111	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
PFHxA	307-24-4	2.20	2.00	110	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
PFPeS	2706-91-4	2.24	2.00	112	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
HFPO-DA	13252-13-6	2.17	2.00	109	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
PFHpA	375-85-9	2.25	2.00	113	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
ADONA	919005-14-4	2.14	2.00	107	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
PFHxS	355-46-4	2.26	2.00	113	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
6:2 FTS	27619-97-2	2.27	2.00	114	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
PFOA	335-67-1	2.31	2.00	115	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
PFHpS	375-92-8	2.54	2.00	127	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
PFNA	375-95-1	2.32	2.00	116	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
PFOSA	754-91-6	2.11	2.00	106	50 - 150	Q	B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
PFOS	1763-23-1	2.34	2.00	117	50 - 150	Q	B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
9Cl-PF3ONS	756426-58-1	2.16	2.00	108	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
PFDA	335-76-2	1.90	2.00	95.0	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
8:2 FTS	39108-34-4	1.98	2.00	99.0	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
PFNS	68259-12-1	1.90	2.00	95.1	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
MeFOSAA	2355-31-9	2.14	2.00	107	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
EtFOSAA	2991-50-6	2.24	2.00	112	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
PFUnA	2058-94-8	2.15	2.00	107	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
PFDS	335-77-3	2.10	2.00	105	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
11Cl-PF3OUdS	763051-92-9	2.87	2.00	143	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
10:2 FTS	120226-60-0	1.76	2.00	88.0	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
PFDoA	307-55-1	2.02	2.00	101	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
MeFOSA	31506-32-8	1.63	2.00	81.4	50 - 150	J	B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
PFTrDA	72629-94-8	2.14	2.00	107	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
PFDoS	79780-39-5	2.59	2.02	128	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
PFTeDA	376-06-7	2.17	2.00	108	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
EtFOSA	4151-50-2	1.80	2.00	90.0	50 - 150	J, Q	B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
PFHxDA	67905-19-5	2.17	2.00	108	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
PFODA	16517-11-6	1.74	2.00	86.9	50 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1

Sample ID: OPR **PFAS Isotope Dilution Method**

Client Data

Name: C T Laboratories
Project: TRUAX FIELD / 159552 VISTA
Matrix: Solid

Laboratory Data

Lab Sample: B1B0106-BS1
Column: BEH C18

Analyte	CAS Number	Amt Found (ng/g)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
MeFOSE	24448-09-7	1.59	2.00	79.4	50 - 150	J	B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
EtFOSE	1691-99-2	1.95	2.00	97.3	50 - 150	J	B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1

Labeled Standards	Type	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	96.1	25 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
13C3-PFPeA	IS	85.2	25 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
13C3-PFBS	IS	89.6	25 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
13C3-HFPO-DA	IS	88.2	25 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
13C2-4:2 FTS	IS	94.2	25 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
13C2-PFHxA	IS	82.0	25 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
13C4-PFHpA	IS	87.1	25 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
13C3-PFHxS	IS	89.1	25 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
13C2-6:2 FTS	IS	78.9	25 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
13C5-PFNA	IS	81.1	25 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
13C8-PFOSA	IS	39.3	10 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
13C2-PFOA	IS	85.8	25 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
13C8-PFOS	IS	89.2	25 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
13C2-PFDA	IS	70.3	25 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
13C2-8:2 FTS	IS	92.2	25 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
d3-MeFOSAA	IS	57.2	25 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
13C2-PFUnA	IS	59.0	25 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
d5-EtFOSAA	IS	55.7	25 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
13C2-10:2 FTS	IS	88.2	25 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
13C2-PFDoA	IS	57.6	25 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
d3-MeFOSA	IS	13.3	10 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
13C2-PFTeDA	IS	60.4	25 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
d5-EtFOSA	IS	10.6	10 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
13C2-PFHxDA	IS	73.8	25 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
d7-MeFOSE	IS	28.4	10 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1
d9-EtFOSE	IS	28.4	10 - 150		B1B0106	18-Feb-21	1.00 g	23-Feb-21 22:04	1

Sample ID: E426-1,S2,4'

PFAS Isotope Dilution Method

Client Data

Name: C T Laboratories
Project: TRUAX FIELD / 159552 VISTA
Location: 530654
Matrix: Soil
Date Collected: 02-Feb-21 10:15

Laboratory Data

Lab Sample: 2102108-01
Date Received: 05-Feb-21 09:40
% Solids: 93.7
Column: BEH C18

Analyte	CAS Number	Conc. (ng/g)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	<0.253	0.253	0.476		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
PFPeA	2706-90-3	<0.240	0.240	0.476		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
PFBS	375-73-5	<0.417	0.417	0.476		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
4:2 FTS	757124-72-4	<0.396	0.396	0.476		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
PFHxA	307-24-4	<0.608	0.608	0.953		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
PFPeS	2706-91-4	<0.309	0.309	0.476		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
HFPO-DA	13252-13-6	<0.522	0.522	0.953		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
PFHpA	375-85-9	0.778	0.316	0.476		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
ADONA	919005-14-4	<0.334	0.334	0.476		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
PFHxS	355-46-4	3.10	0.389	0.476		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
6:2 FTS	27619-97-2	23.2	0.618	0.953		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
PFOA	335-67-1	1.25	0.274	0.476		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
PFHpS	375-92-8	<0.600	0.600	0.953		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
PFNA	375-95-1	1.68	0.358	0.476		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
PFOSA	754-91-6	<0.431	0.431	0.476		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
PFOS	1763-23-1	1410	3.64	4.76	D	B1B0106	18-Feb-21	1.12 g	23-Feb-21 22:25	5
9Cl-PF3ONS	756426-58-1	<0.680	0.680	0.953		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
PFDA	335-76-2	<0.621	0.621	0.953		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
8:2 FTS	39108-34-4	12.5	0.513	0.953		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
PFNS	68259-12-1	<0.593	0.593	0.953		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
MeFOSAA	2355-31-9	<0.366	0.366	0.476		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
EtFOSAA	2991-50-6	<0.671	0.671	0.953		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
PFUnA	2058-94-8	<0.297	0.297	0.476		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
PFDS	335-77-3	<0.717	0.717	0.953		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
11Cl-PF3OUdS	763051-92-9	<1.07	1.07	1.43		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
10:2 FTS	120226-60-0	<0.497	0.497	0.953		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
PFDoA	307-55-1	<0.389	0.389	0.476		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
MeFOSA	31506-32-8	<3.01	3.01	9.53		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
PFTrDA	72629-94-8	<0.589	0.589	0.953		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
PFDoS	79780-39-5	<0.961	0.961	1.43		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
PFTeDA	376-06-7	<0.579	0.579	0.953		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
EtFOSA	4151-50-2	<4.76	4.76	9.53		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
PFHxDA	67905-19-5	<0.238	0.238	0.476		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
PFODA	16517-11-6	<0.924	0.924	0.953		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
MeFOSE	24448-09-7	<2.94	2.94	9.53		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
EtFOSE	1691-99-2	<3.35	3.35	9.53		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	90.4	25 - 150		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1

Sample ID: E426-1,S2,4'

PFAS Isotope Dilution Method

Client Data

Name: C T Laboratories
Project: TRUAX FIELD / 159552 VISTA
Location: 530654
Matrix: Soil
Date Collected: 02-Feb-21 10:15

Laboratory Data

Lab Sample: 2102108-01
Date Received: 05-Feb-21 09:40
% Solids: 93.7
Column: BEH C18

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	85.4	25 - 150		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
13C3-PFBS	IS	96.7	25 - 150		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
13C3-HFPO-DA	IS	74.9	25 - 150		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
13C2-4:2 FTS	IS	90.2	25 - 150		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
13C2-PFHxA	IS	78.1	25 - 150		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
13C4-PFHpA	IS	86.8	25 - 150		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
13C3-PFHxS	IS	90.5	25 - 150		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
13C2-6:2 FTS	IS	86.7	25 - 150		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
13C5-PFNA	IS	75.5	25 - 150		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
13C8-PFOSA	IS	35.4	10 - 150		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
13C2-PFOA	IS	77.6	25 - 150		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
13C8-PFOS	IS	63.5	25 - 150	D	B1B0106	18-Feb-21	1.12 g	23-Feb-21 22:25	5
13C2-PFDA	IS	61.9	25 - 150		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
13C2-8:2 FTS	IS	76.7	25 - 150		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
d3-MeFOSAA	IS	67.1	25 - 150		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
13C2-PFUnA	IS	50.5	25 - 150		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
d5-EtFOSAA	IS	55.3	25 - 150		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
13C2-10:2 FTS	IS	72.5	25 - 150		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
13C2-PFDoA	IS	48.8	25 - 150		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
d3-MeFOSA	IS	9.40	10 - 150	H	B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
13C2-PFTeDA	IS	64.9	25 - 150		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
d5-EtFOSA	IS	7.60	10 - 150	H	B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
13C2-PFHxDA	IS	69.3	25 - 150		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
d7-MeFOSE	IS	32.0	10 - 150		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1
d9-EtFOSE	IS	35.8	10 - 150		B1B0106	18-Feb-21	1.12 g	22-Feb-21 23:17	1

MDL - Method Detection Limit

RL - Reporting limit

The results are reported in dry weight.
The sample size is reported in wet weight.
Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: E426-1 DUP

PFAS Isotope Dilution Method

Client Data

Name: C T Laboratories
Project: TRUAX FIELD / 159552 VISTA
Location: 530655
Matrix: Soil
Date Collected: 02-Feb-21 10:15

Laboratory Data

Lab Sample: 2102108-02
Date Received: 05-Feb-21 09:40
% Solids: 94.2
Column: BEH C18

Analyte	CAS Number	Conc. (ng/g)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	<0.266	0.266	0.501		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
PFPeA	2706-90-3	<0.252	0.252	0.501		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
PFBS	375-73-5	<0.439	0.439	0.501		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
4:2 FTS	757124-72-4	<0.417	0.417	0.501		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
PFHxA	307-24-4	<0.639	0.639	1.00		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
PFPeS	2706-91-4	<0.324	0.324	0.501		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
HFPO-DA	13252-13-6	<0.549	0.549	1.00		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
PFHpA	375-85-9	0.696	0.332	0.501		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
ADONA	919005-14-4	<0.350	0.350	0.501		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
PFHxS	355-46-4	3.36	0.409	0.501		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
6:2 FTS	27619-97-2	22.0	0.649	1.00		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
PFOA	335-67-1	1.19	0.288	0.501		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
PFHpS	375-92-8	<0.631	0.631	1.00		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
PFNA	375-95-1	1.69	0.376	0.501		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
PFOSA	754-91-6	<0.453	0.453	0.501		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
PFOS	1763-23-1	1500	3.82	5.01	D	B1B0106	18-Feb-21	1.06 g	23-Feb-21 22:36	5
9Cl-PF3ONS	756426-58-1	<0.715	0.715	1.00		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
PFDA	335-76-2	<0.653	0.653	1.00		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
8:2 FTS	39108-34-4	12.4	0.539	1.00		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
PFNS	68259-12-1	<0.623	0.623	1.00		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
MeFOSAA	2355-31-9	<0.385	0.385	0.501		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
EtFOSAA	2991-50-6	<0.705	0.705	1.00		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
PFUnA	2058-94-8	<0.312	0.312	0.501		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
PFDS	335-77-3	<0.753	0.753	1.00		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
11Cl-PF3OUdS	763051-92-9	<1.13	1.13	1.50		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
10:2 FTS	120226-60-0	<0.523	0.523	1.00		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
PFDoA	307-55-1	<0.409	0.409	0.501		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
MeFOSA	31506-32-8	<3.16	3.16	10.0		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
PFTrDA	72629-94-8	<0.619	0.619	1.00		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
PFDoS	79780-39-5	<1.01	1.01	1.50		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
PFTeDA	376-06-7	<0.609	0.609	1.00		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
EtFOSA	4151-50-2	<5.01	5.01	10.0		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
PFHxDA	67905-19-5	<0.250	0.250	0.501		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
PFODA	16517-11-6	<0.971	0.971	1.00		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
MeFOSE	24448-09-7	<3.08	3.08	10.0		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
EtFOSE	1691-99-2	<3.52	3.52	10.0		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	92.0	25 - 150		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1

Sample ID: E426-1 DUP

PFAS Isotope Dilution Method

Client Data

Name: C T Laboratories
Project: TRUAX FIELD / 159552 VISTA
Location: 530655
Matrix: Soil
Date Collected: 02-Feb-21 10:15

Laboratory Data

Lab Sample: 2102108-02
Date Received: 05-Feb-21 09:40
% Solids: 94.2
Column: BEH C18

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	89.0	25 - 150		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
13C3-PFBS	IS	98.8	25 - 150		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
13C3-HFPO-DA	IS	73.7	25 - 150		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
13C2-4:2 FTS	IS	93.0	25 - 150		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
13C2-PFHxA	IS	82.4	25 - 150		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
13C4-PFHpA	IS	90.2	25 - 150		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
13C3-PFHxS	IS	83.6	25 - 150		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
13C2-6:2 FTS	IS	91.8	25 - 150		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
13C5-PFNA	IS	77.1	25 - 150		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
13C8-PFOSA	IS	38.9	10 - 150		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
13C2-PFOA	IS	82.1	25 - 150		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
13C8-PFOS	IS	68.5	25 - 150	D	B1B0106	18-Feb-21	1.06 g	23-Feb-21 22:36	5
13C2-PFDA	IS	77.3	25 - 150		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
13C2-8:2 FTS	IS	89.4	25 - 150		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
d3-MeFOSAA	IS	70.7	25 - 150		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
13C2-PFUnA	IS	59.6	25 - 150		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
d5-EtFOSAA	IS	66.2	25 - 150		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
13C2-10:2 FTS	IS	77.8	25 - 150		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
13C2-PFDoA	IS	53.9	25 - 150		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
d3-MeFOSA	IS	12.0	10 - 150		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
13C2-PFTeDA	IS	69.1	25 - 150		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
d5-EtFOSA	IS	9.80	10 - 150	H	B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
13C2-PFHxDA	IS	72.7	25 - 150		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
d7-MeFOSE	IS	35.9	10 - 150		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1
d9-EtFOSE	IS	43.8	10 - 150		B1B0106	18-Feb-21	1.06 g	22-Feb-21 23:28	1

MDL - Method Detection Limit

RL - Reporting limit

The results are reported in dry weight.
The sample size is reported in wet weight.
Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: E426-2,S1,2' **PFAS Isotope Dilution Method**

Client Data

Name: C T Laboratories
Project: TRUAX FIELD / 159552 VISTA
Location: 530656
Matrix: Soil
Date Collected: 02-Feb-21 10:45

Laboratory Data

Lab Sample: 2102108-03
Date Received: 05-Feb-21 09:40
% Solids: 93.2
Column: BEH C18

Analyte	CAS Number	Conc. (ng/g)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	<0.255	0.255	0.479		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
PFPeA	2706-90-3	<0.241	0.241	0.479		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
PFBS	375-73-5	<0.419	0.419	0.479		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
4:2 FTS	757124-72-4	<0.398	0.398	0.479		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
PFHxA	307-24-4	<0.611	0.611	0.958		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
PFPeS	2706-91-4	<0.310	0.310	0.479		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
HFPO-DA	13252-13-6	<0.525	0.525	0.958		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
PFHpA	375-85-9	<0.318	0.318	0.479		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
ADONA	919005-14-4	<0.335	0.335	0.479		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
PFHxS	355-46-4	0.592	0.391	0.479		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
6:2 FTS	27619-97-2	<0.621	0.621	0.958		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
PFOA	335-67-1	0.448	0.276	0.479	J	B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
PFHpS	375-92-8	<0.603	0.603	0.958		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
PFNA	375-95-1	<0.360	0.360	0.479		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
PFOSA	754-91-6	<0.433	0.433	0.479		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
PFOS	1763-23-1	13.2	0.732	0.958		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
9Cl-PF3ONS	756426-58-1	<0.684	0.684	0.958		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
PFDA	335-76-2	<0.624	0.624	0.958		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
8:2 FTS	39108-34-4	<0.515	0.515	0.958		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
PFNS	68259-12-1	<0.596	0.596	0.958		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
MeFOSAA	2355-31-9	<0.368	0.368	0.479		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
EtFOSAA	2991-50-6	<0.674	0.674	0.958		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
PFUnA	2058-94-8	<0.299	0.299	0.479		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
PFDS	335-77-3	<0.720	0.720	0.958		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
11Cl-PF3OUdS	763051-92-9	<1.08	1.08	1.44		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
10:2 FTS	120226-60-0	<0.500	0.500	0.958		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
PFDoA	307-55-1	<0.391	0.391	0.479		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
MeFOSA	31506-32-8	<3.03	3.03	9.58		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
PFTrDA	72629-94-8	<0.592	0.592	0.958		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
PFDoS	79780-39-5	<0.965	0.965	1.44		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
PFTeDA	376-06-7	<0.582	0.582	0.958		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
EtFOSA	4151-50-2	<4.79	4.79	9.58		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
PFHxDA	67905-19-5	<0.239	0.239	0.479		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
PFODA	16517-11-6	<0.929	0.929	0.958		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
MeFOSE	24448-09-7	<2.95	2.95	9.58		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
EtFOSE	1691-99-2	<3.37	3.37	9.58		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	92.8	25 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1

Sample ID: E426-2,S1,2'

PFAS Isotope Dilution Method

Client Data

Name: C T Laboratories
Project: TRUAX FIELD / 159552 VISTA
Location: 530656
Matrix: Soil
Date Collected: 02-Feb-21 10:45

Laboratory Data

Lab Sample: 2102108-03
Date Received: 05-Feb-21 09:40
% Solids: 93.2
Column: BEH C18

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	83.9	25 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
13C3-PFBS	IS	94.1	25 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
13C3-HFPO-DA	IS	81.7	25 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
13C2-4:2 FTS	IS	89.2	25 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
13C2-PFHxA	IS	80.2	25 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
13C4-PFHpA	IS	86.3	25 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
13C3-PFHxS	IS	94.7	25 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
13C2-6:2 FTS	IS	96.5	25 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
13C5-PFNA	IS	75.8	25 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
13C8-PFOSA	IS	46.0	10 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
13C2-PFOA	IS	87.5	25 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
13C8-PFOS	IS	85.1	25 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
13C2-PFDA	IS	71.0	25 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
13C2-8:2 FTS	IS	85.4	25 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
d3-MeFOSAA	IS	68.9	25 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
13C2-PFUnA	IS	62.2	25 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
d5-EtFOSAA	IS	68.6	25 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
13C2-10:2 FTS	IS	89.2	25 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
13C2-PFDoA	IS	70.5	25 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
d3-MeFOSA	IS	10.6	10 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
13C2-PFTeDA	IS	75.3	25 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
d5-EtFOSA	IS	9.00	10 - 150	H	B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
13C2-PFHxDA	IS	86.3	25 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
d7-MeFOSE	IS	31.8	10 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1
d9-EtFOSE	IS	35.1	10 - 150		B1B0106	18-Feb-21	1.12 g	23-Feb-21 23:18	1

