



ANALYTICAL REPORT

Lab Number:	L2254266
Client:	Huntress Associates 17 Tewksbury Street Andover, MA 01810
ATTN:	Christian Huntress
Phone:	(978) 470-8882
Project Name:	LOWER GILE FIELD SOIL SAMPLING
Project Number:	Not Specified
Report Date:	11/01/22

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number: Not Specified

Lab Number: L2254266
Report Date: 11/01/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2254266-01	LOCATION 1	SOIL	25 GILE ROAD, MILTON, MA	09/30/22 09:35	09/30/22
L2254266-02	LOCATION 2	SOIL	25 GILE ROAD, MILTON, MA	09/30/22 10:05	09/30/22
L2254266-03	LOCATION 3	SOIL	25 GILE ROAD, MILTON, MA	09/30/22 10:20	09/30/22
L2254266-04	LOCATION 4	SOIL	25 GILE ROAD, MILTON, MA	09/30/22 10:40	09/30/22
L2254266-05	FIELD BLANK	WATER	25 GILE ROAD, MILTON, MA	09/30/22 10:40	09/30/22

Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number: Not Specified

Lab Number: L2254266
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Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number: Not Specified

Lab Number: L2254266
Report Date: 11/01/22

Case Narrative (continued)

Report Submission

November 01, 2022: This final report includes the results of all requested analyses.

October 25, 2022: This is a preliminary report.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Perfluorinated Alkyl Acids by Isotope Dilution

WG1698087-1 and WG1698087-2: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details.

Total Metals

L2254266-01 through -04: The sample has elevated detection limits for all elements, with the exception of mercury, due to the dilution required by matrix interferences encountered during analysis.

The WG1694533-3 MS recoveries for aluminum (268%) and iron (171%), performed on L2254266-04, do not apply because the sample concentrations are greater than four times the spike amounts added.

The WG1694533-3 MS recoveries, performed on L2254266-04, are outside the acceptance criteria for calcium (180%) and magnesium (161%). A post digestion spike was performed and was within acceptance criteria.

The WG1694533-4 Laboratory Duplicate RPDs for chromium (24%) and magnesium (33%), performed on L2254266-04, are outside the acceptance criteria. The elevated RPDs have been attributed to the non-homogeneous nature of the native sample.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative

Date: 11/01/22

ORGANICS

SEMIVOLATILES

Project Name: LOWER GILE FIELD SOIL SAMPLING**Lab Number:** L2254266**Project Number:** Not Specified**Report Date:** 11/01/22**SAMPLE RESULTS**

Lab ID: L2254266-01
 Client ID: LOCATION 1
 Sample Location: 25 GILE ROAD, MILTON, MA

Date Collected: 09/30/22 09:35
 Date Received: 09/30/22
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 134,LCMSMS-ID
 Analytical Date: 10/31/22 16:19
 Analyst: AC
 Percent Solids: 73%

Extraction Method: ALPHA 23528
 Extraction Date: 10/11/22 18:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	0.043	J	ng/g	0.656	0.030	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/g	0.656	0.060	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	0.328	0.051	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/g	1.31	0.085	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/g	0.656	0.069	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/g	1.31	0.110	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/g	0.328	0.059	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	0.328	0.079	1
Perfluorooctanoic Acid (PFOA)	0.144	J	ng/g	0.328	0.055	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/g	0.656	0.236	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/g	0.656	0.179	1
Perfluorononanoic Acid (PFNA)	0.106	J	ng/g	0.328	0.098	1
Perfluorooctanesulfonic Acid (PFOS)	0.513		ng/g	0.328	0.170	1
Perfluorodecanoic Acid (PFDA)	0.154	J	ng/g	0.328	0.088	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/g	0.656	0.377	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/g	1.31	0.392	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	0.656	0.264	1
Perfluoroundecanoic Acid (PFUnA)	0.066	JF	ng/g	0.656	0.061	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/g	0.656	0.201	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/g	0.656	0.128	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	0.656	0.111	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/g	0.656	0.092	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/g	0.656	0.268	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/g	0.656	0.071	1

Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number: Not Specified

Lab Number: L2254266
Report Date: 11/01/22

SAMPLE RESULTS

Lab ID: L2254266-01
Client ID: LOCATION 1
Sample Location: 25 GILE ROAD, MILTON, MA

Date Collected: 09/30/22 09:35
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Surrogate (Extracted Internal Standard)	% Recovery			Qualifier	Acceptance Criteria	
Perfluoro[13C4]Butanoic Acid (MPFBA)	85				61-135	
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	79				58-150	
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	96				74-139	
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	79				14-167	
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	88				66-128	
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	84				71-129	
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	95				78-139	
Perfluoro[13C8]Octanoic Acid (M8PFOA)	85				75-130	
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	73				20-154	
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	82				72-140	
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	87				79-136	
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	84				75-130	
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	77				19-175	
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	51				31-134	
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	85				61-155	
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	34				5-117	
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	47				34-137	
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	76				54-150	
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	37				24-159	

Project Name: LOWER GILE FIELD SOIL SAMPLING**Lab Number:** L2254266**Project Number:** Not Specified**Report Date:** 11/01/22**SAMPLE RESULTS**

Lab ID: L2254266-02
 Client ID: LOCATION 2
 Sample Location: 25 GILE ROAD, MILTON, MA

Date Collected: 09/30/22 10:05
 Date Received: 09/30/22
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 134,LCMSMS-ID
 Analytical Date: 10/31/22 14:56
 Analyst: AC
 Percent Solids: 73%

Extraction Method: ALPHA 23528
 Extraction Date: 10/11/22 18:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/g	0.632	0.029	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/g	0.632	0.058	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	0.316	0.049	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/g	1.26	0.082	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/g	0.632	0.066	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/g	1.26	0.106	1
Perfluoroheptanoic Acid (PFHpA)	0.072	J	ng/g	0.316	0.057	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	0.316	0.077	1
Perfluorooctanoic Acid (PFOA)	0.183	J	ng/g	0.316	0.053	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/g	0.632	0.227	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/g	0.632	0.172	1
Perfluorononanoic Acid (PFNA)	0.109	J	ng/g	0.316	0.095	1
Perfluorooctanesulfonic Acid (PFOS)	0.843	F	ng/g	0.316	0.164	1
Perfluorodecanoic Acid (PFDA)	0.233	J	ng/g	0.316	0.085	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/g	0.632	0.363	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/g	1.26	0.378	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	0.632	0.255	1
Perfluoroundecanoic Acid (PFUnA)	0.059	JF	ng/g	0.632	0.059	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/g	0.632	0.193	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/g	0.632	0.124	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	0.632	0.107	1
Perfluorododecanoic Acid (PFDoA)	0.111	JF	ng/g	0.632	0.089	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/g	0.632	0.258	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/g	0.632	0.068	1

Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number: Not Specified

Lab Number: L2254266
Report Date: 11/01/22

SAMPLE RESULTS

Lab ID: L2254266-02
Client ID: LOCATION 2
Sample Location: 25 GILE ROAD, MILTON, MA

Date Collected: 09/30/22 10:05
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Surrogate (Extracted Internal Standard)	% Recovery			Qualifier	Acceptance Criteria	
Perfluoro[13C4]Butanoic Acid (MPFBA)	76				61-135	
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	73				58-150	
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	94				74-139	
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	73				14-167	
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	85				66-128	
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	81				71-129	
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	94				78-139	
Perfluoro[13C8]Octanoic Acid (M8PFOA)	84				75-130	
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	67				20-154	
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	80				72-140	
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	83				79-136	
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	82				75-130	
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	78				19-175	
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	42				31-134	
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	81				61-155	
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	9				5-117	
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	40				34-137	
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	67				54-150	
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	43				24-159	

Project Name: LOWER GILE FIELD SOIL SAMPLING**Lab Number:** L2254266**Project Number:** Not Specified**Report Date:** 11/01/22**SAMPLE RESULTS**

Lab ID: L2254266-03
 Client ID: LOCATION 3
 Sample Location: 25 GILE ROAD, MILTON, MA

Date Collected: 09/30/22 10:20
 Date Received: 09/30/22
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 134,LCMSMS-ID
 Analytical Date: 10/31/22 15:29
 Analyst: AC
 Percent Solids: 88%

Extraction Method: ALPHA 23528
 Extraction Date: 10/11/22 18:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	0.041	J	ng/g	0.500	0.023	1
Perfluoropentanoic Acid (PFPeA)	0.046	J	ng/g	0.500	0.046	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	0.250	0.039	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/g	0.999	0.064	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/g	0.500	0.052	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/g	0.999	0.083	1
Perfluoroheptanoic Acid (PFHpA)	0.052	J	ng/g	0.250	0.045	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	0.250	0.060	1
Perfluorooctanoic Acid (PFOA)	0.131	JF	ng/g	0.250	0.042	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/g	0.500	0.179	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/g	0.500	0.136	1
Perfluorononanoic Acid (PFNA)	0.080	J	ng/g	0.250	0.075	1
Perfluorooctanesulfonic Acid (PFOS)	0.586		ng/g	0.250	0.130	1
Perfluorodecanoic Acid (PFDA)	0.183	J	ng/g	0.250	0.067	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/g	0.500	0.287	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/g	0.999	0.299	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	0.500	0.201	1
Perfluoroundecanoic Acid (PFUnA)	0.064	J	ng/g	0.500	0.047	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/g	0.500	0.153	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/g	0.500	0.098	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	0.500	0.084	1
Perfluorododecanoic Acid (PFDoA)	0.076	JF	ng/g	0.500	0.070	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/g	0.500	0.204	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/g	0.500	0.054	1

Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number: Not Specified

Lab Number: L2254266
Report Date: 11/01/22

SAMPLE RESULTS

Lab ID: L2254266-03
Client ID: LOCATION 3
Sample Location: 25 GILE ROAD, MILTON, MA

