55 Walkers Brook Drive, Suite 100, Reading, MA 01867
Tel: 978.532.1900

September 29, 2022

Town of Sudbury Select Board
278 Old Sudbury Road
Sudbury, Massachusetts 01776

Re: Grant of Location Soil & Groundwater Assessment Results
Sudbury to Hudson Transmission Line Project
Sudbury Massachusetts, 01776

To Whom It May Concern:

Weston & Sampson Engineers, Inc., (Weston & Sampson) on behalf of Eversource Energy, has prepared this letter to summarize the findings of our recent supplemental investigation for the Sudbury to Hudson Transmission Project (the Project). The purpose of the investigation was to evaluate the soil and groundwater conditions at four (4) road crossings within the Project area located in Sudbury, MA to meet the requirements of Conditions 43 and 44 of the Town of Sudbury's Select Board Grant of Location (GOL) dated May 5, 2021 and filed with the Town Clerk on May 10, 2021. The approximate Project location is depicted on Figure 1.

BACKGROUND

The Project will include installing a new underground 115 kV electrical transmission line through a portion of Sudbury, Marlborough, Stow, and Hudson, Massachusetts. According to the Project's plans and specifications, Project-related work in Sudbury will include constructing approximately 4 miles of new transmission line along with related manholes and other infrastructure within a section of an inactive Massachusetts Bay Transportation Authority (MBTA) railroad right-of-way (ROW), from the Hudson and Sudbury municipal border to the Eversource Sudbury Substation.

As a requirement to the Project's GOL, the Town required Eversource to perform an additional assessment of soil and groundwater conditions at the following 4 road crossings:

- Dutton Road
- Peakham Road
- Horse Pond Road
- Union Avenue

The required assessment was identified by Conditions 43 and 44 of the GOL.

- *Condition 43: Company shall provide measurements of contaminations including PFAS and other toxins specified by the Town of Sudbury at each of the crossings prior to start of construction.*

- *Condition 44: Company shall provide Groundwater flow and direction measurements and analysis of the crossing to the Town of Sudbury and the Sudbury Water District.*

SITE INVESTIGAITON

To meet the requirements for Conditions 43 and 44 of the GOL, Weston & Sampson performed a targeted investigation at each road crossing in July 2022. The investigation was performed according to Weston & Sampson's GOL Sampling Plan dated June 13, 2022 and included advancing a soil boring (SB-134 to SB-137) at each road crossing:

- SB-134 at Union Avenue,

- SB-135 at Horse Pond Road,
- SB-136 at Peakham Road, and
- SB-137 at Dutton Road.

The investigation also included screening soil samples from each location, collecting soil samples for laboratory analysis, and recording the depth to groundwater, if encountered. The soil boring locations are shown in Figure 1.

Soil Boring Advancement

Between July 27 and 28, 2022, Weston & Sampson oversaw soil boring advancement activities. The borings were advanced by Geosearch, Inc of Sterling, Massachusetts using a Geoprobe® drill rig after pre-clearing each location to a depth of 5 feet below ground surface (ft bgs) using soft-dig, vacuum excavation methods. Based on the anticipated depth of construction, the borings were advanced with continuous soil sampling to depths up to 8 ft bgs, except at SB-136 where shallow refusal was encountered at 6.5 ft bgs. Boring SB-135 was also advanced to 11 ft bgs to assess depth to groundwater.

During the drilling activities, the soil samples from each boring were continuously evaluated by a Weston & Sampson environmental scientist for the following characteristics:

- Soil type, color, depth, thickness, and estimated moisture content
- Evidence of contamination (visual, olfactory, etc.) if observed
- Sample intervals and recovery; and
- Backfill and abandonment procedures.

Additionally, Weston & Sampson performed jar headspace screening for potential volatile organic compounds (VOCs) using a photoionization detector (PID) with 10.6 eV lamp using the Massachusetts Department of Environmental Protection's (MassDEP) jar headspace procedure (#WSC-94-400). Soil characterization details and PID reading are provided within the soil boring logs included in Attachment A.

Soil Sampling & Analysis

According to the GOL Sampling Plan, Weston & Sampson collected a full-depth composite soil sample from each boring location for laboratory analysis. These samples were collected from bottom of asphalt to a depth of 8 ft bgs, except at SB-136 where the sample was collected to depth of 6 ft bgs because of shallow refusal encountered at this location. The laboratory samples were submitted to Pace Analytical Laboratory in East Long Meadow, Massachusetts for the following analysis:

- Per-and polyfluoroalkyl substances (PFAS) using MassDEP's preferred analytical method of LC/MS/MS with isotope dilution,
- RCRA-8 metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) using EPA Method 6010/7410, and
- Semi-volatile organic compounds (SVOCs) using EPA Method 8270.

The soil samples were placed into new, laboratory-prepared sample containers, placed on ice and transported to the laboratory using standard chain-of-custody procedures. The chain-of-custody documentation along with copies of the lab report data are provided in Attachment B.

RESULTS

Soil Sampling Results

The soil conditions encountered during investigation generally consisted of 8 to 9-inches of asphalt that was underlain by light brown sand with some gravel and trace silt. No visual or olfactory contamination or elevated PID screening results were encountered in any of the soil borings. As shown in Table 1, the laboratory results identified select SVOCs and RCRA-8 metals; however, the concentrations were all below the most stringent Massachusetts Contingency Plan (MCP) Reportable Concentrations (RCS-1). The soil sampling results for PFAS (Table 2) were all below their respective laboratory reporting limits.

Groundwater Assessment and Flow Direction

Weston & Sampson evaluated the depth to groundwater at each road crossing. Based on the soil characteristics from at each boring, evidence of groundwater was encountered at Union Avenue (SB-134) at approximately 6 ft bgs and Horse Pond Road at approximately 11 ft bgs. No evidence of groundwater was encountered at Peakham Road (SB-136) or Dutton Road (SB-137). Based on previous geotechnical and environmental subsurface investigations, the depth to groundwater in the area between Dutton Road and Peakham Road is variable, with groundwater depths generally ranging between 1 to 9.5 ft bgs. Where encountered, shallow depth to groundwater appears to correspond with locations where shallow subsurface refusal has historically been encountered. As noted above, shallow refusal was observed at SB-136 without evidence of the perceived groundwater table.

To estimate groundwater flow direction, Weston & Sampson reviewed the results of previous subsurface investigation results within the Project area, available records for nearby MCP disposal sites, and the findings of a 2017 groundwater hydrology study that examined groundwater direction within the Zone II for several municipal public water supply wells. The evaluation indicates that the groundwater at each crossing location flows in an easterly direction which is depicted on Figure 2.

FINDINGS AND CONCLUSIONS

Weston & Sampson completed a site investigation to address Conditions 43 and 44 of the GOL for the Project. The investigation results indicate the following:

- Soil conditions at each road crossing consist generally of sand with no evidence of contamination or elevated PID screening results. Laboratory results indicate the soil contains low SVOC and metals concentrations that do not exceed their respective MCP RCS-1 standards. PFAS compounds were not detected in any of the samples above laboratory reporting limits.
- Groundwater was detected at the approximately 6 ft bgs and 11 ft bgs at SB-134 and SB-135, respectively. Based on these depths, previous studies conducted in the Project area, and the anticipated depth of construction at the road crossings, groundwater is not expected to be encountered, except near SB-134/Union Street. Given the limited groundwater likely to be encountered, any groundwater management/dewatering that is required to complete construction is anticipated to have no appreciable effect on overall groundwater flow rates or directions. If encountered, the groundwater will be managed according to the Soil and Groundwater Management Plan (SMGP) prepared for the Project and associated Project-specific permits and approvals from local, state, and federal agencies.

If you have any questions regarding the findings of Sudbury targeted road crossing investigation for the Project, please feel free to contact the undersigned at 978-548-6122

Sincerely,

WESTON & SAMPSON ENGINEERS, INC.

Paul McKinlay, PG, LSP
Senior Team Leader

Attachments
Figure 1 – Locus Map
Figure 2 – Proposed PFAS Soil Boring Locations

Table 1 – Metals and SVOC Sampling Results
Table 2 – PFAS Sampling Results
Attachment A – Boring Logs
Attachment B – Laboratory Data Reports

Cc Dean Bebis, Eversource Energy
Michael Hager, Eversource Energy

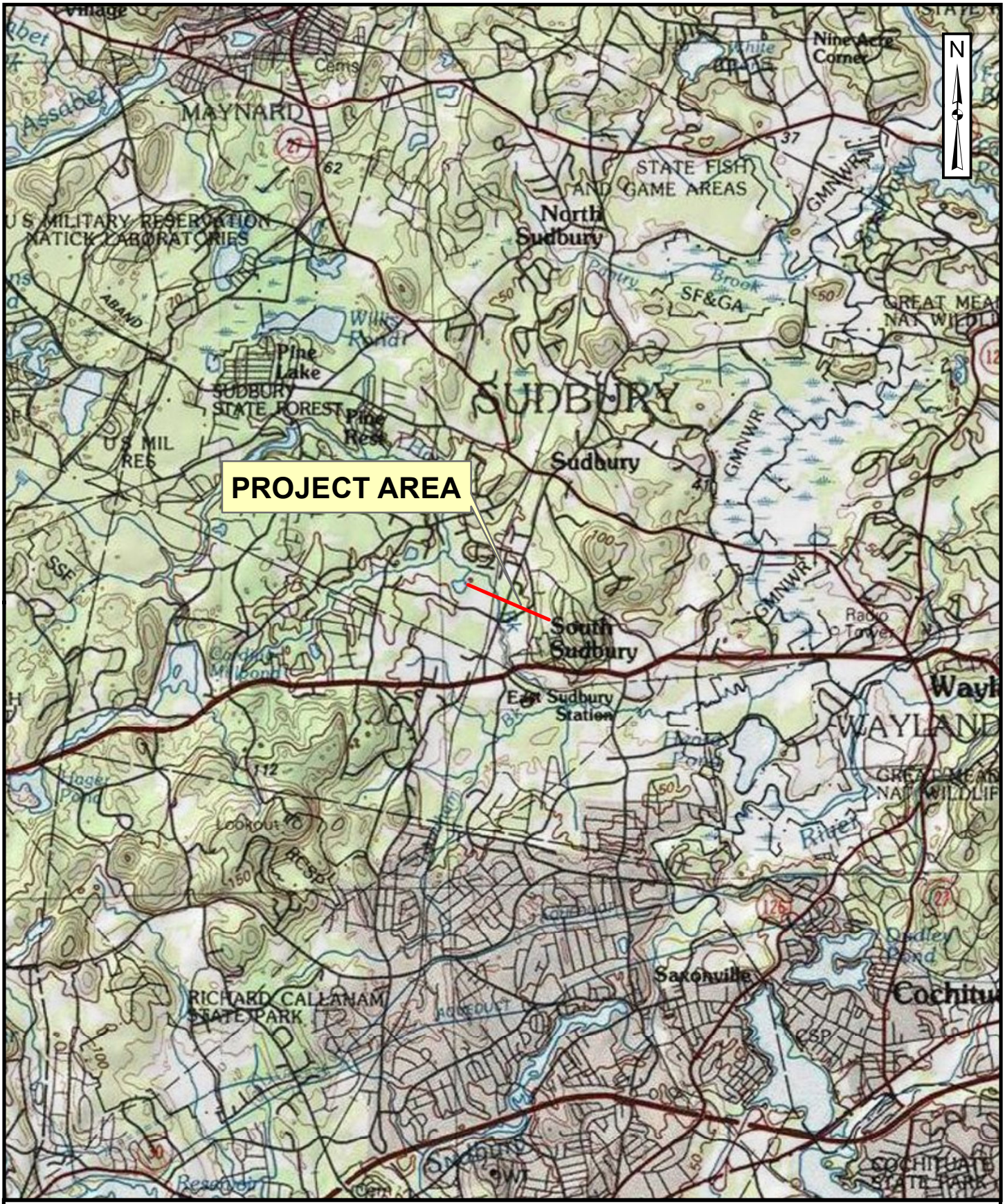
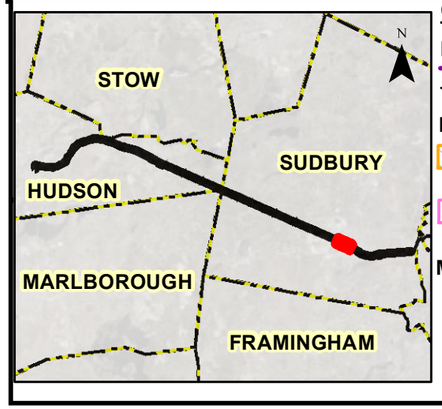


FIGURE 1
SUDBURY TO HUDSON
TRANSMISSION RELIABILITY PROJECT

LOCUS MAP

0.5 0.25 0 0.5 1 1.5 2 Miles



General Legend

Project Area
- In-Road
- MBTA ROW

MBTA Segments
- Industrial /Commercial
- Residential /Rural

MCP Disposal Sites
- Sites of Concern
- All Other Sites

Town Information
- Parcels
- Roads
- Boundary

STA Callout
- Work Limits
- 50ft Interval
- 500ft Interval

Former Railroad Stations

Wetland Information
- Areas subject to Wetland Jurisdiction

Approximate Groundwater Flow Direction

Sample Locations

PFAS & Other Toxins Soil Samples

200 100 0

Scale In Feet

FIGURE 2 | Sheet 1 of 4

SUDBURY TO HUDSON TRANSMISSION RELIABILITY PROJECT

PROPOSED PFAS SOIL BORING LOCATIONS

OCTOBER 2021 SCALE: NOTED

Weston & Sampson

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EVERGREEN ROAD

STONEBROOK ROAD

545

550

SUDBURY

555

560

SB-135

HORSE POND ROAD

JARMAN ROAD

ROLLING LANE

OLD MEADOW ROAD

N

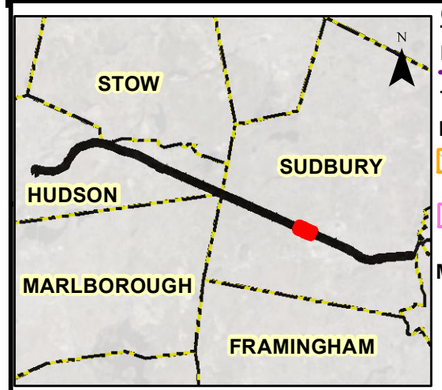

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FIGURE 2 | Sheet 2 of 4

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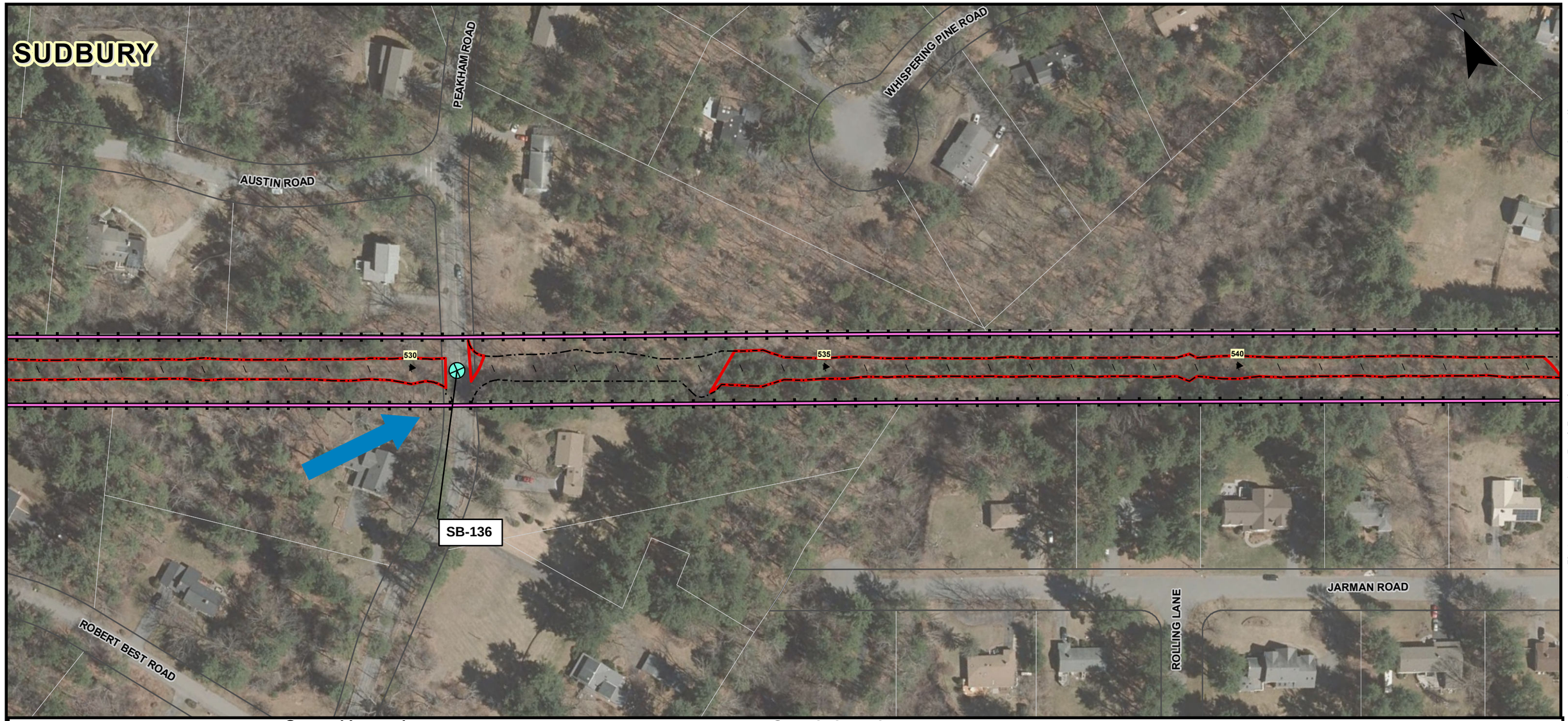