MDL - Method Detection Limit

RL - Reporting limit

The results are reported in dry weight.
The sample size is reported in wet weight.
Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: E426-2,S1,2' **PFAS Isotope Dilution Method**

Name:	C T Laboratories	Lab Sample:	B1B0106-MS1/B1B0106-MSD1	Source Lab Sample:	2102108-03
Project:	TRUAX FIELD / 159552 VISTA	QC Batch:	B1B0106	Date Extracted:	18-Feb-21
Matrix:	Solid	Samp Size:	1.10/1.08 g	Column:	BEH C18

Analyte	CAS Number	Sample (ng/g)	MS (ng/g)	MS Spike	MS % Rec	MS Quals	MSD (ng/g)	MSD Spike	MSD % Rec	RPD	MSD Quals	%Rec Limits	RPD Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
PFBA	375-22-4	ND	2.09	1.95	107		2.06	1.99	104	2.84		70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
PFPeA	2706-90-3	ND	2.07	1.95	106		2.12	1.99	107	0.939		70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
PFBS	375-73-5	ND	2.15	1.95	110		2.20	1.99	111	0.905		70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
4:2 FTS	757124-72-4	ND	1.85	1.95	94.7		2.09	1.99	105	10.3		60-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
PFHxA	307-24-4	ND	2.12	1.95	108		2.44	1.99	122	12.2		70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
PFPeS	2706-91-4	ND	1.92	1.95	98.7		2.27	1.99	114	14.4		70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
HFPO-DA	13252-13-6	ND	2.20	1.95	113		2.36	1.99	118	4.33		70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
PFHpA	375-85-9	ND	2.32	1.95	119		2.25	1.99	113	5.17		70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
ADONA	919005-14-4	ND	2.21	1.95	113		1.96	1.99	98.6	13.6		70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
PFHxS	355-46-4	0.592	2.57	1.95	102	Q	2.87	1.99	114	11.1		70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
6:2 FTS	27619-97-2	ND	2.19	1.95	106		1.70	1.99	78.8	29.4		60-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
PFOA	335-67-1	0.448	2.60	1.95	111		2.66	1.99	111	0		70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
PFHpS	375-92-8	ND	2.23	1.95	108		2.09	1.99	98.3	9.40		60-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
PFNA	375-95-1	ND	2.03	1.95	97.7		2.26	1.99	107	9.09		70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
PFOSA	754-91-6	ND	2.39	1.95	123	Q	2.19	1.99	110	11.2	Q	70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
PFOS	1763-23-1	13.2	14.7	1.95	76.6		14.5	1.99	65.6	15.5	H	70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
9Cl-PF3ONS	756426-58-1	ND	2.05	1.95	105		2.03	1.99	102	2.90		70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
PFDA	335-76-2	ND	2.32	1.95	119		2.37	1.99	119	0		70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
8:2 FTS	39108-34-4	ND	2.11	1.95	96.0		2.91	1.99	134	33.0	H	60-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
PFNS	68259-12-1	ND	1.85	1.95	95.0		1.96	1.99	98.6	3.72		70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
MeFOSAA	2355-31-9	ND	2.06	1.95	106		2.11	1.99	106	0		70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
EtFOSAA	2991-50-6	ND	1.95	1.95	99.8		1.75	1.99	87.9	12.7		70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
PFUnA	2058-94-8	ND	2.17	1.95	111		2.02	1.99	102	8.45		70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
PFDS	335-77-3	ND	1.91	1.95	98.1		1.63	1.99	81.8	18.1		60-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
11Cl-PF3OUdS	763051-92-9	ND	2.60	1.95	133	H	2.50	1.99	126	5.41		70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
10:2 FTS	120226-60-0	ND	2.51	1.95	129		1.59	1.99	79.9	47.0		60-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
PFDoA	307-55-1	ND	1.78	1.95	91.2		1.75	1.99	87.9	3.69		70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
MeFOSA	31506-32-8	ND	1.35	1.95	69.3	J, H	1.92	1.99	96.2	32.5	J	70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
PFTrDA	72629-94-8	ND	2.29	1.95	118		2.08	1.99	105	11.7		60-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
PFDoS	79780-39-5	ND	2.50	1.97	127		2.02	2.01	100	23.8		60-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
PFTeDA	376-06-7	ND	2.15	1.95	110		2.18	1.99	109	0.913		70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
EtFOSA	4151-50-2	ND	1.84	1.95	94.4	J	1.48	1.99	74.4	23.7	J, Q	70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
PFHxDA	67905-19-5	ND	2.25	1.95	115		2.13	1.99	107	7.21		70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1

Sample ID: E426-2,S1,2' **PFAS Isotope Dilution Method**

Name:	C T Laboratories	Lab Sample:	B1B0106-MS1/B1B0106-MSD1	Source Lab Sample:	2102108-03
Project:	TRUAX FIELD / 159552 VISTA	QC Batch:	B1B0106	Date Extracted:	18-Feb-21
Matrix:	Solid	Samp Size:	1.10/1.08 g	Column:	BEH C18

Analyte	CAS Number	Sample (ng/g)	MS (ng/g)	MS Spike	MS % Rec	MS Quals	MSD (ng/g)	MSD Spike	MSD % Rec	RPD	MSD Quals	%Rec Limits	RPD Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
PFODA	16517-11-6	ND	1.58	1.95	81.3		1.69	1.99	84.9	4.33		40-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
MeFOSE	24448-09-7	ND	2.10	1.95	108	J	2.26	1.99	113	4.52	J	70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1
EtFOSE	1691-99-2	ND	1.85	1.95	95.0	J	2.17	1.99	109	13.7	J	70-130	50	22-Feb-21 22:56	1	22-Feb-21 23:07	1

Labeled Standards	Type	MS % Rec	MS Quals	MSD % Rec	MSD Quals	Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
13C3-PFBA	IS	93.8		93.3		25 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
13C3-PFPeA	IS	95.0		91.8		25 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
13C3-PFBS	IS	102		91.6		25 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
13C3-HFPO-DA	IS	79.8		80.4		25 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
13C2-4:2 FTS	IS	97.4		89.4		25 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
13C2-PFHxA	IS	88.2		81.8		25 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
13C4-PFHpA	IS	90.4		88.6		25 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
13C3-PFHxS	IS	93.8		90.3		25 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
13C2-6:2 FTS	IS	89.6		93.1		25 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
13C5-PFNA	IS	78.6		73.7		25 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
13C8-PFOSA	IS	43.8		44.9		10 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
13C2-PFOA	IS	85.5		80.9		25 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
13C8-PFOS	IS	82.0		81.2		25 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
13C2-PFDA	IS	72.4		63.1		25 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
13C2-8:2 FTS	IS	89.9		85.2		25 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
d3-MeFOSAA	IS	71.5		71.4		25 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
13C2-PFUnA	IS	62.4		60.0		25 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
d5-EtFOSAA	IS	66.1		69.8		25 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
13C2-10:2 FTS	IS	78.0		87.1		25 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
13C2-PFDoA	IS	63.3		61.0		25 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
d3-MeFOSA	IS	11.4		14.0		10 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
13C2-PFTeDA	IS	69.4		75.7		25 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
d5-EtFOSA	IS	9.50	H	11.8		10 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
13C2-PFHxDA	IS	63.6		64.9		25 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
d7-MeFOSE	IS	33.9		36.3		10 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1
d9-EtFOSE	IS	40.8		46.0		10 - 150	22-Feb-21 22:56	1	22-Feb-21 23:07	1

Sample ID: E426-2,S2,4 1/2'

PFAS Isotope Dilution Method

Client Data

Name: C T Laboratories
Project: TRUAX FIELD / 159552 VISTA
Location: 530657
Matrix: Soil
Date Collected: 02-Feb-21 11:00

Laboratory Data

Lab Sample: 2102108-04
Date Received: 05-Feb-21 09:40
% Solids: 90.8
Column: BEH C18

Analyte	CAS Number	Conc. (ng/g)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	<0.264	0.264	0.496		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
PFPeA	2706-90-3	<0.250	0.250	0.496		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
PFBS	375-73-5	<0.435	0.435	0.496		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
4:2 FTS	757124-72-4	<0.413	0.413	0.496		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
PFHxA	307-24-4	<0.633	0.633	0.992		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
PFPeS	2706-91-4	<0.322	0.322	0.496		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
HFPO-DA	13252-13-6	<0.544	0.544	0.992		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
PFHpA	375-85-9	<0.329	0.329	0.496		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
ADONA	919005-14-4	<0.347	0.347	0.496		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
PFHxS	355-46-4	<0.405	0.405	0.496		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
6:2 FTS	27619-97-2	<0.643	0.643	0.992		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
PFOA	335-67-1	<0.286	0.286	0.496		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
PFHpS	375-92-8	<0.625	0.625	0.992		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
PFNA	375-95-1	<0.373	0.373	0.496		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
PFOSA	754-91-6	<0.449	0.449	0.496		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
PFOS	1763-23-1	2.84	0.758	0.992		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
9Cl-PF3ONS	756426-58-1	<0.709	0.709	0.992		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
PFDA	335-76-2	<0.647	0.647	0.992		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
8:2 FTS	39108-34-4	<0.534	0.534	0.992		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
PFNS	68259-12-1	<0.617	0.617	0.992		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
MeFOSAA	2355-31-9	<0.381	0.381	0.496		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
EtFOSAA	2991-50-6	<0.699	0.699	0.992		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
PFUnA	2058-94-8	<0.310	0.310	0.496		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
PFDS	335-77-3	<0.746	0.746	0.992		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
11Cl-PF3OUdS	763051-92-9	<1.12	1.12	1.49		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
10:2 FTS	120226-60-0	<0.518	0.518	0.992		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
PFDoA	307-55-1	<0.405	0.405	0.496		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
MeFOSA	31506-32-8	<3.14	3.14	9.92		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
PFTrDA	72629-94-8	<0.613	0.613	0.992		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
PFDoS	79780-39-5	<1.00	1.00	1.49		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
PFTeDA	376-06-7	<0.603	0.603	0.992		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
EtFOSA	4151-50-2	<4.96	4.96	9.92		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
PFHxDA	67905-19-5	<0.248	0.248	0.496		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
PFODA	16517-11-6	<0.963	0.963	0.992		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
MeFOSE	24448-09-7	<3.06	3.06	9.92		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
EtFOSE	1691-99-2	<3.49	3.49	9.92		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	91.5	25 - 150		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1

Sample ID: E426-2,S2,4 1/2'

PFAS Isotope Dilution Method

Client Data

Name: C T Laboratories
Project: TRUAX FIELD / 159552 VISTA
Location: 530657
Matrix: Soil
Date Collected: 02-Feb-21 11:00

Laboratory Data

Lab Sample: 2102108-04
Date Received: 05-Feb-21 09:40
% Solids: 90.8
Column: BEH C18

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	82.4	25 - 150		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
13C3-PFBS	IS	99.8	25 - 150		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
13C3-HFPO-DA	IS	81.8	25 - 150		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
13C2-4:2 FTS	IS	85.1	25 - 150		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
13C2-PFHxA	IS	79.5	25 - 150		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
13C4-PFHpA	IS	86.7	25 - 150		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
13C3-PFHxS	IS	90.2	25 - 150		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
13C2-6:2 FTS	IS	85.7	25 - 150		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
13C5-PFNA	IS	73.8	25 - 150		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
13C8-PFOSA	IS	38.1	10 - 150		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
13C2-PFOA	IS	85.6	25 - 150		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
13C8-PFOS	IS	79.1	25 - 150		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
13C2-PFDA	IS	62.4	25 - 150		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
13C2-8:2 FTS	IS	80.4	25 - 150		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
d3-MeFOSAA	IS	63.3	25 - 150		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
13C2-PFUnA	IS	50.1	25 - 150		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
d5-EtFOSAA	IS	55.5	25 - 150		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
13C2-10:2 FTS	IS	75.7	25 - 150		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
13C2-PFDoA	IS	49.4	25 - 150		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
d3-MeFOSA	IS	6.80	10 - 150	H	B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
13C2-PFTeDA	IS	63.7	25 - 150		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
d5-EtFOSA	IS	5.70	10 - 150	H	B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
13C2-PFHxDA	IS	62.0	25 - 150		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
d7-MeFOSE	IS	30.5	10 - 150		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1
d9-EtFOSE	IS	35.2	10 - 150		B1B0106	18-Feb-21	1.11 g	22-Feb-21 23:49	1

MDL - Method Detection Limit

RL - Reporting limit

The results are reported in dry weight.
The sample size is reported in wet weight.
Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: E426-1,S1,4 1/2' **PFAS Isotope Dilution Method**

Client Data

Name: C T Laboratories
Project: TRUAX FIELD / 159552 VISTA
Location: 530661
Matrix: Soil
Date Collected: 02-Feb-21 09:45

Laboratory Data

Lab Sample: 2102108-08
Date Received: 05-Feb-21 09:40
% Solids: 89.4
Column: BEH C18

Analyte	CAS Number	Conc. (ng/g)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	0.277	0.263	0.495	J	B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
PFPeA	2706-90-3	0.979	0.249	0.495		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
PFBS	375-73-5	<0.434	0.434	0.495		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
4:2 FTS	757124-72-4	<0.412	0.412	0.495		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
PFHxA	307-24-4	0.704	0.632	0.990	J	B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
PFPeS	2706-91-4	<0.321	0.321	0.495		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
HFPO-DA	13252-13-6	<0.543	0.543	0.990		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
PFHpA	375-85-9	0.765	0.329	0.495		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
ADONA	919005-14-4	<0.347	0.347	0.495		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
PFHxS	355-46-4	1.15	0.404	0.495		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
6:2 FTS	27619-97-2	5.99	0.642	0.990		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
PFOA	335-67-1	<0.285	0.285	0.495		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
PFHpS	375-92-8	<0.624	0.624	0.990		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
PFNA	375-95-1	<0.372	0.372	0.495		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
PFOSA	754-91-6	<0.447	0.447	0.495		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
PFOS	1763-23-1	181	0.756	0.990		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
9Cl-PF3ONS	756426-58-1	<0.707	0.707	0.990		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
PFDA	335-76-2	<0.645	0.645	0.990		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
8:2 FTS	39108-34-4	0.760	0.533	0.990	J	B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
PFNS	68259-12-1	<0.616	0.616	0.990		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
MeFOSAA	2355-31-9	<0.380	0.380	0.495		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
EtFOSAA	2991-50-6	<0.697	0.697	0.990		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
PFUnA	2058-94-8	<0.309	0.309	0.495		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
PFDS	335-77-3	<0.745	0.745	0.990		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
11Cl-PF3OUdS	763051-92-9	<1.12	1.12	1.49		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
10:2 FTS	120226-60-0	<0.517	0.517	0.990		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
PFDoA	307-55-1	<0.404	0.404	0.495		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
MeFOSA	31506-32-8	<3.13	3.13	9.90		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
PFTrDA	72629-94-8	<0.612	0.612	0.990		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
PFDoS	79780-39-5	<0.998	0.998	1.49		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
PFTeDA	376-06-7	<0.602	0.602	0.990		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
EtFOSA	4151-50-2	<4.95	4.95	9.90		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
PFHxDA	67905-19-5	<0.248	0.248	0.495		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
PFODA	16517-11-6	<0.960	0.960	0.990		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
MeFOSE	24448-09-7	<3.05	3.05	9.90		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
EtFOSE	1691-99-2	<3.48	3.48	9.90		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	92.6	25 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1

Sample ID: E426-1,S1,4 1/2'

PFAS Isotope Dilution Method

Client Data

Name: C T Laboratories
Project: TRUAX FIELD / 159552 VISTA
Location: 530661
Matrix: Soil
Date Collected: 02-Feb-21 09:45

Laboratory Data

Lab Sample: 2102108-08
Date Received: 05-Feb-21 09:40
% Solids: 89.4
Column: BEH C18

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	89.6	25 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
13C3-PFBS	IS	93.9	25 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
13C3-HFPO-DA	IS	77.5	25 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
13C2-4:2 FTS	IS	83.8	25 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
13C2-PFHxA	IS	88.3	25 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
13C4-PFHpA	IS	85.3	25 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
13C3-PFHxS	IS	89.4	25 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
13C2-6:2 FTS	IS	94.0	25 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
13C5-PFNA	IS	76.5	25 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
13C8-PFOSA	IS	53.1	10 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
13C2-PFOA	IS	77.4	25 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
13C8-PFOS	IS	71.0	25 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
13C2-PFDA	IS	73.2	25 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
13C2-8:2 FTS	IS	85.0	25 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
d3-MeFOSAA	IS	79.6	25 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
13C2-PFUnA	IS	68.0	25 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
d5-EtFOSAA	IS	75.0	25 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
13C2-10:2 FTS	IS	84.3	25 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
13C2-PFDoA	IS	63.0	25 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
d3-MeFOSA	IS	24.5	10 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
13C2-PFTeDA	IS	56.1	25 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
d5-EtFOSA	IS	29.4	10 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
13C2-PFHxDA	IS	35.7	25 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
d7-MeFOSE	IS	46.5	10 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1
d9-EtFOSE	IS	59.1	10 - 150		B1B0106	18-Feb-21	1.13 g	22-Feb-21 23:59	1

MDL - Method Detection Limit

RL - Reporting limit

The results are reported in dry weight.
The sample size is reported in wet weight.
Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: Method Blank