Date Collected: 09/30/22 10:20
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	79		61-135
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	75		58-150
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	91		74-139
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	72		14-167
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	84		66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	80		71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	94		78-139
Perfluoro[13C8]Octanoic Acid (M8PFOA)	83		75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	69		20-154
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	77		72-140
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	81		79-136
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	81		75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	79		19-175
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	38		31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	76		61-155
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	20		5-117
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	38		34-137
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	69		54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	40		24-159

Project Name: LOWER GILE FIELD SOIL SAMPLING**Lab Number:** L2254266**Project Number:** Not Specified**Report Date:** 11/01/22**SAMPLE RESULTS**

Lab ID: L2254266-04
 Client ID: LOCATION 4
 Sample Location: 25 GILE ROAD, MILTON, MA

Date Collected: 09/30/22 10:40
 Date Received: 09/30/22
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 134,LCMSMS-ID
 Analytical Date: 10/31/22 15:46
 Analyst: AC
 Percent Solids: 87%

Extraction Method: ALPHA 23528
 Extraction Date: 10/11/22 18:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	0.035	J	ng/g	0.532	0.024	1
Perfluoropentanoic Acid (PFPeA)	0.083	J	ng/g	0.532	0.049	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	0.266	0.042	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/g	1.06	0.069	1
Perfluorohexanoic Acid (PFHxA)	0.080	J	ng/g	0.532	0.056	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/g	1.06	0.089	1
Perfluoroheptanoic Acid (PFHpA)	0.086	J	ng/g	0.266	0.048	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	0.266	0.064	1
Perfluorooctanoic Acid (PFOA)	0.311		ng/g	0.266	0.045	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/g	0.532	0.191	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/g	0.532	0.145	1
Perfluorononanoic Acid (PFNA)	0.169	J	ng/g	0.266	0.080	1
Perfluorooctanesulfonic Acid (PFOS)	0.767		ng/g	0.266	0.138	1
Perfluorodecanoic Acid (PFDA)	0.210	J	ng/g	0.266	0.071	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/g	0.532	0.305	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/g	1.06	0.318	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	0.532	0.214	1
Perfluoroundecanoic Acid (PFUnA)	0.072	JF	ng/g	0.532	0.050	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/g	0.532	0.163	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/g	0.532	0.104	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	0.532	0.090	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/g	0.532	0.075	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/g	0.532	0.218	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/g	0.532	0.058	1

Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number: Not Specified

Lab Number: L2254266
Report Date: 11/01/22

SAMPLE RESULTS

Lab ID: L2254266-04
Client ID: LOCATION 4
Sample Location: 25 GILE ROAD, MILTON, MA

Date Collected: 09/30/22 10:40
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Surrogate (Extracted Internal Standard)	% Recovery			Qualifier	Acceptance Criteria	
Perfluoro[13C4]Butanoic Acid (MPFBA)	92				61-135	
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	87				58-150	
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	104				74-139	
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	88				14-167	
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	101				66-128	
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	96				71-129	
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	105				78-139	
Perfluoro[13C8]Octanoic Acid (M8PFOA)	99				75-130	
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	84				20-154	
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	91				72-140	
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	94				79-136	
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	91				75-130	
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	97				19-175	
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	64				31-134	
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	91				61-155	
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	58				5-117	
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	64				34-137	
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	85				54-150	
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	52				24-159	

Project Name: LOWER GILE FIELD SOIL SAMPLING**Lab Number:** L2254266**Project Number:** Not Specified**Report Date:** 11/01/22**SAMPLE RESULTS**

Lab ID: L2254266-05
 Client ID: FIELD BLANK
 Sample Location: 25 GILE ROAD, MILTON, MA

Date Collected: 09/30/22 10:40
 Date Received: 09/30/22
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 134,LCMSMS-ID
 Analytical Date: 10/31/22 16:02
 Analyst: AC

Extraction Method: ALPHA 23528
 Extraction Date: 10/14/22 04:12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	1.82	0.372	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	1.82	0.361	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.82	0.217	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.82	0.412	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.82	0.299	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.82	0.223	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.82	0.205	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.82	0.343	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.82	0.215	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.82	1.21	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.82	0.627	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.82	0.284	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.82	0.459	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.82	0.277	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.82	1.10	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.82	1.02	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.82	0.590	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.82	0.237	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.82	0.893	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.82	0.529	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.82	0.733	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.82	0.339	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.82	0.298	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.82	0.226	1

Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number: Not Specified

Lab Number: L2254266
Report Date: 11/01/22

SAMPLE RESULTS

Lab ID: L2254266-05
Client ID: FIELD BLANK
Sample Location: 25 GILE ROAD, MILTON, MA

Date Collected: 09/30/22 10:40
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	92		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	92		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	107		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	90		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	101		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	95		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	105		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	95		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	78		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	87		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	91		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	91		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	81		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	70		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	94		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	41		5-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	71		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	86		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	74		22-136

Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number: Not Specified

Lab Number: L2254266
Report Date: 11/01/22

Method Blank Analysis Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 10/31/22 14:40
Analyst: AC

Extraction Method: ALPHA 23528
Extraction Date: 10/11/22 18:00

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-04 Batch: WG1698087-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/g	0.500	0.023
Perfluoropentanoic Acid (PFPeA)	ND		ng/g	0.500	0.046
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	0.250	0.039
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/g	1.00	0.065
Perfluorohexanoic Acid (PFHxA)	ND		ng/g	0.500	0.053
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/g	1.00	0.084
Perfluoroheptanoic Acid (PFHpA)	ND		ng/g	0.250	0.045
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	0.250	0.061
Perfluorooctanoic Acid (PFOA)	ND		ng/g	0.250	0.042
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/g	0.500	0.180
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/g	0.500	0.136
Perfluorononanoic Acid (PFNA)	ND		ng/g	0.250	0.075
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/g	0.250	0.130
Perfluorodecanoic Acid (PFDA)	ND		ng/g	0.250	0.067
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/g	0.500	0.287
Perfluorononanesulfonic Acid (PFNS)	ND		ng/g	1.00	0.299
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	0.500	0.202
Perfluoroundecanoic Acid (PFUnA)	ND		ng/g	0.500	0.047
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/g	0.500	0.153
Perfluorooctanesulfonamide (FOSA)	ND		ng/g	0.500	0.098
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	0.500	0.085
Perfluorododecanoic Acid (PFDoA)	ND		ng/g	0.500	0.070
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/g	0.500	0.204
Perfluorotetradecanoic Acid (PFTA)	ND		ng/g	0.500	0.054

Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number: Not Specified

Lab Number: L2254266
Report Date: 11/01/22

Method Blank Analysis Batch Quality Control

Analytical Method: 134,LCMSMS-ID
 Analytical Date: 10/31/22 14:40
 Analyst: AC

Extraction Method: ALPHA 23528
 Extraction Date: 10/11/22 18:00

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-04 Batch: WG1698087-1					

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	60	Q	61-135
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	59		58-150
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	70	Q	74-139
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	59		14-167
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	65	Q	66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	61	Q	71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	68	Q	78-139
Perfluoro[13C8]Octanoic Acid (M8PFOA)	61	Q	75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	50		20-154
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	57	Q	72-140
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	57	Q	79-136
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	57	Q	75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	48		19-175
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	31		31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	55	Q	61-155
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	42		5-117
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	31	Q	34-137
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	47	Q	54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	20	Q	24-159

Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number: Not Specified

Lab Number: L2254266
Report Date: 11/01/22

Method Blank Analysis Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 10/28/22 13:32
Analyst: AC

Extraction Method: ALPHA 23528
Extraction Date: 10/14/22 04:12

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 05 Batch: WG1699273-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.00	0.408
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.00	0.396
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.238
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	2.00	0.452
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.328
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	2.00	0.245
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.225
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.376
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.236
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.00	1.33
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.00	0.688
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.312
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.504
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.304
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.00	1.21
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	2.00	1.12
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.648
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.260
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.00	0.980
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.804
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.372
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.327
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.248

Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number: Not Specified

Lab Number: L2254266
Report Date: 11/01/22

Method Blank Analysis Batch Quality Control

Analytical Method: 134,LCMSMS-ID
 Analytical Date: 10/28/22 13:32
 Analyst: AC

Extraction Method: ALPHA 23528
 Extraction Date: 10/14/22 04:12

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 05 Batch: WG1699273-1					

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	92		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	92		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	101		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	98		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	93		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	93		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	100		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	98		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	89		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	93		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	92		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	94		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	114		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	70		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	99		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	39		5-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	66		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	88		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	75		22-136

Lab Control Sample Analysis

Batch Quality Control

Project Name: LOWER GILE FIELD SOIL SAMPLING

Project Number: Not Specified

Lab Number: L2254266

Report Date: 11/01/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-04 Batch: WG1698087-2								
Perfluorobutanoic Acid (PFBA)	97		-		71-135	-		30
Perfluoropentanoic Acid (PFPeA)	97		-		69-132	-		30
Perfluorobutanesulfonic Acid (PFBS)	97		-		72-128	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	94		-		62-145	-		30
Perfluorohexanoic Acid (PFHxA)	94		-		70-132	-		30
Perfluoropentanesulfonic Acid (PFPeS)	101		-		73-123	-		30
Perfluoroheptanoic Acid (PFHpA)	97		-		71-131	-		30
Perfluorohexanesulfonic Acid (PFHxS)	108		-		67-130	-		30
Perfluorooctanoic Acid (PFOA)	94		-		69-133	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	103		-		64-140	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	103		-		70-132	-		30
Perfluorononanoic Acid (PFNA)	98		-		72-129	-		30
Perfluorooctanesulfonic Acid (PFOS)	109		-		68-136	-		30
Perfluorodecanoic Acid (PFDA)	101		-		69-133	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	101		-		65-137	-		30
Perfluorononanesulfonic Acid (PFNS)	90		-		69-125	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	99		-		63-144	-		30
Perfluoroundecanoic Acid (PFUnA)	113		-		64-136	-		30
Perfluorodecanesulfonic Acid (PFDS)	81		-		59-134	-		30
Perfluorooctanesulfonamide (FOSA)	107		-		67-137	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	100		-		61-139	-		30
Perfluorododecanoic Acid (PFDoA)	98		-		69-135	-		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: LOWER GILE FIELD SOIL SAMPLING