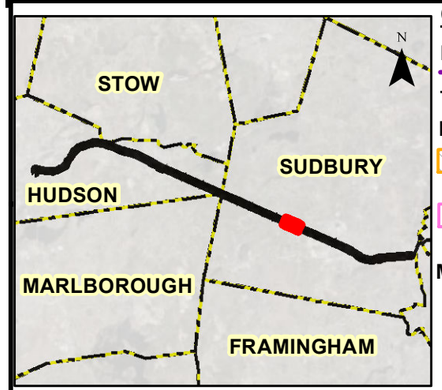

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Scale In Feet

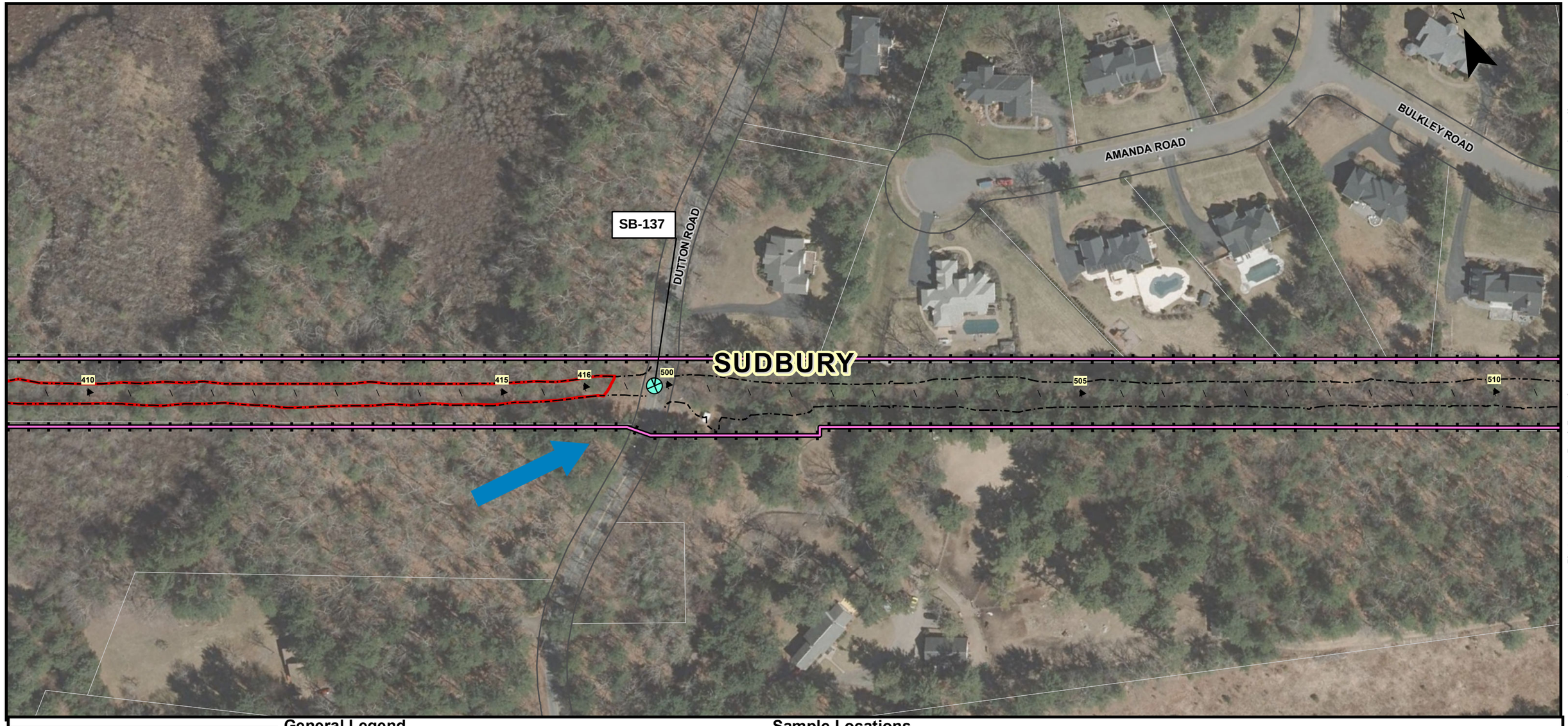
FIGURE 2 | Sheet 3 of 4

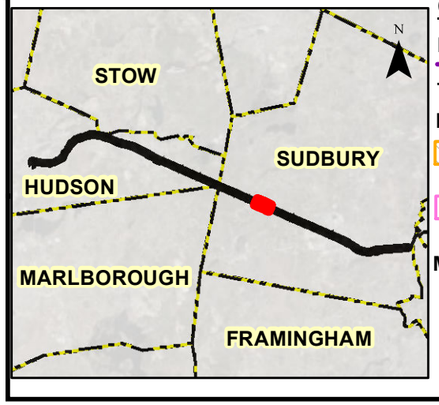
SUDBURY TO HUDSON TRANSMISSION RELIABILITY PROJECT

PROPOSED PFAS SOIL BORING LOCATIONS

OCTOBER 2021 SCALE: NOTED

Weston & Sampson SM





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Weston & Sampson

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TABLE 1
METALS AND SVOC SOIL SAMPLING RESULTS
HUDSON TO SUDBURY ELECTRICAL TRANSMISSION LINE
SUDBURY, MASSACHUSETTS

Parameter	Units	RCS 1	SB-134		SB-135		SB-136		SB-137	
			7/28/2022		7/28/2022		7/28/2022		7/28/2022	
			0 - 8 ft		0 - 8 ft		0 - 6.5 ft		0 - 8 ft	
			Result	Flag	Result	Flag	Result	Flag	Result	Flag
Metals										
Arsenic	mg/kg	20	**4.2**		**6.3**		**8.7**		**4.9**	
Barium	mg/kg	1000	**19**		**23**		**25**		**24**	
Cadmium	mg/kg	70	0.41	U	0.33	U	0.34	U	0.35	U
Chromium	mg/kg	100	**9.5**		**9.7**		**13**		**12**	
Lead	mg/kg	200	**14**		**5.6**		**14**		**7.3**	
Mercury	mg/kg	20	0.032	U	0.026	U	0.026	U	0.026	U
Selenium	mg/kg	400	4.1	U	3.3	U	3.4	U	3.5	U
Silver	mg/kg	100	0.41	U	0.33	U	0.34	U	0.35	U
Semi-Volatile Organic Compounds (SVOCs)										
1,2,4-Trichlorobenzene	mg/kg	2	0.43	U	0.35	U	0.35	U	0.36	U
1,2-Dichlorobenzene	mg/kg	9	0.43	U	0.35	U	0.35	U	0.36	U
1,2-Diphenylhydrazine	mg/kg	50	0.43	U	0.35	U	0.35	U	0.36	U
1,3-Dichlorobenzene	mg/kg	3	0.43	U	0.35	U	0.35	U	0.36	U
1,4-Dichlorobenzene	mg/kg	0.7	0.43	U	0.35	U	0.35	U	0.36	U
2,4,5-Trichlorophenol	mg/kg	4	0.43	U	0.35	U	0.35	U	0.36	U
2,4,6-Trichlorophenol	mg/kg	0.7	0.43	U	0.35	U	0.35	U	0.36	U
2,4-Dichlorophenol	mg/kg	0.7	0.43	U	0.35	U	0.35	U	0.36	U
2,4-Dimethylphenol	mg/kg	0.7	0.43	U	0.35	U	0.35	U	0.36	U
2,4-Dinitrophenol	mg/kg	3	0.83	U	0.67	U	0.69	U	0.71	U
2,4-Dinitrotoluene	mg/kg	0.7	0.43	U	0.35	U	0.35	U	0.36	U
2,6-Dinitrotoluene	mg/kg	100	0.43	U	0.35	U	0.35	U	0.36	U
2-Chloronaphthalene	mg/kg	1000	0.43	U	0.35	U	0.35	U	0.36	U
2-Chlorophenol	mg/kg	0.7	0.43	U	0.35	U	0.35	U	0.36	U
2-Methylnaphthalene	mg/kg	0.7	0.21	U	0.17	U	0.18	U	0.18	U
2-Methylphenol	mg/kg	500	0.43	U	0.35	U	0.35	U	0.36	U
2-Nitrophenol	mg/kg	100	0.43	U	0.35	U	0.35	U	0.36	U
3,3'-Dichlorobenzidine	mg/kg	3	0.21	U	0.17	U	0.18	U	0.18	U
3/4-Methylphenol	mg/kg	500	0.43	U	0.35	U	0.35	U	0.36	U
4-Bromophenyl-phenylether	mg/kg	100	0.43	U	0.35	U	0.35	U	0.36	U
4-Chloroaniline	mg/kg	1	0.83	U	0.67	U	0.69	U	0.71	U
4-Nitrophenol	mg/kg	100	0.83	U	0.67	U	0.69	U	0.71	U
Acenaphthene	mg/kg	4	0.21	U	0.17	U	0.18	U	0.18	U
Acenaphthylene	mg/kg	1	0.21	U	0.17	U	**0.23**		0.18	U
Acetophenone	mg/kg	1000	0.43	U	0.35	U	0.35	U	0.36	U
Aniline	mg/kg	1000	0.43	U	0.35	U	0.35	U	0.36	U
Anthracene	mg/kg	1000	0.21	U	0.17	U	**0.21**		0.18	U
Benza]anthracene	mg/kg	7	0.21	U	0.17	U	**0.59**		0.18	U
Benzo(k)fluoranthene	mg/kg	70	0.21	U	0.17	U	**0.38**		0.18	U
Benzo[a]pyrene	mg/kg	2	0.21	U	0.17	U	**0.82**		0.18	U
Benzo[b]fluoranthene	mg/kg	7	**0.25**		0.17	U	**0.99**		0.18	U
Benzo[g,h,i]perylene	mg/kg	1000	**0.23**		0.17	U	**0.56**		0.18	U
Biphenyl	mg/kg	0.05	*0.084*	U	*0.068*	U	*0.07*	U	*0.072*	U
bis(2-Chloroethoxy)methane	mg/kg	500	0.43	U	0.35	U	0.35	U	0.36	U
bis(2-Chloroethyl)ether	mg/kg	0.7	0.43	U	0.35	U	0.35	U	0.36	U
bis(2-Chloroisopropyl)ether	mg/kg	0.7	0.43	U	0.35	U	0.35	U	0.36	U
bis(2-Ethylhexyl)phthalate	mg/kg	90	0.43	U	0.35	U	0.35	U	0.36	U
Butyl benzyl phthalate	mg/kg	100	0.43	U	0.35	U	0.35	U	0.36	U
Chrysene	mg/kg	70	0.21	U	0.17	U	**0.56**		0.18	U
Dibenz[a,h]anthracene	mg/kg	0.7	0.21	U	0.17	U	0.18	U	0.18	U
Dibenzofuran	mg/kg	100	0.43	U	0.35	U	0.35	U	0.36	U
Diethyl phthalate	mg/kg	10	0.43	U	0.35	U	0.35	U	0.36	U
Dimethyl phthalate	mg/kg	0.7	0.43	U	0.35	U	0.35	U	0.36	U
Di-N-Butyl phthalate	mg/kg	50	0.43	U	0.35	U	0.35	U	0.36	U

TABLE 1
METALS AND SVOC SOIL SAMPLING RESULTS
HUDSON TO SUDBURY ELECTRICAL TRANSMISSION LINE
SUDBURY, MASSACHUSETTS

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			7/28/2022		7/28/2022		7/28/2022		7/28/2022	
			0 - 8 ft		0 - 8 ft		0 - 6.5 ft		0 - 8 ft	
			Result	Flag	Result	Flag	Result	Flag	Result	Flag
Semi-Volatile Organic Compounds (SVOCs) Continued										
Di-N-Octyl phthalate	mg/kg	1000	0.43	U	0.35	U	0.35	U	0.36	U
Fluoranthene	mg/kg	1000	**0.22**		0.17	U	**0.6**		0.18	U
Fluorene	mg/kg	1000	0.21	U	0.17	U	0.18	U	0.18	U
Hexachlorobenzene	mg/kg	0.7	0.43	U	0.35	U	0.35	U	0.36	U
Hexachlorobutadiene	mg/kg	30	0.43	U	0.35	U	0.35	U	0.36	U
Hexachloroethane	mg/kg	0.7	0.43	U	0.35	U	0.35	U	0.36	U
Indeno(1,2,3-cd)pyrene	mg/kg	7	0.21	U	0.17	U	**0.58**		0.18	U
Isophorone	mg/kg	100	0.43	U	0.35	U	0.35	U	0.36	U
Naphthalene	mg/kg	4	0.21	U	0.17	U	0.18	U	0.18	U
Nitrobenzene	mg/kg	500	0.43	U	0.35	U	0.35	U	0.36	U
Pentachlorophenol	mg/kg	3	0.43	U	0.35	U	0.35	U	0.36	U
Phenanthrene	mg/kg	10	0.21	U	0.17	U	**0.2**		0.18	U
Phenol	mg/kg	1	0.43	U	0.35	U	0.35	U	0.36	U
Pyrene	mg/kg	1000	**0.31**		0.17	U	**1.2**		0.18	U
Pyridine	mg/kg	500	0.43	U	0.35	U	0.35	U	0.36	U

Notes:

MCP	Massachusetts Contingency Plan, 310 CMR 40.0000
mg/kg	milligrams per kilogram
U	not detected above laboratory reporting limit
Y	calculated value
J	estimated value less than the reporting limit, but greater than the method detection limit
Italic	Laboratory reporting limit below applicable MCP Reportable Concentrations (RC)
Bold	Detected above laboratory reporting limit
Bold	Detected above MCP Reportable Concentrations (RC)