PFAS Isotope Dilution Method

Client Data

Name: C T Laboratories
Project: TRUAX FIELD / 159552 VISTA
Matrix: Aqueous

Laboratory Data

Lab Sample: B1B0084-BLK1
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	<0.365	0.365	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
PFPeA	2706-90-3	<0.640	0.640	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
PFBS	375-73-5	<0.895	0.895	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
4:2 FTS	757124-72-4	<0.695	0.695	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
PFHxA	307-24-4	<1.09	1.09	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
PFPeS	2706-91-4	<1.21	1.21	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
HFPO-DA	13252-13-6	<2.41	2.41	2.50		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
PFHpA	375-85-9	<0.296	0.296	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
ADONA	919005-14-4	<0.361	0.361	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
PFHxS	355-46-4	<0.474	0.474	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
6:2 FTS	27619-97-2	<1.00	1.00	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
PFOA	335-67-1	<0.326	0.326	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
PFHpS	375-92-8	<0.469	0.469	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
PFNA	375-95-1	<0.405	0.405	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
PFOSA	754-91-6	<0.885	0.885	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
PFOS	1763-23-1	<0.404	0.404	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
9Cl-PF3ONS	756426-58-1	<0.725	0.725	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
PFDA	335-76-2	<0.745	0.745	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
8:2 FTS	39108-34-4	<1.03	1.03	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
PFNS	68259-12-1	<1.94	1.94	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
MeFOSAA	2355-31-9	<0.825	0.825	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
EtFOSAA	2991-50-6	<0.685	0.685	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
PFUnA	2058-94-8	<0.525	0.525	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
PFDS	335-77-3	<0.615	0.615	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
11Cl-PF3OUdS	763051-92-9	<1.21	1.21	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
10:2 FTS	120226-60-0	<1.57	1.57	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
PFDoA	307-55-1	<0.396	0.396	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
MeFOSA	31506-32-8	<6.85	6.85	8.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
PFTrDA	72629-94-8	<0.247	0.247	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
PFDoS	79780-39-5	<2.09	2.09	2.50		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
PFTeDA	376-06-7	<0.378	0.378	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
EtFOSA	4151-50-2	<7.30	7.30	8.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
PFHxDA	67905-19-5	<0.147	0.147	2.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
PFODA	16517-11-6	<3.07	3.07	3.50		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
MeFOSE	24448-09-7	<8.00	8.00	8.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
EtFOSE	1691-99-2	<5.55	5.55	8.00		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	117	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1

Sample ID: Method Blank

PFAS Isotope Dilution Method

Client Data

Name: C T Laboratories
Project: TRUAX FIELD / 159552 VISTA
Matrix: Aqueous

Laboratory Data

Lab Sample: B1B0084-BLK1
Column: BEH C18

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	85.8	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
13C3-PFBS	IS	89.7	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
13C3-HFPO-DA	IS	77.8	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
13C2-4:2 FTS	IS	97.1	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
13C2-PFHxA	IS	87.2	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
13C4-PFHpA	IS	87.8	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
13C3-PFHxS	IS	87.0	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
13C2-6:2 FTS	IS	83.3	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
13C5-PFNA	IS	85.1	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
13C8-PFOSA	IS	41.9	10 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
13C2-PFOA	IS	88.9	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
13C8-PFOS	IS	84.0	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
13C2-PFDA	IS	86.2	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
13C2-8:2 FTS	IS	84.2	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
d3-MeFOSAA	IS	75.6	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
13C2-PFUnA	IS	75.5	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
d5-EtFOSAA	IS	65.0	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
13C2-10:2 FTS	IS	79.6	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
13C2-PFDoA	IS	73.6	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
d3-MeFOSA	IS	15.1	10 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
13C2-PFTeDA	IS	73.4	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
d5-EtFOSA	IS	13.6	10 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
13C2-PFHxDA	IS	79.4	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
d7-MeFOSE	IS	29.3	10 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1
d9-EtFOSE	IS	32.5	10 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:12	1

MDL - Method Detection Limit RL - Reporting limit Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OPR **PFAS Isotope Dilution Method**

Client Data

Name: C T Laboratories
Project: TRUAX FIELD / 159552 VISTA
Matrix: Aqueous

Laboratory Data

Lab Sample: B1B0084-BS1
Column: BEH C18

Analyte	CAS Number	Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	7.50	8.00	93.7	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
PFPeA	2706-90-3	8.13	8.00	102	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
PFBS	375-73-5	7.96	8.00	99.5	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
4:2 FTS	757124-72-4	7.90	8.00	98.7	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
PFHxA	307-24-4	7.31	8.00	91.3	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
PFPeS	2706-91-4	8.47	8.00	106	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
HFPO-DA	13252-13-6	7.73	8.00	96.6	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
PFHpA	375-85-9	8.35	8.00	104	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
ADONA	919005-14-4	7.80	8.00	97.5	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
PFHxS	355-46-4	7.82	8.00	97.8	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
6:2 FTS	27619-97-2	8.60	8.00	108	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
PFOA	335-67-1	8.30	8.00	104	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
PFHpS	375-92-8	8.81	8.00	110	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
PFNA	375-95-1	8.56	8.00	107	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
PFOSA	754-91-6	8.81	8.00	110	50 - 150	Q	B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
PFOS	1763-23-1	18.1	8.00	226	50 - 150	H	B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
9Cl-PF3ONS	756426-58-1	7.77	8.00	97.2	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
PFDA	335-76-2	8.74	8.00	109	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
8:2 FTS	39108-34-4	8.42	8.00	105	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
PFNS	68259-12-1	7.48	8.00	93.4	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
MeFOSAA	2355-31-9	8.38	8.00	105	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
EtFOSAA	2991-50-6	6.86	8.00	85.8	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
PFUnA	2058-94-8	8.79	8.00	110	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
PFDS	335-77-3	8.20	8.00	102	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
11Cl-PF3OUdS	763051-92-9	8.93	8.00	112	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
10:2 FTS	120226-60-0	8.17	8.00	102	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
PFDoA	307-55-1	8.64	8.00	108	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
MeFOSA	31506-32-8	7.35	8.00	91.8	50 - 150	J	B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
PFTrDA	72629-94-8	7.78	8.00	97.3	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
PFDoS	79780-39-5	7.50	8.08	92.8	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
PFTeDA	376-06-7	8.66	8.00	108	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
EtFOSA	4151-50-2	4.95	8.00	61.8	50 - 150	J	B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
PFHxDA	67905-19-5	7.91	8.00	98.9	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
PFODA	16517-11-6	6.99	8.00	87.3	50 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1

Sample ID: OPR **PFAS Isotope Dilution Method**

Client Data

Name: C T Laboratories
Project: TRUAX FIELD / 159552 VISTA
Matrix: Aqueous

Laboratory Data

Lab Sample: B1B0084-BS1
Column: BEH C18

Analyte	CAS Number	Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
MeFOSE	24448-09-7	6.94	8.00	86.7	50 - 150	J	B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
EtFOSE	1691-99-2	5.96	8.00	74.4	50 - 150	J	B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1

Labeled Standards	Type	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	118	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
13C3-PFPeA	IS	85.6	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
13C3-PFBS	IS	89.4	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
13C3-HFPO-DA	IS	70.3	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
13C2-4:2 FTS	IS	97.7	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
13C2-PFHxA	IS	90.0	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
13C4-PFHpA	IS	91.3	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
13C3-PFHxS	IS	91.6	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
13C2-6:2 FTS	IS	93.5	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
13C5-PFNA	IS	85.4	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
13C8-PFOSA	IS	42.8	10 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
13C2-PFOA	IS	88.7	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
13C8-PFOS	IS	84.9	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
13C2-PFDA	IS	86.6	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
13C2-8:2 FTS	IS	85.4	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
d3-MeFOSAA	IS	75.3	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
13C2-PFUnA	IS	78.3	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
d5-EtFOSAA	IS	70.8	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
13C2-10:2 FTS	IS	79.4	40 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
13C2-PFDoA	IS	73.0	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
d3-MeFOSA	IS	15.3	10 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
13C2-PFTeDA	IS	76.8	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
d5-EtFOSA	IS	15.4	10 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
13C2-PFHxDA	IS	82.0	25 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
d7-MeFOSE	IS	30.8	10 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1
d9-EtFOSE	IS	33.4	10 - 150		B1B0084	14-Feb-21	0.250 L	16-Feb-21 18:22	1

Sample ID: E426-1

PFAS Isotope Dilution Method

Client Data

Name: C T Laboratories
Project: TRUAX FIELD / 159552 VISTA
Location: 530658
Matrix: Groundwater
Date Collected: 02-Feb-21 12:05

Laboratory Data

Lab Sample: 2102108-05
Date Received: 05-Feb-21 09:40
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	362	0.359	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
PFPeA	2706-90-3	1380	0.631	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
PFBS	375-73-5	78.5	0.882	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
4:2 FTS	757124-72-4	106	0.685	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
PFHxA	307-24-4	1070	1.07	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
PFPeS	2706-91-4	131	1.19	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
HFPO-DA	13252-13-6	<2.38	2.38	2.46		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
PFHpA	375-85-9	411	0.291	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
ADONA	919005-14-4	<0.356	0.356	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
PFHxS	355-46-4	1970	0.467	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
6:2 FTS	27619-97-2	7490	49.3	98.6	D	B1B0084	14-Feb-21	0.254 L	19-Feb-21 13:19	50
PFOA	335-67-1	470	0.321	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
PFHpS	375-92-8	803	0.462	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
PFNA	375-95-1	310	0.399	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
PFOSA	754-91-6	77.6	0.872	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
PFOS	1763-23-1	38600	19.9	98.6	D	B1B0084	14-Feb-21	0.254 L	01-Mar-21 22:54	50
9Cl-PF3ONS	756426-58-1	<0.715	0.715	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
PFDA	335-76-2	23.1	0.734	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
8:2 FTS	39108-34-4	8220	50.8	98.6	D	B1B0084	14-Feb-21	0.254 L	19-Feb-21 13:19	50
PFNS	68259-12-1	77.9	1.91	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
MeFOSAA	2355-31-9	<0.813	0.813	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
EtFOSAA	2991-50-6	<0.675	0.675	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
PFUnA	2058-94-8	0.648	0.518	1.97	J, Q	B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
PFDS	335-77-3	<0.606	0.606	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
11Cl-PF3OUdS	763051-92-9	<1.19	1.19	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
10:2 FTS	120226-60-0	<1.54	1.54	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
PFDoA	307-55-1	<0.390	0.390	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
MeFOSA	31506-32-8	<6.75	6.75	7.89		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
PFTrDA	72629-94-8	<0.243	0.243	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
PFDoS	79780-39-5	<2.06	2.06	2.46		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
PFTeDA	376-06-7	<0.372	0.372	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
EtFOSA	4151-50-2	<7.20	7.20	7.89		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
PFHxDA	67905-19-5	<0.145	0.145	1.97		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
PFODA	16517-11-6	<3.03	3.03	3.45		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
MeFOSE	24448-09-7	<7.89	7.89	7.89		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
EtFOSE	1691-99-2	<5.47	5.47	7.89		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	102	25 - 150		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1

Sample ID: E426-1

PFAS Isotope Dilution Method

Client Data

Name: C T Laboratories
Project: TRUAX FIELD / 159552 VISTA
Location: 530658
Matrix: Groundwater
Date Collected: 02-Feb-21 12:05

Laboratory Data

Lab Sample: 2102108-05
Date Received: 05-Feb-21 09:40
Column: BEH C18

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	79.3	25 - 150		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
13C3-PFBS	IS	93.8	25 - 150		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
13C3-HFPO-DA	IS	85.4	25 - 150		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
13C2-4:2 FTS	IS	86.0	25 - 150		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
13C2-PFHxA	IS	82.1	25 - 150		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
13C4-PFHpA	IS	88.2	25 - 150		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
13C3-PFHxS	IS	74.2	25 - 150		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
13C2-6:2 FTS	IS	55.0	25 - 150	D	B1B0084	14-Feb-21	0.254 L	19-Feb-21 13:19	50
13C5-PFNA	IS	80.3	25 - 150		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
13C8-PFOSA	IS	49.9	10 - 150		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
13C2-PFOA	IS	89.3	25 - 150		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
13C8-PFOS	IS	95.0	25 - 150	D	B1B0084	14-Feb-21	0.254 L	01-Mar-21 22:54	50
13C2-PFDA	IS	92.6	25 - 150		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
13C2-8:2 FTS	IS	46.0	25 - 150	D	B1B0084	14-Feb-21	0.254 L	19-Feb-21 13:19	50
d3-MeFOSAA	IS	88.2	25 - 150		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
13C2-PFUnA	IS	91.0	25 - 150		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
d5-EtFOSAA	IS	85.9	25 - 150		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
13C2-10:2 FTS	IS	92.1	25 - 150		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
13C2-PFDoA	IS	84.5	25 - 150		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
d3-MeFOSA	IS	34.2	10 - 150		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
13C2-PFTeDA	IS	81.8	25 - 150		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
d5-EtFOSA	IS	29.8	10 - 150		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
13C2-PFHxDA	IS	86.8	25 - 150		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
d7-MeFOSE	IS	61.8	10 - 150		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1
d9-EtFOSE	IS	60.3	10 - 150		B1B0084	14-Feb-21	0.254 L	16-Feb-21 18:54	1

MDL - Method Detection Limit RL - Reporting limit Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: E426-1 DUP

PFAS Isotope Dilution Method

Client Data

Name: C T Laboratories
Project: TRUAX FIELD / 159552 VISTA
Location: 530659
Matrix: Groundwater
Date Collected: 02-Feb-21 12:05

Laboratory Data

Lab Sample: 2102108-06
Date Received: 05-Feb-21 09:40
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	358	0.362	1.99		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
PFPeA	2706-90-3	1330	0.636	1.99		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
PFBS	375-73-5	84.7	0.889	1.99		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
4:2 FTS	757124-72-4	102	0.691	1.99		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
PFHxA	307-24-4	1090	1.08	1.99		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
PFPeS	2706-91-4	131	1.20	1.99		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
HFPO-DA	13252-13-6	<2.39	2.39	2.48		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
PFHpA	375-85-9	420	0.294	1.99		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
ADONA	919005-14-4	<0.359	0.359	1.99		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
PFHxS	355-46-4	1660	23.5	99.4	D	B1B0084	14-Feb-21	0.252 L	19-Feb-21 13:30	50
6:2 FTS	27619-97-2	6180	49.7	99.4	D	B1B0084	14-Feb-21	0.252 L	19-Feb-21 13:30	50
PFOA	335-67-1	477	0.323	1.99		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
PFHpS	375-92-8	805	0.466	1.99		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
PFNA	375-95-1	307	0.402	1.99		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
PFOSA	754-91-6	76.6	0.879	1.99		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
PFOS	1763-23-1	42200	20.0	99.4	D	B1B0084	14-Feb-21	0.252 L	01-Mar-21 23:05	50
9Cl-PF3ONS	756426-58-1	<0.720	0.720	1.99		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
PFDA	335-76-2	23.8	0.740	1.99		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
8:2 FTS	39108-34-4	5370	51.2	99.4	D	B1B0084	14-Feb-21	0.252 L	19-Feb-21 13:30	50
PFNS	68259-12-1	76.5	1.92	1.99		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
MeFOSAA	2355-31-9	<0.820	0.820	1.99		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
EtFOSAA	2991-50-6	<0.681	0.681	1.99		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
PFUnA	2058-94-8	0.692	0.522	1.99	J, Q	B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
PFDS	335-77-3	<0.611	0.611	1.99		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
11Cl-PF3OUdS	763051-92-9	<1.20	1.20	1.99		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
10:2 FTS	120226-60-0	<1.56	1.56	1.99		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
PFDoA	307-55-1	<0.393	0.393	1.99		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
MeFOSA	31506-32-8	<6.81	6.81	7.95		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
PFTrDA	72629-94-8	<0.245	0.245	1.99		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
PFDoS	79780-39-5	<2.07	2.07	2.48		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
PFTeDA	376-06-7	<0.375	0.375	1.99		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
EtFOSA	4151-50-2	<7.25	7.25	7.95		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
PFHxDA	67905-19-5	<0.146	0.146	1.99		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
PFODA	16517-11-6	<3.05	3.05	3.48		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
MeFOSE	24448-09-7	<7.95	7.95	7.95		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
EtFOSE	1691-99-2	<5.51	5.51	7.95		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	106	25 - 150		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1

Sample ID: E426-1 DUP

PFAS Isotope Dilution Method

Client Data

Name: C T Laboratories
Project: TRUAX FIELD / 159552 VISTA
Location: 530659
Matrix: Groundwater
Date Collected: 02-Feb-21 12:05

Laboratory Data

Lab Sample: 2102108-06
Date Received: 05-Feb-21 09:40
Column: BEH C18

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	85.0	25 - 150		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
13C3-PFBS	IS	92.1	25 - 150		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
13C3-HFPO-DA	IS	99.3	25 - 150		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
13C2-4:2 FTS	IS	93.8	25 - 150		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
13C2-PFHxA	IS	83.1	25 - 150		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
13C4-PFHpA	IS	90.5	25 - 150		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
13C3-PFHxS	IS	65.0	25 - 150	D	B1B0084	14-Feb-21	0.252 L	19-Feb-21 13:30	50
13C2-6:2 FTS	IS	60.0	25 - 150	D	B1B0084	14-Feb-21	0.252 L	19-Feb-21 13:30	50
13C5-PFNA	IS	82.9	25 - 150		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
13C8-PFOSA	IS	51.0	10 - 150		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
13C2-PFOA	IS	90.5	25 - 150		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
13C8-PFOS	IS	70.0	25 - 150	D	B1B0084	14-Feb-21	0.252 L	01-Mar-21 23:05	50
13C2-PFDA	IS	93.5	25 - 150		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
13C2-8:2 FTS	IS	62.6	25 - 150	D	B1B0084	14-Feb-21	0.252 L	19-Feb-21 13:30	50
d3-MeFOSAA	IS	89.4	25 - 150		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
13C2-PFUnA	IS	88.8	25 - 150		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
d5-EtFOSAA	IS	86.9	25 - 150		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
13C2-10:2 FTS	IS	89.5	25 - 150		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
13C2-PFDoA	IS	89.4	25 - 150		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
d3-MeFOSA	IS	27.8	10 - 150		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
13C2-PFTeDA	IS	84.7	25 - 150		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
d5-EtFOSA	IS	26.8	10 - 150		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
13C2-PFHxDA	IS	88.8	25 - 150		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
d7-MeFOSE	IS	65.3	10 - 150		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1
d9-EtFOSE	IS	64.6	10 - 150		B1B0084	14-Feb-21	0.252 L	16-Feb-21 19:05	1

MDL - Method Detection Limit RL - Reporting limit Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: E426-2

PFAS Isotope Dilution Method

Client Data

Name: C T Laboratories
Project: TRUAX FIELD / 159552 VISTA
Location: 530660
Matrix: Groundwater
Date Collected: 02-Feb-21 12:55