Lab Number: L2254266

Project Number: Not Specified

Report Date: 11/01/22

Parameter	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-04 Batch: WG1698087-2								
Perfluorotridecanoic Acid (PFTTrDA)	121		-		66-139	-		30
Perfluorotetradecanoic Acid (PFTA)	98		-		69-133	-		30

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCS %Recovery	Qual	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	57	Q			61-135
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	53	Q			58-150
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	66	Q			74-139
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	55				14-167
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	61	Q			66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	58	Q			71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	64	Q			78-139
Perfluoro[13C8]Octanoic Acid (M8PFOA)	59	Q			75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	45				20-154
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	55	Q			72-140
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	54	Q			79-136
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	53	Q			75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	48				19-175
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	32				31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	50	Q			61-155
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	19				5-117
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	30	Q			34-137
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	42	Q			54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	20	Q			24-159

Lab Control Sample Analysis

Batch Quality Control

Project Name: LOWER GILE FIELD SOIL SAMPLING

Project Number: Not Specified

Lab Number: L2254266

Report Date: 11/01/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 05 Batch: WG1699273-2								
Perfluorobutanoic Acid (PFBA)	100		-		67-148	-		30
Perfluoropentanoic Acid (PFPeA)	101		-		63-161	-		30
Perfluorobutanesulfonic Acid (PFBS)	101		-		65-157	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	103		-		37-219	-		30
Perfluorohexanoic Acid (PFHxA)	98		-		69-168	-		30
Perfluoropentanesulfonic Acid (PFPeS)	102		-		52-156	-		30
Perfluoroheptanoic Acid (PFHpA)	99		-		58-159	-		30
Perfluorohexanesulfonic Acid (PFHxS)	110		-		69-177	-		30
Perfluorooctanoic Acid (PFOA)	96		-		63-159	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	108		-		49-187	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	104		-		61-179	-		30
Perfluorononanoic Acid (PFNA)	99		-		68-171	-		30
Perfluorooctanesulfonic Acid (PFOS)	113		-		52-151	-		30
Perfluorodecanoic Acid (PFDA)	95		-		63-171	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	122		-		56-173	-		30
Perfluorononanesulfonic Acid (PFNS)	103		-		48-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	101		-		60-166	-		30
Perfluoroundecanoic Acid (PFUnA)	112		-		60-153	-		30
Perfluorodecanesulfonic Acid (PFDS)	100		-		38-156	-		30
Perfluorooctanesulfonamide (FOSA)	97		-		46-170	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	101		-		45-170	-		30
Perfluorododecanoic Acid (PFDoA)	98		-		67-153	-		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: LOWER GILE FIELD SOIL SAMPLING

Lab Number: L2254266

Project Number: Not Specified

Report Date: 11/01/22

Parameter	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 05 Batch: WG1699273-2								
Perfluorotridecanoic Acid (PFTrDA)	115		-		48-158	-		30
Perfluorotetradecanoic Acid (PFTA)	110		-		59-182	-		30

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCS %Recovery	Qual	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	93				58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	100				62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	105				70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	101				12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	96				57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	95				60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	103				71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	99				62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	96				14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	92				59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	96				69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	96				62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	110				10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	67				24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	97				55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	36				5-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	65				27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	87				48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	78				22-136

Matrix Spike Analysis

Batch Quality Control

Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number: Not Specified

Lab Number: L2254266
Report Date: 11/01/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1698087-3 QC Sample: L2254266-01 Client ID: LOCATION 1												
Perfluorobutanoic Acid (PFBA)	0.043J	6.53	6.36	97		-	-		71-135	-		30
Perfluoropentanoic Acid (PFPeA)	ND	6.53	6.36	97		-	-		69-132	-		30
Perfluorobutanesulfonic Acid (PFBS)	ND	5.8	5.61	97		-	-		72-128	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	6.12	6.04	99		-	-		62-145	-		30
Perfluorohexanoic Acid (PFHxA)	ND	6.53	6.26	96		-	-		70-132	-		30
Perfluoropentanesulfonic Acid (PFPeS)	ND	6.15	6.20	101		-	-		73-123	-		30
Perfluoroheptanoic Acid (PFHpA)	ND	6.53	6.42	98		-	-		71-131	-		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	5.97	6.50	109		-	-		67-130	-		30
Perfluorooctanoic Acid (PFOA)	0.144J	6.53	6.33	95		-	-		69-133	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	6.22	5.91	95		-	-		64-140	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	6.23	6.46	104		-	-		70-132	-		30
Perfluorononanoic Acid (PFNA)	0.106J	6.53	6.36	96		-	-		72-129	-		30
Perfluorooctanesulfonic Acid (PFOS)	0.513	6.06	7.25	111		-	-		68-136	-		30
Perfluorodecanoic Acid (PFDA)	0.154J	6.53	6.79	102		-	-		69-133	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	6.27	6.86	109		-	-		65-137	-		30
Perfluorononanesulfonic Acid (PFNS)	ND	6.28	6.11	97		-	-		69-125	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	6.53	6.20	95		-	-		63-144	-		30
Perfluoroundecanoic Acid (PFUnA)	0.066JF	6.53	6.75	102		-	-		64-136	-		30
Perfluorodecanesulfonic Acid (PFDS)	ND	6.31	5.98	95		-	-		59-134	-		30
Perfluorooctanesulfonamide (FOSA)	ND	6.53	6.12	94		-	-		67-137	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	6.53	6.26	96		-	-		61-139	-		30
Perfluorododecanoic Acid (PFDoA)	ND	6.53	6.78	104		-	-		69-135	-		30

Matrix Spike Analysis

Batch Quality Control

Project Name: LOWER GILE FIELD SOIL SAMPLING

Project Number: Not Specified

Lab Number: L2254266

Report Date: 11/01/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1698087-3 QC Sample: L2254266-01 Client ID: LOCATION 1												
Perfluorotridecanoic Acid (PFTrDA)	ND	6.53	8.28	127		-	-		66-139	-		30
Perfluorotetradecanoic Acid (PFTA)	ND	6.53	7.11	109		-	-		69-133	-		30

Surrogate (Extracted Internal Standard)	MS % Recovery	Qualifier	MSD % Recovery	Qualifier	Acceptance Criteria
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	81				19-175
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	83				14-167
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	76				20-154
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	48				34-137
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	50				31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	84				61-155
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	84				75-130
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	88				66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	82				71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	92				78-139
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	73				54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	46				24-159
Perfluoro[13C4]Butanoic Acid (MPFBA)	82				61-135
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	75				58-150
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	20				5-117
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	84				79-136
Perfluoro[13C8]Octanoic Acid (M8PFOA)	84				75-130
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	80				72-140
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	93				74-139

Matrix Spike Analysis **Batch Quality Control**

Project Name: LOWER GILE FIELD SOIL SAMPLING

Project Number: Not Specified

Lab Number: L2254266

Report Date: 11/01/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 05 QC Batch ID: WG1699273-3 QC Sample: L2254345-07 Client ID: MS Sample												
Perfluorobutanoic Acid (PFBA)	0.376J	37.9	37.6	98		-	-		67-148	-		30
Perfluoropentanoic Acid (PFPeA)	ND	37.9	37.8	100		-	-		63-161	-		30
Perfluorobutanesulfonic Acid (PFBS)	ND	33.6	32.4	96		-	-		65-157	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	35.5	36.2	102		-	-		37-219	-		30
Perfluorohexanoic Acid (PFHxA)	ND	37.9	37.2	98		-	-		69-168	-		30
Perfluoropentanesulfonic Acid (PFPeS)	ND	35.7	36.9	103		-	-		52-156	-		30
Perfluoroheptanoic Acid (PFHpA)	0.328J	37.9	37.3	98		-	-		58-159	-		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	34.6	38.4	111		-	-		69-177	-		30
Perfluorooctanoic Acid (PFOA)	1.02J	37.9	37.6	97		-	-		63-159	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	36	37.7	105		-	-		49-187	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	36.1	36.5	101		-	-		61-179	-		30
Perfluorononanoic Acid (PFNA)	ND	37.9	35.5	94		-	-		68-171	-		30
Perfluorooctanesulfonic Acid (PFOS)	ND	35.1	38.0	108		-	-		52-151	-		30
Perfluorodecanoic Acid (PFDA)	ND	37.9	36.7	97		-	-		63-171	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	36.4	47.0	129		-	-		56-173	-		30
Perfluorononanesulfonic Acid (PFNS)	ND	36.4	34.9	96		-	-		48-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	37.9	38.9	103		-	-		60-166	-		30
Perfluoroundecanoic Acid (PFUnA)	ND	37.9	40.1	106		-	-		60-153	-		30
Perfluorodecanesulfonic Acid (PFDS)	ND	36.6	34.7	95		-	-		38-156	-		30
Perfluorooctanesulfonamide (FOSA)	ND	37.9	38.4	101		-	-		46-170	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	37.9	32.9	87		-	-		45-170	-		30
Perfluorododecanoic Acid (PFDoA)	ND	37.9	36.8	97		-	-		67-153	-		30

Matrix Spike Analysis**Batch Quality Control****Project Name:** LOWER GILE FIELD SOIL SAMPLING**Project Number:** Not Specified**Lab Number:** L2254266**Report Date:** 11/01/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 05 QC Batch ID: WG1699273-3 QC Sample: L2254345-07 Client ID: MS Sample												
Perfluorotridecanoic Acid (PFTrDA)	ND	37.9	41.8	110		-	-		48-158	-		30
Perfluorotetradecanoic Acid (PFTA)	ND	37.9	38.7	102		-	-		59-182	-		30

Surrogate (Extracted Internal Standard)	MS % Recovery	Qualifier	MSD % Recovery	Qualifier	Acceptance Criteria
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	96				10-162
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	145	Q			12-142
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	94				14-147
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	57				27-126
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	57				24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	83				55-137
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	83				62-124
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	91				57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	88				60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	96				71-134
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	74				48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	69				22-136
Perfluoro[13C4]Butanoic Acid (MPFBA)	83				58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	89				62-163
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	19				5-112
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	89				69-131
Perfluoro[13C8]Octanoic Acid (M8PFOA)	87				62-129
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	81				59-139
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	98				70-131