TABLE 2
PFAS SOIL SAMPLING RESULTS
HUDSON TO SUDBURY ELECTRICAL TRANSMISSION LINE
SUDBURY, MASSACHUSETTS

Parameter	Units	RCS 1	SB-134 7/28/2022 0 - 8 ft		SB-135 7/28/2022 0 - 8 ft		SB-136 7/28/2022 0 - 6.5 ft		SB-137 7/28/2022 0 - 8 ft	
			Result	Flag	Result	Flag	Result	Flag	Result	Flag
Per- and Poly- Fluorinated Alkyl Substances (PFAS)										
Perfluorobutanoic Acid (PFBA)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
Perfluoropentanoic Acid (PFPeA)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
Perfluorohexanoic Acid (PFHxA)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
Perfluoroheptanoic Acid (PFHpA)	ug/kg	0.5	*0.57*	U	0.44	U	0.48	U	0.46	U
Perfluorooctanoic Acid (PFOA)	ug/kg	0.72	0.57	U	0.44	U	0.48	U	0.46	U
Perfluorononanoic Acid (PFNA)	ug/kg	0.32	*0.57*	U	*0.44*	U	*0.48*	U	*0.46*	U
Perfluorodecanoic Acid (PFDA)	ug/kg	0.3	*0.57*	U	*0.44*	U	*0.48*	U	*0.46*	U
Perfluoroundecanoic Acid (PFUnA)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
Perfluoro-5-oxahexanoic acid (PFMBA)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
Perfluorododecanoic acid (PFDoA)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
Perfluorotridecanoic Acid (PFTrDA)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
Perfluorotetradecanoic Acid (PFTeDA)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
Perfluorobutanesulfonic Acid (PFBS)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
Perfluoropentanesulfonic Acid (PFPeS)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
Perfluorohexanesulfonic Acid (PFHxS)	ug/kg	0.3	*0.57*	U	*0.44*	U	*0.48*	U	*0.46*	U
Perfluoroheptanesulfonic Acid (PFHpS)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
Perfluorooctanesulfonic Acid (PFOS)	ug/kg	2	0.57	U	0.44	U	0.48	U	0.46	U
Perfluorononanesulfonic Acid (PFNS)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
Perfluorodecanesulfonic Acid (PFDS)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
Perfluorooctanesulfonamide (FOSA)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
1H,1H,2H,2H-Perfluorohexanesulfonic acid (4:2FTS)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2FTS)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
Hexafluoropropylene oxide dimer acid/GenX (HFPODA)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
9Cl-PF3ONS (F53B Minor)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
11Cl-PF3OUdS (F53B Major)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
Perfluoro-4-oxapentanoic acid (PFMPA)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
Perfluoro-1-butanesulfonamide (FBSA)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U
Perfluoro-1-hexanesulfonamide (FHxSA)	ug/kg	~	0.57	U	0.44	U	0.48	U	0.46	U

Notes:

MCP	Massachusetts Contingency Plan, 310 CMR 40.0000
~	No Standard
mg/kg	milligrams per kilogram
U	not detected above laboratory reporting limit
J	estimated value less than the reporting limit, but greater than the method detection limit
Italic	Laboratory reporting limit below applicable MCP Reportable Concentrations (RC)
Bold	Detected above laboratory reporting limit
Bold	Detected above MCP Reportable Concentrations (RC)

ATTACHMENT A

Boring Logs

Weston & Sampson	PROJECT Hudson-Sudbury Transmission Line	BORING No.: SB-134 SHEET: 1 OF 1 PROJECT No.: ENG21-1242 LOGGED BY: E Earley

BORING Co.	Geosearch, Inc.	BORING LOCATION	SB-134/37 Union St		
FOREMAN	--	DATE START	7/27/22	DATE END	7/28/22
WSE REP:	Elizabeth Earley	BACKFILL DATE	7/28/22	DEPTH	8 ft

SAMPLER:	E Earley
DRILL METHOD/ SIZE:	Vacuum Excavation || Geoprobe 7780
HAMMER TYPE:	NA
BORING DIA:	3.25-Inch
SURFACE CONDITION:	Asphalt Pavement

GROUNDWATER OBSERVATIONS

DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME
7/27/22		6'2"		

DEPTH (feet)	CASING (blows/ft)	SAMPLE No.	SAMPLE RECOV. (in)	SAMPLE BLOWS/6"	PID (ppm)	SAMPLE DESCRIPTION	DRILLING NOTES	STRATUM DESCRIPTION
0						9"asphalt		
						5% fines, 30% gravel, 65% sands. Brown, dry SAND		
2						5% fines, 15% gravel, 80% sands. Brown, moist SAND.		
4						5% fines, 10% gravel, 85% sands. Dark brown, damp SAND.		
6					0.0	5% fines, 15% gravel, 80% sands. Lt brown & grey, wet SAND.	GW @ 6. ft 2 inches	
8						End Boring: 8ft		
10								
12								
14								
16								
18								
20								

NOTES:

Composite Samples for: PFAS, RCRA8 metals, SVOCS

Pre-cleared boring by vacuum excavation (~5 ft bgs)

GRANULAR SOILS		COHESIVE SOILS		CONSTITUENT PROPORTIONS			
BLOWS/FT	DENSITY	BLOWS/FT	CONSISTENCY	GRAVEL, SAND, FINES		COBBLES, BOULDERS, DEBRIS	
0 - 4	V. LOOSE	0 - 2	V. SOFT	50 - 100%	MOSTLY	40 - 50%	NUMEROUS
4 - 10	LOOSE	2 - 4	SOFT	30 - 45%	SOME	25 - 35%	COMMON
10 - 30	M. DENSE	4 - 8	M. STIFF	15 - 25%	LITTLE	10 - 20%	OCCASIONAL
30 - 50	DENSE	8 - 15	STIFF	5 - 10%	FEW	< 5%	TRACE
> 50	V. DENSE	15 - 30	V. STIFF	< 5%	TRACE		
		> 30	HARD	(BY WEIGHT)		(BY VOLUME)	

Weston & Sampson	PROJECT Hudson-Sudbury Transmission Line	BORING No.: SB-135 SHEET: 1 OF 1 PROJECT No.: ENG21-1242 LOGGED BY: E Earley

BORING Co.	Geosearch, Inc.	BORING LOCATION	SB-135/100 Horse Pond Rd		
FOREMAN	--	DATE START	7/27/22	DATE END	7/28/22
WSE REP:	Elizabeth Earley	BACKFILL DATE	7/28/22	DEPTH	8 ft

SAMPLER:	E Earley
DRILL METHOD/ SIZE:	Vacuum Excavation || Geoprobe 7780
HAMMER TYPE:	NA
BORING DIA:	3.25-Inch
SURFACE CONDITION:	Asphalt Pavement

GROUNDWATER OBSERVATIONS

DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME
7/28/22		11.25		

DEPTH (feet)	CASING (blows/ft)	SAMPLE No.	SAMPLE RECOV. (in)	SAMPLE BLOWS/6"	PID (ppm)	SAMPLE DESCRIPTION	DRILLING NOTES	STRATUM DESCRIPTION
0						9"asphalt		
						5% fines, 30% gravel, 65% sands. Lt brown, dry SAND		
2						5% fines, 20% gravel, 75% sands. Lt brown, moist SAND.		
4						5% fines, 5% gravel, 90% sands. Tan, dry, SAND.		
6					0.0	5% fines, 15% gravel, 80% sands. Lt brown, with some dampness, SAND.		
8						End Boring: 8ft (see notes)		
10								
12								
14								
16								
18								
20								

NOTES:

Composite Samples for: PFAS, RCRA8 metals, SVOCS

Drilled to see ground water level because at 8' soil observed damp. Casing advanced to approximately 12 feet and water level measured with measuring tape around 11 feet below ground surface.

Pre-cleared boring by vacuum excavation (~5 ft bgs)

GRANULAR SOILS		COHESIVE SOILS		CONSTITUENT PROPORTIONS			
BLOWS/FT	DENSITY	BLOWS/FT	CONSISTENCY	GRAVEL, SAND, FINES		COBBLES, BOULDERS, DEBRIS	
0 - 4	V. LOOSE	0 - 2	V. SOFT	50 - 100%	MOSTLY	40 - 50%	NUMEROUS
4 - 10	LOOSE	2 - 4	SOFT	30 - 45%	SOME	25 - 35%	COMMON
10 - 30	M. DENSE	4 - 8	M. STIFF	15 - 25%	LITTLE	10 - 20%	OCCASIONAL
30 - 50	DENSE	8 - 15	STIFF	5 - 10%	FEW	< 5%	TRACE
> 50	V. DENSE	15 - 30	V. STIFF	< 5%	TRACE		
		> 30	HARD	(BY WEIGHT)		(BY VOLUME)	

Weston & Sampson	PROJECT Hudson-Sudbury Transmission Line	BORING No.: SB-136 SHEET: 1 OF 1 PROJECT No.: ENG21-1242 LOGGED BY: E Earley

BORING Co.	Geosearch, Inc.	BORING LOCATION	SB-136/237 Peakham Rd		
FOREMAN	--	DATE START	7/27/22	DATE END	7/28/22
WSE REP:	Elizabeth Earley	BACKFILL DATE	7/28/22	DEPTH	6.5 ft

SAMPLER:	E Earley
DRILL METHOD/ SIZE:	Vacuum Excavation || Geoprobe 7780
HAMMER TYPE:	NA
BORING DIA:	3.25-Inch
SURFACE CONDITION:	Asphalt Pavement

GROUNDWATER OBSERVATIONS

DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME
7/28/22		not observed		

DEPTH (feet)	CASING (blows/ft)	SAMPLE No.	SAMPLE RECOV. (in)	SAMPLE BLOWS/6"	PID (ppm)	SAMPLE DESCRIPTION	DRILLING NOTES	STRATUM DESCRIPTION
0						8" asphalt		
						5% fines, 30% gravel, 65% sands. Brown, dry SAND		
2						5% fines, 30% gravel, 65% sands. Tan, dry, SAND.		
4						5% fines, 10% gravel, 85% sands. Tan, slight moist, SAND.		
6						REFUSAL		
						END BORING AT 6 ft 5 inches		
8								
10								
12								
14								
16								
18								
20								

NOTES:

Composite Samples for: PFAS, RCRA8 metals, SVOCS
Refusal hit at 6 ft 5 inches
Pre-cleared boring by vacuum excavation (~5 ft bgs)

GRANULAR SOILS		COHESIVE SOILS		CONSTITUENT PROPORTIONS			
BLOWS/FT	DENSITY	BLOWS/FT	CONSISTENCY	GRAVEL, SAND, FINES		COBBLES, BOULDERS, DEBRIS	
0 - 4	V. LOOSE	0 - 2	V. SOFT	50 - 100%	MOSTLY	40 - 50%	NUMEROUS
4 - 10	LOOSE	2 - 4	SOFT	30 - 45%	SOME	25 - 35%	COMMON
10 - 30	M. DENSE	4 - 8	M. STIFF	15 - 25%	LITTLE	10 - 20%	OCCASIONAL
30 - 50	DENSE	8 - 15	STIFF	5 - 10%	FEW	< 5%	TRACE
> 50	V. DENSE	15 - 30	V. STIFF	< 5%	TRACE		
		> 30	HARD	(BY WEIGHT)		(BY VOLUME)	

Weston & Sampson	PROJECT Hudson-Sudbury Transmission Line	BORING No.: SB-137 SHEET: 1 OF 1 PROJECT No.: ENG21-1242 LOGGED BY: E Earley

BORING Co.	Geosearch, Inc.	BORING LOCATION	SB-137/318 Dutton Rd		
FOREMAN	--	DATE START	7/27/22	DATE END	7/28/22
WSE REP:	Elizabeth Earley	BACKFILL DATE	7/28/22	DEPTH	8.0 ft

SAMPLER:	E Earley
DRILL METHOD/ SIZE:	Vacuum Excavation || Geoprobe 7780
HAMMER TYPE:	NA
BORING DIA:	3.25-Inch
SURFACE CONDITION:	Asphalt Pavement

GROUNDWATER OBSERVATIONS

DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME
7/28/22		not observed		

DEPTH (feet)	CASING (blows/ft)	SAMPLE No.	SAMPLE RECOV. (in)	SAMPLE BLOWS/6"	PID (ppm)	SAMPLE DESCRIPTION	DRILLING NOTES	STRATUM DESCRIPTION
0						9' asphalt		
						5% fines, 10% gravel, 85% sands. Lt brown, dry SAND		
2						5% fines, 10% gravel, 85% sands. LT brown, moist, SAND.		
4						5% fines, 10% gravel, 85% sands. Tan, moist, SAND.		
6					0.0	5% fines, 20% cobbles, 75% sands. LT brown, dry sand.		
8						END Boring 8.0ft		
10								
12								
14								
16								
18								
20								

NOTES:

Composite Samples for: PFAS, RCRA8 metals, SVOCS

Pre-cleared boring by vacuum excavation (~5 ft bgs)

GRANULAR SOILS		COHESIVE SOILS		CONSTITUENT PROPORTIONS			
BLOWS/FT	DENSITY	BLOWS/FT	CONSISTENCY	GRAVEL, SAND, FINES		COBBLES, BOULDERS, DEBRIS	
0 - 4	V. LOOSE	0 - 2	V. SOFT	50 - 100%	MOSTLY	40 - 50%	NUMEROUS
4 - 10	LOOSE	2 - 4	SOFT	30 - 45%	SOME	25 - 35%	COMMON
10 - 30	M. DENSE	4 - 8	M. STIFF	15 - 25%	LITTLE	10 - 20%	OCCASIONAL
30 - 50	DENSE	8 - 15	STIFF	5 - 10%	FEW	< 5%	TRACE
> 50	V. DENSE	15 - 30	V. STIFF	< 5%	TRACE		
		> 30	HARD	(BY WEIGHT)		(BY VOLUME)	

ATTACHMENT B

Laboratory Data Reports

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

August 11, 2022

Paul McKinlay
Weston & Sampson Engineers MA
55 Walkers Brook Drive
Reading, MA 01867

Project Location: Sudbury, MA
Client Job Number:
Project Number: ENG22-0402
Laboratory Work Order Number: 22G1707

Enclosed are results of analyses for samples as received by the laboratory on July 29, 2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kerry K. McGee
Project Manager

Table of Contents

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Weston & Sampson Engineers MA
55 Walkers Brook Drive
Reading, MA 01867
ATTN: Paul McKinlay

REPORT DATE: 8/11/2022

PURCHASE ORDER NUMBER: 10948702

PROJECT NUMBER: ENG22-0402

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 22G1707

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Sudbury, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB 134 (0-8)	22G1707-01	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8270E	
SB 135 (0-8)	22G1707-02	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8270E	
SB 136 (0-6.5)	22G1707-03	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8270E	
SB 137 (0-8)	22G1707-04	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8270E	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 6010D

Qualifications:

M-10

The reporting limit verification for the AIHA lead program is outside of control limits for this element. Any reported result at or near the detection limit may be biased on the high side.

Analyte & Samples(s) Qualified:

Lead

22G1707-01[SB 134 (0-8)], 22G1707-02[SB 135 (0-8)], 22G1707-03[SB 136 (0-6.5)], 22G1707-04[SB 137 (0-8)], B314195-SRM1, B314257-SRM1

SW-846 7471B

Qualifications:

R-02

Duplicate RPD is outside of control limits. Outlier can be attributed to sample non-homogeneity encountered during sample prep.

Analyte & Samples(s) Qualified:

Mercury

B314243-DUP1

SW-846 8270E

Qualifications:

V-04

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.