Laboratory Data

Lab Sample: 2102108-07
Date Received: 05-Feb-21 09:40
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	119	0.379	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
PFPeA	2706-90-3	440	0.665	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
PFBS	375-73-5	48.2	0.930	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
4:2 FTS	757124-72-4	5.98	0.723	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
PFHxA	307-24-4	461	1.13	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
PFPeS	2706-91-4	70.4	1.26	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
HFPO-DA	13252-13-6	<2.51	2.51	2.60		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
PFHpA	375-85-9	294	0.307	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
ADONA	919005-14-4	<0.375	0.375	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
PFHxS	355-46-4	949	0.492	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
6:2 FTS	27619-97-2	556	1.04	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
PFOA	335-67-1	201	0.338	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
PFHpS	375-92-8	249	0.487	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
PFNA	375-95-1	68.9	0.421	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
PFOSA	754-91-6	14.0	0.920	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
PFOS	1763-23-1	27800	21.0	104	D	B1B0084	14-Feb-21	0.240 L	28-Feb-21 19:16	50
9Cl-PF3ONS	756426-58-1	<0.754	0.754	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
PFDA	335-76-2	9.43	0.775	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
8:2 FTS	39108-34-4	1090	1.07	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
PFNS	68259-12-1	32.3	2.01	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
MeFOSAA	2355-31-9	<0.858	0.858	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
EtFOSAA	2991-50-6	<0.712	0.712	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
PFUnA	2058-94-8	<0.546	0.546	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
PFDS	335-77-3	<0.639	0.639	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
11Cl-PF3OUdS	763051-92-9	<1.25	1.25	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
10:2 FTS	120226-60-0	<1.63	1.63	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
PFDoA	307-55-1	<0.412	0.412	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
MeFOSA	31506-32-8	<7.12	7.12	8.32		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
PFTrDA	72629-94-8	<0.257	0.257	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
PFDoS	79780-39-5	<2.17	2.17	2.60		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
PFTeDA	376-06-7	<0.392	0.392	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
EtFOSA	4151-50-2	<7.59	7.59	8.32		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
PFHxDA	67905-19-5	<0.153	0.153	2.08		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
PFODA	16517-11-6	<3.19	3.19	3.64		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
MeFOSE	24448-09-7	<8.32	8.32	8.32		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
EtFOSE	1691-99-2	<5.77	5.77	8.32		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	83.6	25 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1

Sample ID: E426-2

PFAS Isotope Dilution Method

Client Data

Name: C T Laboratories
Project: TRUAX FIELD / 159552 VISTA
Location: 530660
Matrix: Groundwater
Date Collected: 02-Feb-21 12:55

Laboratory Data

Lab Sample: 2102108-07
Date Received: 05-Feb-21 09:40
Column: BEH C18

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	82.9	25 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
13C3-PFBS	IS	87.2	25 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
13C3-HFPO-DA	IS	77.9	25 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
13C2-4:2 FTS	IS	87.3	25 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
13C2-PFHxA	IS	75.0	25 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
13C4-PFHpA	IS	78.6	25 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
13C3-PFHxS	IS	80.9	25 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
13C2-6:2 FTS	IS	75.8	25 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
13C5-PFNA	IS	73.5	25 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
13C8-PFOSA	IS	51.7	10 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
13C2-PFOA	IS	85.3	25 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
13C8-PFOS	IS	85.0	25 - 150	D	B1B0084	14-Feb-21	0.240 L	28-Feb-21 19:16	50
13C2-PFDA	IS	86.6	25 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
13C2-8:2 FTS	IS	70.0	25 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
d3-MeFOSAA	IS	79.3	25 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
13C2-PFUnA	IS	82.3	25 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
d5-EtFOSAA	IS	74.2	25 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
13C2-10:2 FTS	IS	85.5	25 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
13C2-PFDoA	IS	77.4	25 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
d3-MeFOSA	IS	27.2	10 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
13C2-PFTeDA	IS	74.6	25 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
d5-EtFOSA	IS	25.1	10 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
13C2-PFHxDA	IS	77.7	25 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
d7-MeFOSE	IS	50.3	10 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1
d9-EtFOSE	IS	55.7	10 - 150		B1B0084	14-Feb-21	0.240 L	22-Feb-21 16:07	1

MDL - Method Detection Limit RL - Reporting limit Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: E426-2 **PFAS Isotope Dilution Method**

Name:	C T Laboratories	Lab Sample:	B1B0084-MS1/B1B0084-MSD1	Source Lab Sample:	2102108-07
Project:	TRUAX FIELD / 159552 VISTA	QC Batch:	B1B0084	Date Extracted:	14-Feb-21
Matrix:	Aqueous	Samp Size:	0.242/0.240 L	Column:	BEH C18

Analyte	CAS Number	Sample (ng/L)	MS (ng/L)	MS Spike	MS % Rec	MS Quals	MSD (ng/L)	MSD Spike	MSD % Rec	RPD	MSD Quals	%Rec Limits	RPD Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
PFBA	375-22-4	119	122	8.27	32.2	H	126	8.32	80.8	86.0	H	70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
PFPeA	2706-90-3	440	435	8.27	-64.0	H	446	8.32	72.5	3210	H	70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
PFBS	375-73-5	48.2	60.1	8.27	143	H	66.8	8.32	224	44.1	H	70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
4:2 FTS	757124-72-4	5.98	14.4	8.27	102		14.8	8.32	106	3.85		60-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
PFHxA	307-24-4	461	454	8.27	-83.5	H	448	8.32	-152	58.2	H	70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
PFPeS	2706-91-4	70.4	81.5	8.27	134	H	88.0	8.32	211	44.6	H	70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
HFPO-DA	13252-13-6	ND	8.85	8.27	107		10.0	8.32	120	11.5		70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
PFHpA	375-85-9	294	280	8.27	-165	H	295	8.32	12.7	233	H	70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
ADONA	919005-14-4	ND	8.58	8.27	104		8.81	8.32	106	1.90		70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
PFHxS	355-46-4	949	952	8.27	43.2	H	982	8.32	403	161	H	70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
6:2 FTS	27619-97-2	556	578	8.27	268	H	566	8.32	115	79.9	H	60-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
PFOA	335-67-1	201	209	8.27	90.8		210	8.32	105	14.5		70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
PFHpS	375-92-8	249	276	8.27	334	H	270	8.32	263	23.8	H	60-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
PFNA	375-95-1	68.9	75.6	8.27	80.4		78.1	8.32	110	31.1		70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
PFOSA	754-91-6	14.0	22.5	8.27	103	Q	24.7	8.32	129	22.4		70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
PFOS	1763-23-1	27800	19200	414	-2070	D, H	26600	416	-297	150	D, H	70-130	50	28-Feb-21 18:44	50	28-Feb-21 18:55	50
9Cl-PF3ONS	756426-58-1	ND	18.1	8.27	219	H	18.2	8.32	218	0.458	H, Q	70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
PFDA	335-76-2	9.43	17.1	8.27	92.5		18.4	8.32	108	15.5		70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
8:2 FTS	39108-34-4	1090	933	8.27	-1910	H	968	8.32	-1480	25.4	H	60-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
PFNS	68259-12-1	32.3	40.0	8.27	93.5		37.3	8.32	60.2	43.3	H	70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
MeFOSAA	2355-31-9	ND	8.70	8.27	105	Q	8.75	8.32	105	0		70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
EtFOSAA	2991-50-6	ND	8.45	8.27	96.3		9.88	8.32	113	16.0		70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
PFUnA	2058-94-8	ND	10.0	8.27	121		10.0	8.32	121	0		70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
PFDS	335-77-3	ND	19.3	8.27	234	H	17.8	8.32	214	8.93	H	60-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
11Cl-PF3OUdS	763051-92-9	ND	8.17	8.27	98.8		9.53	8.32	114	14.3		70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
10:2 FTS	120226-60-0	ND	8.47	8.27	102		9.07	8.32	109	6.64		60-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
PFDoA	307-55-1	ND	8.89	8.27	108		8.93	8.32	107	0.930		70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
MeFOSA	31506-32-8	ND	9.55	8.27	116		10.6	8.32	127	9.05		70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
PFTrDA	72629-94-8	ND	8.10	8.27	98.0		8.34	8.32	100	2.02		60-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
PFDoS	79780-39-5	ND	9.00	8.35	108		9.39	8.41	112	3.64		60-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
PFTeDA	376-06-7	ND	8.32	8.27	101		8.93	8.32	107	5.77		70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
EtFOSA	4151-50-2	ND	6.00	8.27	72.6	J	6.46	8.32	77.7	6.79	J	70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
PFHxDA	67905-19-5	ND	8.07	8.27	97.6		8.50	8.32	102	4.41		70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1

Sample ID: E426-2 **PFAS Isotope Dilution Method**

Name:	C T Laboratories	Lab Sample:	B1B0084-MS1/B1B0084-MSD1	Source Lab Sample:	2102108-07
Project:	TRUAX FIELD / 159552 VISTA	QC Batch:	B1B0084	Date Extracted:	14-Feb-21
Matrix:	Aqueous	Samp Size:	0.242/0.240 L	Column:	BEH C18

Analyte	CAS Number	Sample (ng/L)	MS (ng/L)	MS Spike	MS % Rec	MS Quals	MSD (ng/L)	MSD Spike	MSD % Rec	RPD	MSD Quals	%Rec Limits	RPD Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
PFODA	16517-11-6	ND	7.48	8.27	90.4		7.41	8.32	89.1	1.45		40-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
MeFOSE	24448-09-7	ND	7.24	8.27	87.5	J	9.81	8.32	118	29.7		70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1
EtFOSE	1691-99-2	ND	7.89	8.27	95.4	J	8.91	8.32	107	11.5		70-130	50	16-Feb-21 18:33	1	16-Feb-21 18:44	1

Labeled Standards	Type	MS % Rec	MS Quals	MSD % Rec	MSD Quals	Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
13C3-PFBA	IS	89.5		81.7		25 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1
13C3-PFPeA	IS	88.1		85.5		25 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1
13C3-PFBS	IS	92.7		88.2		25 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1
13C3-HFPO-DA	IS	86.4		94.1		25 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1
13C2-4:2 FTS	IS	99.7		92.0		25 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1
13C2-PFHxA	IS	88.2		87.9		25 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1
13C4-PFHpA	IS	93.7		88.8		25 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1
13C3-PFHxS	IS	85.1		82.4		25 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1
13C2-6:2 FTS	IS	85.9		87.6		25 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1
13C5-PFNA	IS	88.0		84.1		25 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1
13C8-PFOSA	IS	56.6		53.3		10 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1
13C2-PFOA	IS	91.9		90.3		25 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1
13C8-PFOS	IS	105	D	80.0	D	25 - 150	28-Feb-21 18:44	50	28-Feb-21 18:55	50
13C2-PFDA	IS	94.0		91.5		25 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1
13C2-8:2 FTS	IS	81.7		83.6		25 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1
d3-MeFOSAA	IS	88.8		91.4		25 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1
13C2-PFUnA	IS	85.0		87.3		25 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1
d5-EtFOSAA	IS	84.0		81.5		25 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1
13C2-10:2 FTS	IS	89.4		92.8		25 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1
13C2-PFDoA	IS	84.5		86.2		25 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1
d3-MeFOSA	IS	27.5		26.2		10 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1
13C2-PFTeDA	IS	80.9		83.9		25 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1
d5-EtFOSA	IS	29.1		26.6		10 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1
13C2-PFHxDA	IS	85.7		86.4		25 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1
d7-MeFOSE	IS	62.0		61.7		10 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1
d9-EtFOSE	IS	61.6		61.1		10 - 150	16-Feb-21 18:33	1	16-Feb-21 18:44	1

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank
Conc.	Concentration
CRS	Cleanup Recovery Standard
D	Dilution
DL	Detection Limit
E	The associated compound concentration exceeded the calibration range of the instrument
H	Recovery and/or RPD was outside laboratory acceptance limits
I	Chemical Interference
IS	Internal Standard
J	The amount detected is below the Reporting Limit/LOQ
LOD	Limit of Detection
LOQ	Limit of Quantitation
M	Estimated Maximum Possible Concentration (CA Region 2 projects only)
MDL	Method Detection Limit
NA	Not applicable
ND	Not Detected
OPR	Ongoing Precision and Recovery sample
P	The reported concentration may include contribution from chlorinated diphenyl ether(s).
Q	The ion transition ratio is outside of the acceptance criteria.
RL	Reporting Limit
RL	For 537.1, the reported RLs are the MRLs.
TEQ	Toxic Equivalency
U	Not Detected (specific projects only)
*	See Cover Letter

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

Vista Analytical Laboratory Certifications

Accrediting Authority	Certificate Number
Alaska Department of Environmental Conservation	17-013
Arkansas Department of Environmental Quality	19-013-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-23
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2018017
Massachusetts Department of Environmental Protection	N/A
Michigan Department of Environmental Quality	9932
Minnesota Department of Health	1521520
New Hampshire Environmental Accreditation Program	207718-B
New Jersey Department of Environmental Protection	190001
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-010
Pennsylvania Department of Environmental Protection	016
Texas Commission on Environmental Quality	T104704189-19-10
Vermont Department of Health	VT-4042
Virginia Department of General Services	10272
Washington Department of Ecology	C584-19
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	**Method**
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA 23
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA TO-9A

MATRIX: Biological Tissue	
Description of Test	**Method**
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	**Method**
2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD) GC/HRMS	EPA 1613/1613B
1,4-Dioxane (1,4-Diethyleneoxide) analysis by GC/HRMS	EPA 522
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	ISO 25101 2009

MATRIX: Non-Potable Water	
Description of Test	**Method**
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	**Method**
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

2102108

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Sub-Contract Laboratory Chain-of-Custody and Purchase Order

PURCHASE ORDER # 159552 VISTA

The PO# must appear on all invoice and reports!

Upon Receipt of Samples, please verify that samples were received in acceptable condition then sign this form and fax to (608)356-2766 or email to the project manager. Sample temperature, upon receipt, must be recorded on this document unless thermal preservation is not a method requirement.

Ship to: **Vista Analytical**
1104 Winfield Way
El Dorado Hills, CA

Return Invoice and Results to: **ekorthals@ctlaboratories.com**

CTLaboratories
Eric Korthals
1230 Lange Court
Baraboo WI 53913

Government UPS Shipping Acct ? (Y) **N**

Ship by: Speedee ☐ UPS Grnd ☐ UPS 2nd ☐ UPS NDA ☒ XX

Date Due: STD ***RUSH TURNAROUND NEEDED? Y or (N) (Circle One)***

Project Name: TRUAX FIELD **Project State:** WI

Analytical/QC Criteria: NONE INDICATED (STATE) DOD QSM NELAP (Circle one) OTHER_____

Report results as EDD? N (Y) (Circle one and indicate type: EXCEL) Data Deliverable Package LEVEL: LEVEL2

CTLabs ID#	Sample Date/Time	Matrix	Sample Description	Analyses / Method	Cost
530654	02/02/2021 1015	SOIL	E426-1,S2,4'	PFOS/PFOA	
530655	02/02/2021 1015	SOIL	E426-1 DUP	PFOS/PFOA	
530656 **	02/02/2021 1045	SOIL	E426-2,S1,2'	PFOS/PFOA	
530657	02/02/2021 1100	SOIL	E426-2,S2,4 1/2'	PFOS/PFOA	
530658	02/02/2021 1205	GROUND WATER	E426-1	PFOS/PFOA	
530659	02/02/2021 1205	GROUND WATER	E426-1 DUP	PFOS/PFOA	
530660 **	02/02/2021 1255	GROUND WATER	E426-2	PFOS/PFOA	
530661	02/02/2021 0945	SOIL	E426-1,S1,4 1/2'	PFOS/PFOA	

Relinquished by: _____ Date/Time: 02-04-2021/0800h

Received by: Kinsey Snider Date/Time: 02/05/21 0940 Receipt Temperature (C) _____

COMMENTS: USE SAMPLE DESCRIPTION INSTEAD OF CTLABS ID#, **DESIGNATED FOR MS/MSD

REPORT ALL SOLIDS ON A DRY WEIGHT BASIS UNLESS OTHERWISE INDICATED

Form #: FPM1-01
Effective Date: 02/15/14

Vista Analytical Laboratory

Sample Log-In Checklist

Page # 1 of 1

Vista Work Order #: 2102108 **TAT** Std

Samples Arrival:	**Date/Time** 02/05/21 0940		**Initials:** KS		**Location:** WR-2 **Shelf/Rack:** N/A		
Delivered By:	FedEx	UPS	On Trac	GLS	DHL	Hand Delivered	Other
Preservation:	Ice		Blue Ice		Techni Ice	Dry Ice	None
Temp °C: 0.2 (uncorrected) **Temp °C:** 0.2 (corrected)			**Probe used:** Y / N		**Thermometer ID:** IR-4		

	YES	NO	NA
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Airbill — Trk # 1Z 1A4 A85 01 4239 8895	✓		
Shipping Documentation Present?	✓		
Shipping Container: Vista / Client / Retain / Return / Dispose			
Chain of Custody / Sample Documentation Present?	✓		
Chain of Custody / Sample Documentation Complete?	✓		
Holding Time Acceptable?	✓		

Logged In:	**Date/Time** 02/08/21 0639	**Initials:** KS	**Location:** R-13 / WR-2 **Shelf/Rack:** A-2 / A-4/B-4	
COC Anomaly/Sample Acceptance Form completed?			✓	✓

Comments:

CoC/Label Reconciliation Report WO# 2102108

LabNumber	CoC Sample ID		SampleAlias	Sample Date/Time		Container	BaseMatrix	Sample Comments
2102108-01	A E426-1,S2,4'	☑	530654	02-Feb-21 10:15	☑	HDPE Jar, 6 oz	Solid	
2102108-02	A E426-1 DUP	☑	530655	02-Feb-21 10:15	☑	HDPE Jar, 6 oz	Solid	
2102108-03	A E426-2,S1,2'	☑	530656	02-Feb-21 10:45	☑	HDPE Jar, 6 oz	Solid	MS/MSD
2102108-03	B E426-2,S1,2'	☑	530656	02-Feb-21 10:45	☑	HDPE Jar, 6 oz	Solid	MS/MSD
2102108-04	A E426-2,S2,4 1/2'	☑	530657	02-Feb-21 11:00	☑	HDPE Jar, 6 oz	Solid	
2102108-05	A E426-1	☑	530658	02-Feb-21 12:05	☑	HDPE Bottle, 250 mL	Aqueous	
2102108-05	B E426-1	☑	530658	02-Feb-21 12:05	☑	HDPE Bottle, 250 mL	Aqueous	
2102108-06	A E426-1 DUP	☑	530659	02-Feb-21 12:05	☑	HDPE Bottle, 250 mL	Aqueous	
2102108-06	B E426-1 DUP	☑	530659	02-Feb-21 12:05	☑	HDPE Bottle, 250 mL	Aqueous	
2102108-07	A E426-2	☑	530660	02-Feb-21 12:55	☑	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2102108-07	B E426-2	☑ (A)	530660	02-Feb-21 12:55	☑	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2102108-07	C E426-2	☑	530660	02-Feb-21 12:55	☑	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2102108-07	D E426-2	☑	530660	02-Feb-21 12:55	☑	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2102108-08	A E426-1,S1,4 1/2'	☑	530661	02-Feb-21 09:45	☑	HDPE Jar, 6 oz	Solid	

Checkmarks indicate that information on the COC reconciled with the sample label.
Any discrepancies are noted in the following columns.