Project Name: LOWER GILE FIELD SOIL SAMPLING

Project Number: Not Specified

Lab Duplicate Analysis

Batch Quality Control

Lab Number: L2254266

Report Date: 11/01/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1698087-4 QC Sample: L2254266-02 Client ID: LOCATION 2						
Perfluorobutanoic Acid (PFBA)	ND	0.046J	ng/g	NC		30
Perfluoropentanoic Acid (PFPeA)	ND	0.066J	ng/g	NC		30
Perfluorobutanesulfonic Acid (PFBS)	ND	ND	ng/g	NC		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	ND	ng/g	NC		30
Perfluorohexanoic Acid (PFHxA)	ND	0.089J	ng/g	NC		30
Perfluoropentanesulfonic Acid (PFPeS)	ND	ND	ng/g	NC		30
Perfluoroheptanoic Acid (PFHpA)	0.072J	0.074J	ng/g	NC		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	ND	ng/g	NC		30
Perfluorooctanoic Acid (PFOA)	0.183J	0.193J	ng/g	NC		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	ND	ng/g	NC		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	ND	ng/g	NC		30
Perfluorononanoic Acid (PFNA)	0.109J	0.107J	ng/g	NC		30
Perfluorooctanesulfonic Acid (PFOS)	0.843F	0.703	ng/g	18		30
Perfluorodecanoic Acid (PFDA)	0.233J	0.236J	ng/g	NC		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	ND	ng/g	NC		30
Perfluorononanesulfonic Acid (PFNS)	ND	ND	ng/g	NC		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	ND	ng/g	NC		30
Perfluoroundecanoic Acid (PFUnA)	0.059JF	0.067JF	ng/g	NC		30
Perfluorodecanesulfonic Acid (PFDS)	ND	ND	ng/g	NC		30
Perfluorooctanesulfonamide (FOSA)	ND	ND	ng/g	NC		30

Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number: Not Specified

Lab Duplicate Analysis

Batch Quality Control

Lab Number: L2254266
Report Date: 11/01/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1698087-4 QC Sample: L2254266-02 Client ID: LOCATION 2						
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ng/g	NC		30
Perfluorododecanoic Acid (PFDoA)	0.111JF	0.105J	ng/g	NC		30
Perfluorotridecanoic Acid (PFTrDA)	ND	ND	ng/g	NC		30
Perfluorotetradecanoic Acid (PFTA)	ND	ND	ng/g	NC		30

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	76		79		61-135
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	73		74		58-150
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	94		94		74-139
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	73		73		14-167
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	85		88		66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	81		81		71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	94		93		78-139
Perfluoro[13C8]Octanoic Acid (M8PFOA)	84		84		75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	67		68		20-154
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	80		78		72-140
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	83		82		79-136
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	82		79		75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	78		74		19-175
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	42		42		31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	81		74		61-155
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	9		13		5-117
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	40		39		34-137
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	67		63		54-150

Project Name: LOWER GILE FIELD SOIL SAMPLING

Project Number: Not Specified

Lab Duplicate Analysis

Batch Quality Control

Lab Number: L2254266

Report Date: 11/01/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1698087-4 QC Sample: L2254266-02 Client ID: LOCATION 2						

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	43		42		24-159

Lab Duplicate Analysis Batch Quality Control

Project Name: LOWER GILE FIELD SOIL SAMPLING

Project Number: Not Specified

Lab Number: L2254266

Report Date: 11/01/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 05 QC Batch ID: WG1699273-4 QC Sample: L2254458-01 Client ID: DUP Sample						
Perfluorobutanoic Acid (PFBA)	8.70	8.67	ng/l	0		30
Perfluoropentanoic Acid (PFPeA)	15.9	15.8	ng/l	1		30
Perfluorobutanesulfonic Acid (PFBS)	2.42	2.11	ng/l	14		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	ND	ng/l	NC		30
Perfluorohexanoic Acid (PFHxA)	37.0	36.4	ng/l	2		30
Perfluoropentanesulfonic Acid (PFPeS)	0.253J	0.305JF	ng/l	NC		30
Perfluoroheptanoic Acid (PFHpA)	3.79	3.78	ng/l	0		30
Perfluorohexanesulfonic Acid (PFHxS)	1.10JF	1.15J	ng/l	NC		30
Perfluorooctanoic Acid (PFOA)	11.4	11.6	ng/l	2		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	1.50J	ng/l	NC		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	ND	ng/l	NC		30
Perfluorononanoic Acid (PFNA)	0.744J	0.972J	ng/l	NC		30
Perfluorooctanesulfonic Acid (PFOS)	3.65	3.84	ng/l	5		30
Perfluorodecanoic Acid (PFDA)	1.01J	1.31J	ng/l	NC		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	ND	ng/l	NC		30
Perfluorononanesulfonic Acid (PFNS)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	ND	ng/l	NC		30
Perfluoroundecanoic Acid (PFUnA)	ND	ND	ng/l	NC		30
Perfluorodecanesulfonic Acid (PFDS)	ND	ND	ng/l	NC		30
Perfluorooctanesulfonamide (FOSA)	ND	ND	ng/l	NC		30

Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number: Not Specified

Lab Duplicate Analysis Batch Quality Control

Lab Number: L2254266
Report Date: 11/01/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 05 QC Batch ID: WG1699273-4 QC Sample: L2254458-01 Client ID: DUP Sample						
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ng/l	NC		30
Perfluorododecanoic Acid (PFDoA)	ND	ND	ng/l	NC		30
Perfluorotridecanoic Acid (PFTrDA)	ND	ND	ng/l	NC		30
Perfluorotetradecanoic Acid (PFTA)	ND	ND	ng/l	NC		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	ND	ng/l	NC		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	ND	ng/l	NC		30
Perfluorohexadecanoic Acid (PFHxDA)	ND	ND	ng/l	NC		30
Perfluorooctadecanoic Acid (PFODA)	ND	ND	ng/l	NC		30

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	75		73		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	68		65		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	90		91		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	163	Q	161	Q	12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	71		64		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	68		62		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	98		95		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	85		77		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	173	Q	174	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	80		69		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	81		76		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	71		63		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	109		100		10-162

Project Name: LOWER GILE FIELD SOIL SAMPLING

Project Number: Not Specified

Lab Duplicate Analysis

Batch Quality Control

Lab Number: L2254266

Report Date: 11/01/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 05 QC Batch ID: WG1699273-4 QC Sample: L2254458-01 Client ID: DUP Sample						

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	36		36		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	61		59		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	12		7		5-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	35		28		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	53		51		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	49		49		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	66		62		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	35		36		10-206

METALS

Project Name: LOWER GILE FIELD SOIL SAMPLING**Lab Number:** L2254266**Project Number:** Not Specified**Report Date:** 11/01/22**SAMPLE RESULTS**

Lab ID: L2254266-01

Date Collected: 09/30/22 09:35

Client ID: LOCATION 1

Date Received: 09/30/22

Sample Location: 25 GILE ROAD, MILTON, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 73%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	5000		mg/kg	10.5	2.83	2	10/02/22 13:37	10/20/22 10:30	EPA 3050B	1,6010D	NTB
Antimony, Total	ND		mg/kg	5.24	0.398	2	10/02/22 13:37	10/20/22 10:30	EPA 3050B	1,6010D	NTB
Arsenic, Total	4.85		mg/kg	1.05	0.218	2	10/02/22 13:37	10/20/22 10:30	EPA 3050B	1,6010D	NTB
Barium, Total	15.7		mg/kg	1.05	0.182	2	10/02/22 13:37	10/20/22 10:30	EPA 3050B	1,6010D	NTB
Beryllium, Total	0.337	J	mg/kg	0.524	0.035	2	10/02/22 13:37	10/20/22 10:30	EPA 3050B	1,6010D	NTB
Cadmium, Total	0.136	J	mg/kg	1.05	0.103	2	10/02/22 13:37	10/20/22 10:30	EPA 3050B	1,6010D	NTB
Calcium, Total	928		mg/kg	10.5	3.67	2	10/02/22 13:37	10/20/22 10:30	EPA 3050B	1,6010D	NTB
Chromium, Total	7.59		mg/kg	1.05	0.100	2	10/02/22 13:37	10/20/22 10:30	EPA 3050B	1,6010D	NTB
Cobalt, Total	1.88	J	mg/kg	2.09	0.174	2	10/02/22 13:37	10/20/22 10:30	EPA 3050B	1,6010D	NTB
Copper, Total	8.63		mg/kg	1.05	0.270	2	10/02/22 13:37	10/20/22 10:30	EPA 3050B	1,6010D	NTB
Iron, Total	8380		mg/kg	5.24	0.946	2	10/02/22 13:37	10/20/22 10:30	EPA 3050B	1,6010D	NTB
Lead, Total	14.0		mg/kg	5.24	0.281	2	10/02/22 13:37	10/20/22 10:30	EPA 3050B	1,6010D	NTB
Magnesium, Total	873		mg/kg	10.5	1.61	2	10/02/22 13:37	10/20/22 10:30	EPA 3050B	1,6010D	NTB
Manganese, Total	87.6		mg/kg	1.05	0.166	2	10/02/22 13:37	10/20/22 10:30	EPA 3050B	1,6010D	NTB
Mercury, Total	ND		mg/kg	0.104	0.068	1	10/02/22 14:40	10/03/22 12:11	EPA 7471B	1,7471B	ZK
Nickel, Total	3.49		mg/kg	2.62	0.253	2	10/02/22 13:37	10/20/22 10:30	EPA 3050B	1,6010D	NTB
Potassium, Total	234	J	mg/kg	262	15.1	2	10/02/22 13:37	10/20/22 10:30	EPA 3050B	1,6010D	NTB
Selenium, Total	ND		mg/kg	2.09	0.270	2	10/02/22 13:37	10/20/22 10:30	EPA 3050B	1,6010D	NTB
Silver, Total	ND		mg/kg	1.05	0.296	2	10/02/22 13:37	10/20/22 10:30	EPA 3050B	1,6010D	NTB
Sodium, Total	60.8	J	mg/kg	209	3.30	2	10/02/22 13:37	10/20/22 10:30	EPA 3050B	1,6010D	NTB
Thallium, Total	ND		mg/kg	2.09	0.330	2	10/02/22 13:37	10/20/22 10:30	EPA 3050B	1,6010D	NTB
Vanadium, Total	14.2		mg/kg	1.05	0.213	2	10/02/22 13:37	10/20/22 10:30	EPA 3050B	1,6010D	NTB
Zinc, Total	21.4		mg/kg	5.24	0.307	2	10/02/22 13:37	10/20/22 10:30	EPA 3050B	1,6010D	NTB