Analyte & Samples(s) Qualified:

2,4-Dinitrophenol

22G1707-01[SB 134 (0-8)], 22G1707-02[SB 135 (0-8)], 22G1707-03[SB 136 (0-6.5)], 22G1707-04[SB 137 (0-8)], B314219-BLK1, B314219-BS1, B314219-BSD1, S074815-CCV1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Lisa A. Worthington
Technical Representative

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Sudbury, MA | Sample Description: | Work Order: 22G1707

Date Received: 7/29/2022

Field Sample #: SB 134 (0-8) | Sampled: 7/28/2022 08:30

Sample ID: 22G1707-01

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Biphenyl	ND	0.084	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Acenaphthene	ND	0.21	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Acenaphthylene	ND	0.21	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Acetophenone	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Aniline	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Benzo(a)anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Benzo(a)pyrene	ND	0.21	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Benzo(b)fluoranthene	0.25	0.21	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Benzo(g,h,i)perylene	0.23	0.21	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Benzo(k)fluoranthene	ND	0.21	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Bis(2-chloroethoxy)methane	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Bis(2-chloroethyl)ether	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Bis(2-chloroisopropyl)ether	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
4-Bromophenylphenylether	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Butylbenzylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
4-Chloroaniline	ND	0.83	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
2-Chloronaphthalene	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
2-Chlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Chrysene	ND	0.21	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Dibenz(a,h)anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Dibenzofuran	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Di-n-butylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
1,2-Dichlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
1,3-Dichlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
1,4-Dichlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
3,3-Dichlorobenzidine	ND	0.21	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
2,4-Dichlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Diethylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
2,4-Dimethylphenol	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Dimethylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
2,4-Dinitrophenol	ND	0.83	mg/Kg dry	1	V-04	SW-846 8270E	8/1/22	8/4/22 11:26	IMR
2,4-Dinitrotoluene	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
2,6-Dinitrotoluene	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Di-n-octylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Fluoranthene	0.22	0.21	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Fluorene	ND	0.21	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Hexachlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Hexachlorobutadiene	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Hexachloroethane	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Indeno(1,2,3-cd)pyrene	ND	0.21	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Isophorone	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Sudbury, MA | Sample Description: | Work Order: 22G1707

Date Received: 7/29/2022

Field Sample #: SB 134 (0-8) | Sampled: 7/28/2022 08:30

Sample ID: 22G1707-01

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylnaphthalene	ND	0.21	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
2-Methylphenol	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
3/4-Methylphenol	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Naphthalene	ND	0.21	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Nitrobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
2-Nitrophenol	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
4-Nitrophenol	ND	0.83	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Pentachlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Phenanthrene	ND	0.21	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Phenol	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Pyrene	0.31	0.21	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
Pyridine	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
1,2,4-Trichlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
2,4,5-Trichlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR
2,4,6-Trichlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 11:26	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	79.7	30-130		8/4/22 11:26
Phenol-d6	87.3	30-130		8/4/22 11:26
Nitrobenzene-d5	103	30-130		8/4/22 11:26
2-Fluorobiphenyl	86.9	30-130		8/4/22 11:26
2,4,6-Tribromophenol	75.0	30-130		8/4/22 11:26
p-Terphenyl-d14	99.5	30-130		8/4/22 11:26

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Project Location: Sudbury, MA | Sample Description: | Work Order: 22G1707

Date Received: 7/29/2022

Field Sample #: SB 134 (0-8) | Sampled: 7/28/2022 08:30

Sample ID: 22G1707-01

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	4.2	4.1	mg/Kg dry	1		SW-846 6010D	8/1/22	8/3/22 21:29	JLC
Barium	19	2.1	mg/Kg dry	1		SW-846 6010D	8/1/22	8/3/22 21:29	JLC
Cadmium	ND	0.41	mg/Kg dry	1		SW-846 6010D	8/1/22	8/3/22 21:29	JLC
Chromium	9.5	0.82	mg/Kg dry	1		SW-846 6010D	8/1/22	8/3/22 21:29	JLC
Lead	14	0.62	mg/Kg dry	1	M-10	SW-846 6010D	8/1/22	8/8/22 21:21	MJH
Mercury	ND	0.032	mg/Kg dry	1		SW-846 7471B	8/2/22	8/3/22 16:21	ATP
Selenium	ND	4.1	mg/Kg dry	1		SW-846 6010D	8/1/22	8/3/22 21:29	JLC
Silver	ND	0.41	mg/Kg dry	1		SW-846 6010D	8/1/22	8/3/22 21:29	JLC

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Project Location: Sudbury, MA | Sample Description: | Work Order: 22G1707

Date Received: 7/29/2022

Field Sample #: SB 134 (0-8) | Sampled: 7/28/2022 08:30

Sample ID: 22G1707-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	79.9		% Wt	1		SM 2540G	8/1/22	8/2/22 10:10	RWS

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Project Location: Sudbury, MA | Sample Description: | Work Order: 22G1707

Date Received: 7/29/2022

Field Sample #: SB 135 (0-8) | Sampled: 7/28/2022 09:10

Sample ID: 22G1707-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Biphenyl	ND	0.068	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Acenaphthene	ND	0.17	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Acenaphthylene	ND	0.17	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Acetophenone	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Aniline	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Benzo(a)anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Benzo(a)pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Benzo(b)fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Benzo(g,h,i)perylene	ND	0.17	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Benzo(k)fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Bis(2-chloroethoxy)methane	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Bis(2-chloroethyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Bis(2-chloroisopropyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
4-Bromophenylphenylether	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Butylbenzylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
4-Chloroaniline	ND	0.67	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
2-Chloronaphthalene	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
2-Chlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Chrysene	ND	0.17	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Dibenz(a,h)anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Dibenzofuran	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Di-n-butylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
1,2-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
1,3-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
1,4-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
3,3-Dichlorobenzidine	ND	0.17	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
2,4-Dichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Diethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
2,4-Dimethylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Dimethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
2,4-Dinitrophenol	ND	0.67	mg/Kg dry	1	V-04	SW-846 8270E	8/1/22	8/4/22 14:37	IMR
2,4-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
2,6-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Di-n-octylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Fluorene	ND	0.17	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Hexachlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Hexachlorobutadiene	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Hexachloroethane	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Isophorone	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR

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Project Location: Sudbury, MA | Sample Description: | Work Order: 22G1707

Date Received: 7/29/2022

Field Sample #: SB 135 (0-8) | Sampled: 7/28/2022 09:10

Sample ID: 22G1707-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylnaphthalene	ND	0.17	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
2-Methylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
3/4-Methylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Naphthalene	ND	0.17	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Nitrobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
2-Nitrophenol	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
4-Nitrophenol	ND	0.67	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Pentachlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Phenanthrene	ND	0.17	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Phenol	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
Pyridine	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
1,2,4-Trichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
2,4,5-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR
2,4,6-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 14:37	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	78.8	30-130		8/4/22 14:37
Phenol-d6	80.6	30-130		8/4/22 14:37
Nitrobenzene-d5	112	30-130		8/4/22 14:37
2-Fluorobiphenyl	96.0	30-130		8/4/22 14:37
2,4,6-Tribromophenol	80.5	30-130		8/4/22 14:37
p-Terphenyl-d14	115	30-130		8/4/22 14:37

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Project Location: Sudbury, MA | Sample Description: | Work Order: 22G1707

Date Received: 7/29/2022

Field Sample #: SB 135 (0-8) | Sampled: 7/28/2022 09:10

Sample ID: 22G1707-02

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	6.3	3.3	mg/Kg dry	1		SW-846 6010D	7/29/22	8/2/22 19:21	QNW
Barium	23	1.7	mg/Kg dry	1		SW-846 6010D	7/29/22	8/2/22 19:21	QNW
Cadmium	ND	0.33	mg/Kg dry	1		SW-846 6010D	7/29/22	8/2/22 19:21	QNW
Chromium	9.7	0.66	mg/Kg dry	1		SW-846 6010D	7/29/22	8/2/22 19:21	QNW
Lead	5.6	0.50	mg/Kg dry	1	M-10	SW-846 6010D	7/29/22	8/2/22 19:21	QNW
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	8/2/22	8/3/22 16:22	ATP
Selenium	ND	3.3	mg/Kg dry	1		SW-846 6010D	7/29/22	8/2/22 19:21	QNW
Silver	ND	0.33	mg/Kg dry	1		SW-846 6010D	7/29/22	8/2/22 19:21	QNW

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Project Location: Sudbury, MA | Sample Description: | Work Order: 22G1707

Date Received: 7/29/2022

Field Sample #: SB 135 (0-8) | Sampled: 7/28/2022 09:10

Sample ID: 22G1707-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	98.4		% Wt	1		SM 2540G	8/1/22	8/2/22 10:10	RWS

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Project Location: Sudbury, MA | Sample Description: | Work Order: 22G1707

Date Received: 7/29/2022

Field Sample #: SB 136 (0-6.5) | Sampled: 7/28/2022 09:40

Sample ID: 22G1707-03

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Biphenyl	ND	0.070	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Acenaphthylene	0.23	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Acetophenone	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Aniline	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Anthracene	0.21	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Benzo(a)anthracene	0.59	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Benzo(a)pyrene	0.82	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Benzo(b)fluoranthene	0.99	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Benzo(g,h,i)perylene	0.56	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Benzo(k)fluoranthene	0.38	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Bis(2-chloroethoxy)methane	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Bis(2-chloroethyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Bis(2-chloroisopropyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
4-Bromophenylphenylether	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Butylbenzylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
4-Chloroaniline	ND	0.69	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
2-Chloronaphthalene	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
2-Chlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Chrysene	0.56	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Dibenzofuran	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Di-n-butylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
1,2-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
1,3-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
1,4-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
2,4-Dichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Diethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
2,4-Dimethylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Dimethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
2,4-Dinitrophenol	ND	0.69	mg/Kg dry	1	V-04	SW-846 8270E	8/1/22	8/4/22 12:14	IMR
2,4-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
2,6-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Di-n-octylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Fluoranthene	0.60	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Hexachlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Hexachlorobutadiene	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Hexachloroethane	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Indeno(1,2,3-cd)pyrene	0.58	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Isophorone	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR

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Project Location: Sudbury, MA | Sample Description: | Work Order: 22G1707

Date Received: 7/29/2022

Field Sample #: SB 136 (0-6.5) | Sampled: 7/28/2022 09:40

Sample ID: 22G1707-03

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
2-Methylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
3/4-Methylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Nitrobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
2-Nitrophenol	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
4-Nitrophenol	ND	0.69	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Pentachlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Phenanthrene	0.20	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Phenol	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Pyrene	1.2	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
Pyridine	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
1,2,4-Trichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
2,4,5-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR
2,4,6-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 12:14	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	69.7	30-130		8/4/22 12:14
Phenol-d6	70.7	30-130		8/4/22 12:14
Nitrobenzene-d5	98.4	30-130		8/4/22 12:14
2-Fluorobiphenyl	84.2	30-130		8/4/22 12:14
2,4,6-Tribromophenol	68.5	30-130		8/4/22 12:14
p-Terphenyl-d14	98.5	30-130		8/4/22 12:14

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Project Location: Sudbury, MA | Sample Description: | Work Order: 22G1707

Date Received: 7/29/2022

Field Sample #: SB 136 (0-6.5) | Sampled: 7/28/2022 09:40

Sample ID: 22G1707-03

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	8.7	3.4	mg/Kg dry	1		SW-846 6010D	7/29/22	8/2/22 19:27	QNW
Barium	25	1.7	mg/Kg dry	1		SW-846 6010D	7/29/22	8/2/22 19:27	QNW
Cadmium	ND	0.34	mg/Kg dry	1		SW-846 6010D	7/29/22	8/2/22 19:27	QNW
Chromium	13	0.67	mg/Kg dry	1		SW-846 6010D	7/29/22	8/2/22 19:27	QNW
Lead	14	0.50	mg/Kg dry	1	M-10	SW-846 6010D	7/29/22	8/2/22 19:27	QNW
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	8/2/22	8/3/22 16:24	ATP
Selenium	ND	3.4	mg/Kg dry	1		SW-846 6010D	7/29/22	8/2/22 19:27	QNW
Silver	ND	0.34	mg/Kg dry	1		SW-846 6010D	7/29/22	8/2/22 19:27	QNW

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Project Location: Sudbury, MA | Sample Description: | Work Order: 22G1707

Date Received: 7/29/2022

Field Sample #: SB 136 (0-6.5) | Sampled: 7/28/2022 09:40

Sample ID: 22G1707-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.2		% Wt	1		SM 2540G	8/1/22	8/2/22 10:10	RWS

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Project Location: Sudbury, MA | Sample Description: | Work Order: 22G1707

Date Received: 7/29/2022

Field Sample #: SB 137 (0-8) | Sampled: 7/28/2022 10:35

Sample ID: 22G1707-04

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Biphenyl	ND	0.072	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Acetophenone	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Aniline	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Bis(2-chloroethoxy)methane	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Bis(2-chloroethyl)ether	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Bis(2-chloroisopropyl)ether	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
4-Bromophenylphenylether	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Butylbenzylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
4-Chloroaniline	ND	0.71	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
2-Chloronaphthalene	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
2-Chlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Dibenzofuran	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Di-n-butylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
1,2-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
1,3-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
1,4-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
2,4-Dichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Diethylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
2,4-Dimethylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Dimethylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
2,4-Dinitrophenol	ND	0.71	mg/Kg dry	1	V-04	SW-846 8270E	8/1/22	8/4/22 15:01	IMR
2,4-Dinitrotoluene	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
2,6-Dinitrotoluene	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Di-n-octylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Hexachlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Hexachlorobutadiene	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Hexachloroethane	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Isophorone	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR

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Project Location: Sudbury, MA | Sample Description: | Work Order: 22G1707

Date Received: 7/29/2022

Field Sample #: SB 137 (0-8) | Sampled: 7/28/2022 10:35

Sample ID: 22G1707-04

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
2-Methylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
3/4-Methylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Nitrobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
2-Nitrophenol	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
4-Nitrophenol	ND	0.71	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Pentachlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Phenol	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
Pyridine	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
1,2,4-Trichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
2,4,5-Trichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR
2,4,6-Trichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270E	8/1/22	8/4/22 15:01	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	73.7	30-130		8/4/22 15:01
Phenol-d6	74.7	30-130		8/4/22 15:01
Nitrobenzene-d5	107	30-130		8/4/22 15:01
2-Fluorobiphenyl	87.9	30-130		8/4/22 15:01
2,4,6-Tribromophenol	78.2	30-130		8/4/22 15:01
p-Terphenyl-d14	114	30-130		8/4/22 15:01

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Project Location: Sudbury, MA | Sample Description: | Work Order: 22G1707

Date Received: 7/29/2022

Field Sample #: SB 137 (0-8) | Sampled: 7/28/2022 10:35

Sample ID: 22G1707-04

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	4.9	3.5	mg/Kg dry	1		SW-846 6010D	7/29/22	8/2/22 19:32	QNW
Barium	24	1.7	mg/Kg dry	1		SW-846 6010D	7/29/22	8/2/22 19:32	QNW
Cadmium	ND	0.35	mg/Kg dry	1		SW-846 6010D	7/29/22	8/2/22 19:32	QNW
Chromium	12	0.70	mg/Kg dry	1		SW-846 6010D	7/29/22	8/2/22 19:32	QNW
Lead	7.3	0.52	mg/Kg dry	1	M-10	SW-846 6010D	7/29/22	8/2/22 19:32	QNW
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	8/2/22	8/3/22 16:26	ATP
Selenium	ND	3.5	mg/Kg dry	1		SW-846 6010D	7/29/22	8/2/22 19:32	QNW
Silver	ND	0.35	mg/Kg dry	1		SW-846 6010D	7/29/22	8/2/22 19:32	QNW

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Project Location: Sudbury, MA | Sample Description: | Work Order: 22G1707

Date Received: 7/29/2022

Field Sample #: SB 137 (0-8) | Sampled: 7/28/2022 10:35

Sample ID: 22G1707-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.3		% Wt	1		SM 2540G	8/1/22	8/2/22 10:10	RWS

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B314219 - SW-846 3546										
Blank (B314219-BLK1)				Prepared: 08/01/22 Analyzed: 08/04/22						
Biphenyl	ND	0.67	mg/Kg wet							
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	mg/Kg wet							
Anthracene	ND	0.17	mg/Kg wet							
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Bis(2-chloroethoxy)methane	ND	0.34	mg/Kg wet							
Bis(2-chloroethyl)ether	ND	0.34	mg/Kg wet							
Bis(2-chloroisopropyl)ether	ND	0.34	mg/Kg wet							
Bis(2-Ethylhexyl)phthalate	ND	0.34	mg/Kg wet							
4-Bromophenylphenylether	ND	0.34	mg/Kg wet							
Butylbenzylphthalate	ND	0.34	mg/Kg wet							
4-Chloroaniline	ND	0.66	mg/Kg wet							
2-Chloronaphthalene	ND	0.34	mg/Kg wet							
2-Chlorophenol	ND	0.34	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Dibenzofuran	ND	0.34	mg/Kg wet							
Di-n-butylphthalate	ND	0.34	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.34	mg/Kg wet							
3,3-Dichlorobenzidine	ND	0.17	mg/Kg wet							
2,4-Dichlorophenol	ND	0.34	mg/Kg wet							
Diethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dimethylphenol	ND	0.34	mg/Kg wet							
Dimethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							V-04
2,4-Dinitrotoluene	ND	0.34	mg/Kg wet							
2,6-Dinitrotoluene	ND	0.34	mg/Kg wet							
Di-n-octylphthalate	ND	0.34	mg/Kg wet							
1,2-Diphenylhydrazine/Azobenzene	ND	0.34	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Hexachlorobutadiene	ND	0.34	mg/Kg wet							
Hexachloroethane	ND	0.34	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
Isophorone	ND	0.34	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylphenol	ND	0.34	mg/Kg wet							
3/4-Methylphenol	ND	0.34	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
Nitrobenzene	ND	0.34	mg/Kg wet							
2-Nitrophenol	ND	0.34	mg/Kg wet							
4-Nitrophenol	ND	0.66	mg/Kg wet							
Pentachlorophenol	ND	0.34	mg/Kg wet							