	Yes	No	NA
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Adequate Sample Volume?	✓		
Container Type Appropriate for Analysis(es)	✓		
Preservation Documented: Na2S2O3 Trizma (None) Other		✓	✓
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

Comments: (A) No back up volume received for MS/MSD

Verifed by/Date: KG 02/08/21

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QC SUMMARY REPORT

SOILS & ENGINEERING SERVICES **Project Name: TRUAX FIELD**

SDG #: 0 **Folder #: 159552** **Project #: XGFG 192004**

Duplicate

Analytical Run #:	179150	Analysis Date:	02/04/2021	Prep Batch #:		Matrix:	SOIL
CTLab #:	531745	Analysis Time:	11:57	Prep Date/Time:		Method:	SW8000C
Parent Sample #:	530656	Analyst:	BMM	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Solids, Percent	92.2	%	90.1					2	8

SOILS & ENGINEERING SERVICES **Project Name: TRUAX FIELD**

SDG #: 0 **Folder #: 159552** **Project #: XGFG 192004**

Lab Control Spike Soil

Analytical Run #:	179187	Analysis Date:	02/05/2021	Prep Batch #:	79900	Matrix:	SOLID
CTLab #:	531234	Analysis Time:	09:14	Prep Date/Time:	02/04/2021 13:15	Method:	SW8260C
Parent Sample #:		Analyst:	RLD	Prep Analyst:	KMT		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	0.514	mg/kg			0.500	103	70 --- 130		20
1,1,1-Trichloroethane	0.479	mg/kg			0.500	96	70 --- 130		20
1,1,2,2-Tetrachloroethane	0.496	mg/kg			0.500	99	70 --- 130		20
1,1,2-Trichloroethane	0.511	mg/kg			0.500	102	70 --- 130		20
1,1-Dichloroethane	0.501	mg/kg			0.500	100	70 --- 130		20
1,1-Dichloroethene	0.473	mg/kg			0.500	95	67 --- 130		20
1,1-Dichloropropene	0.509	mg/kg			0.500	102	70 --- 130		20
1,2 Dichloroethane-d4	99.0	% Recovery			100	99.0	70 --- 130		
1,2,3-Trichlorobenzene	0.492	mg/kg			0.500	98	70 --- 130		20
1,2,3-Trichloropropane	0.519	mg/kg			0.500	104	68 --- 130		20
1,2,4-Trichlorobenzene	0.515	mg/kg			0.500	103	70 --- 130		20
1,2,4-Trimethylbenzene	0.499	mg/kg			0.500	100	70 --- 130		20
1,2-Dibromo-3-chloropropane	0.489	mg/kg			0.500	98	60 --- 131		20
1,2-Dibromoethane	0.492	mg/kg			0.500	98	70 --- 130		20
1,2-Dichlorobenzene	0.496	mg/kg			0.500	99	70 --- 130		20
1,2-Dichloroethane	0.487	mg/kg			0.500	97	70 --- 130		20
1,2-Dichloropropane	0.512	mg/kg			0.500	102	70 --- 130		20
1,3,5-Trimethylbenzene	0.500	mg/kg			0.500	100	70 --- 130		20
1,3-Dichlorobenzene	0.495	mg/kg			0.500	99	70 --- 130		20
1,3-Dichloropropane	0.493	mg/kg			0.500	99	70 --- 130		20
1,4-Dichlorobenzene	0.491	mg/kg			0.500	98	70 --- 130		20
2,2-Dichloropropane	0.528	mg/kg			0.500	106	57 --- 135		20
2-Butanone	4.96	mg/kg			5.00	99	70 --- 130		20
2-Chlorotoluene	0.503	mg/kg			0.500	101	70 --- 130		20
2-Hexanone	5.30	mg/kg			5.00	106	70 --- 134		20
4-Chlorotoluene	0.491	mg/kg			0.500	98	70 --- 130		20
4-Methyl-2-pentanone	5.23	mg/kg			5.00	105	70 --- 130		20
Acetone	5.48	mg/kg			5.00	110	63 --- 139		20
Benzene	0.505	mg/kg			0.500	101	70 --- 130		20
Bromobenzene	0.487	mg/kg			0.500	97	70 --- 130		20
Bromochloromethane	0.464	mg/kg			0.500	93	70 --- 130		20
Bromodichloromethane	0.503	mg/kg			0.500	101	70 --- 130		20
Bromofluorobenzene	101	% Recovery			100	101	70 --- 130		
Bromoform	0.512	mg/kg			0.500	102	70 --- 130		20
Bromomethane	0.581	mg/kg			0.500	116	9 --- 149		20
Carbon disulfide	1.04	mg/kg			1.00	104	64 --- 136		20
Carbon tetrachloride	0.514	mg/kg			0.500	103	70 --- 130		20
Chlorobenzene	0.501	mg/kg			0.500	100	70 --- 130		20
Chloroethane	0.478	mg/kg			0.500	96	38 --- 153		20
Chloroform	0.491	mg/kg			0.500	98	70 --- 130		20
Chloromethane	0.528	mg/kg			0.500	106	70 --- 130		20
cis-1,2-Dichloroethene	0.495	mg/kg			0.500	99	70 --- 130		20

SOILS & ENGINEERING SERVICES **Project Name: TRUAX FIELD**

SDG #: 0 **Folder #: 159552** **Project #: XGFG 192004**

Lab Control Spike Soil

Analytical Run #:	179187	Analysis Date:	02/05/2021	Prep Batch #:	79900	Matrix:	SOLID
CTLab #:	531234	Analysis Time:	09:14	Prep Date/Time:	02/04/2021 13:15	Method:	SW8260C
Parent Sample #:		Analyst:	RLD	Prep Analyst:	KMT		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
cis-1,3-Dichloropropene	0.498	mg/kg			0.500	100	70 --- 130		20
d8-Toluene	100	% Recovery			100	100	70 --- 130		
Dibromochloromethane	0.503	mg/kg			0.500	101	70 --- 130		20
Dibromofluoromethane	100	% Recovery			100	100	70 --- 130		
Dibromomethane	0.493	mg/kg			0.500	99	70 --- 130		20
Dichlorodifluoromethane	0.503	mg/kg			0.500	101	70 --- 130		20
Diisopropyl ether	0.525	mg/kg			0.500	105	70 --- 130		20
Ethylbenzene	0.505	mg/kg			0.500	101	70 --- 130		20
Hexachlorobutadiene	0.509	mg/kg			0.500	102	70 --- 130		20
Isopropylbenzene	0.507	mg/kg			0.500	101	70 --- 130		20
m & p-Xylene	0.994	mg/kg			1.00	99	70 --- 130		20
Methyl tert-butyl ether	0.484	mg/kg			0.500	97	70 --- 130		20
Methylene chloride	0.498	mg/kg			0.500	100	70 --- 130		20
n-Butylbenzene	0.510	mg/kg			0.500	102	70 --- 130		20
n-Propylbenzene	0.510	mg/kg			0.500	102	70 --- 130		20
Naphthalene	0.506	mg/kg			0.500	101	70 --- 130		20
o-Xylene	0.492	mg/kg			0.500	98	70 --- 130		20
p-Isopropyltoluene	0.500	mg/kg			0.500	100	70 --- 130		20
sec-Butylbenzene	0.511	mg/kg			0.500	102	70 --- 130		20
Styrene	0.508	mg/kg			0.500	102	70 --- 130		20
tert-Butylbenzene	0.497	mg/kg			0.500	99	70 --- 130		20
Tetrachloroethene	0.487	mg/kg			0.500	97	70 --- 130		20
Tetrahydrofuran	5.04	mg/kg			5.00	101	70 --- 130		20
Toluene	0.500	mg/kg			0.500	100	70 --- 130		20
trans-1,2-Dichloroethene	0.498	mg/kg			0.500	100	61 --- 132		20
trans-1,3-Dichloropropene	0.519	mg/kg			0.500	104	70 --- 130		20
Trichloroethene	0.491	mg/kg			0.500	98	70 --- 130		20
Trichlorofluoromethane	0.496	mg/kg			0.500	99	5 --- 154		20
Vinyl chloride	0.503	mg/kg			0.500	101	70 --- 131		20

SOILS & ENGINEERING SERVICES **Project Name: TRUAX FIELD**

SDG #: 0 **Folder #: 159552** **Project #: XGFG 192004**

Method Blank Soil

Analytical Run #:	179187	Analysis Date:	02/05/2021	Prep Batch #:	79900	Matrix:	SOLID
CTLab #:	531233	Analysis Time:	10:13	Prep Date/Time:	02/04/2021 13:15	Method:	SW8260C
Parent Sample #:		Analyst:	RLD	Prep Analyst:	KMT		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	0.060	mg/kg		U	0		0.060		
1,1,1-Trichloroethane	0.016	mg/kg		U	0		0.016		
1,1,2,2-Tetrachloroethane	0.021	mg/kg		U	0		0.021		
1,1,2-Trichloroethane	0.012	mg/kg		U	0		0.012		
1,1-Dichloroethane	0.007	mg/kg		U	0		0.007		
1,1-Dichloroethene	0.021	mg/kg		U	0		0.021		
1,1-Dichloropropene	0.027	mg/kg		U	0		0.027		
1,2 Dichloroethane-d4	99.0	% Recovery			100	99.0	78 --- 118		
1,2,3-Trichlorobenzene	0.011	mg/kg		U	0		0.011		
1,2,3-Trichloropropane	0.040	mg/kg		U	0		0.040		
1,2,4-Trichlorobenzene	0.017	mg/kg		U	0		0.017		
1,2,4-Trimethylbenzene	0.011	mg/kg		U	0		0.011		
1,2-Dibromo-3-chloropropane	0.070	mg/kg		U	0		0.070		
1,2-Dibromoethane	0.011	mg/kg		U	0		0.011		
1,2-Dichlorobenzene	0.015	mg/kg		U	0		0.015		
1,2-Dichloroethane	0.022	mg/kg		U	0		0.022		
1,2-Dichloropropane	0.026	mg/kg		U	0		0.026		
1,3,5-Trimethylbenzene	0.013	mg/kg		U	0		0.013		
1,3-Dichlorobenzene	0.014	mg/kg		U	0		0.014		
1,3-Dichloropropane	0.014	mg/kg		U	0		0.014		
1,4-Dichlorobenzene	0.015	mg/kg		U	0		0.015		
2,2-Dichloropropane	0.021	mg/kg		U	0		0.021		
2-Butanone	0.400	mg/kg		U	0		0.400		
2-Chlorotoluene	0.018	mg/kg		U	0		0.018		
2-Hexanone	0.200	mg/kg		U	0		0.200		
4-Chlorotoluene	0.015	mg/kg		U	0		0.015		
4-Methyl-2-pentanone	0.180	mg/kg		U	0		0.180		
Acetone	0.400	mg/kg		U	0		0.400		
Benzene	0.011	mg/kg		U	0		0.011		
Bromobenzene	0.016	mg/kg		U	0		0.016		
Bromochloromethane	0.017	mg/kg		U	0		0.017		
Bromodichloromethane	0.014	mg/kg		U	0		0.014		
Bromofluorobenzene	101	% Recovery			100	101	83 --- 132		
Bromoform	0.060	mg/kg		U	0		0.060		
Bromomethane	0.090	mg/kg		U	0		0.090		
Carbon disulfide	0.040	mg/kg		U	0		0.040		
Carbon tetrachloride	0.014	mg/kg		U	0		0.014		
Chlorobenzene	0.010	mg/kg		U	0		0.010		
Chloroethane	0.030	mg/kg		U	0		0.030		
Chloroform	0.016	mg/kg		U	0		0.016		
Chloromethane	0.030	mg/kg		U	0		0.030		
cis-1,2-Dichloroethene	0.027	mg/kg		U	0		0.027		

SOILS & ENGINEERING SERVICES **Project Name: TRUAX FIELD**

SDG #: 0 **Folder #: 159552** **Project #: XGFG 192004**

Method Blank Soil

Analytical Run #:	179187	Analysis Date:	02/05/2021	Prep Batch #:	79900	Matrix:	SOLID
CTLab #:	531233	Analysis Time:	10:13	Prep Date/Time:	02/04/2021 13:15	Method:	SW8260C
Parent Sample #:		Analyst:	RLD	Prep Analyst:	KMT		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
cis-1,3-Dichloropropene	0.014	mg/kg		U	0		0.014		
d8-Toluene	100	% Recovery			100	100	82 --- 124		
Dibromochloromethane	0.040	mg/kg		U	0		0.040		
Dibromofluoromethane	97.0	% Recovery			100	97.0	79 --- 119		
Dibromomethane	0.021	mg/kg		U	0		0.021		
Dichlorodifluoromethane	0.050	mg/kg		U	0		0.050		
Diisopropyl ether	0.018	mg/kg		U	0		0.018		
Ethylbenzene	0.011	mg/kg		U	0		0.011		
Hexachlorobutadiene	0.023	mg/kg		U	0		0.023		
Isopropylbenzene	0.013	mg/kg		U	0		0.013		
m & p-Xylene	0.025	mg/kg		U	0		0.025		
Methyl tert-butyl ether	0.016	mg/kg		U	0		0.016		
Methylene chloride	0.060	mg/kg		U	0		0.060		
n-Butylbenzene	0.017	mg/kg		U	0		0.017		
n-Propylbenzene	0.013	mg/kg		U	0		0.013		
Naphthalene	0.015	mg/kg		U	0		0.015		
o-Xylene	0.007	mg/kg		U	0		0.007		
p-Isopropyltoluene	0.013	mg/kg		U	0		0.013		
sec-Butylbenzene	0.011	mg/kg		U	0		0.011		
Styrene	0.016	mg/kg		U	0		0.016		
tert-Butylbenzene	0.012	mg/kg		U	0		0.012		
Tetrachloroethene	0.011	mg/kg		U	0		0.011		
Tetrahydrofuran	0.250	mg/kg		U	0		0.250		
Toluene	0.016	mg/kg		U	0		0.016		
trans-1,2-Dichloroethene	0.014	mg/kg		U	0		0.014		
trans-1,3-Dichloropropene	0.040	mg/kg		U	0		0.040		
Trichloroethene	0.019	mg/kg		U	0		0.019		
Trichlorofluoromethane	0.040	mg/kg		U	0		0.040		
Vinyl chloride	0.019	mg/kg		U	0		0.019		

SOILS & ENGINEERING SERVICES **Project Name: TRUAX FIELD**

SDG #: 0 **Folder #: 159552** **Project #: XGFG 192004**

Matrix Spike Duplicate Soil

Analytical Run #:	179187	Analysis Date:	02/05/2021	Prep Batch #:	79900	Matrix:	SOIL
CTLab #:	531230	Analysis Time:	18:19	Prep Date/Time:	02/04/2021 13:15	Method:	SW8260C
Parent Sample #:	531229	Analyst:	RLD	Prep Analyst:	KMT		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	0.548	mg/kg	BDL		0.530	103	70 --- 130	3	20
1,1,1-Trichloroethane	0.531	mg/kg	BDL		0.530	100	70 --- 130	2	20
1,1,2,2-Tetrachloroethane	0.324	mg/kg	BDL		0.530	61	39 --- 130	1	20
1,1,2-Trichloroethane	0.544	mg/kg	BDL		0.530	103	70 --- 130	0	20
1,1-Dichloroethane	0.562	mg/kg	BDL		0.530	106	70 --- 130	3	21
1,1-Dichloroethene	0.509	mg/kg	BDL		0.530	96	70 --- 130	1	20
1,1-Dichloropropene	0.547	mg/kg	BDL		0.530	103	70 --- 130	5	20
1,2 Dichloroethane-d4	103	% Recovery			100	103	70 --- 130		
1,2,3-Trichlorobenzene	0.496	mg/kg	BDL		0.530	94	70 --- 130	1	47
1,2,3-Trichloropropane	0.536	mg/kg	BDL		0.530	101	70 --- 130	0	20
1,2,4-Trichlorobenzene	0.505	mg/kg	BDL		0.530	95	70 --- 130	1	35
1,2,4-Trimethylbenzene	0.537	mg/kg	BDL		0.530	101	70 --- 130	3	20
1,2-Dibromo-3-chloropropane	0.508	mg/kg	BDL		0.530	96	61 --- 130	3	29
1,2-Dibromoethane	0.518	mg/kg	BDL		0.530	98	70 --- 130	2	20
1,2-Dichlorobenzene	0.507	mg/kg	BDL		0.530	96	70 --- 130	1	20
1,2-Dichloroethane	0.537	mg/kg	BDL		0.530	101	70 --- 130	0	20
1,2-Dichloropropane	0.559	mg/kg	BDL		0.530	105	70 --- 130	1	20
1,3,5-Trimethylbenzene	0.530	mg/kg	BDL		0.530	100	70 --- 130	2	20
1,3-Dichlorobenzene	0.513	mg/kg	BDL		0.530	97	70 --- 130	0	20
1,3-Dichloropropane	0.534	mg/kg	BDL		0.530	101	70 --- 130	3	20
1,4-Dichlorobenzene	0.509	mg/kg	BDL		0.530	96	70 --- 130	1	20
2,2-Dichloropropane	0.466	mg/kg	BDL		0.530	88	62 --- 130	1	33
2-Butanone	5.84	mg/kg	BDL		5.30	110	70 --- 130	2	24
2-Chlorotoluene	0.528	mg/kg	BDL		0.530	100	70 --- 130	3	20
2-Hexanone	5.57	mg/kg	BDL		5.30	105	70 --- 130	2	25
4-Chlorotoluene	0.517	mg/kg	BDL		0.530	98	70 --- 130	0	20
4-Methyl-2-pentanone	5.58	mg/kg	BDL		5.30	105	70 --- 130	1	21
Acetone	6.20	mg/kg	BDL		5.30	117	70 --- 139	2	50
Benzene	0.552	mg/kg	BDL		0.530	104	70 --- 130	2	24
Bromobenzene	0.517	mg/kg	BDL		0.530	98	70 --- 130	1	20
Bromochloromethane	0.513	mg/kg	BDL		0.530	97	70 --- 131	2	20
Bromodichloromethane	0.531	mg/kg	BDL		0.530	100	70 --- 130	1	20
Bromofluorobenzene	100	% Recovery			100	100	70 --- 130		
Bromoform	0.506	mg/kg	BDL		0.530	95	70 --- 130	0	20
Bromomethane	0.636	mg/kg	BDL		0.530	120	1 --- 288	2	35
Carbon disulfide	1.09	mg/kg	BDL		1.06	103	70 --- 130	2	22
Carbon tetrachloride	0.550	mg/kg	BDL		0.530	104	65 --- 133	3	20
Chlorobenzene	0.521	mg/kg	BDL		0.530	98	70 --- 130	0	20
Chloroethane	0.626	mg/kg	BDL		0.530	118	39 --- 162	4	35
Chloroform	0.552	mg/kg	BDL		0.530	104	70 --- 130	2	20
Chloromethane	0.587	mg/kg	BDL		0.530	111	68 --- 144	2	25
cis-1,2-Dichloroethene	0.515	mg/kg	BDL		0.530	97	70 --- 130	1	20