Project Name: LOWER GILE FIELD SOIL SAMPLING**Lab Number:** L2254266**Project Number:** Not Specified**Report Date:** 11/01/22**SAMPLE RESULTS**

Lab ID: L2254266-02

Date Collected: 09/30/22 10:05

Client ID: LOCATION 2

Date Received: 09/30/22

Sample Location: 25 GILE ROAD, MILTON, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 73%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	4440		mg/kg	10.4	2.82	2	10/02/22 13:37	10/20/22 10:35	EPA 3050B	1,6010D	NTB
Antimony, Total	ND		mg/kg	5.22	0.397	2	10/02/22 13:37	10/20/22 10:35	EPA 3050B	1,6010D	NTB
Arsenic, Total	6.01		mg/kg	1.04	0.217	2	10/02/22 13:37	10/20/22 10:35	EPA 3050B	1,6010D	NTB
Barium, Total	12.8		mg/kg	1.04	0.182	2	10/02/22 13:37	10/20/22 10:35	EPA 3050B	1,6010D	NTB
Beryllium, Total	0.337	J	mg/kg	0.522	0.035	2	10/02/22 13:37	10/20/22 10:35	EPA 3050B	1,6010D	NTB
Cadmium, Total	0.136	J	mg/kg	1.04	0.102	2	10/02/22 13:37	10/20/22 10:35	EPA 3050B	1,6010D	NTB
Calcium, Total	944		mg/kg	10.4	3.66	2	10/02/22 13:37	10/20/22 10:35	EPA 3050B	1,6010D	NTB
Chromium, Total	7.96		mg/kg	1.04	0.100	2	10/02/22 13:37	10/20/22 10:35	EPA 3050B	1,6010D	NTB
Cobalt, Total	1.65	J	mg/kg	2.09	0.173	2	10/02/22 13:37	10/20/22 10:35	EPA 3050B	1,6010D	NTB
Copper, Total	6.34		mg/kg	1.04	0.270	2	10/02/22 13:37	10/20/22 10:35	EPA 3050B	1,6010D	NTB
Iron, Total	9550		mg/kg	5.22	0.943	2	10/02/22 13:37	10/20/22 10:35	EPA 3050B	1,6010D	NTB
Lead, Total	12.2		mg/kg	5.22	0.280	2	10/02/22 13:37	10/20/22 10:35	EPA 3050B	1,6010D	NTB
Magnesium, Total	791		mg/kg	10.4	1.61	2	10/02/22 13:37	10/20/22 10:35	EPA 3050B	1,6010D	NTB
Manganese, Total	68.9		mg/kg	1.04	0.166	2	10/02/22 13:37	10/20/22 10:35	EPA 3050B	1,6010D	NTB
Mercury, Total	ND		mg/kg	0.101	0.066	1	10/02/22 14:40	10/03/22 13:34	EPA 7471B	1,7471B	ZK
Nickel, Total	3.09		mg/kg	2.61	0.253	2	10/02/22 13:37	10/20/22 10:35	EPA 3050B	1,6010D	NTB
Potassium, Total	261		mg/kg	261	15.0	2	10/02/22 13:37	10/20/22 10:35	EPA 3050B	1,6010D	NTB
Selenium, Total	ND		mg/kg	2.09	0.270	2	10/02/22 13:37	10/20/22 10:35	EPA 3050B	1,6010D	NTB
Silver, Total	ND		mg/kg	1.04	0.296	2	10/02/22 13:37	10/20/22 10:35	EPA 3050B	1,6010D	NTB
Sodium, Total	64.1	J	mg/kg	209	3.29	2	10/02/22 13:37	10/20/22 10:35	EPA 3050B	1,6010D	NTB
Thallium, Total	ND		mg/kg	2.09	0.329	2	10/02/22 13:37	10/20/22 10:35	EPA 3050B	1,6010D	NTB
Vanadium, Total	16.5		mg/kg	1.04	0.212	2	10/02/22 13:37	10/20/22 10:35	EPA 3050B	1,6010D	NTB
Zinc, Total	18.1		mg/kg	5.22	0.306	2	10/02/22 13:37	10/20/22 10:35	EPA 3050B	1,6010D	NTB



Project Name: LOWER GILE FIELD SOIL SAMPLING**Lab Number:** L2254266**Project Number:** Not Specified**Report Date:** 11/01/22**SAMPLE RESULTS**

Lab ID: L2254266-03

Date Collected: 09/30/22 10:20

Client ID: LOCATION 3

Date Received: 09/30/22

Sample Location: 25 GILE ROAD, MILTON, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 88%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	4500		mg/kg	8.64	2.33	2	10/02/22 13:37	10/20/22 10:39	EPA 3050B	1,6010D	NTB
Antimony, Total	ND		mg/kg	4.32	0.328	2	10/02/22 13:37	10/20/22 10:39	EPA 3050B	1,6010D	NTB
Arsenic, Total	4.24		mg/kg	0.864	0.180	2	10/02/22 13:37	10/20/22 10:39	EPA 3050B	1,6010D	NTB
Barium, Total	15.0		mg/kg	0.864	0.150	2	10/02/22 13:37	10/20/22 10:39	EPA 3050B	1,6010D	NTB
Beryllium, Total	0.285	J	mg/kg	0.432	0.029	2	10/02/22 13:37	10/20/22 10:39	EPA 3050B	1,6010D	NTB
Cadmium, Total	0.121	J	mg/kg	0.864	0.085	2	10/02/22 13:37	10/20/22 10:39	EPA 3050B	1,6010D	NTB
Calcium, Total	691		mg/kg	8.64	3.02	2	10/02/22 13:37	10/20/22 10:39	EPA 3050B	1,6010D	NTB
Chromium, Total	7.63		mg/kg	0.864	0.083	2	10/02/22 13:37	10/20/22 10:39	EPA 3050B	1,6010D	NTB
Cobalt, Total	1.63	J	mg/kg	1.73	0.143	2	10/02/22 13:37	10/20/22 10:39	EPA 3050B	1,6010D	NTB
Copper, Total	11.0		mg/kg	0.864	0.223	2	10/02/22 13:37	10/20/22 10:39	EPA 3050B	1,6010D	NTB
Iron, Total	7780		mg/kg	4.32	0.780	2	10/02/22 13:37	10/20/22 10:39	EPA 3050B	1,6010D	NTB
Lead, Total	14.8		mg/kg	4.32	0.232	2	10/02/22 13:37	10/20/22 10:39	EPA 3050B	1,6010D	NTB
Magnesium, Total	804		mg/kg	8.64	1.33	2	10/02/22 13:37	10/20/22 10:39	EPA 3050B	1,6010D	NTB
Manganese, Total	76.2		mg/kg	0.864	0.137	2	10/02/22 13:37	10/20/22 10:39	EPA 3050B	1,6010D	NTB
Mercury, Total	ND		mg/kg	0.090	0.059	1	10/02/22 14:40	10/03/22 13:37	EPA 7471B	1,7471B	ZK
Nickel, Total	3.44		mg/kg	2.16	0.209	2	10/02/22 13:37	10/20/22 10:39	EPA 3050B	1,6010D	NTB
Potassium, Total	233		mg/kg	216	12.4	2	10/02/22 13:37	10/20/22 10:39	EPA 3050B	1,6010D	NTB
Selenium, Total	ND		mg/kg	1.73	0.223	2	10/02/22 13:37	10/20/22 10:39	EPA 3050B	1,6010D	NTB
Silver, Total	0.282	J	mg/kg	0.864	0.244	2	10/02/22 13:37	10/20/22 10:39	EPA 3050B	1,6010D	NTB
Sodium, Total	45.4	J	mg/kg	173	2.72	2	10/02/22 13:37	10/20/22 10:39	EPA 3050B	1,6010D	NTB
Thallium, Total	ND		mg/kg	1.73	0.272	2	10/02/22 13:37	10/20/22 10:39	EPA 3050B	1,6010D	NTB
Vanadium, Total	13.6		mg/kg	0.864	0.175	2	10/02/22 13:37	10/20/22 10:39	EPA 3050B	1,6010D	NTB
Zinc, Total	19.3		mg/kg	4.32	0.253	2	10/02/22 13:37	10/20/22 10:39	EPA 3050B	1,6010D	NTB



Project Name: LOWER GILE FIELD SOIL SAMPLING**Lab Number:** L2254266**Project Number:** Not Specified**Report Date:** 11/01/22**SAMPLE RESULTS**