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B314219 - SW-846 3546											
Blank (B314219-BLK1)				Prepared: 08/01/22 Analyzed: 08/04/22							
Phenanthrene	ND	0.17	mg/Kg wet								
Phenol	ND	0.34	mg/Kg wet								
Pyrene	ND	0.17	mg/Kg wet								
Pyridine	ND	0.34	mg/Kg wet								
1,2,4-Trichlorobenzene	ND	0.34	mg/Kg wet								
2,4,5-Trichlorophenol	ND	0.34	mg/Kg wet								
2,4,6-Trichlorophenol	ND	0.34	mg/Kg wet								
Surrogate: 2-Fluorophenol	*5.26*		mg/Kg wet	6.67		78.9	30-130				
Surrogate: Phenol-d6	*5.54*		mg/Kg wet	6.67		83.1	30-130				
Surrogate: Nitrobenzene-d5	*3.54*		mg/Kg wet	3.33		106	30-130				
Surrogate: 2-Fluorobiphenyl	*2.73*		mg/Kg wet	3.33		81.9	30-130				
Surrogate: 2,4,6-Tribromophenol	*6.12*		mg/Kg wet	6.67		91.8	30-130				
Surrogate: p-Terphenyl-d14	*3.70*		mg/Kg wet	3.33		111	30-130				
LCS (B314219-BS1)				Prepared: 08/01/22 Analyzed: 08/04/22							
Biphenyl	1.34	0.67	mg/Kg wet	1.67		80.6	40-140				
Acenaphthene	1.26	0.17	mg/Kg wet	1.67		75.4	40-140				
Acenaphthylene	1.33	0.17	mg/Kg wet	1.67		79.5	40-140				
Acetophenone	1.43	0.34	mg/Kg wet	1.67		85.9	40-140				
Aniline	1.51	0.34	mg/Kg wet	1.67		90.5	40-140				
Anthracene	1.40	0.17	mg/Kg wet	1.67		84.1	40-140				
Benzo(a)anthracene	1.41	0.17	mg/Kg wet	1.67		84.4	40-140				
Benzo(a)pyrene	1.35	0.17	mg/Kg wet	1.67		80.9	40-140				
Benzo(b)fluoranthene	1.38	0.17	mg/Kg wet	1.67		83.1	40-140				
Benzo(g,h,i)perylene	1.41	0.17	mg/Kg wet	1.67		84.3	40-140				
Benzo(k)fluoranthene	1.48	0.17	mg/Kg wet	1.67		88.8	40-140				
Bis(2-chloroethoxy)methane	1.47	0.34	mg/Kg wet	1.67		88.1	40-140				
Bis(2-chloroethyl)ether	1.44	0.34	mg/Kg wet	1.67		86.3	40-140				
Bis(2-chloroisopropyl)ether	1.83	0.34	mg/Kg wet	1.67		110	40-140				
Bis(2-Ethylhexyl)phthalate	1.67	0.34	mg/Kg wet	1.67		100	40-140				
4-Bromophenylphenylether	1.45	0.34	mg/Kg wet	1.67		86.9	40-140				
Butylbenzylphthalate	1.64	0.34	mg/Kg wet	1.67		98.3	40-140				
4-Chloroaniline	1.08	0.66	mg/Kg wet	1.67		64.7	15-140				†
2-Chloronaphthalene	1.15	0.34	mg/Kg wet	1.67		69.3	40-140				
2-Chlorophenol	1.40	0.34	mg/Kg wet	1.67		83.8	30-130				
Chrysene	1.39	0.17	mg/Kg wet	1.67		83.2	40-140				
Dibenz(a,h)anthracene	1.41	0.17	mg/Kg wet	1.67		84.6	40-140				
Dibenzofuran	1.41	0.34	mg/Kg wet	1.67		84.5	40-140				
Di-n-butylphthalate	1.46	0.34	mg/Kg wet	1.67		87.8	40-140				
1,2-Dichlorobenzene	1.17	0.34	mg/Kg wet	1.67		70.1	40-140				
1,3-Dichlorobenzene	1.08	0.34	mg/Kg wet	1.67		64.9	40-140				
1,4-Dichlorobenzene	1.12	0.34	mg/Kg wet	1.67		67.0	40-140				
3,3-Dichlorobenzidine	1.19	0.17	mg/Kg wet	1.67		71.3	40-140				
2,4-Dichlorophenol	1.48	0.34	mg/Kg wet	1.67		88.6	30-130				
Diethylphthalate	1.52	0.34	mg/Kg wet	1.67		91.2	40-140				
2,4-Dimethylphenol	1.52	0.34	mg/Kg wet	1.67		90.9	30-130				
Dimethylphthalate	1.47	0.34	mg/Kg wet	1.67		88.2	40-140				
2,4-Dinitrophenol	1.16	0.66	mg/Kg wet	1.67		69.4	15-140			V-04	†
2,4-Dinitrotoluene	1.43	0.34	mg/Kg wet	1.67		86.1	40-140				
2,6-Dinitrotoluene	1.48	0.34	mg/Kg wet	1.67		89.0	40-140				
Di-n-octylphthalate	1.63	0.34	mg/Kg wet	1.67		97.9	40-140				
1,2-Diphenylhydrazine/Azobenzene	1.56	0.34	mg/Kg wet	1.67		93.4	40-140				

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B314219 - SW-846 3546										
LCS (B314219-BS1)				Prepared: 08/01/22 Analyzed: 08/04/22						
Fluoranthene	1.25	0.17	mg/Kg wet	1.67		75.2	40-140			
Fluorene	1.41	0.17	mg/Kg wet	1.67		84.9	40-140			
Hexachlorobenzene	1.45	0.34	mg/Kg wet	1.67		87.1	40-140			
Hexachlorobutadiene	1.10	0.34	mg/Kg wet	1.67		66.0	40-140			
Hexachloroethane	1.16	0.34	mg/Kg wet	1.67		69.5	40-140			
Indeno(1,2,3-cd)pyrene	1.43	0.17	mg/Kg wet	1.67		85.7	40-140			
Isophorone	1.50	0.34	mg/Kg wet	1.67		89.9	40-140			
2-Methylnaphthalene	1.44	0.17	mg/Kg wet	1.67		86.2	40-140			
2-Methylphenol	1.54	0.34	mg/Kg wet	1.67		92.6	30-130			
3/4-Methylphenol	1.64	0.34	mg/Kg wet	1.67		98.6	30-130			
Naphthalene	1.26	0.17	mg/Kg wet	1.67		75.6	40-140			
Nitrobenzene	1.27	0.34	mg/Kg wet	1.67		76.3	40-140			
2-Nitrophenol	1.36	0.34	mg/Kg wet	1.67		81.9	30-130			
4-Nitrophenol	1.38	0.66	mg/Kg wet	1.67		82.7	15-140			†
Pentachlorophenol	1.22	0.34	mg/Kg wet	1.67		73.3	30-130			
Phenanthrene	1.41	0.17	mg/Kg wet	1.67		84.7	40-140			
Phenol	1.51	0.34	mg/Kg wet	1.67		90.4	15-140			†
Pyrene	1.68	0.17	mg/Kg wet	1.67		101	40-140			
Pyridine	0.910	0.34	mg/Kg wet	1.67		54.6	30-140			†
1,2,4-Trichlorobenzene	1.15	0.34	mg/Kg wet	1.67		69.0	40-140			
2,4,5-Trichlorophenol	1.48	0.34	mg/Kg wet	1.67		89.0	30-130			
2,4,6-Trichlorophenol	1.44	0.34	mg/Kg wet	1.67		86.2	30-130			
Surrogate: 2-Fluorophenol	*5.73*		mg/Kg wet	6.67		86.0	30-130			
Surrogate: Phenol-d6	*6.18*		mg/Kg wet	6.67		92.7	30-130			
Surrogate: Nitrobenzene-d5	*3.61*		mg/Kg wet	3.33		108	30-130			
Surrogate: 2-Fluorobiphenyl	*2.90*		mg/Kg wet	3.33		87.0	30-130			
Surrogate: 2,4,6-Tribromophenol	*6.49*		mg/Kg wet	6.67		97.4	30-130			
Surrogate: p-Terphenyl-d14	*3.75*		mg/Kg wet	3.33		112	30-130			
LCS Dup (B314219-BSD1)				Prepared: 08/01/22 Analyzed: 08/04/22						
Biphenyl	1.28	0.67	mg/Kg wet	1.67		76.9	40-140	4.72	20	
Acenaphthene	1.25	0.17	mg/Kg wet	1.67		75.2	40-140	0.319	30	
Acenaphthylene	1.32	0.17	mg/Kg wet	1.67		79.3	40-140	0.277	30	
Acetophenone	1.56	0.34	mg/Kg wet	1.67		93.5	40-140	8.38	30	
Aniline	1.56	0.34	mg/Kg wet	1.67		93.9	40-140	3.71	30	
Anthracene	1.40	0.17	mg/Kg wet	1.67		84.3	40-140	0.261	30	
Benzo(a)anthracene	1.43	0.17	mg/Kg wet	1.67		85.6	40-140	1.48	30	
Benzo(a)pyrene	1.36	0.17	mg/Kg wet	1.67		81.4	40-140	0.542	30	
Benzo(b)fluoranthene	1.43	0.17	mg/Kg wet	1.67		85.9	40-140	3.32	30	
Benzo(g,h,i)perylene	1.30	0.17	mg/Kg wet	1.67		78.3	40-140	7.45	30	
Benzo(k)fluoranthene	1.53	0.17	mg/Kg wet	1.67		91.5	40-140	2.99	30	
Bis(2-chloroethoxy)methane	1.50	0.34	mg/Kg wet	1.67		89.7	40-140	1.80	30	
Bis(2-chloroethyl)ether	1.49	0.34	mg/Kg wet	1.67		89.2	40-140	3.26	30	
Bis(2-chloroisopropyl)ether	1.95	0.34	mg/Kg wet	1.67		117	40-140	6.20	30	
Bis(2-Ethylhexyl)phthalate	1.64	0.34	mg/Kg wet	1.67		98.4	40-140	1.55	30	
4-Bromophenylphenylether	1.34	0.34	mg/Kg wet	1.67		80.2	40-140	8.04	30	
Butylbenzylphthalate	1.72	0.34	mg/Kg wet	1.67		103	40-140	5.07	30	
4-Chloroaniline	1.23	0.66	mg/Kg wet	1.67		73.7	15-140	13.0	30	†
2-Chloronaphthalene	1.03	0.34	mg/Kg wet	1.67		62.0	40-140	11.0	30	
2-Chlorophenol	1.49	0.34	mg/Kg wet	1.67		89.4	30-130	6.51	30	
Chrysene	1.37	0.17	mg/Kg wet	1.67		82.2	40-140	1.14	30	
Dibenz(a,h)anthracene	1.34	0.17	mg/Kg wet	1.67		80.2	40-140	5.44	30	

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B314219 - SW-846 3546											
LCS Dup (B314219-BSD1)				Prepared: 08/01/22 Analyzed: 08/04/22							
Dibenzofuran	1.43	0.34	mg/Kg wet	1.67		86.1	40-140	1.88	30		
Di-n-butylphthalate	1.57	0.34	mg/Kg wet	1.67		94.5	40-140	7.33	30		
1,2-Dichlorobenzene	1.18	0.34	mg/Kg wet	1.67		70.6	40-140	0.739	30		
1,3-Dichlorobenzene	1.08	0.34	mg/Kg wet	1.67		65.1	40-140	0.215	30		
1,4-Dichlorobenzene	1.12	0.34	mg/Kg wet	1.67		67.1	40-140	0.209	30		
3,3-Dichlorobenzidine	1.16	0.17	mg/Kg wet	1.67		69.3	40-140	2.79	30		
2,4-Dichlorophenol	1.53	0.34	mg/Kg wet	1.67		91.8	30-130	3.48	30		
Diethylphthalate	1.69	0.34	mg/Kg wet	1.67		101	40-140	10.5	30		
2,4-Dimethylphenol	1.56	0.34	mg/Kg wet	1.67		93.7	30-130	3.05	30		
Dimethylphthalate	1.56	0.34	mg/Kg wet	1.67		93.7	40-140	6.07	30		
2,4-Dinitrophenol	1.38	0.66	mg/Kg wet	1.67		82.5	15-140	17.3	30	V-04	†
2,4-Dinitrotoluene	1.63	0.34	mg/Kg wet	1.67		97.9	40-140	12.8	30		
2,6-Dinitrotoluene	1.59	0.34	mg/Kg wet	1.67		95.2	40-140	6.80	30		
Di-n-octylphthalate	1.75	0.34	mg/Kg wet	1.67		105	40-140	7.23	30		
1,2-Diphenylhydrazine/Azobenzene	1.38	0.34	mg/Kg wet	1.67		82.7	40-140	12.1	30		
Fluoranthene	1.44	0.17	mg/Kg wet	1.67		86.7	40-140	14.2	30		
Fluorene	1.51	0.17	mg/Kg wet	1.67		90.3	40-140	6.23	30		
Hexachlorobenzene	1.34	0.34	mg/Kg wet	1.67		80.2	40-140	8.18	30		
Hexachlorobutadiene	1.06	0.34	mg/Kg wet	1.67		63.7	40-140	3.58	30		
Hexachloroethane	1.16	0.34	mg/Kg wet	1.67		69.4	40-140	0.230	30		
Indeno(1,2,3-cd)pyrene	1.36	0.17	mg/Kg wet	1.67		81.6	40-140	4.90	30		
Isophorone	1.56	0.34	mg/Kg wet	1.67		93.5	40-140	3.90	30		
2-Methylnaphthalene	1.50	0.17	mg/Kg wet	1.67		90.1	40-140	4.42	30		
2-Methylphenol	1.70	0.34	mg/Kg wet	1.67		102	30-130	9.92	30		
3/4-Methylphenol	1.85	0.34	mg/Kg wet	1.67		111	30-130	11.6	30		
Naphthalene	1.28	0.17	mg/Kg wet	1.67		76.6	40-140	1.29	30		
Nitrobenzene	1.26	0.34	mg/Kg wet	1.67		75.7	40-140	0.842	30		
2-Nitrophenol	1.37	0.34	mg/Kg wet	1.67		82.2	30-130	0.439	30		
4-Nitrophenol	1.74	0.66	mg/Kg wet	1.67		104	15-140	23.1	30		†
Pentachlorophenol	1.26	0.34	mg/Kg wet	1.67		75.9	30-130	3.49	30		
Phenanthrene	1.40	0.17	mg/Kg wet	1.67		83.9	40-140	0.972	30		
Phenol	1.64	0.34	mg/Kg wet	1.67		98.3	15-140	8.37	30		†
Pyrene	1.75	0.17	mg/Kg wet	1.67		105	40-140	4.04	30		
Pyridine	0.839	0.34	mg/Kg wet	1.67		50.4	30-140	8.08	30		†
1,2,4-Trichlorobenzene	1.13	0.34	mg/Kg wet	1.67		67.6	40-140	1.99	30		
2,4,5-Trichlorophenol	1.47	0.34	mg/Kg wet	1.67		88.1	30-130	0.949	30		
2,4,6-Trichlorophenol	1.41	0.34	mg/Kg wet	1.67		84.7	30-130	1.78	30		
Surrogate: 2-Fluorophenol	*5.96*		mg/Kg wet	6.67		89.4	30-130				
Surrogate: Phenol-d6	*6.77*		mg/Kg wet	6.67		101	30-130				
Surrogate: Nitrobenzene-d5	*3.58*		mg/Kg wet	3.33		107	30-130				
Surrogate: 2-Fluorobiphenyl	*2.75*		mg/Kg wet	3.33		82.4	30-130				
Surrogate: 2,4,6-Tribromophenol	*7.39*		mg/Kg wet	6.67		111	30-130				
Surrogate: p-Terphenyl-d14	*3.90*		mg/Kg wet	3.33		117	30-130				