SOILS & ENGINEERING SERVICES **Project Name: TRUAX FIELD**

SDG #: 0 **Folder #: 159552** **Project #: XGFG 192004**

Matrix Spike Duplicate Soil

Analytical Run #:	179187	Analysis Date:	02/05/2021	Prep Batch #:	79900	Matrix:	SOIL
CTLab #:	531230	Analysis Time:	18:19	Prep Date/Time:	02/04/2021 13:15	Method:	SW8260C
Parent Sample #:	531229	Analyst:	RLD	Prep Analyst:	KMT		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
cis-1,3-Dichloropropene	0.522	mg/kg	BDL		0.530	98	70 --- 130	0	20
d8-Toluene	101	% Recovery			100	101	70 --- 130		
Dibromochloromethane	0.510	mg/kg	BDL		0.530	96	63 --- 130	1	20
Dibromofluoromethane	100	% Recovery			100	100	70 --- 130		
Dibromomethane	0.522	mg/kg	BDL		0.530	98	70 --- 130	3	20
Dichlorodifluoromethane	0.527	mg/kg	BDL		0.530	99	70 --- 140	2	20
Diisopropyl ether	0.511	mg/kg	BDL		0.530	96	76 --- 124	2	28
Ethylbenzene	0.530	mg/kg	BDL		0.530	100	70 --- 130	0	24
Hexachlorobutadiene	0.519	mg/kg	BDL		0.530	98	70 --- 130	1	23
Isopropylbenzene	0.535	mg/kg	BDL		0.530	101	70 --- 130	1	20
m & p-Xylene	1.06	mg/kg	BDL		1.06	100	70 --- 130	1	20
Methyl tert-butyl ether	0.520	mg/kg	BDL		0.530	98	70 --- 130	0	26
Methylene chloride	0.575	mg/kg	BDL		0.530	108	46 --- 138	0	24
n-Butylbenzene	0.530	mg/kg	BDL		0.530	100	70 --- 130	0	20
n-Propylbenzene	0.540	mg/kg	BDL		0.530	102	70 --- 130	3	20
Naphthalene	0.508	mg/kg	BDL		0.530	96	70 --- 130	2	20
o-Xylene	0.525	mg/kg	BDL		0.530	99	70 --- 130	0	24
p-Isopropyltoluene	0.516	mg/kg	BDL		0.530	97	70 --- 130	1	20
sec-Butylbenzene	0.524	mg/kg	BDL		0.530	99	70 --- 130	1	20
Styrene	0.528	mg/kg	BDL		0.530	100	70 --- 130	0	20
tert-Butylbenzene	0.516	mg/kg	BDL		0.530	97	70 --- 130	1	20
Tetrachloroethene	0.524	mg/kg	BDL		0.530	99	65 --- 135	4	20
Tetrahydrofuran	5.28	mg/kg	BDL		5.30	100	70 --- 130	1	35
Toluene	0.534	mg/kg	BDL		0.530	101	70 --- 130	0	24
trans-1,2-Dichloroethene	0.531	mg/kg	BDL		0.530	100	70 --- 130	1	22
trans-1,3-Dichloropropene	0.516	mg/kg	BDL		0.530	97	70 --- 130	6	20
Trichloroethene	0.730	mg/kg	BDL		0.530	138	45 --- 196	3	20
Trichlorofluoromethane	0.755	mg/kg	BDL		0.530	142	1 --- 228	9	64
Vinyl chloride	0.562	mg/kg	BDL		0.530	106	70 --- 146	1	20

SOILS & ENGINEERING SERVICES **Project Name: TRUAX FIELD**

SDG #: 0 **Folder #: 159552** **Project #: XGFG 192004**

Matrix Spike Soil

Analytical Run #:	179187	Analysis Date:	02/05/2021	Prep Batch #:	79900	Matrix:	SOIL
CTLab #:	531229	Analysis Time:	17:49	Prep Date/Time:	02/04/2021 13:15	Method:	SW8260C
Parent Sample #:	530656	Analyst:	RLD	Prep Analyst:	KMT		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	0.534	mg/kg	BDL		0.530	101	70 --- 130		
1,1,1-Trichloroethane	0.518	mg/kg	BDL		0.530	98	70 --- 130		
1,1,2,2-Tetrachloroethane	0.328	mg/kg	BDL		0.530	62	39 --- 130		
1,1,2-Trichloroethane	0.545	mg/kg	BDL		0.530	103	70 --- 130		
1,1-Dichloroethane	0.544	mg/kg	BDL		0.530	103	70 --- 130		
1,1-Dichloroethene	0.504	mg/kg	BDL		0.530	95	70 --- 130		
1,1-Dichloropropene	0.521	mg/kg	BDL		0.530	98	70 --- 130		
1,2 Dichloroethane-d4	96.0	% Recovery			100	96.0	70 --- 130		
1,2,3-Trichlorobenzene	0.500	mg/kg	BDL		0.530	94	70 --- 130		
1,2,3-Trichloropropane	0.536	mg/kg	BDL		0.530	101	70 --- 130		
1,2,4-Trichlorobenzene	0.512	mg/kg	BDL		0.530	97	70 --- 130		
1,2,4-Trimethylbenzene	0.524	mg/kg	BDL		0.530	99	70 --- 130		
1,2-Dibromo-3-chloropropane	0.491	mg/kg	BDL		0.530	93	61 --- 130		
1,2-Dibromoethane	0.528	mg/kg	BDL		0.530	100	70 --- 130		
1,2-Dichlorobenzene	0.514	mg/kg	BDL		0.530	97	70 --- 130		
1,2-Dichloroethane	0.537	mg/kg	BDL		0.530	101	70 --- 130		
1,2-Dichloropropane	0.563	mg/kg	BDL		0.530	106	70 --- 130		
1,3,5-Trimethylbenzene	0.517	mg/kg	BDL		0.530	98	70 --- 130		
1,3-Dichlorobenzene	0.512	mg/kg	BDL		0.530	97	70 --- 130		
1,3-Dichloropropane	0.551	mg/kg	BDL		0.530	104	70 --- 130		
1,4-Dichlorobenzene	0.516	mg/kg	BDL		0.530	97	70 --- 130		
2,2-Dichloropropane	0.470	mg/kg	BDL		0.530	89	62 --- 130		
2-Butanone	5.97	mg/kg	BDL		5.30	113	70 --- 130		
2-Chlorotoluene	0.515	mg/kg	BDL		0.530	97	70 --- 130		
2-Hexanone	5.67	mg/kg	BDL		5.30	107	70 --- 130		
4-Chlorotoluene	0.515	mg/kg	BDL		0.530	97	70 --- 130		
4-Methyl-2-pentanone	5.65	mg/kg	BDL		5.30	107	70 --- 130		
Acetone	6.32	mg/kg	BDL		5.30	119	70 --- 139		
Benzene	0.538	mg/kg	BDL		0.530	102	70 --- 130		
Bromobenzene	0.523	mg/kg	BDL		0.530	99	70 --- 130		
Bromochloromethane	0.505	mg/kg	BDL		0.530	95	70 --- 131		
Bromodichloromethane	0.535	mg/kg	BDL		0.530	101	70 --- 130		
Bromofluorobenzene	98.0	% Recovery			100	98.0	70 --- 130		
Bromoform	0.504	mg/kg	BDL		0.530	95	70 --- 130		
Bromomethane	0.651	mg/kg	BDL		0.530	123	1 --- 288		
Carbon disulfide	1.06	mg/kg	BDL		1.06	100	70 --- 130		
Carbon tetrachloride	0.533	mg/kg	BDL		0.530	101	65 --- 133		
Chlorobenzene	0.523	mg/kg	BDL		0.530	99	70 --- 130		
Chloroethane	0.601	mg/kg	BDL		0.530	113	39 --- 162		
Chloroform	0.539	mg/kg	BDL		0.530	102	70 --- 130		
Chloromethane	0.577	mg/kg	BDL		0.530	109	68 --- 144		
cis-1,2-Dichloroethene	0.520	mg/kg	BDL		0.530	98	70 --- 130		

SOILS & ENGINEERING SERVICES **Project Name: TRUAX FIELD**

SDG #: 0 **Folder #: 159552** **Project #: XGFG 192004**

Matrix Spike Soil

Analytical Run #:	179187	Analysis Date:	02/05/2021	Prep Batch #:	79900	Matrix:	SOIL
CTLab #:	531229	Analysis Time:	17:49	Prep Date/Time:	02/04/2021 13:15	Method:	SW8260C
Parent Sample #:	530656	Analyst:	RLD	Prep Analyst:	KMT		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
cis-1,3-Dichloropropene	0.523	mg/kg	BDL		0.530	99	70 --- 130		
d8-Toluene	100	% Recovery			100	100	70 --- 130		
Dibromochloromethane	0.516	mg/kg	BDL		0.530	97	63 --- 130		
Dibromofluoromethane	99.0	% Recovery			100	99.0	70 --- 130		
Dibromomethane	0.539	mg/kg	BDL		0.530	102	70 --- 130		
Dichlorodifluoromethane	0.536	mg/kg	BDL		0.530	101	70 --- 140		
Diisopropyl ether	0.519	mg/kg	BDL		0.530	98	76 --- 124		
Ethylbenzene	0.529	mg/kg	BDL		0.530	100	70 --- 130		
Hexachlorobutadiene	0.513	mg/kg	BDL		0.530	97	70 --- 130		
Isopropylbenzene	0.530	mg/kg	BDL		0.530	100	70 --- 130		
m & p-Xylene	1.06	mg/kg	BDL		1.06	100	70 --- 130		
Methyl tert-butyl ether	0.522	mg/kg	BDL		0.530	98	70 --- 130		
Methylene chloride	0.572	mg/kg	BDL		0.530	108	46 --- 138		
n-Butylbenzene	0.530	mg/kg	BDL		0.530	100	70 --- 130		
n-Propylbenzene	0.524	mg/kg	BDL		0.530	99	70 --- 130		
Naphthalene	0.500	mg/kg	BDL		0.530	94	70 --- 130		
o-Xylene	0.524	mg/kg	BDL		0.530	99	70 --- 130		
p-Isopropyltoluene	0.510	mg/kg	BDL		0.530	96	70 --- 130		
sec-Butylbenzene	0.516	mg/kg	BDL		0.530	97	70 --- 130		
Styrene	0.528	mg/kg	BDL		0.530	100	70 --- 130		
tert-Butylbenzene	0.509	mg/kg	BDL		0.530	96	70 --- 130		
Tetrachloroethene	0.506	mg/kg	BDL		0.530	95	65 --- 135		
Tetrahydrofuran	5.36	mg/kg	BDL		5.30	101	70 --- 130		
Toluene	0.533	mg/kg	BDL		0.530	101	70 --- 130		
trans-1,2-Dichloroethene	0.528	mg/kg	BDL		0.530	100	70 --- 130		
trans-1,3-Dichloropropene	0.546	mg/kg	BDL		0.530	103	70 --- 130		
Trichloroethene	0.711	mg/kg	BDL		0.530	134	45 --- 196		
Trichlorofluoromethane	0.694	mg/kg	BDL		0.530	131	1 --- 228		
Vinyl chloride	0.567	mg/kg	BDL		0.530	107	70 --- 146		

SOILS & ENGINEERING SERVICES **Project Name: TRUAX FIELD**

SDG #: 0 **Folder #: 159552** **Project #: XGFG 192004**

Lab Control Spike Water

Analytical Run #:	179222	Analysis Date:	02/09/2021	Prep Batch #:		Matrix:	LIQUID
CTLab #:	532291	Analysis Time:	09:03	Prep Date/Time:		Method:	SW8260C
Parent Sample #:		Analyst:	DGS	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	9.39	ug/L			10.0	94	86 --- 112		20
1,1,1-Trichloroethane	11.1	ug/L			10.0	111	88 --- 120		20
1,1,2,2-Tetrachloroethane	8.75	ug/L			10.0	88	83 --- 116		20
1,1,2-Trichloroethane	10.3	ug/L			10.0	103	86 --- 115		20
1,1-Dichloroethane	10.2	ug/L			10.0	102	86 --- 117		20
1,1-Dichloroethene	10.6	ug/L			10.0	106	86 --- 119		20
1,1-Dichloropropene	10.1	ug/L			10.0	101	87 --- 117		20
1,2 Dichloroethane-d4	93.0	% Recovery			100	93.0	90 --- 111		
1,2,3-Trichlorobenzene	8.60	ug/L			10.0	86	81 --- 114		20
1,2,3-Trichloropropane	9.44	ug/L			10.0	94	77 --- 120		20
1,2,4-Trichlorobenzene	9.12	ug/L			10.0	91	80 --- 116		20
1,2,4-Trimethylbenzene	9.53	ug/L			10.0	95	91 --- 118		20
1,2-Dibromo-3-chloropropane	9.98	ug/L			10.0	100	68 --- 122		20
1,2-Dibromoethane	9.82	ug/L			10.0	98	87 --- 113		20
1,2-Dichlorobenzene	9.16	ug/L			10.0	92	88 --- 113		20
1,2-Dichloroethane	9.93	ug/L			10.0	99	84 --- 120		20
1,2-Dichloropropane	10.4	ug/L			10.0	104	85 --- 116		20
1,3,5-Trimethylbenzene	9.45	ug/L			10.0	94	90 --- 119		20
1,3-Dichlorobenzene	9.12	ug/L			10.0	91	89 --- 113		20
1,3-Dichloropropane	9.99	ug/L			10.0	100	87 --- 115		20
1,4-Dichlorobenzene	8.87	ug/L			10.0	89	87 --- 113		20
2,2-Dichloropropane	11.3	ug/L			10.0	113	75 --- 127		20
2-Butanone	115	ug/L			100	115	68 --- 133		20
2-Chlorotoluene	9.30	ug/L			10.0	93	88 --- 117		20
2-Hexanone	101	ug/L			100	101	71 --- 134		20
4-Chlorotoluene	9.23	ug/L			10.0	92	88 --- 119		20
4-Methyl-2-pentanone	108	ug/L			100	108	78 --- 127		20
Acetone	120	ug/L			100	120	66 --- 137		20
Benzene	10.3	ug/L			10.0	103	90 --- 119		20
Bromobenzene	8.74	ug/L			10.0	87	86 --- 113		20
Bromochloromethane	9.47	ug/L			10.0	95	81 --- 120		20
Bromodichloromethane	10.1	ug/L			10.0	101	87 --- 116		20
Bromofluorobenzene	97.0	% Recovery			100	97.0	88 --- 108		
Bromoform	9.56	ug/L			10.0	96	72 --- 124		20
Bromomethane	11.4	ug/L			10.0	114	40 --- 169		20
Carbon disulfide	20.9	ug/L			20.0	104	89 --- 124		20
Carbon tetrachloride	11.4	ug/L			10.0	114	82 --- 127		20
Chlorobenzene	9.17	ug/L			10.0	92	89 --- 114		20
Chloroethane	9.75	ug/L			10.0	98	78 --- 128		20
Chloroform	9.51	ug/L			10.0	95	88 --- 115		20
Chloromethane	9.93	ug/L			10.0	99	63 --- 135		20
cis-1,2-Dichloroethene	9.97	ug/L			10.0	100	87 --- 115		20

SOILS & ENGINEERING SERVICES **Project Name: TRUAX FIELD**

SDG #: 0 **Folder #: 159552** **Project #: XGFG 192004**

Lab Control Spike Water

Analytical Run #:	179222	Analysis Date:	02/09/2021	Prep Batch #:		Matrix:	LIQUID
CTLab #:	532291	Analysis Time:	09:03	Prep Date/Time:		Method:	SW8260C
Parent Sample #:		Analyst:	DGS	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
cis-1,3-Dichloropropene	10.3	ug/L			10.0	103	86 --- 115		20
d8-Toluene	104	% Recovery			100	104	95 --- 105		
Dibromochloromethane	9.33	ug/L			10.0	93	82 --- 117		20
Dibromofluoromethane	99.0	% Recovery			100	99.0	92 --- 107		
Dibromomethane	9.78	ug/L			10.0	98	84 --- 115		20
Dichlorodifluoromethane	11.1	ug/L			10.0	111	76 --- 129		20
Diisopropyl ether	10.3	ug/L			10.0	103	82 --- 123		20
Ethylbenzene	9.79	ug/L			10.0	98	92 --- 119		20
Hexachlorobutadiene	9.66	ug/L			10.0	97	84 --- 120		20
Isopropylbenzene	9.97	ug/L			10.0	100	91 --- 121		20
m & p-Xylene	19.1	ug/L			20.0	96	91 --- 117		20
Methyl tert-butyl ether	10.5	ug/L			10.0	105	85 --- 115		20
Methylene chloride	9.98	ug/L			10.0	100	71 --- 128		20
n-Butylbenzene	9.65	ug/L			10.0	96	88 --- 122		20
n-Propylbenzene	9.23	ug/L			10.0	92	90 --- 123		20
Naphthalene	9.34	ug/L			10.0	93	64 --- 129		20
o-Xylene	9.24	ug/L			10.0	92	89 --- 115		20
p-Isopropyltoluene	9.56	ug/L			10.0	96	91 --- 119		20
sec-Butylbenzene	9.96	ug/L			10.0	100	92 --- 122		20
Styrene	9.44	ug/L			10.0	94	90 --- 116		20
tert-Butylbenzene	9.47	ug/L			10.0	95	90 --- 118		20
Tetrachloroethene	10.0	ug/L			10.0	100	86 --- 120		20
Tetrahydrofuran	106	ug/L			100	106	72 --- 135		20
Toluene	10.2	ug/L			10.0	102	89 --- 117		20
trans-1,2-Dichloroethene	10.1	ug/L			10.0	101	86 --- 116		20
trans-1,3-Dichloropropene	10.2	ug/L			10.0	102	84 --- 115		20
Trichloroethene	10.3	ug/L			10.0	103	86 --- 117		20
Trichlorofluoromethane	11.0	ug/L			10.0	110	83 --- 133		20
Vinyl chloride	10.6	ug/L			10.0	106	84 --- 124		20