Lab ID: L2254266-04

Date Collected: 09/30/22 10:40

Client ID: LOCATION 4

Date Received: 09/30/22

Sample Location: 25 GILE ROAD, MILTON, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 87%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	4140		mg/kg	8.96	2.42	2	10/04/22 09:00	10/14/22 08:17	EPA 3050B	1,6010D	NTB
Antimony, Total	ND		mg/kg	4.48	0.341	2	10/04/22 09:00	10/14/22 08:17	EPA 3050B	1,6010D	NTB
Arsenic, Total	3.83		mg/kg	0.896	0.186	2	10/04/22 09:00	10/14/22 08:17	EPA 3050B	1,6010D	NTB
Barium, Total	14.9		mg/kg	0.896	0.156	2	10/04/22 09:00	10/14/22 08:17	EPA 3050B	1,6010D	NTB
Beryllium, Total	0.249	J	mg/kg	0.448	0.030	2	10/04/22 09:00	10/14/22 08:17	EPA 3050B	1,6010D	NTB
Cadmium, Total	0.120	J	mg/kg	0.896	0.088	2	10/04/22 09:00	10/14/22 08:17	EPA 3050B	1,6010D	NTB
Calcium, Total	947		mg/kg	8.96	3.14	2	10/04/22 09:00	10/14/22 08:17	EPA 3050B	1,6010D	NTB
Chromium, Total	8.65		mg/kg	0.896	0.086	2	10/04/22 09:00	10/14/22 08:17	EPA 3050B	1,6010D	NTB
Cobalt, Total	1.96		mg/kg	1.79	0.149	2	10/04/22 09:00	10/14/22 08:17	EPA 3050B	1,6010D	NTB
Copper, Total	10.0		mg/kg	0.896	0.231	2	10/04/22 09:00	10/14/22 08:17	EPA 3050B	1,6010D	NTB
Iron, Total	7330		mg/kg	4.48	0.810	2	10/04/22 09:00	10/14/22 08:17	EPA 3050B	1,6010D	NTB
Lead, Total	15.8		mg/kg	4.48	0.240	2	10/04/22 09:00	10/14/22 08:17	EPA 3050B	1,6010D	NTB
Magnesium, Total	1040		mg/kg	8.96	1.38	2	10/04/22 09:00	10/14/22 08:17	EPA 3050B	1,6010D	NTB
Manganese, Total	86.2		mg/kg	0.896	0.142	2	10/04/22 09:00	10/14/22 08:17	EPA 3050B	1,6010D	NTB
Mercury, Total	0.062	J	mg/kg	0.076	0.049	1	10/04/22 10:10	10/05/22 21:37	EPA 7471B	1,7471B	ZK
Nickel, Total	3.77		mg/kg	2.24	0.217	2	10/04/22 09:00	10/14/22 08:17	EPA 3050B	1,6010D	NTB
Potassium, Total	172	J	mg/kg	224	12.9	2	10/04/22 09:00	10/14/22 08:17	EPA 3050B	1,6010D	NTB
Selenium, Total	ND		mg/kg	1.79	0.231	2	10/04/22 09:00	10/14/22 08:17	EPA 3050B	1,6010D	NTB
Silver, Total	0.321	J	mg/kg	0.896	0.254	2	10/04/22 09:00	10/14/22 08:17	EPA 3050B	1,6010D	NTB
Sodium, Total	56.0	J	mg/kg	179	2.82	2	10/04/22 09:00	10/14/22 08:17	EPA 3050B	1,6010D	NTB
Thallium, Total	ND		mg/kg	1.79	0.282	2	10/04/22 09:00	10/14/22 08:17	EPA 3050B	1,6010D	NTB
Vanadium, Total	13.4		mg/kg	0.896	0.182	2	10/04/22 09:00	10/14/22 08:17	EPA 3050B	1,6010D	NTB
Zinc, Total	19.9		mg/kg	4.48	0.263	2	10/04/22 09:00	10/14/22 08:17	EPA 3050B	1,6010D	NTB



Project Name: LOWER GILE FIELD SOIL SAMPLING

Lab Number: L2254266

Project Number: Not Specified

Report Date: 11/01/22

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-03 Batch: WG1694483-1										
Aluminum, Total	ND		mg/kg	4.00	1.08	1	10/02/22 13:37	10/07/22 13:33	1,6010D	NB
Antimony, Total	ND		mg/kg	2.00	0.152	1	10/02/22 13:37	10/06/22 08:01	1,6010D	NB
Arsenic, Total	ND		mg/kg	0.400	0.083	1	10/02/22 13:37	10/06/22 08:01	1,6010D	NB
Barium, Total	ND		mg/kg	0.400	0.070	1	10/02/22 13:37	10/06/22 08:01	1,6010D	NB
Beryllium, Total	ND		mg/kg	0.200	0.013	1	10/02/22 13:37	10/06/22 08:01	1,6010D	NB
Cadmium, Total	ND		mg/kg	0.400	0.039	1	10/02/22 13:37	10/06/22 08:01	1,6010D	NB
Calcium, Total	ND		mg/kg	4.00	1.40	1	10/02/22 13:37	10/07/22 13:33	1,6010D	NB
Chromium, Total	0.039	J	mg/kg	0.400	0.038	1	10/02/22 13:37	10/06/22 08:01	1,6010D	NB
Cobalt, Total	ND		mg/kg	0.800	0.066	1	10/02/22 13:37	10/06/22 08:01	1,6010D	NB
Copper, Total	ND		mg/kg	0.400	0.103	1	10/02/22 13:37	10/06/22 08:01	1,6010D	NB
Iron, Total	0.744	J	mg/kg	2.00	0.361	1	10/02/22 13:37	10/07/22 13:33	1,6010D	NB
Lead, Total	ND		mg/kg	2.00	0.107	1	10/02/22 13:37	10/06/22 08:01	1,6010D	NB
Magnesium, Total	ND		mg/kg	4.00	0.616	1	10/02/22 13:37	10/06/22 08:01	1,6010D	NB
Manganese, Total	0.113	J	mg/kg	0.400	0.064	1	10/02/22 13:37	10/06/22 08:01	1,6010D	NB
Nickel, Total	ND		mg/kg	1.00	0.097	1	10/02/22 13:37	10/06/22 08:01	1,6010D	NB
Potassium, Total	ND		mg/kg	100	5.76	1	10/02/22 13:37	10/06/22 08:01	1,6010D	NB
Selenium, Total	ND		mg/kg	0.800	0.103	1	10/02/22 13:37	10/06/22 08:01	1,6010D	NB
Silver, Total	ND		mg/kg	0.400	0.113	1	10/02/22 13:37	10/06/22 08:01	1,6010D	NB
Sodium, Total	ND		mg/kg	80.0	1.26	1	10/02/22 13:37	10/06/22 08:01	1,6010D	NB
Thallium, Total	ND		mg/kg	0.800	0.126	1	10/02/22 13:37	10/06/22 08:01	1,6010D	NB
Vanadium, Total	ND		mg/kg	0.400	0.081	1	10/02/22 13:37	10/06/22 08:01	1,6010D	NB
Zinc, Total	ND		mg/kg	2.00	0.117	1	10/02/22 13:37	10/06/22 08:01	1,6010D	NB

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-03 Batch: WG1694484-1										
Mercury, Total	ND		mg/kg	0.083	0.054	1	10/02/22 14:40	10/03/22 11:58	1,7471B	ZK



Project Name: LOWER GILE FIELD SOIL SAMPLING

Lab Number: L2254266

Project Number: Not Specified

Report Date: 11/01/22

Method Blank Analysis Batch Quality Control

Prep Information

Digestion Method: EPA 7471B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 04 Batch: WG1694533-1										
Aluminum, Total	ND		mg/kg	4.00	1.08	1	10/04/22 09:00	10/14/22 08:00	1,6010D	NTB
Antimony, Total	ND		mg/kg	2.00	0.152	1	10/04/22 09:00	10/14/22 08:00	1,6010D	NTB
Arsenic, Total	ND		mg/kg	0.400	0.083	1	10/04/22 09:00	10/14/22 08:00	1,6010D	NTB
Barium, Total	ND		mg/kg	0.400	0.070	1	10/04/22 09:00	10/14/22 08:00	1,6010D	NTB
Beryllium, Total	ND		mg/kg	0.200	0.013	1	10/04/22 09:00	10/14/22 08:00	1,6010D	NTB
Cadmium, Total	ND		mg/kg	0.400	0.039	1	10/04/22 09:00	10/14/22 08:00	1,6010D	NTB
Calcium, Total	ND		mg/kg	4.00	1.40	1	10/04/22 09:00	10/14/22 08:00	1,6010D	NTB
Chromium, Total	0.058	J	mg/kg	0.400	0.038	1	10/04/22 09:00	10/14/22 08:00	1,6010D	NTB
Cobalt, Total	ND		mg/kg	0.800	0.066	1	10/04/22 09:00	10/14/22 08:00	1,6010D	NTB
Copper, Total	ND		mg/kg	0.400	0.103	1	10/04/22 09:00	10/14/22 08:00	1,6010D	NTB
Iron, Total	0.647	J	mg/kg	2.00	0.361	1	10/04/22 09:00	10/14/22 08:00	1,6010D	NTB
Lead, Total	ND		mg/kg	2.00	0.107	1	10/04/22 09:00	10/14/22 08:00	1,6010D	NTB
Magnesium, Total	ND		mg/kg	4.00	0.616	1	10/04/22 09:00	10/14/22 08:00	1,6010D	NTB
Manganese, Total	ND		mg/kg	0.400	0.064	1	10/04/22 09:00	10/14/22 08:00	1,6010D	NTB
Nickel, Total	ND		mg/kg	1.00	0.097	1	10/04/22 09:00	10/14/22 08:00	1,6010D	NTB
Potassium, Total	ND		mg/kg	100	5.76	1	10/04/22 09:00	10/14/22 08:00	1,6010D	NTB
Selenium, Total	ND		mg/kg	0.800	0.103	1	10/04/22 09:00	10/14/22 08:00	1,6010D	NTB
Silver, Total	ND		mg/kg	0.400	0.113	1	10/04/22 09:00	10/14/22 08:00	1,6010D	NTB
Sodium, Total	1.57	J	mg/kg	80.0	1.26	1	10/04/22 09:00	10/14/22 08:00	1,6010D	NTB
Thallium, Total	ND		mg/kg	0.800	0.126	1	10/04/22 09:00	10/14/22 08:00	1,6010D	NTB
Vanadium, Total	ND		mg/kg	0.400	0.081	1	10/04/22 09:00	10/14/22 08:00	1,6010D	NTB
Zinc, Total	ND		mg/kg	2.00	0.117	1	10/04/22 09:00	10/14/22 08:00	1,6010D	NTB