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B314195 - SW-846 3050B											
Blank (B314195-BLK1)				Prepared: 07/29/22 Analyzed: 08/02/22							
Arsenic	ND	3.3	mg/Kg wet								
Barium	ND	1.7	mg/Kg wet								
Cadmium	ND	0.33	mg/Kg wet								
Chromium	ND	0.67	mg/Kg wet								
Lead	ND	0.50	mg/Kg wet								
Selenium	ND	3.3	mg/Kg wet								
Silver	ND	0.33	mg/Kg wet								
LCS (B314195-BS1)				Prepared: 07/29/22 Analyzed: 08/02/22							
Arsenic	75.4	9.7	mg/Kg wet	84.5		89.2		82.8-117.2			
Barium	240	4.9	mg/Kg wet	249		96.3		82.7-117.3			
Cadmium	91.4	0.97	mg/Kg wet	99.0		92.3		83-117.2			
Chromium	113	1.9	mg/Kg wet	122		92.3		82.8-118			
Lead	116	1.5	mg/Kg wet	123		94.5		83.7-117.1			
Selenium	108	9.7	mg/Kg wet	121		89.0		80.1-120.7			
Silver	41.3	0.97	mg/Kg wet	44.1		93.8		80.5-119.7			
LCS Dup (B314195-BSD1)				Prepared: 07/29/22 Analyzed: 08/02/22							
Arsenic	78.4	9.9	mg/Kg wet	84.5		92.7		82.8-117.2	3.86	30	
Barium	254	5.0	mg/Kg wet	249		102		82.7-117.3	5.89	20	
Cadmium	96.6	0.99	mg/Kg wet	99.0		97.6		83-117.2	5.56	20	
Chromium	123	2.0	mg/Kg wet	122		101		82.8-118	9.01	30	
Lead	117	1.5	mg/Kg wet	123		95.5		83.7-117.1	0.975	30	
Selenium	112	9.9	mg/Kg wet	121		92.8		80.1-120.7	4.14	30	
Silver	43.5	0.99	mg/Kg wet	44.1		98.7		80.5-119.7	5.10	30	
Reference (B314195-SRM1) MRL CHECK				Prepared: 07/29/22 Analyzed: 08/02/22							
Lead	0.649	0.50	mg/Kg wet	0.505		**129**	*	80-120			M-10
Batch B314243 - SW-846 7471											
Blank (B314243-BLK1)				Prepared: 08/02/22 Analyzed: 08/03/22							
Mercury	ND	0.025	mg/Kg wet								
LCS (B314243-BS1)				Prepared: 08/02/22 Analyzed: 08/03/22							
Mercury	20.3	3.8	mg/Kg wet	18.9		107		68.8-131.2			
LCS Dup (B314243-BSD1)				Prepared: 08/02/22 Analyzed: 08/03/22							
Mercury	19.4	3.9	mg/Kg wet	18.9		103		68.8-131.2	4.22	20	
Duplicate (B314243-DUP1)	**Source: 22G1707-01**			Prepared: 08/02/22 Analyzed: 08/03/22							
Mercury	ND	0.032	mg/Kg dry		ND				NC	20	R-02

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B314243 - SW-846 7471										
Matrix Spike (B314243-MS1)	**Source: 22G1707-01**			Prepared: 08/02/22 Analyzed: 08/03/22						
Mercury	0.398	0.032	mg/Kg dry	0.423	0.0276	87.6	80-120			
Batch B314257 - SW-846 3050B										
Blank (B314257-BLK1)				Prepared: 08/01/22 Analyzed: 08/03/22						
Arsenic	ND	3.3	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Cadmium	ND	0.33	mg/Kg wet							
Chromium	ND	0.67	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
LCS (B314257-BS1)				Prepared: 08/01/22 Analyzed: 08/03/22						
Arsenic	78.6	9.9	mg/Kg wet	84.5		93.0	82.8-117.2			
Barium	247	4.9	mg/Kg wet	249		99.2	82.7-117.3			
Cadmium	96.7	0.99	mg/Kg wet	99.0		97.7	83-117.2			
Chromium	121	2.0	mg/Kg wet	122		99.1	82.8-118			
Lead	113	1.5	mg/Kg wet	123		92.2	83.7-117.1			
Selenium	115	9.9	mg/Kg wet	121		94.6	80.1-120.7			
Silver	43.1	0.99	mg/Kg wet	44.1		97.8	80.5-119.7			
LCS Dup (B314257-BSD1)				Prepared: 08/01/22 Analyzed: 08/03/22						
Arsenic	77.7	10	mg/Kg wet	84.5		92.0	82.8-117.2	1.10	30	
Barium	241	5.0	mg/Kg wet	249		96.9	82.7-117.3	2.37	20	
Cadmium	94.3	1.0	mg/Kg wet	99.0		95.2	83-117.2	2.58	20	
Chromium	121	2.0	mg/Kg wet	122		98.9	82.8-118	0.203	30	
Lead	113	1.5	mg/Kg wet	123		91.6	83.7-117.1	0.600	30	
Selenium	113	10	mg/Kg wet	121		93.7	80.1-120.7	1.00	30	
Silver	44.7	1.0	mg/Kg wet	44.1		101	80.5-119.7	3.61	30	
Reference (B314257-SRM1) MRL CHECK				Prepared: 08/01/22 Analyzed: 08/08/22						
Lead	0.712	0.49	mg/Kg wet	0.494		**144** *	80-120			M-10

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
M-10	The reporting limit verification for the AIHA lead program is outside of control limits for this element. Any reported result at or near the detection limit may be biased on the high side.
R-02	Duplicate RPD is outside of control limits. Outlier can be attributed to sample non-homogeneity encountered during sample prep.
V-04	Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6010D in Soil	
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,AIHA,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
SW-846 7471B in Soil	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8270E in Soil	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Acetophenone	NY,NH
Aniline	NY,NH
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH
Benzo(g,h,i)perylene	CT,NY,NH
Benzo(k)fluoranthene	CT,NY,NH
Bis(2-chloroethoxy)methane	CT,NY,NH
Bis(2-chloroethyl)ether	CT,NY,NH
Bis(2-chloroisopropyl)ether	CT,NY,NH
Bis(2-Ethylhexyl)phthalate	CT,NY,NH
4-Bromophenylphenylether	CT,NY,NH
Butylbenzylphthalate	CT,NY,NH
4-Chloroaniline	CT,NY,NH
2-Chloronaphthalene	CT,NY,NH
2-Chlorophenol	CT,NY,NH
Chrysene	CT,NY,NH
Dibenz(a,h)anthracene	CT,NY,NH
Dibenzofuran	CT,NY,NH
Di-n-butylphthalate	CT,NY,NH
1,2-Dichlorobenzene	NY,NH
1,3-Dichlorobenzene	NY,NH
1,4-Dichlorobenzene	NY,NH
3,3-Dichlorobenzidine	CT,NY,NH
2,4-Dichlorophenol	CT,NY,NH
Diethylphthalate	CT,NY,NH
2,4-Dimethylphenol	CT,NY,NH
Dimethylphthalate	CT,NY,NH
2,4-Dinitrophenol	CT,NY,NH
2,4-Dinitrotoluene	CT,NY,NH
2,6-Dinitrotoluene	CT,NY,NH
Di-n-octylphthalate	CT,NY,NH
1,2-Diphenylhydrazine/Azobenzene	NY,NH

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270E in Soil	
Fluoranthene	CT,NY,NH
Fluorene	NY,NH
Hexachlorobenzene	CT,NY,NH
Hexachlorobutadiene	CT,NY,NH
Hexachloroethane	CT,NY,NH
Indeno(1,2,3-cd)pyrene	CT,NY,NH
Isophorone	CT,NY,NH
2-Methylnaphthalene	CT,NY,NH
2-Methylphenol	CT,NY,NH
3/4-Methylphenol	CT,NY,NH
Naphthalene	CT,NY,NH
Nitrobenzene	CT,NY,NH
2-Nitrophenol	CT,NY,NH
4-Nitrophenol	CT,NY,NH
Pentachlorophenol	CT,NY,NH
Phenanthrene	CT,NY,NH
Phenol	CT,NY,NH
Pyrene	CT,NY,NH
1,2,4-Trichlorobenzene	CT,NY,NH
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH
SW-846 8270E in Water	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Acetophenone	NY
Aniline	CT,NY
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH
Benzo(g,h,i)perylene	CT,NY,NH
Benzo(k)fluoranthene	CT,NY,NH
Bis(2-chloroethoxy)methane	CT,NY,NH
Bis(2-chloroethyl)ether	CT,NY,NH
Bis(2-chloroisopropyl)ether	CT,NY,NH
Bis(2-Ethylhexyl)phthalate	CT,NY,NH
4-Bromophenylphenylether	CT,NY,NH
Butylbenzylphthalate	CT,NY,NH
4-Chloroaniline	CT,NY,NH
2-Chloronaphthalene	CT,NY,NH
2-Chlorophenol	CT,NY,NH
Chrysene	CT,NY,NH
Dibenz(a,h)anthracene	CT,NY,NH
Dibenzofuran	CT,NY,NH
Di-n-butylphthalate	CT,NY,NH
1,2-Dichlorobenzene	CT,NY,NH

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270E in Water	
1,3-Dichlorobenzene	CT,NY,NH
1,4-Dichlorobenzene	CT,NY,NH
3,3-Dichlorobenzidine	CT,NY,NH
2,4-Dichlorophenol	CT,NY,NH
Diethylphthalate	CT,NY,NH
2,4-Dimethylphenol	CT,NY,NH
Dimethylphthalate	CT,NY,NH
2,4-Dinitrophenol	CT,NY,NH
2,4-Dinitrotoluene	CT,NY,NH
2,6-Dinitrotoluene	CT,NY,NH
Di-n-octylphthalate	CT,NY,NH
1,2-Diphenylhydrazine/Azobenzene	NY
Fluoranthene	CT,NY,NH
Fluorene	NY,NH
Hexachlorobenzene	CT,NY,NH
Hexachlorobutadiene	CT,NY,NH
Hexachloroethane	CT,NY,NH
Indeno(1,2,3-cd)pyrene	CT,NY,NH
Isophorone	CT,NY,NH
2-Methylnaphthalene	CT,NY,NH
2-Methylphenol	CT,NY,NH
3/4-Methylphenol	CT,NY,NH
Naphthalene	CT,NY,NH
Nitrobenzene	CT,NY,NH
2-Nitrophenol	CT,NY,NH
4-Nitrophenol	CT,NY,NH
Pentachlorophenol	CT,NY,NH
Phenanthrene	CT,NY,NH
Phenol	CT,NY,NH
Pyrene	CT,NY,NH
1,2,4-Trichlorobenzene	CT,NY,NH
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH

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Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO 17025:2017	100033	03/1/2024
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2023
RI	Rhode Island Department of Health	LAO00373	12/30/2022
NC	North Carolina Div. of Water Quality	652	12/31/2022
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
FL	Florida Department of Health	E871027 NELAP	06/30/2023
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2022
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
NC-DW	North Carolina Department of Health and Human Services	25703	07/31/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022

22G1707

Pace Analytical®

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http://www.pacelabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Doc # 381 Rev 5_07/13/2021

Page 1 of 1

Company Name:	
Address:	55 Walkers Brook Dr #100 Reading, MA
Phone:	978-532-1900
Project Name:	Eversource Sudbury/Hudson
Project Location:	Sudbury, MA
Project Number:	ENG22-0402
Project Manager:	Paul McKinlay
Pace Quote Name/Number:	
Invoice Recipient:	Eversource
Sampled By:	EGE

Requested Turnaround Time:
7-Day ☐ 10-Day ☐
PFAS 10-Day (std) ☒ Due Date:

Rush: Approval Required:
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery:
Format: PDF ☐ EXCEL ☐
Other:
CLP Like Data Pkg Required: ☐
Email To: McKinlayP@wseinc.com
Fax To #: Earley.Elizabeth@wseinc.com

Dissolved Metals Samples:
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples:
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☐
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PFAS	8RCRA metals & SVOCs
1	SB134 (0-8)	7/28 8:30	7/28 8:30	Comp	S	U		1	2			2	1
2	SB135 (0-8)	7/28 9:10	7/28 9:10	comp	S	U		1	2			2	1
3	SB136 (0-8)	7/28 9:40	7/28 9:40	comp	S	U		1	2			2	1
4	SB137 (0-8)	7/28 10:35	7/28 10:35	comp	S	U		1	2			2	1

Relinquished by: (signature) Elizabeth Earley Date/Time: 7/29/22 1120
Received by: (signature) MARIE RUSSELL Date/Time: 7-29-22 1120
Relinquished by: (signature) Date/Time: 7-29-22 1840
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments:

Detection Limit Requirements:
MA
GW-1
Other:

Special Requirements:
☐ MA MCP Required
☐ MCP Certification Form Required
☐ CT RCP Required
☐ RCP Certification Form Required
☐ MA State DW Required
PWSID #

NELAC and AIHA-LAP, LLC Accredited

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity:
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other:
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N
*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

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East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
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Pace PEOPLE ADVANCING SCIENCE

Doc# 277 Rev 6 July 2022

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Received By: W+S JRW Date: 07/29/22 Time: 1840

How were the samples received? In Cooler: T No Cooler: ____ On Ice: T No Ice: ____ Direct From Sample: ____ Ambient: ____ Melted Ice: ____

Were samples within Tempurature? Within 2-6°C: T By Gun #: 5 Actual Temp - 5.3 By Blank #: ____ Actual Temp - ____

Was Custody Seal In tact? N/A Were Samples Tampered with? N/A

Was COC Relinquished ? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client? T Analysis? T Sampler Name? T Project? T ID's? T Collection Dates/Times? T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? ____

Are there Rushes? F Who was notified? ____

Are there Short Holds? F Who was notified? ____

Samples are received within holding time? T Is there enough Volume? T

Is there Headspace where applicable? N/A MS/MSD? F

Proper Media/Containers Used? T splitting samples require F

Were trip blanks receive F On COC? F

Do All Samples Have the proper pH? Acid N/A Base N/A

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	4
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Pace New England	Project #: 22G1707
Project Location: Sudbury, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

22G1707-01 thru 22G1707-04

Matrices: Soil

CAM Protocol (check all that below)

8260 VOC CAM II A ( )	7470/7471 Hg CAM IIIB (X)	MassDEP VPH (GC/PID/FID) CAM IV A ( )	8082 PCB CAM V A ( )	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B (X)	7010 Metals CAM III C ( )	MassDEP VPH (GC/MS) CAM IV C ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	MassDEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )

Affirmative response to Questions A throughF is required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes	☐ No[1]
B	Were the analytical method(s) and all associated QC requirements specificed in the selected CAM protocol(s) followed?	☑ Yes	☐ No[1]
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No[1]
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidlines for the Acquisition and Reporting of Analytical Data?	☑ Yes	☐ No[1]
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	☐ Yes	☐ No[1]
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes	☐ No[1]
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Qestions A through E)?	☑ Yes	☐ No[1]

A response to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☑ Yes	☐ No[1]

<u>Data User Note:</u> Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were all QC perfomance standards specified in the CAM protocol(s) achieved?	☐ Yes	☑ No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes	☑ No[1]

[1] *All Negative responses must be addressed in an attached Environmental Laboratory case narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Lisa Worthington Position: Technical Representative

Printed Name: Lisa A. Worthington Date: 08/11/22

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August 24, 2022

Paul McKinlay
Weston & Sampson Engineers MA
55 Walkers Brook Drive
Reading, MA 01867

Project Location: Sudbury, MA
Client Job Number:
Project Number: ENG22-0402
Laboratory Work Order Number: 22G1708

Enclosed are results of analyses for samples as received by the laboratory on July 29, 2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kerry K. McGee
Project Manager

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Weston & Sampson Engineers MA
55 Walkers Brook Drive
Reading, MA 01867
ATTN: Paul McKinlay

REPORT DATE: 8/24/2022

PURCHASE ORDER NUMBER: 10948702

PROJECT NUMBER: ENG22-0402

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 22G1708

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Sudbury, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB 134 (0-8)	22G1708-01	Soil		SM 2540G	
				SOP-466 PFAS	
SB 135 (0-8)	22G1708-02	Soil		SM 2540G	
				SOP-466 PFAS	
SB 136 (0-6.5)	22G1708-03	Soil		SM 2540G	
				SOP-466 PFAS	
SB 137 (0-8)	22G1708-04	Soil		SM 2540G	
				SOP-466 PFAS	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SOP-466 PFAS

Qualifications:

S-29

Extracted Internal Standard is outside of control limits.