SOILS & ENGINEERING SERVICES **Project Name: TRUAX FIELD**

SDG #: 0 **Folder #: 159552** **Project #: XGFG 192004**

Method Blank Water

Analytical Run #:	179222	Analysis Date:	02/09/2021	Prep Batch #:		Matrix:	LIQUID
CTLab #:	532394	Analysis Time:	11:23	Prep Date/Time:		Method:	SW8260C
Parent Sample #:		Analyst:	DGS	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	0.4	ug/L		U	0		0.4		
1,1,1-Trichloroethane	0.29	ug/L		U	0		0.29		
1,1,2,2-Tetrachloroethane	0.3	ug/L		U	0		0.3		
1,1,2-Trichloroethane	0.30	ug/L		U	0		0.30		
1,1-Dichloroethane	0.3	ug/L		U	0		0.3		
1,1-Dichloroethene	0.4	ug/L		U	0		0.4		
1,1-Dichloropropene	0.3	ug/L		U	0		0.3		
1,2 Dichloroethane-d4	100	% Recovery			100	100	83 --- 116		
1,2,3-Trichlorobenzene	0.23	ug/L		U	0		0.23		
1,2,3-Trichloropropane	0.3	ug/L		U	0		0.3		
1,2,4-Trichlorobenzene	0.28	ug/L		U	0		0.28		
1,2,4-Trimethylbenzene	0.29	ug/L		U	0		0.29		
1,2-Dibromo-3-chloropropane	0.25	ug/L		U	0		0.25		
1,2-Dibromoethane	0.3	ug/L		U	0		0.3		
1,2-Dichlorobenzene	0.3	ug/L		U	0		0.3		
1,2-Dichloroethane	0.24	ug/L		U	0		0.24		
1,2-Dichloropropane	0.18	ug/L		U	0		0.18		
1,3,5-Trimethylbenzene	0.27	ug/L		U	0		0.27		
1,3-Dichlorobenzene	0.26	ug/L		U	0		0.26		
1,3-Dichloropropane	0.17	ug/L		U	0		0.17		
1,4-Dichlorobenzene	0.3	ug/L		U	0		0.3		
2,2-Dichloropropane	0.30	ug/L		U	0		0.30		
2-Butanone	2.6	ug/L		U	0		2.6		
2-Chlorotoluene	0.25	ug/L		U	0		0.25		
2-Hexanone	3	ug/L		U	0		3		
4-Chlorotoluene	0.3	ug/L		U	0		0.3		
4-Methyl-2-pentanone	2.2	ug/L		U	0		2.2		
Acetone	4	ug/L		U	0		4		
Benzene	0.4	ug/L		U	0		0.4		
Bromobenzene	0.4	ug/L		U	0		0.4		
Bromochloromethane	0.30	ug/L		U	0		0.30		
Bromodichloromethane	0.29	ug/L		U	0		0.29		
Bromofluorobenzene	104	% Recovery			100	104	80 --- 129		
Bromoform	0.4	ug/L		U	0		0.4		
Bromomethane	0.9	ug/L		U	0		0.9		
Carbon disulfide	0.6	ug/L		U	0		0.6		
Carbon tetrachloride	0.3	ug/L		U	0		0.3		
Chlorobenzene	0.3	ug/L		U	0		0.3		
Chloroethane	0.5	ug/L		U	0		0.5		
Chloroform	0.3	ug/L		U	0		0.3		
Chloromethane	0.6	ug/L		U	0		0.6		
cis-1,2-Dichloroethene	0.3	ug/L		U	0		0.3		

SOILS & ENGINEERING SERVICES **Project Name: TRUAX FIELD**

SDG #: 0 **Folder #: 159552** **Project #: XGFG 192004**

Method Blank Water

Analytical Run #:	179222	Analysis Date:	02/09/2021	Prep Batch #:		Matrix:	LIQUID
CTLab #:	532394	Analysis Time:	11:23	Prep Date/Time:		Method:	SW8260C
Parent Sample #:		Analyst:	DGS	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
cis-1,3-Dichloropropene	0.16	ug/L		U	0		0.16		
d8-Toluene	104	% Recovery			100	104	85 --- 117		
Dibromochloromethane	0.3	ug/L		U	0		0.3		
Dibromofluoromethane	104	% Recovery			100	104	85 --- 115		
Dibromomethane	0.22	ug/L		U	0		0.22		
Dichlorodifluoromethane	0.4	ug/L		U	0		0.4		
Diisopropyl ether	0.4	ug/L		U	0		0.4		
Ethylbenzene	0.3	ug/L		U	0		0.3		
Hexachlorobutadiene	0.4	ug/L		U	0		0.4		
Isopropylbenzene	0.3	ug/L		U	0		0.3		
m & p-Xylene	0.7	ug/L		U	0		0.7		
Methyl tert-butyl ether	0.3	ug/L		U	0		0.3		
Methylene chloride	0.4	ug/L		U	0		0.4		
n-Butylbenzene	0.29	ug/L		U	0		0.29		
n-Propylbenzene	0.3	ug/L		U	0		0.3		
Naphthalene	0.30	ug/L		U	0		0.30		
o-Xylene	0.26	ug/L		U	0		0.26		
p-Isopropyltoluene	0.3	ug/L		U	0		0.3		
sec-Butylbenzene	0.4	ug/L		U	0		0.4		
Styrene	0.29	ug/L		U	0		0.29		
tert-Butylbenzene	0.4	ug/L		U	0		0.4		
Tetrachloroethene	0.27	ug/L		U	0		0.27		
Tetrahydrofuran	3	ug/L		U	0		3		
Toluene	0.21	ug/L		U	0		0.21		
trans-1,2-Dichloroethene	0.3	ug/L		U	0		0.3		
trans-1,3-Dichloropropene	0.23	ug/L		U	0		0.23		
Trichloroethene	0.3	ug/L		U	0		0.3		
Trichlorofluoromethane	0.4	ug/L		U	0		0.4		
Vinyl chloride	0.14	ug/L		U	0		0.14		

SOILS & ENGINEERING SERVICES **Project Name: TRUAX FIELD**

SDG #: 0 **Folder #: 159552** **Project #: XGFG 192004**

Matrix Spike Duplicate Water

Analytical Run #:	179222	Analysis Date:	02/09/2021	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	532637	Analysis Time:	20:51	Prep Date/Time:		Method:	SW8260C
Parent Sample #:	532636	Analyst:	DGS	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	9.74	ug/L	BDL		10.0	97	80 --- 117	6	11
1,1,1-Trichloroethane	12.2	ug/L	BDL		10.0	122	84 --- 130	5	10
1,1,2,2-Tetrachloroethane	8.88	ug/L	BDL		10.0	89	73 --- 124	5	15
1,1,2-Trichloroethane	11.2	ug/L	BDL		10.0	112	80 --- 121	6	12
1,1-Dichloroethane	11.4	ug/L	BDL		10.0	114	82 --- 123	1	11
1,1-Dichloroethene	12.4	ug/L	BDL		10.0	124	83 --- 129	9	11
1,1-Dichloropropene	11.7	ug/L	BDL		10.0	117	84 --- 127	4	12
1,2 Dichloroethane-d4	95.0	% Recovery			100	95.0	89 --- 111		29
1,2,3-Trichlorobenzene	9.84	ug/L	BDL		10.0	98	70 --- 125	9	23
1,2,3-Trichloropropane	8.98	ug/L	BDL		10.0	90	64 --- 119	11	17
1,2,4-Trichlorobenzene	9.96	ug/L	BDL		10.0	100	73 --- 121	11	20
1,2,4-Trimethylbenzene	10.3	ug/L	BDL		10.0	103	85 --- 124	10	17
1,2-Dibromo-3-chloropropane	9.48	ug/L	BDL		10.0	95	58 --- 122	7	24
1,2-Dibromoethane	9.85	ug/L	BDL		10.0	98	78 --- 117	10	12
1,2-Dichlorobenzene	9.30	ug/L	BDL		10.0	93	81 --- 119	8	8
1,2-Dichloroethane	10.3	ug/L	BDL		10.0	103	78 --- 126	1	12
1,2-Dichloropropane	11.2	ug/L	BDL		10.0	112	81 --- 121	3	11
1,3,5-Trimethylbenzene	9.97	ug/L	BDL		10.0	100	83 --- 126	5	21
1,3-Dichlorobenzene	9.58	ug/L	BDL		10.0	96	83 --- 119	8	11
1,3-Dichloropropane	10.7	ug/L	BDL		10.0	107	83 --- 119	4	11
1,4-Dichlorobenzene	9.19	ug/L	BDL		10.0	92	82 --- 118	8	11
2,2-Dichloropropane	10.6	ug/L	BDL		10.0	106	56 --- 134	10	21
2-Butanone	114	ug/L	BDL		100	114	68 --- 134	5	21
2-Chlorotoluene	9.57	ug/L	BDL		10.0	96	81 --- 125	5	11
2-Hexanone	105	ug/L	BDL		100	105	64 --- 140	6	26
4-Chlorotoluene	9.78	ug/L	BDL		10.0	98	82 --- 125	7	11
4-Methyl-2-pentanone	114	ug/L	BDL		100	114	66 --- 140	4	19
Acetone	113	ug/L	BDL		100	113	47 --- 139	4	27
Benzene	11.5	ug/L	BDL		10.0	115	87 --- 125	5	10
Bromobenzene	9.02	ug/L	BDL		10.0	90	78 --- 120	7	10
Bromochloromethane	10.4	ug/L	BDL		10.0	104	79 --- 124	4	11
Bromodichloromethane	10.6	ug/L	BDL		10.0	106	81 --- 120	7	10
Bromofluorobenzene	98.0	% Recovery			100	98.0	83 --- 111		25
Bromoform	8.70	ug/L	BDL		10.0	87	61 --- 121	2	17
Bromomethane	14.1	ug/L	BDL		10.0	141	21 --- 177	2	35
Carbon disulfide	23.0	ug/L	BDL		20.0	115	86 --- 133	3	18
Carbon tetrachloride	12.5	ug/L	BDL		10.0	125	82 --- 135	8	12
Chlorobenzene	9.86	ug/L	BDL		10.0	99	86 --- 120	7	8
Chloroethane	11.2	ug/L	BDL		10.0	112	59 --- 153	7	26
Chloroform	10.8	ug/L	BDL		10.0	108	84 --- 122	5	10
Chloromethane	12.1	ug/L	BDL		10.0	121	56 --- 145	3	18
cis-1,2-Dichloroethene	10.8	ug/L	BDL		10.0	108	42 --- 166	3	10

SOILS & ENGINEERING SERVICES **Project Name: TRUAX FIELD**

SDG #: 0 **Folder #: 159552** **Project #: XGFG 192004**

Matrix Spike Duplicate Water

Analytical Run #:	179222	Analysis Date:	02/09/2021	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	532637	Analysis Time:	20:51	Prep Date/Time:		Method:	SW8260C
Parent Sample #:	532636	Analyst:	DGS	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
cis-1,3-Dichloropropene	10.8	ug/L	BDL		10.0	108	75 --- 115	6	13
d8-Toluene	106	% Recovery			100	106	93 --- 107		20
Dibromochloromethane	9.12	ug/L	BDL		10.0	91	73 --- 118	6	15
Dibromofluoromethane	101	% Recovery			100	101	90 --- 110		20
Dibromomethane	10.2	ug/L	BDL		10.0	102	79 --- 120	0	12
Dichlorodifluoromethane	12.5	ug/L	BDL		10.0	125	64 --- 155	3	14
Diisopropyl ether	11.2	ug/L	BDL		10.0	112	74 --- 131	6	11
Ethylbenzene	10.6	ug/L	BDL		10.0	106	87 --- 126	5	8
Hexachlorobutadiene	10.6	ug/L	BDL		10.0	106	63 --- 138	10	20
Isopropylbenzene	10.9	ug/L	BDL		10.0	109	77 --- 141	6	11
m & p-Xylene	21.0	ug/L	BDL		20.0	105	87 --- 124	6	11
Methyl tert-butyl ether	11.2	ug/L	BDL		10.0	112	80 --- 122	5	19
Methylene chloride	11.1	ug/L	BDL		10.0	111	64 --- 124	8	13
n-Butylbenzene	10.5	ug/L	BDL		10.0	105	79 --- 132	8	12
n-Propylbenzene	9.67	ug/L	BDL		10.0	97	77 --- 138	7	12
Naphthalene	10.9	ug/L	BDL		10.0	109	45 --- 152	10	30
o-Xylene	10.1	ug/L	BDL		10.0	101	83 --- 122	8	12
p-Isopropyltoluene	10.7	ug/L	BDL		10.0	107	85 --- 126	9	11
sec-Butylbenzene	11.4	ug/L	BDL		10.0	114	87 --- 130	9	11
Styrene	10.2	ug/L	BDL		10.0	102	82 --- 123	8	24
tert-Butylbenzene	10.5	ug/L	BDL		10.0	105	84 --- 125	10	10
Tetrachloroethene	11.3	ug/L	BDL		10.0	113	82 --- 131	3	11
Tetrahydrofuran	114	ug/L	BDL		100	114	49 --- 147	4	22
Toluene	11.5	ug/L	BDL		10.0	115	86 --- 124	5	10
trans-1,2-Dichloroethene	11.6	ug/L	BDL		10.0	116	82 --- 125	8	16
trans-1,3-Dichloropropene	10.7	ug/L	BDL		10.0	107	73 --- 114	6	16
Trichloroethene	11.5	ug/L	BDL		10.0	115	82 --- 125	4	14
Trichlorofluoromethane	13.0	ug/L	BDL		10.0	130	74 --- 153	4	15
Vinyl chloride	12.1	ug/L	BDL		10.0	121	72 --- 144	6	11

SOILS & ENGINEERING SERVICES **Project Name: TRUAX FIELD**

SDG #: 0 **Folder #: 159552** **Project #: XGFG 192004**

Matrix Spike Water

Analytical Run #:	179222	Analysis Date:	02/09/2021	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	532636	Analysis Time:	20:19	Prep Date/Time:		Method:	SW8260C
Parent Sample #:	530660	Analyst:	DGS	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	9.20	ug/L	BDL		10.0	92	80 --- 117		11
1,1,1-Trichloroethane	11.5	ug/L	BDL		10.0	115	84 --- 130		10
1,1,2,2-Tetrachloroethane	8.47	ug/L	BDL		10.0	85	73 --- 124		15
1,1,2-Trichloroethane	10.6	ug/L	BDL		10.0	106	80 --- 121		12
1,1-Dichloroethane	11.4	ug/L	BDL		10.0	114	82 --- 123		11
1,1-Dichloroethene	11.4	ug/L	BDL		10.0	114	83 --- 129		11
1,1-Dichloropropene	11.3	ug/L	BDL		10.0	113	84 --- 127		12
1,2 Dichloroethane-d4	91.0	% Recovery			100	91.0	89 --- 111		29
1,2,3-Trichlorobenzene	9.01	ug/L	BDL		10.0	90	70 --- 125		23
1,2,3-Trichloropropane	8.08	ug/L	BDL		10.0	81	64 --- 119		17
1,2,4-Trichlorobenzene	8.97	ug/L	BDL		10.0	90	73 --- 121		20
1,2,4-Trimethylbenzene	9.27	ug/L	BDL		10.0	93	85 --- 124		17
1,2-Dibromo-3-chloropropane	8.85	ug/L	BDL		10.0	88	58 --- 122		24
1,2-Dibromoethane	8.88	ug/L	BDL		10.0	89	78 --- 117		12
1,2-Dichlorobenzene	8.55	ug/L	BDL		10.0	86	81 --- 119		8
1,2-Dichloroethane	10.2	ug/L	BDL		10.0	102	78 --- 126		12
1,2-Dichloropropane	10.9	ug/L	BDL		10.0	109	81 --- 121		11
1,3,5-Trimethylbenzene	9.45	ug/L	BDL		10.0	94	83 --- 126		21
1,3-Dichlorobenzene	8.84	ug/L	BDL		10.0	88	83 --- 119		11
1,3-Dichloropropane	10.3	ug/L	BDL		10.0	103	83 --- 119		11
1,4-Dichlorobenzene	8.52	ug/L	BDL		10.0	85	82 --- 118		11
2,2-Dichloropropane	9.56	ug/L	BDL		10.0	96	56 --- 134		21
2-Butanone	108	ug/L	BDL		100	108	68 --- 134		21
2-Chlorotoluene	9.14	ug/L	BDL		10.0	91	81 --- 125		11
2-Hexanone	98.3	ug/L	BDL		100	98	64 --- 140		26
4-Chlorotoluene	9.11	ug/L	BDL		10.0	91	82 --- 125		11
4-Methyl-2-pentanone	109	ug/L	BDL		100	109	66 --- 140		19
Acetone	108	ug/L	BDL		100	108	47 --- 139		27
Benzene	11.0	ug/L	BDL		10.0	110	87 --- 125		10
Bromobenzene	8.45	ug/L	BDL		10.0	84	78 --- 120		10
Bromochloromethane	9.97	ug/L	BDL		10.0	100	79 --- 124		11
Bromodichloromethane	9.88	ug/L	BDL		10.0	99	81 --- 120		10
Bromofluorobenzene	95.0	% Recovery			100	95.0	83 --- 111		25
Bromoform	8.48	ug/L	BDL		10.0	85	61 --- 121		17
Bromomethane	14.5	ug/L	BDL		10.0	145	21 --- 177		35
Carbon disulfide	22.2	ug/L	BDL		20.0	111	86 --- 133		18
Carbon tetrachloride	11.5	ug/L	BDL		10.0	115	82 --- 135		12
Chlorobenzene	9.24	ug/L	BDL		10.0	92	86 --- 120		8
Chloroethane	10.4	ug/L	BDL		10.0	104	59 --- 153		26
Chloroform	10.3	ug/L	BDL		10.0	103	84 --- 122		10
Chloromethane	11.7	ug/L	BDL		10.0	117	56 --- 145		18
cis-1,2-Dichloroethene	10.5	ug/L	BDL		10.0	105	42 --- 166		10