Prep Information

Digestion Method: EPA 3050B



Project Name: LOWER GILE FIELD SOIL SAMPLING**Lab Number:** L2254266**Project Number:** Not Specified**Report Date:** 11/01/22

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 04 Batch: WG1694535-1										
Mercury, Total	ND		mg/kg	0.083	0.054	1	10/04/22 10:10	10/05/22 21:30	1,7471B	ZK

Prep Information

Digestion Method: EPA 7471B

Lab Control Sample Analysis

Batch Quality Control

Project Name: LOWER GILE FIELD SOIL SAMPLING

Project Number: Not Specified

Lab Number: L2254266

Report Date: 11/01/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1694483-2 SRM Lot Number: D113-540								
Aluminum, Total	76		-		51-149	-		
Antimony, Total	188		-		20-250	-		
Arsenic, Total	110		-		70-130	-		
Barium, Total	103		-		75-125	-		
Beryllium, Total	102		-		75-125	-		
Cadmium, Total	106		-		75-125	-		
Calcium, Total	88		-		73-128	-		
Chromium, Total	102		-		70-130	-		
Cobalt, Total	107		-		75-125	-		
Copper, Total	106		-		75-125	-		
Iron, Total	90		-		36-164	-		
Lead, Total	110		-		72-128	-		
Magnesium, Total	95		-		63-138	-		
Manganese, Total	104		-		77-123	-		
Nickel, Total	108		-		70-130	-		
Potassium, Total	100		-		59-141	-		
Selenium, Total	108		-		66-134	-		
Silver, Total	106		-		70-131	-		
Sodium, Total	102		-		35-164	-		
Thallium, Total	109		-		70-130	-		
Vanadium, Total	105		-		74-126	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: LOWER GILE FIELD SOIL SAMPLING

Project Number: Not Specified

Lab Number: L2254266

Report Date: 11/01/22

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1694483-2 SRM Lot Number: D113-540					
Zinc, Total	107	-	70-130	-	
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1694484-2 SRM Lot Number: D113-540					
Mercury, Total	84	-	60-140	-	

Lab Control Sample Analysis

Batch Quality Control

Project Name: LOWER GILE FIELD SOIL SAMPLING

Project Number: Not Specified

Lab Number: L2254266

Report Date: 11/01/22

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 04 Batch: WG1694533-2 SRM Lot Number: D113-540					
Aluminum, Total	75	-	51-149	-	
Antimony, Total	129	-	20-250	-	
Arsenic, Total	96	-	70-130	-	
Barium, Total	87	-	75-125	-	
Beryllium, Total	97	-	75-125	-	
Cadmium, Total	92	-	75-125	-	
Calcium, Total	91	-	73-128	-	
Chromium, Total	91	-	70-130	-	
Cobalt, Total	90	-	75-125	-	
Copper, Total	91	-	75-125	-	
Iron, Total	88	-	36-164	-	
Lead, Total	93	-	72-128	-	
Magnesium, Total	86	-	63-138	-	
Manganese, Total	89	-	77-123	-	
Nickel, Total	91	-	70-130	-	
Potassium, Total	87	-	59-141	-	
Selenium, Total	97	-	66-134	-	
Silver, Total	90	-	70-131	-	
Sodium, Total	102	-	35-164	-	
Thallium, Total	93	-	70-130	-	
Vanadium, Total	90	-	74-126	-	

Lab Control Sample Analysis**Batch Quality Control****Project Name:** LOWER GILE FIELD SOIL SAMPLING**Project Number:** Not Specified**Lab Number:** L2254266**Report Date:** 11/01/22

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 04 Batch: WG1694533-2 SRM Lot Number: D113-540					
Zinc, Total	89	-	70-130	-	
Total Metals - Mansfield Lab Associated sample(s): 04 Batch: WG1694535-2 SRM Lot Number: D113-540					
Mercury, Total	93	-	60-140	-	

Matrix Spike Analysis

Batch Quality Control

Project Name: LOWER GILE FIELD SOIL SAMPLING

Project Number: Not Specified

Lab Number: L2254266

Report Date: 11/01/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03			QC Batch ID: WG1694483-3			QC Sample: L2254098-02			Client ID: MS Sample			
Aluminum, Total	15200	255	16600	548	Q	-	-		75-125	-		20
Antimony, Total	ND	63.9	48.0	75		-	-		75-125	-		20
Arsenic, Total	9.19	15.3	27.4	119		-	-		75-125	-		20
Barium, Total	102	255	382	110		-	-		75-125	-		20
Beryllium, Total	0.852	6.39	6.72	92		-	-		75-125	-		20
Cadmium, Total	0.381J	6.77	7.14	105		-	-		75-125	-		20
Calcium, Total	4060	1280	9570	431	Q	-	-		75-125	-		20
Chromium, Total	27.8	25.5	52.3	96		-	-		75-125	-		20
Cobalt, Total	10.7	63.9	69.5	92		-	-		75-125	-		20
Copper, Total	70.1	31.9	113	134	Q	-	-		75-125	-		20
Iron, Total	30000	128	29100	0	Q	-	-		75-125	-		20
Lead, Total	444	67.7	624	266	Q	-	-		75-125	-		20
Magnesium, Total	5770	1280	6880	87		-	-		75-125	-		20
Manganese, Total	320	63.9	411	142	Q	-	-		75-125	-		20
Nickel, Total	33.6	63.9	96.1	98		-	-		75-125	-		20
Potassium, Total	2700	1280	4010	102		-	-		75-125	-		20
Selenium, Total	1.11J	15.3	16.3	106		-	-		75-125	-		20
Silver, Total	0.470J	38.3	38.9	102		-	-		75-125	-		20
Sodium, Total	765	1280	2030	99		-	-		75-125	-		20
Thallium, Total	ND	15.3	13.7	89		-	-		75-125	-		20
Vanadium, Total	33.3	63.9	96.7	99		-	-		75-125	-		20

Matrix Spike Analysis Batch Quality Control

Project Name: LOWER GILE FIELD SOIL SAMPLING

Lab Number: L2254266

Project Number: Not Specified

Report Date: 11/01/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1694483-3 QC Sample: L2254098-02 Client ID: MS Sample									
Zinc, Total	98.9	63.9	162	99	-	-	75-125	-	20
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1694484-3 QC Sample: L2254266-01 Client ID: LOCATION 1									
Mercury, Total	ND	1.71	1.69	98	-	-	80-120	-	20

Matrix Spike Analysis

Batch Quality Control

Project Name: LOWER GILE FIELD SOIL SAMPLING

Project Number: Not Specified

Lab Number: L2254266

Report Date: 11/01/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 04 QC Batch ID: WG1694533-3 QC Sample: L2254266-04 Client ID: LOCATION 4									
Aluminum, Total	4140	175	4610	268	Q	-	75-125	-	20
Antimony, Total	ND	43.8	38.5	88		-	75-125	-	20
Arsenic, Total	3.83	10.5	15.1	107		-	75-125	-	20
Barium, Total	14.9	175	189	99		-	75-125	-	20
Beryllium, Total	0.249J	4.38	4.71	107		-	75-125	-	20
Cadmium, Total	0.120J	4.65	4.72	102		-	75-125	-	20
Calcium, Total	947	877	2530	180	Q	-	75-125	-	20
Chromium, Total	8.65	17.5	24.1	88		-	75-125	-	20
Cobalt, Total	1.96	43.8	41.8	91		-	75-125	-	20
Copper, Total	10.0	21.9	31.7	99		-	75-125	-	20
Iron, Total	7330	87.7	7480	171	Q	-	75-125	-	20
Lead, Total	15.8	46.5	60.7	97		-	75-125	-	20
Magnesium, Total	1040	877	2450	161	Q	-	75-125	-	20
Manganese, Total	86.2	43.8	132	104		-	75-125	-	20
Nickel, Total	3.77	43.8	45.0	94		-	75-125	-	20
Potassium, Total	172J	877	1100	125		-	75-125	-	20
Selenium, Total	ND	10.5	10.9	104		-	75-125	-	20
Silver, Total	0.321J	26.3	26.9	102		-	75-125	-	20
Sodium, Total	56.0J	877	989	113		-	75-125	-	20
Thallium, Total	ND	10.5	10.6	101		-	75-125	-	20
Vanadium, Total	13.4	43.8	54.8	94		-	75-125	-	20

Matrix Spike Analysis Batch Quality Control

Project Name: LOWER GILE FIELD SOIL SAMPLING

Lab Number: L2254266

Project Number: Not Specified

Report Date: 11/01/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 04 QC Batch ID: WG1694533-3 QC Sample: L2254266-04 Client ID: LOCATION 4									
Zinc, Total	19.9	43.8	60.7	93	-	-	75-125	-	20
Total Metals - Mansfield Lab Associated sample(s): 04 QC Batch ID: WG1694535-3 QC Sample: L2254266-04 Client ID: LOCATION 4									
Mercury, Total	0.062J	1.5	1.65	110	-	-	80-120	-	20

Project Name: LOWER GILE FIELD SOIL SAMPLING

Project Number: Not Specified

Lab Duplicate Analysis

Batch Quality Control

Lab Number: L2254266

Report Date: 11/01/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1694483-4 QC Sample: L2254098-02 Client ID: DUP Sample						
Lead, Total	444	493	mg/kg	10		20
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1694484-4 QC Sample: L2254266-01 Client ID: LOCATION 1						
Mercury, Total	ND	ND	mg/kg	NC		20

Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number: Not Specified

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L2254266
Report Date: 11/01/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 04 QC Batch ID: WG1694533-4 QC Sample: L2254266-04 Client ID: LOCATION 4					
Aluminum, Total	4140	3690	mg/kg	11	20
Antimony, Total	ND	ND	mg/kg	NC	20
Arsenic, Total	3.83	4.02	mg/kg	5	20
Barium, Total	14.9	13.2	mg/kg	12	20
Beryllium, Total	0.249J	0.246J	mg/kg	NC	20
Cadmium, Total	0.120J	0.104J	mg/kg	NC	20
Calcium, Total	947	1030	mg/kg	8	20
Chromium, Total	8.65	6.80	mg/kg	24	Q 20
Cobalt, Total	1.96	1.63J	mg/kg	NC	20
Copper, Total	10.0	8.24	mg/kg	19	20
Iron, Total	7330	7010	mg/kg	4	20
Lead, Total	15.8	14.4	mg/kg	9	20
Magnesium, Total	1040	745	mg/kg	33	Q 20
Manganese, Total	86.2	83.8	mg/kg	3	20
Nickel, Total	3.77	3.18	mg/kg	17	20
Potassium, Total	172J	178J	mg/kg	NC	20
Selenium, Total	ND	ND	mg/kg	NC	20
Silver, Total	0.321J	ND	mg/kg	NC	20
Sodium, Total	56.0J	60.3J	mg/kg	NC	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: LOWER GILE FIELD SOIL SAMPLING

Project Number: Not Specified

Lab Number: L2254266

Report Date: 11/01/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 04 QC Batch ID: WG1694533-4 QC Sample: L2254266-04 Client ID: LOCATION 4					
Thallium, Total	ND	ND	mg/kg	NC	20
Vanadium, Total	13.4	13.1	mg/kg	2	20
Zinc, Total	19.9	17.9	mg/kg	11	20
Total Metals - Mansfield Lab Associated sample(s): 04 QC Batch ID: WG1694535-4 QC Sample: L2254266-04 Client ID: LOCATION 4					
Mercury, Total	0.062J	0.062J	mg/kg	NC	20

Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number: Not Specified

**Lab Serial Dilution
Analysis**
Batch Quality Control

Lab Number: L2254266
Report Date: 11/01/22

Parameter	Native Sample	Serial Dilution	Units	% D	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1694483-6 QC Sample: L2254098-02 Client ID: DUP Sample						
Lead, Total	444	469	mg/kg	6		20



INORGANICS & MISCELLANEOUS

Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number: Not Specified

Lab Number: L2254266
Report Date: 11/01/22

SAMPLE RESULTS

Lab ID: L2254266-01
Client ID: LOCATION 1
Sample Location: 25 GILE ROAD, MILTON, MA

Date Collected: 09/30/22 09:35
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	73.1		%	0.100	NA	1	-	10/01/22 11:25	121,2540G	RI



Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number: Not Specified

Lab Number: L2254266
Report Date: 11/01/22

SAMPLE RESULTS

Lab ID: L2254266-02
Client ID: LOCATION 2
Sample Location: 25 GILE ROAD, MILTON, MA

Date Collected: 09/30/22 10:05
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	73.4		%	0.100	NA	1	-	10/01/22 11:25	121,2540G	RI



Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number: Not Specified

Lab Number: L2254266
Report Date: 11/01/22

SAMPLE RESULTS

Lab ID: L2254266-03
Client ID: LOCATION 3
Sample Location: 25 GILE ROAD, MILTON, MA

Date Collected: 09/30/22 10:20
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	88.0		%	0.100	NA	1	-	10/01/22 11:25	121,2540G	RI



Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number: Not Specified

Lab Number: L2254266
Report Date: 11/01/22

SAMPLE RESULTS

Lab ID: L2254266-04
Client ID: LOCATION 4
Sample Location: 25 GILE ROAD, MILTON, MA

Date Collected: 09/30/22 10:40
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.6		%	0.100	NA	1	-	10/01/22 11:25	121,2540G	RI



Lab Duplicate Analysis *Batch Quality Control*

Project Name: LOWER GILE FIELD SOIL SAMPLING

Project Number: Not Specified

Lab Number: L2254266

Report Date: 11/01/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1694313-1 QC Sample: L2254021-01 Client ID: DUP Sample						
Solids, Total	81.3	82.1	%	1		20

Project Name: LOWER GILE FIELD SOIL SAMPLING**Lab Number:** L2254266**Project Number:** Not Specified**Report Date:** 11/01/22**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent
C	Absent
D	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2254266-01A	Plastic 2oz unpreserved for TS	A	NA		4.4	Y	Absent		TS(7)
L2254266-01B	Plastic 2oz unpreserved for TS	A	NA		4.4	Y	Absent		TS(7)
L2254266-01C	Metals Only-Glass 60mL/2oz unpreserved	A	NA		4.4	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),AL-TI(180),TL-TI(180),NI-TI(180),PB-TI(180),SB-TI(180),ZN-TI(180),CU-TI(180),SE-TI(180),CO-TI(180),V-TI(180),HG-T(28),MG-TI(180),FE-TI(180),MN-TI(180),NA-TI(180),CA-TI(180),CD-TI(180),K-TI(180)
L2254266-01D	Plastic 8oz unpreserved	A	NA		4.4	Y	Absent		A2-537-ISOTOPE(14)
L2254266-02A	Plastic 2oz unpreserved for TS	A	NA		4.4	Y	Absent		TS(7)
L2254266-02B	Plastic 2oz unpreserved for TS	A	NA		4.4	Y	Absent		TS(7)
L2254266-02C	Metals Only-Glass 60mL/2oz unpreserved	A	NA		4.4	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),TL-TI(180),CR-TI(180),NI-TI(180),ZN-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),CU-TI(180),CO-TI(180),V-TI(180),HG-T(28),MG-TI(180),FE-TI(180),MN-TI(180),CD-TI(180),K-TI(180),CA-TI(180),NA-TI(180)
L2254266-02D	Plastic 8oz unpreserved	A	NA		4.4	Y	Absent		A2-537-ISOTOPE(14)
L2254266-03A	Plastic 2oz unpreserved for TS	A	NA		4.4	Y	Absent		TS(7)
L2254266-03B	Plastic 2oz unpreserved for TS	A	NA		4.4	Y	Absent		TS(7)
L2254266-03C	Metals Only-Glass 60mL/2oz unpreserved	A	NA		4.4	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),CR-TI(180),TL-TI(180),AL-TI(180),NI-TI(180),SB-TI(180),ZN-TI(180),CU-TI(180),SE-TI(180),PB-TI(180),V-TI(180),CO-TI(180),HG-T(28),FE-TI(180),MG-TI(180),MN-TI(180),CD-TI(180),CA-TI(180),K-TI(180),NA-TI(180)
L2254266-03D	Plastic 8oz unpreserved	A	NA		4.4	Y	Absent		A2-537-ISOTOPE(14)

Project Name: LOWER GILE FIELD SOIL SAMPLING**Lab Number:** L2254266**Project Number:** Not Specified**Report Date:** 11/01/22**Container Information**

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2254266-04A	Plastic 2oz unpreserved for TS	A	NA		4.4	Y	Absent		TS(7)
L2254266-04B	Plastic 2oz unpreserved for TS	A	NA		4.4	Y	Absent		TS(7)
L2254266-04C	Metals Only-Glass 60mL/2oz unpreserved	A	NA		4.4	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),TL-TI(180),CR-TI(180),NI-TI(180),SB-TI(180),CU-TI(180),ZN-TI(180),PB-TI(180),SE-TI(180),V-TI(180),CO-TI(180),FE-TI(180),HG-T(28),MN-TI(180),MG-TI(180),NA-TI(180),CD-TI(180),CA-TI(180),K-TI(180)
L2254266-04D	Plastic 8oz unpreserved	A	NA		4.4	Y	Absent		A2-537-ISOTOPE(14)
L2254266-05A	Plastic 250ml unpreserved	A	NA		4.4	Y	Absent		A2-537-ISOTOPE(14)

Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number:

Serial_No:11012209:09
Lab Number: L2254266
Report Date: 11/01/22

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs)		
Perfluorooctadecanoic Acid	PFODA	16517-11-6
Perfluorohexadecanoic Acid	PFHxDA	67905-19-5
Perfluorotetradecanoic Acid	PFTA/PFTeDA	376-06-7
Perfluorotridecanoic Acid	PFTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSAs)		
Perfluorododecanesulfonic Acid	PFDoDS/PFDoS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
Perfluoropropanesulfonic Acid	PFPrS	423-41-6
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA/PFOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	11Cl-PF3OUdS	763051-92-9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid	9Cl-PF3ONS	756426-58-1
PERFLUOROETHER SULFONIC ACIDS (PFESAs)		
Perfluoro(2-Ethoxyethane)Sulfonic Acid	PFEESA	113507-82-7
PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs)		
Perfluoro-3-Methoxypropanoic Acid	PFMPA	377-73-1
Perfluoro-4-Methoxybutanoic Acid	PFMBA	863090-89-5
Nonafluoro-3,6-Dioxaheptanoic Acid	NFDHA	151772-58-6

Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number:

Serial_No:11012209:09
Lab Number: L2254266
Report Date: 11/01/22

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
FLUOROTELOMER CARBOXYLIC ACIDS (FTCAs)		
3-Perfluoroheptyl Propanoic Acid	7:3FTCA	812-70-4
2H,2H,3H,3H-Perfluorooctanoic Acid	5:3FTCA	914637-49-3
3-Perfluoropropyl Propanoic Acid	3:3FTCA	356-02-5

Project Name: LOWER GILE FIELD SOIL SAMPLING**Lab Number:** L2254266**Project Number:** Not Specified**Report Date:** 11/01/22

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name: LOWER GILE FIELD SOIL SAMPLING**Lab Number:** L2254266**Project Number:** Not Specified**Report Date:** 11/01/22**Footnotes**

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers



Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number: Not Specified

Lab Number: L2254266
Report Date: 11/01/22

Data Qualifiers

Identified Compounds (TICs).

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: DU Report with 'J' Qualifiers



Project Name: LOWER GILE FIELD SOIL SAMPLING
Project Number: Not Specified

Lab Number: L2254266
Report Date: 11/01/22

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.
- 134 Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) using Isotope Dilution. Alpha SOP 23528.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

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Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility**EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625/625.1:** alpha-Terpineol**EPA 8260C/8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D/8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility****SM 2540D:** TSS**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:**Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,****SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.****EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1 Hg.****SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