Analyte & Samples(s) Qualified:

d5-NEtFOSAA
22G1708-01[SB 134 (0-8)]

M2-4:2FTS
22G1708-01[SB 134 (0-8)], 22G1708-03[SB 136 (0-6.5)]

M2-6:2FTS
22G1708-01[SB 134 (0-8)], 22G1708-03[SB 136 (0-6.5)], S075694-CCV2

M2-8:2FTS
S075694-CCV2

M2PFTA
22G1708-01[SB 134 (0-8)]

V-05

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

Analyte & Samples(s) Qualified:

6:2 Fluorotelomersulfonic acid (6:2
S075694-CCV2

Nonafluoro-3,6-dioxaheptanoic aci
S075694-CCV3

Perfluorodecanesulfonic acid (PFD
S075694-CCV3

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Lisa A. Worthington
Technical Representative

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Project Location: Sudbury, MA | Sample Description: | Work Order: 22G1708

Date Received: 7/29/2022

Field Sample #: SB 134 (0-8) | Sampled: 7/28/2022 08:30

Sample ID: 22G1708-01

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
11Cl-PF3OUdS (F53B Major)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
9Cl-PF3ONS (F53B Minor)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Perfluorodecanoic acid (PFDA)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
N-EtFOSAA	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
N-MeFOSAA	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Perfluoropetanesulfonic acid (PFPeS)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Perfluorooctanoic acid (PFOA)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH
Perfluorononanoic acid (PFNA)	ND	0.57	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:43	BLH

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Project Location: Sudbury, MA | Sample Description: | Work Order: 22G1708

Date Received: 7/29/2022

Field Sample #: SB 134 (0-8) | Sampled: 7/28/2022 08:30

Sample ID: 22G1708-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	78.3		% Wt	1		SM 2540G	8/3/22	8/4/22 9:27	BRD

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Project Location: Sudbury, MA | Sample Description: | Work Order: 22G1708

Date Received: 7/29/2022

Field Sample #: SB 135 (0-8) | Sampled: 7/28/2022 09:10

Sample ID: 22G1708-02

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
11Cl-PF3OUdS (F53B Major)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
9Cl-PF3ONS (F53B Minor)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Perfluorodecanoic acid (PFDA)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
N-EtFOSAA	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
N-MeFOSAA	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Perfluoropetanesulfonic acid (PFPeS)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Perfluorooctanoic acid (PFOA)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH
Perfluorononanoic acid (PFNA)	ND	0.44	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:50	BLH

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Project Location: Sudbury, MA | Sample Description: | Work Order: 22G1708

Date Received: 7/29/2022

Field Sample #: SB 135 (0-8) | Sampled: 7/28/2022 09:10

Sample ID: 22G1708-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.4		% Wt	1		SM 2540G	8/3/22	8/4/22 9:27	BRD

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Project Location: Sudbury, MA | Sample Description: | Work Order: 22G1708

Date Received: 7/29/2022

Field Sample #: SB 136 (0-6.5) | Sampled: 7/28/2022 09:40

Sample ID: 22G1708-03

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
11Cl-PF3OUdS (F53B Major)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
9Cl-PF3ONS (F53B Minor)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Perfluorodecanoic acid (PFDA)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
N-EtFOSAA	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
N-MeFOSAA	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Perfluoropetanesulfonic acid (PFPeS)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Perfluorooctanoic acid (PFOA)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH
Perfluorononanoic acid (PFNA)	ND	0.48	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 3:57	BLH

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Project Location: Sudbury, MA | Sample Description: | Work Order: 22G1708

Date Received: 7/29/2022

Field Sample #: SB 136 (0-6.5) | Sampled: 7/28/2022 09:40

Sample ID: 22G1708-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.5		% Wt	1		SM 2540G	8/3/22	8/4/22 9:27	BRD

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Project Location: Sudbury, MA | Sample Description: | Work Order: 22G1708

Date Received: 7/29/2022

Field Sample #: SB 137 (0-8) | Sampled: 7/28/2022 10:35

Sample ID: 22G1708-04

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
11Cl-PF3OUdS (F53B Major)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
9Cl-PF3ONS (F53B Minor)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Perfluorodecanoic acid (PFDA)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
N-EtFOSAA	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
N-MeFOSAA	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Perfluoropetanesulfonic acid (PFPeS)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Perfluorooctanoic acid (PFOA)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH
Perfluorononanoic acid (PFNA)	ND	0.46	µg/kg dry	1		SOP-466 PFAS	8/12/22	8/22/22 4:04	BLH

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Project Location: Sudbury, MA | Sample Description: | Work Order: 22G1708

Date Received: 7/29/2022

Field Sample #: SB 137 (0-8) | Sampled: 7/28/2022 10:35

Sample ID: 22G1708-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.7		% Wt	1		SM 2540G	8/3/22	8/4/22 9:27	BRD

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Sample Extraction Data

Prep Method: % Solids **Analytical Method: SM 2540G**

Lab Number [Field ID]	Batch	Date
22G1708-01 [SB 134 (0-8)]	B314470	08/03/22
22G1708-02 [SB 135 (0-8)]	B314470	08/03/22
22G1708-03 [SB 136 (0-6.5)]	B314470	08/03/22
22G1708-04 [SB 137 (0-8)]	B314470	08/03/22

Prep Method: SOP 465-PFAAS **Analytical Method: SOP-466 PFAS**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
22G1708-01 [SB 134 (0-8)]	B314297	5.55	5.00	08/12/22
22G1708-02 [SB 135 (0-8)]	B314297	5.90	5.00	08/12/22
22G1708-03 [SB 136 (0-6.5)]	B314297	5.56	5.00	08/12/22
22G1708-04 [SB 137 (0-8)]	B314297	5.77	5.00	08/12/22

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QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B314297 - SOP 465-PFAAS										
Blank (B314297-BLK1)				Prepared: 08/12/22 Analyzed: 08/22/22						
Perfluorobutanoic acid (PFBA)	ND	0.42	µg/kg wet							
Perfluorobutanesulfonic acid (PFBS)	ND	0.42	µg/kg wet							
Perfluoropentanoic acid (PFPeA)	ND	0.42	µg/kg wet							
Perfluorohexanoic acid (PFHxA)	ND	0.42	µg/kg wet							
11Cl-PF3OUdS (F53B Major)	ND	0.42	µg/kg wet							
9Cl-PF3ONS (F53B Minor)	ND	0.42	µg/kg wet							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.42	µg/kg wet							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.42	µg/kg wet							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.42	µg/kg wet							
Perfluorodecanoic acid (PFDA)	ND	0.42	µg/kg wet							
Perfluorododecanoic acid (PFDoA)	ND	0.42	µg/kg wet							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.42	µg/kg wet							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.42	µg/kg wet							
N-EtFOSAA	ND	0.42	µg/kg wet							
N-MeFOSAA	ND	0.42	µg/kg wet							
Perfluorotetradecanoic acid (PFTA)	ND	0.42	µg/kg wet							
Perfluorotridecanoic acid (PFTrDA)	ND	0.42	µg/kg wet							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.42	µg/kg wet							
Perfluorodecanesulfonic acid (PFDS)	ND	0.42	µg/kg wet							
Perfluorooctanesulfonamide (FOSA)	ND	0.42	µg/kg wet							
Perfluorononanesulfonic acid (PFNS)	ND	0.42	µg/kg wet							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.42	µg/kg wet							
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.42	µg/kg wet							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.42	µg/kg wet							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.42	µg/kg wet							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.42	µg/kg wet							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.42	µg/kg wet							
Perfluoropetanesulfonic acid (PFPeS)	ND	0.42	µg/kg wet							
Perfluoroundecanoic acid (PFUnA)	ND	0.42	µg/kg wet							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.42	µg/kg wet							
Perfluoroheptanoic acid (PFHpA)	ND	0.42	µg/kg wet							
Perfluorooctanoic acid (PFOA)	ND	0.42	µg/kg wet							
Perfluorooctanesulfonic acid (PFOS)	ND	0.42	µg/kg wet							
Perfluorononanoic acid (PFNA)	ND	0.42	µg/kg wet							
LCS (B314297-BS1)				Prepared: 08/12/22 Analyzed: 08/22/22						
Perfluorobutanoic acid (PFBA)	2.49	0.42	µg/kg wet	2.13		117	71-135			
Perfluorobutanesulfonic acid (PFBS)	2.21	0.42	µg/kg wet	1.89		117	72-128			
Perfluoropentanoic acid (PFPeA)	2.43	0.42	µg/kg wet	2.13		114	69-132			
Perfluorohexanoic acid (PFHxA)	2.47	0.42	µg/kg wet	2.13		116	70-132			
11Cl-PF3OUdS (F53B Major)	1.63	0.42	µg/kg wet	2.01		81.2	50-150			
9Cl-PF3ONS (F53B Minor)	1.66	0.42	µg/kg wet	1.99		83.6	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.78	0.42	µg/kg wet	2.01		88.8	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.87	0.42	µg/kg wet	2.13		87.4	50-150			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	2.17	0.42	µg/kg wet	2.05		106	65-137			
Perfluorodecanoic acid (PFDA)	2.41	0.42	µg/kg wet	2.13		113	69-133			
Perfluorododecanoic acid (PFDoA)	2.65	0.42	µg/kg wet	2.13		124	69-135			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	1.38	0.42	µg/kg wet	1.90		72.6	50-150			