SOILS & ENGINEERING SERVICES **Project Name: TRUAX FIELD**

SDG #: 0 **Folder #: 159552** **Project #: XGFG 192004**

Matrix Spike Water

Analytical Run #:	179222	Analysis Date:	02/09/2021	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	532636	Analysis Time:	20:19	Prep Date/Time:		Method:	SW8260C
Parent Sample #:	530660	Analyst:	DGS	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
cis-1,3-Dichloropropene	10.2	ug/L	BDL		10.0	102	75 --- 115		13
d8-Toluene	104	% Recovery			100	104	93 --- 107		20
Dibromochloromethane	8.57	ug/L	BDL		10.0	86	73 --- 118		15
Dibromofluoromethane	101	% Recovery			100	101	90 --- 110		20
Dibromomethane	10.2	ug/L	BDL		10.0	102	79 --- 120		12
Dichlorodifluoromethane	12.1	ug/L	BDL		10.0	121	64 --- 155		14
Diisopropyl ether	10.5	ug/L	BDL		10.0	105	74 --- 131		11
Ethylbenzene	10.1	ug/L	BDL		10.0	101	87 --- 126		8
Hexachlorobutadiene	9.58	ug/L	BDL		10.0	96	63 --- 138		20
Isopropylbenzene	10.2	ug/L	BDL		10.0	102	77 --- 141		11
m & p-Xylene	19.8	ug/L	BDL		20.0	99	87 --- 124		11
Methyl tert-butyl ether	10.6	ug/L	BDL		10.0	106	80 --- 122		19
Methylene chloride	10.3	ug/L	BDL		10.0	103	64 --- 124		13
n-Butylbenzene	9.68	ug/L	BDL		10.0	97	79 --- 132		12
n-Propylbenzene	9.02	ug/L	BDL		10.0	90	77 --- 138		12
Naphthalene	9.85	ug/L	BDL		10.0	98	45 --- 152		30
o-Xylene	9.32	ug/L	BDL		10.0	93	83 --- 122		12
p-Isopropyltoluene	9.76	ug/L	BDL		10.0	98	85 --- 126		11
sec-Butylbenzene	10.4	ug/L	BDL		10.0	104	87 --- 130		11
Styrene	9.41	ug/L	BDL		10.0	94	82 --- 123		24
tert-Butylbenzene	9.47	ug/L	BDL		10.0	95	84 --- 125		10
Tetrachloroethene	11.0	ug/L	BDL		10.0	110	82 --- 131		11
Tetrahydrofuran	109	ug/L	BDL		100	109	49 --- 147		22
Toluene	10.9	ug/L	BDL		10.0	109	86 --- 124		10
trans-1,2-Dichloroethene	10.8	ug/L	BDL		10.0	108	82 --- 125		16
trans-1,3-Dichloropropene	10.1	ug/L	BDL		10.0	101	73 --- 114		16
Trichloroethene	11.0	ug/L	BDL		10.0	110	82 --- 125		14
Trichlorofluoromethane	12.6	ug/L	BDL		10.0	126	74 --- 153		15
Vinyl chloride	11.4	ug/L	BDL		10.0	114	72 --- 144		11

CS SES #508.02

Rev. 02/2017

CHAIN OF CUSTODY

Page 1 of 1

Company: SOILS & ENGINEERING SERVICES
Project Contact: DUANE REICHEL
Telephone: 608-274-7600
Project Name: TRUAX FIELD
Project #: XGFG 192004
Location: COLD STORAGE
Sampled By: GEOFF PRIOR

CT LABORATORIES

1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Folder = 159552
Company: SOILS & ENGINEERIN
Project: TRUAX FIELD
Logged By: ERC PM: ET

Program:
QSM RCRA SDWA NPDES
Solid Waste Other _____

PO #

Report To: DUANE REICHEL
EMAIL:
Company: SES
Address: 1102 STEWART ST. MADISON, WI 53713

Invoice To:*
EMAIL:
Company: -SAME-
Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

Turnaround Time
Normal RUSH*
Date Needed: _____
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

Collection Date	Collection Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	ANALYSES REQUESTED: VOC 8260	ROS/FFOA	FIELD PID	Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
					~~CS, B~~	N						
2-2-21	~~0915~~	S	G		~~E426-1, S1, 2' **5'~~	N	3					
2-2-21	1005	S	G		E426-1, S1, 2'	N	3		0.5	3		530657
	1015				~~E426-2~~ E426-1, S2, 4'	N	3		0.1	3		530654
	1015				E426-1 DUP	N	3		0.1	3		530655
	1045				E426-2, S1, 2'	N	6		0.2	6	MSD	530656
	1100	↓			E426-2, S2, 4 1/2'	N	3		0.2	3		530657
	1205	GW			E426-1	N	3			3		530658
	1205	GW			E426-1 DUP	N	3			3		530659
↓	1255	GW			E426-2	N	6			6	MSD	530660

Fill in Spaces with Bottles per Test

Relinquished By	Date/Time	Received By	Date/Time
	2-3-21 0940	ERC	2/3/21 946
Received by:	Date/Time	Received for Laboratory by:	Date/Time
		ERC	2/3/21 1038

Lab Use Only
Ice Present (Yes) No
Temp 3.5/4.3 IR Gun 27
Cooler # 6215

159552 CS SES # 508.02 P1 of 1

Vista Analytical Laboratory

CHAIN OF CUSTODY

For Laboratory Use Only — Work Order #: _____ Temp: 3.9/4.4 °C — Storage ID: _____ Storage Secured: Yes ☐ No ☐

Project ID: XGFG 192004 PO#: _____ Sampler: GEOFF PRIOR (name)

TAT (check one): Standard: ☐ 21 days; Rush (surcharge may apply): ☐ 14 days ☐ 7 days Specify: _____

Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time
LFR	2-3-21	0940	ERC	2/3/21	946
			ERC	2/3/21	1038

SHIP TO: Vista Analytical Laboratory, 1104 Windfield Way, El Dorado Hills, CA 95762, (916) 673-1520 * Fax (916) 673-0106

ATTN: _____ Method of Shipment: _____ Tracking No.: _____

Add Analysis(es) Requested

Sample ID	Date	Time	Location/ Sample Description	Container(s) Quantity	Type	Matrix	PFAS by Isotope Dilution: PFOA/PFOS	UCMR3 PFAS List:6	537.1 List: 14 or 18 (Circle One)	EPA Draft List of 24	OTHER: Please attach analyte list	EPA Method 537 (DW only): PFOA/PFOS	UCMR3 PFAS List:6	537.1 List of 14	537.1 List of 18	Comments
~~CS, B~~			~~COLD STORAGE~~	~~1~~	~~P~~	~~SO~~	X									
~~E426-1, S1, 2' XRS~~	~~2-2-21~~		B426-1													
E426-1	2-2-21	1205		2	AG	AQ	X									530658
E426-1, S1, 4½'		945		1	P	SO	X									530661
E426-1, S2, 4'		1015		1	P	SO	X									530654
E426-1, DUP		1015		1	P	SO	X									530655
E426-2, S1, 2'		1045		2	P	SO	X									USE FOR MSD 530656
E426-2, S2, 4½'		1100		1	P	SO	X									530657
E426-1 DUP		1205		2	AG	AQ	X									530659
E426-2	↓	1255	↓	4	P	AQ	X									USE FOR MSD 530660

Special Instructions/Comment

SEND DOCUMENTATION AND RESULTS TO:

Name: DUANE REICHEL
Company: SOILS & ENGINEERING SERVICES
Address: 1102 STEWART ST
City: MADISON State: WI Zip: 53713
Phone: 608-274-7602
Email: _____

Container Types: P = HDPE, PJ = HDPE Jar, PY = Polypropylene, O= Other _____

Bottle Preservation Type: TZ= Trizma: _____

Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, O = Other _____

APPENDIX C

Appendix C Contents

- *Important Information about This Geoenvironmental Report* advisory

Important Information about This

Geoenvironmental Report

Geoenvironmental studies are commissioned to gain information about environmental conditions on and beneath the surface of a site. The more comprehensive the study, the more reliable the assessment is likely to be. But remember: Any such assessment is to a greater or lesser extent based on professional opinions about conditions that cannot be seen or tested. Accordingly, no matter how many data are developed, risks created by unanticipated conditions will always remain. *Have realistic expectations.* Work with your geoenvironmental consultant to manage known and unknown risks. Part of that process should already have been accomplished, through the risk allocation provisions you and your geoenvironmental professional discussed and included in your contract's general terms and conditions. This document is intended to explain some of the concepts that may be included in your agreement, and to pass along information and suggestions to help you manage your risk.

Beware of Change; Keep Your Geoenvironmental Professional Advised

The design of a geoenvironmental study considers a variety of factors that are subject to change. Changes can undermine the applicability of a report's findings, conclusions, and recommendations. *Advise your geoenvironmental professional about any changes you become aware of.* Geoenvironmental professionals cannot accept responsibility or liability for problems that occur because a report fails to consider conditions that did not exist when the study was designed. Ask your geoenvironmental professional about the types of changes you should be particularly alert to. Some of the most common include:

- modification of the proposed development or ownership group,
- sale or other property transfer,
- replacement of or additions to the financing entity,
- amendment of existing regulations or introduction of new ones, or
- changes in the use or condition of adjacent property.

Should you become aware of any change, *do not rely on a geoenvironmental report.* Advise your geoenvironmental professional immediately; follow the professional's advice.

Recognize the Impact of Time

A geoenvironmental professional's findings, recommendations, and conclusions cannot remain valid indefinitely. The more time that passes, the more likely it is that important latent changes will occur. *Do not rely on a geoenvironmental report if too much time has elapsed since it was completed.* Ask your environmental professional to define "too much time." In the case of Phase I Environmental Site Assessments (ESAs), for example, more than 180 days after submission is generally considered "too much."

Prepare To Deal with Unanticipated Conditions

The findings, recommendations, and conclusions of a Phase I ESA report typically are based on a review of historical information, interviews, a site "walkover," and other forms of noninvasive research. When site subsurface conditions are not sampled in any way, the risk of unanticipated conditions is higher than it would otherwise be.

While borings, installation of monitoring wells, and similar invasive test methods can help reduce the risk of unanticipated conditions, *do not overvalue the effectiveness of testing.* Testing provides information about actual conditions only at the precise locations where samples are taken, and only when they are taken. Your geoenvironmental

professional has applied that specific information to develop a general opinion about environmental conditions. *Actual conditions in areas not sampled may differ (sometimes sharply) from those predicted in a report.* For example, a site may contain an unregistered underground storage tank that shows no surface trace of its existence. *Even conditions in areas that were tested can change*, sometimes suddenly, due to any number of events, not the least of which include occurrences at adjacent sites. Recognize, too, that *even some conditions in tested areas may go undiscovered,* because the tests or analytical methods used were designed to detect only those conditions assumed to exist.

Manage your risks by retaining your geoenvironmental professional to work with you as the project proceeds. Establish a contingency fund or other means to enable your geoenvironmental professional to respond rapidly, in order to limit the impact of unforeseen conditions. And to help prevent any misunderstanding, identify those empowered to authorize changes and the administrative procedures that should be followed.

Do Not Permit Any Other Party To Rely on the Report

Geoenvironmental professionals design their studies and prepare their reports to meet the specific needs of the clients who retain them, in light of the risk management methods that the client and geoenvironmental professional agree to, and the statutory, regulatory, or other requirements that apply. The study designed for a developer may differ sharply from one designed for a lender, insurer, public agency...or even another developer. *Unless the report specifically states otherwise, it was developed for you and only you.* Do not unilaterally permit any other party to rely on it. The report and the study underlying it may not be adequate for another party's needs, and you could be held liable for shortcomings your geoenvironmental professional was powerless to prevent or anticipate. Inform your geoenvironmental professional when you know or expect that someone else—a third-party—will want to use or rely on the report. *Do not permit third-party use or reliance until you first confer with the geoenvironmental professional who prepared the report.* Additional testing, analysis, or study may be required and, in any event, appropriate terms and conditions should be agreed to so both you and your geoenvironmental professional are protected from third-party risks. *Any party who relies on a geoenvironmental report without the express written permission of the professional who prepared it and the client for whom it was prepared may be solely liable for any problems that arise.*

Avoid Misinterpretation of the Report

Design professionals and other parties may want to rely on the report in developing plans and specifications. They need to be advised, in writing, that their needs may not have been considered when the study's scope was developed, and, even if their needs were considered, they might misinterpret geoenvironmental findings, conclusions, and recommendations. *Commission your geoenvironmental professional to explain pertinent elements of the report to others who are permitted to rely on it, and to review any plans, specifications or other instruments of professional service that incorporate any of the report's findings, conclusions, or recommendations.* Your geoenvironmental professional has the best understanding of the issues involved, including the fundamental assumptions that underpinned the study's scope.

Give Contractors Access to the Report

Reduce the risk of delays, claims, and disputes by giving contractors access to the full report, *providing that it is accompanied by a letter of transmittal that can protect you* by making it unquestionably clear that: 1) the study was not conducted and the report was not prepared for purposes of bid development, and 2) the findings, conclusions, and recommendations included in the report are based on a variety of opinions, inferences, and assumptions and are subject to interpretation. Use the letter to also advise contractors to consult with your geoenvironmental professional to obtain clarifications, interpretations, and guidance (a fee may be required for this service), and that—in any event—they should conduct additional studies to obtain the specific type and extent of information each prefers for preparing a bid or cost estimate. Providing access to the full report, with the appropriate caveats, helps prevent formation of adversarial attitudes and claims of concealed or differing conditions. If a contractor elects to ignore the warnings and advice in the letter of transmittal, it would do so at its own risk. Your geoenvironmental professional should be able to help you prepare an effective letter.

Do Not Separate Documentation from the Report

Geoenvironmental reports often include supplemental documentation, such as maps and copies of regulatory files, permits, registrations, citations, and correspondence with regulatory agencies. If subsurface explorations were performed, the report may contain final boring logs and copies of laboratory data. If remediation activities occurred on site, the report may include: copies of daily field reports; waste manifests; and information about the disturbance of subsurface materials, the type and thickness of any fill placed on site, and fill placement practices, among other types of documentation. *Do not separate supplemental documentation from the report. Do not, and do not permit any other party to redraw or modify any of the supplemental documentation for incorporation into other professionals' instruments of service.*

Understand the Role of Standards

Unless they are incorporated into statutes or regulations, standard practices and standard guides developed by the American Society for Testing and Materials (ASTM) and other recognized standards-developing organizations (SDOs) are little more than aspirational methods agreed to by a consensus of a committee. The committees that develop standards may not comprise those best-qualified to establish methods and, no matter what, no standard method can possibly consider the infinite client- and project-specific variables that fly in the face of the theoretical "standard conditions" to which standard practices and standard guides apply. In fact, these variables can be so pronounced that geoenvironmental professionals who comply with every directive of an ASTM or other standard procedure could run afoul of local custom and practice, thus violating the standard of care. Accordingly, when geoenvironmental professionals indicate in their reports that they have performed a service "in general compliance" with one standard or another, it means they have applied professional judgement in creating and implementing a scope of service designed for the specific client and project involved, and which follows some of the general precepts laid out in the referenced standard. To the extent that a report indicates "general compliance" with a standard, you may wish to speak with your geoenvironmental professional to learn more about what was and was not done. *Do not assume a given standard was followed to the letter.* Research indicates that that seldom is the case.

Realize That Recommendations May Not Be Final

The technical recommendations included in a geoenvironmental report are based on assumptions about actual conditions, and so are preliminary or tentative. Final recommendations can be prepared only by observing actual conditions as they are exposed. For that reason, you should retain the geoenvironmental professional of record to observe construction and/or remediation activities on site, to permit rapid response to unanticipated conditions. *The geoenvironmental professional who prepared the report cannot assume responsibility or liability for the report's recommendations if that professional is not retained to observe relevant site operations.*

Understand That Geotechnical Issues Have Not Been Addressed

Unless geotechnical engineering was specifically included in the scope of professional service, a report is not likely to relate any findings, conclusions, or recommendations about the suitability of subsurface materials for construction purposes, especially when site remediation has been accomplished through the removal, replacement, encapsulation, or chemical treatment of on-site soils. The equipment, techniques, and testing used by geotechnical engineers differ markedly from those used by geoenvironmental professionals; their education, training, and experience are also significantly different. If you plan to build on the subject site, but have not yet had a geotechnical engineering study conducted, your geoenvironmental professional should be able to provide guidance about the next steps you should take. The same firm may provide the services you need.

Read Responsibility Provisions Closely

Geoenvironmental studies cannot be exact; they are based on professional judgement and opinion. Nonetheless, some clients, contractors, and others assume geoenvironmental reports are or certainly should be unerringly precise. Such assumptions have created unrealistic expectations that have led to wholly unwarranted claims and disputes. To help prevent such problems, geoenvironmental professionals have developed a number of report provisions and contract terms that explain who is responsible for what, and how risks are to be allocated. Some people mistake these for "exculpatory clauses," that is, provisions whose purpose is to transfer one party's rightful responsibilities and liabilities to someone else. Read the responsibility provisions included in a report and in the contract you and your geoenvironmental professional agreed to. *Responsibility provisions are not "boilerplate."* They are important.

Rely on Your Geoenvironmental Professional for Additional Assistance

Membership in the Geoprofessional Business Association exposes geoenvironmental professionals to a wide array of risk management techniques that can be of genuine benefit for everyone involved with a geoenvironmental project. Confer with your GBA-member geoenvironmental professional for more information.

GEOPROFESSIONAL BUSINESS ASSOCIATION

8811 Colesville Road/Suite G106, Silver Spring, MD 20910
Telephone: 301/565-2733 Facsimile: 301/589-2017
e-mail: info@geoprofessional.org www.geoprofessional.org

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