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QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B314297 - SOP 465-PFAAS										
LCS (B314297-BS1)				Prepared: 08/12/22 Analyzed: 08/22/22						
Perfluoroheptanesulfonic acid (PFHpS)	2.01	0.42	µg/kg wet	2.04		98.7	70-132			
N-EtFOSAA	2.89	0.42	µg/kg wet	2.13		136	61-139			
N-MeFOSAA	2.75	0.42	µg/kg wet	2.13		129	63-144			
Perfluorotetradecanoic acid (PFTA)	2.46	0.42	µg/kg wet	2.13		115	69-133			
Perfluorotridecanoic acid (PFTrDA)	2.44	0.42	µg/kg wet	2.13		114	66-139			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	2.36	0.42	µg/kg wet	2.00		118	62-145			
Perfluorodecanesulfonic acid (PFDS)	2.13	0.42	µg/kg wet	2.06		104	59-134			
Perfluorooctanesulfonamide (FOSA)	2.62	0.42	µg/kg wet	2.13		123	67-137			
Perfluorononanesulfonic acid (PFNS)	2.17	0.42	µg/kg wet	2.05		106	69-125			
Perfluoro-1-hexanesulfonamide (FHxSA)	2.10	0.42	µg/kg wet	2.13		98.5	50-150			
Perfluoro-1-butanesulfonamide (FBSA)	2.03	0.42	µg/kg wet	2.13		95.0	50-150			
Perfluorohexanesulfonic acid (PFHxS)	2.15	0.42	µg/kg wet	1.95		110	67-130			
Perfluoro-4-oxapentanoic acid (PFMPA)	1.74	0.42	µg/kg wet	2.13		81.6	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	1.76	0.42	µg/kg wet	2.13		82.5	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	2.45	0.42	µg/kg wet	2.03		121	64-140			
Perfluoropetanesulfonic acid (PFPeS)	2.35	0.42	µg/kg wet	2.01		117	73-123			
Perfluoroundecanoic acid (PFUnA)	2.76	0.42	µg/kg wet	2.13		129	64-136			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	1.72	0.42	µg/kg wet	2.13		80.5	50-150			
Perfluoroheptanoic acid (PFHpA)	2.46	0.42	µg/kg wet	2.13		115	71-131			
Perfluorooctanoic acid (PFOA)	2.34	0.42	µg/kg wet	2.13		110	69-133			
Perfluorooctanesulfonic acid (PFOS)	2.24	0.42	µg/kg wet	1.97		114	68-136			
Perfluorononanoic acid (PFNA)	2.64	0.42	µg/kg wet	2.13		124	72-129			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
S-29	Extracted Internal Standard is outside of control limits.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SB 134 (0-8) (22G1708-01)			Lab File ID: 22G1708-01.d			Analyzed: 08/22/22 03:43			
M8FOSA	170784.2	3.988567	269,638.00	3.980567	63	50 - 150	0.0080	+/-0.50	
M2-4:2FTS	53231.51	2.439333	126,864.00	2.439333	42	50 - 150	0.0000	+/-0.50	*
M2PFTA	368011	4.321567	1,005,267.00	4.321567	37	50 - 150	0.0000	+/-0.50	*
M2-8:2FTS	64292.68	3.786867	100,826.00	3.794833	64	50 - 150	-0.0080	+/-0.50	
MPFBA	259906.7	1.058467	383,883.00	1.058467	68	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	82674.03	2.7902	108,969.00	2.7902	76	50 - 150	0.0000	+/-0.50	
M6PFDA	346353.1	3.79535	594,391.00	3.79535	58	50 - 150	0.0000	+/-0.50	
M3PFBS	77938.68	1.853533	102,930.00	1.853533	76	50 - 150	0.0000	+/-0.50	
M7PFUnA	471761.9	3.93805	762,555.00	3.938033	62	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	31633.64	3.429317	72,457.00	3.4293	44	50 - 150	0.0000	+/-0.50	*
M5PFPeA	263502.4	1.681733	359,506.00	1.681733	73	50 - 150	0.0000	+/-0.50	
M5PFHxA	512125.7	2.523067	692,970.00	2.523067	74	50 - 150	0.0000	+/-0.50	
M3PFHxS	62589.84	3.193817	95,426.00	3.193817	66	50 - 150	0.0000	+/-0.50	
M4PFHpA	542847.5	3.154633	794,471.00	3.154633	68	50 - 150	0.0000	+/-0.50	
M8PFOA	428871	3.445833	706,304.00	3.445833	61	50 - 150	0.0000	+/-0.50	
M8PFOS	51261.98	3.636183	91,706.00	3.636183	56	50 - 150	0.0000	+/-0.50	
M9PFNA	291340.7	3.637217	560,883.00	3.637217	52	50 - 150	0.0000	+/-0.50	
MPFDoA	476191.8	4.072667	857,741.00	4.072667	56	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	93001.39	3.945517	204,574.00	3.945517	45	50 - 150	0.0000	+/-0.50	*
d3-NMeFOSAA	105874.8	3.865617	189,342.00	3.865617	56	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SB 135 (0-8) (22G1708-02)			Lab File ID: 22G1708-02.d			Analyzed: 08/22/22 03:50			
M8FOSA	194378	3.980583	269,638.00	3.980567	72	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	82297.35	2.439333	126,864.00	2.439333	65	50 - 150	0.0000	+/-0.50	
M2PFTA	716129.6	4.313433	1,005,267.00	4.321567	71	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	106234.5	3.786867	100,826.00	3.794833	105	50 - 150	-0.0080	+/-0.50	
MPFBA	320740.6	1.058467	383,883.00	1.058467	84	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	110643.9	2.782017	108,969.00	2.7902	102	50 - 150	-0.0082	+/-0.50	
M6PFDA	466001.3	3.787383	594,391.00	3.79535	78	50 - 150	-0.0080	+/-0.50	
M3PFBS	101109.8	1.845233	102,930.00	1.853533	98	50 - 150	-0.0083	+/-0.50	
M7PFUnA	649408.7	3.93805	762,555.00	3.938033	85	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	37575.36	3.429317	72,457.00	3.4293	52	50 - 150	0.0000	+/-0.50	
M5PFPeA	329242.2	1.681733	359,506.00	1.681733	92	50 - 150	0.0000	+/-0.50	
M5PFHxA	632841.7	2.523067	692,970.00	2.523067	91	50 - 150	0.0000	+/-0.50	
M3PFHxS	81790.31	3.193817	95,426.00	3.193817	86	50 - 150	0.0000	+/-0.50	
M4PFHpA	707671.6	3.154633	794,471.00	3.154633	89	50 - 150	0.0000	+/-0.50	
M8PFOA	569518.9	3.43785	706,304.00	3.445833	81	50 - 150	-0.0080	+/-0.50	
M8PFOS	70498.96	3.636183	91,706.00	3.636183	77	50 - 150	0.0000	+/-0.50	
M9PFNA	394781.1	3.637233	560,883.00	3.637217	70	50 - 150	0.0000	+/-0.50	
MPFDoA	689286.9	4.072667	857,741.00	4.072667	80	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	143674.3	3.937533	204,574.00	3.945517	70	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	157756.8	3.865633	189,342.00	3.865617	83	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SB 136 (0-6.5) (22G1708-03)			Lab File ID: 22G1708-03.d			Analyzed: 08/22/22 03:57			
M8FOSA	202456	3.988583	269,638.00	3.980567	75	50 - 150	0.0080	+/-0.50	
M2-4:2FTS	60373.33	2.431017	126,864.00	2.439333	48	50 - 150	-0.0083	+/-0.50	*
M2PFTA	823327.1	4.313433	1,005,267.00	4.321567	82	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	111930.1	3.786867	100,826.00	3.794833	111	50 - 150	-0.0080	+/-0.50	
MPFBA	338621.2	1.058467	383,883.00	1.058467	88	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	103982.1	2.782033	108,969.00	2.7902	95	50 - 150	-0.0082	+/-0.50	
M6PFDA	481536.3	3.787383	594,391.00	3.79535	81	50 - 150	-0.0080	+/-0.50	
M3PFBS	106934.9	1.845233	102,930.00	1.853533	104	50 - 150	-0.0083	+/-0.50	
M7PFUnA	625160.3	3.93005	762,555.00	3.938033	82	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	34590.86	3.429317	72,457.00	3.4293	48	50 - 150	0.0000	+/-0.50	*
M5PFPeA	354019.7	1.681733	359,506.00	1.681733	98	50 - 150	0.0000	+/-0.50	
M5PFHxA	681617.4	2.51485	692,970.00	2.523067	98	50 - 150	-0.0082	+/-0.50	
M3PFHxS	82447.05	3.18575	95,426.00	3.193817	86	50 - 150	-0.0081	+/-0.50	
M4PFHpA	748828.4	3.146567	794,471.00	3.154633	94	50 - 150	-0.0081	+/-0.50	
M8PFOA	606833.4	3.43785	706,304.00	3.445833	86	50 - 150	-0.0080	+/-0.50	
M8PFOS	76914.9	3.6362	91,706.00	3.636183	84	50 - 150	0.0000	+/-0.50	
M9PFNA	413800.3	3.637233	560,883.00	3.637217	74	50 - 150	0.0000	+/-0.50	
MPFDoA	748007.7	4.072667	857,741.00	4.072667	87	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	159493.1	3.937517	204,574.00	3.945517	78	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	172305.1	3.865617	189,342.00	3.865617	91	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SB 137 (0-8) (22G1708-04)			Lab File ID: 22G1708-04.d			Analyzed: 08/22/22 04:04			
M8FOSA	184158.3	3.988583	269,638.00	3.980567	68	50 - 150	0.0080	+/-0.50	
M2-4:2FTS	76154.84	2.431017	126,864.00	2.439333	60	50 - 150	-0.0083	+/-0.50	
M2PFTA	697113	4.313433	1,005,267.00	4.321567	69	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	105555	3.7789	100,826.00	3.794833	105	50 - 150	-0.0159	+/-0.50	
MPFBA	330379.4	1.058467	383,883.00	1.058467	86	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	108922.4	2.77385	108,969.00	2.7902	100	50 - 150	-0.0164	+/-0.50	
M6PFDA	481011.6	3.787383	594,391.00	3.79535	81	50 - 150	-0.0080	+/-0.50	
M3PFBS	105373.3	1.84525	102,930.00	1.853533	102	50 - 150	-0.0083	+/-0.50	
M7PFUnA	638408.3	3.93005	762,555.00	3.938033	84	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	41445.22	3.420517	72,457.00	3.4293	57	50 - 150	-0.0088	+/-0.50	
M5PFPeA	344529.2	1.681733	359,506.00	1.681733	96	50 - 150	0.0000	+/-0.50	
M5PFHxA	656364.3	2.51485	692,970.00	2.523067	95	50 - 150	-0.0082	+/-0.50	
M3PFHxS	81241.49	3.18575	95,426.00	3.193817	85	50 - 150	-0.0081	+/-0.50	
M4PFHpA	726101.2	3.154633	794,471.00	3.154633	91	50 - 150	0.0000	+/-0.50	
M8PFOA	545794.2	3.43785	706,304.00	3.445833	77	50 - 150	-0.0080	+/-0.50	
M8PFOS	75483.55	3.6362	91,706.00	3.636183	82	50 - 150	0.0000	+/-0.50	
M9PFNA	411228.9	3.62925	560,883.00	3.637217	73	50 - 150	-0.0080	+/-0.50	
MPFDoA	649684.3	4.072667	857,741.00	4.072667	76	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	144750.8	3.937533	204,574.00	3.945517	71	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	163215.3	3.857667	189,342.00	3.865617	86	50 - 150	-0.0079	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B314297-BLK1)			Lab File ID: B314297-BLK1.d			Analyzed: 08/22/22 01:05			
M8FOSA	265467.2	3.980583	269,638.00	3.980583	98	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	138941.2	2.439333	126,864.00	2.439333	110	50 - 150	0.0000	+/-0.50	
M2PFTA	962268.2	4.321567	1,005,267.00	4.321567	96	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	150180.7	3.794833	100,826.00	3.794833	149	50 - 150	0.0000	+/-0.50	
MPFBA	420522.2	1.058467	383,883.00	1.058467	110	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	107485.7	2.790217	108,969.00	2.790217	99	50 - 150	0.0000	+/-0.50	
M6PFDA	622771	3.795367	594,391.00	3.79535	105	50 - 150	0.0000	+/-0.50	
M3PFBS	115163.7	1.853533	102,930.00	1.853533	112	50 - 150	0.0000	+/-0.50	
M7PFUnA	760591.8	3.94605	762,555.00	3.93805	100	50 - 150	0.0080	+/-0.50	
M2-6:2FTS	81132.32	3.437317	72,457.00	3.4373	112	50 - 150	0.0000	+/-0.50	
M5PFPeA	393682.6	1.690017	359,506.00	1.681733	110	50 - 150	0.0083	+/-0.50	
M5PFHxA	724681.8	2.523067	692,970.00	2.523067	105	50 - 150	0.0000	+/-0.50	
M3PFHxS	101388.8	3.193833	95,426.00	3.193817	106	50 - 150	0.0000	+/-0.50	
M4PFHpA	833453.2	3.162717	794,471.00	3.154633	105	50 - 150	0.0081	+/-0.50	
M8PFOA	748578.8	3.445833	706,304.00	3.445833	106	50 - 150	0.0000	+/-0.50	
M8PFOS	91949.78	3.644183	91,706.00	3.644183	100	50 - 150	0.0000	+/-0.50	
M9PFNA	546978.3	3.645217	560,883.00	3.637233	98	50 - 150	0.0080	+/-0.50	
MPFDoA	804101.8	4.080667	857,741.00	4.080667	94	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	188522.2	3.945517	204,574.00	3.945517	92	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	205287.9	3.873783	189,342.00	3.873783	108	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B314297-BS1)			Lab File ID: B314297-BS1.d			Analyzed: 08/22/22 00:58			
M8FOSA	278174.7	3.980583	269,638.00	3.980583	103	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	161837.6	2.439333	126,864.00	2.439333	128	50 - 150	0.0000	+/-0.50	
M2PFTA	1020966	4.321567	1,005,267.00	4.321567	102	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	141930.1	3.794833	100,826.00	3.794833	141	50 - 150	0.0000	+/-0.50	
MPFBA	438995.2	1.058467	383,883.00	1.058467	114	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	132197.9	2.7902	108,969.00	2.790217	121	50 - 150	0.0000	+/-0.50	
M6PFDA	632244.9	3.79535	594,391.00	3.79535	106	50 - 150	0.0000	+/-0.50	
M3PFBS	119752.4	1.853533	102,930.00	1.853533	116	50 - 150	0.0000	+/-0.50	
M7PFUnA	784737.8	3.93805	762,555.00	3.93805	103	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	96237.19	3.4373	72,457.00	3.4373	133	50 - 150	0.0000	+/-0.50	
M5PFPeA	417059.6	1.681733	359,506.00	1.681733	116	50 - 150	0.0000	+/-0.50	
M5PFHxA	759967.1	2.523067	692,970.00	2.523067	110	50 - 150	0.0000	+/-0.50	
M3PFHxS	106876.6	3.193817	95,426.00	3.193817	112	50 - 150	0.0000	+/-0.50	
M4PFHpA	885919.8	3.154633	794,471.00	3.154633	112	50 - 150	0.0000	+/-0.50	
M8PFOA	813422.3	3.445833	706,304.00	3.445833	115	50 - 150	0.0000	+/-0.50	
M8PFOS	103761.5	3.636183	91,706.00	3.644183	113	50 - 150	-0.0080	+/-0.50	
M9PFNA	555241.4	3.637217	560,883.00	3.637233	99	50 - 150	0.0000	+/-0.50	
MPFDoA	848878.1	4.08065	857,741.00	4.080667	99	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	207149.2	3.945517	204,574.00	3.945517	101	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	220044.1	3.873767	189,342.00	3.873783	116	50 - 150	0.0000	+/-0.50	

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SOP-466 PFAS in Soil	
Perfluorobutanoic acid (PFBA)	NH-P
Perfluorobutanesulfonic acid (PFBS)	NH-P
Perfluoropentanoic acid (PFPeA)	NH-P
Perfluorohexanoic acid (PFHxA)	NH-P
11Cl-PF3OUdS (F53B Major)	NH-P
9Cl-PF3ONS (F53B Minor)	NH-P
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P
8:2 Fluorotelomersulfonic acid (8:2FTS A)	NH-P
Perfluorodecanoic acid (PFDA)	NH-P
Perfluorododecanoic acid (PFDoA)	NH-P
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NH-P
Perfluoroheptanesulfonic acid (PFHpS)	NH-P
N-EtFOSAA	NH-P
N-MeFOSAA	NH-P
Perfluorotetradecanoic acid (PFTA)	NH-P
Perfluorotridecanoic acid (PFTrDA)	NH-P
4:2 Fluorotelomersulfonic acid (4:2FTS A)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P
Perfluorooctanesulfonamide (FOSA)	NH-P
Perfluorononanesulfonic acid (PFNS)	NH-P
Perfluoro-1-hexanesulfonamide (FHxSA)	NH-P
Perfluoro-1-butanesulfonamide (FBSA)	NH-P
Perfluorohexanesulfonic acid (PFHxS)	NH-P
Perfluoro-4-oxapentanoic acid (PFMPA)	NH-P
Perfluoro-5-oxahexanoic acid (PFMBA)	NH-P
6:2 Fluorotelomersulfonic acid (6:2FTS A)	NH-P
Perfluoropetanesulfonic acid (PFPeS)	NH-P
Perfluoroundecanoic acid (PFUnA)	NH-P
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P
Perfluoroheptanoic acid (PFHpA)	NH-P
Perfluorooctanoic acid (PFOA)	NH-P
Perfluorooctanesulfonic acid (PFOS)	NH-P
Perfluorononanoic acid (PFNA)	NH-P

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Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO 17025:2017	100033	03/1/2024
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2023
RI	Rhode Island Department of Health	LAO00373	12/30/2022
NC	North Carolina Div. of Water Quality	652	12/31/2022
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
FL	Florida Department of Health	E871027 NELAP	06/30/2023
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2022
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
NC-DW	North Carolina Department of Health and Human Services	25703	07/31/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022

22G1768

Pace Analytical®

Phone: 413-525-2332
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Access COC's and Support Requests

http://www.pacelabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

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Page 1 of 1

Company Name:	
Address:	55 Walkers Brook Dr #100 Reading, MA
Phone:	978-532-1900
Project Name:	Eversource Sudbury/Hudson
Project Location:	Sudbury, MA
Project Number:	ENG22-0402
Project Manager:	Paul McKinlay
Pace Quote Name/Number:	
Invoice Recipient:	Eversource
Sampled By:	EGE

Requested Turnaround Time			
7-Day	☐	10-Day	☐
PFAS 10-Day (std)	☒	Due Date:	

Rush-Approval Required			
1-Day	☐	3-Day	☐
2-Day	☐	4-Day	☐

Data Delivery	
Format: PDF ☐	EXCEL ☐
Other:	
CLP Like Data Pkg Required:	☐
Email To:	McKinlayP@wseinc.com
Fax To #:	Farley.Elizabeth@wseinc.com

Dissolved Metals Samples	
○	Field Filtered
○	Lab to Filter

Orthophosphate Samples	
○	Field Filtered
○	Lab to Filter

PCB ONLY

SOXHLET ☐

NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PFAS	RCRA8 metals & SVOC
1	SB 134 (0-8)	7/28 9:30	7/28 9:30	Comp	S	U		1	2			2	1
2	SB 135 (0-8)	7/28 9:10	7/28 9:10	comp	S	U		1	2			2	1
3	SB 136 (0-6.5)	7/28 9:40	7/28 9:40	comp	S	U		1	2			2	1
4	SB 137 (0-8)	7/28 10:35	7/28 10:35	comp	S	U		1	2			2	1

[2] Preservation Code

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Elizabeth Farley
Date/Time:	7/29/22 1120
Received by: (signature)	MARIL RUSSELL
Date/Time:	7-29-22 1120
Relinquished by: (signature)	
Date/Time:	7-29-22 1840
Received by: (signature)	
Date/Time:	7-29-22 1840
Relinquished by: (signature)	
Date/Time:	
Received by: (signature)	
Date/Time:	
Relinquished by: (signature)	
Date/Time:	
Received by: (signature)	
Date/Time:	

Client Comments:

Detection Limit Requirements	
MA	
CT	
Other:	

Special Requirements:	
☐	MA MCP Required
	MCP Certification Form Required
☐	CT RCP Required
	RCP Certification Form Required
☐	MA State DW Required
PWSID #	

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government	☐	Municipality	☐	MWRA	☐	WRTA	☐
Federal	☐	21 J	☐	School	☐		
City	☐	Brownfield	☐	MBTA	☐		

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. T
Chain of Custody is a legal document that must be complete and accurate and is used to determine wi
analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. P
Analytical values your partnership on each project and will try to assist with missing information, but
not be held accountable.

Table of Contents

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Pace PEOPLE ADVANCING SCIENCE

Doc# 277 Rev 6 July 2022

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Received By: W+S OAW Date: 07/29/22 Time: 1840

How were the samples received? In Cooler: T No Cooler: _____ On Ice: T No Ice: _____ Direct From Sample: _____ Ambient: _____ Melted Ice: _____

Were samples within Tempurature? Within 2-6°C: T By Gun #: 5 Actual Temp: 5-3 By Blank #: _____ Actual Temp: _____

Was Custody Seal In tact? N/A Were Samples Tampered with? N/A

Was COC Relinquished ? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client: T Analysis: T Sampler Name: T Project: T ID's: T Collection Dates/Times: T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____

Are there Rushes? F Who was notified? _____

Are there Short Holds? F Who was notified? _____

Samples are received within holding time? T Is there enough Volume? T

Is there Headspace where applicable? N/A MS/MSD? F

Proper Media/Containers Used? T splitting samples required? F

Were trip blanks received? F On COC? F

Do All Samples Have the proper pH? Acid N/A Base N/A

Vials	#	Containers	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	5 overlap
Meoh-		250 mL Amb.		250 mL Plastic	8	4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments: