April 29, 2022

Mark Baldi
Deputy Regional Director Bureau of Waste Site Cleanup
Central Regional Office
Massachusetts Department of Environmental Protection
8 New Bond Street
Worcester, MA 01606

RE: Immediate Response Action (IRA) Update Letter No. 3
Massachusetts Natural Fertilizer
65 Bean Porridge Road
Westminster, MA
MassDEP RTN: 2-0021866

Dear Mr. Baldi,

The following IRA response actions have been performed for the above referenced RTN.

WEEK OF APRIL 22, 2022 – APRIL 29, 2022

IRA Public Involvement Request
A petition requesting public involvement activities relative to the on-going IRA was received. A response is pending.

Private Well at MNF
As detailed in the previous status report, the drinking water well at MNF is impacted. Use for drinking water had previously been terminated. Use for handwashing was terminated and temporary wash stations were put in place. Water from this well is not used for dust control on the site. The well was turned off pending installation of a POET system.

Laboratory Results Received on April 27, 2022
On the afternoon of April 22, 2022, LEI received laboratory analytical results from the Raw Materials Stockpile (SP) and Finished Product Stockpile (FP) at Massachusetts

121 Loring Avenue, Suite 455 • Salem, Massachusetts 01970 • P: 978.338.5541 • F: 978.338.5542

Natural Fertilizer. A copy of the laboratory report is attached. PFAS 6 Totals were detected samples collected from both stockpiles. While these samples are not soil, we antidotally compared to the MCP S-1 Soil Standards of 300 PPB for each of the PFAS 6 compounds. All results were well below the S-1 Standards. The laboratory report is attached as well as a data summary table.

Laboratory Results Received on April 27, 2022
LEI received laboratory analytical results from the following
Influent and Effluent Water Samples from the Treatment Systems located at 64, 66, 68 and 72 Bean Porridge Hill Road. A copy of the laboratory report is attached. All treatment system sampling showed PFAS to be less than the laboratory detection limit for each of the addresses.

Monitoring Well and Surface Water Sampling
On April 28, 2022, LEI also collected groundwater samples from discovered monitoring wells MW-1 and MW-2, located on the property at 65 Bean Porridge Hill Road.

Coordinates for these monitoring wells are:

MW-1 42° 34′ 32″ 71 N 71 ° 52′ 12″ W
MW-2 42° 34’ 34” 71 N 71 ° 52’ 7” W

On April 28, 2022, LEI also collected a surface water sample from the wetland at the northern most extent of a small pond located on 65 Bean Porridge Hill Road property. Coordinates for this location are: 42° 34′ 48″ 71 N 71 ° 52′ 7″ W.
All water samples were submitted to Alpha Analytical for PFAS-18 analysis. LEI is awaiting the results from Alpha.

Private Well Sampling
On April 28, 2022, LEI collected drinking water samples from the following addresses:

- 1 Amber Road
- 2 Amber Road
- 4 Amber Road
- 14 Amber Road
- 11 White Pine Dive
- 14 White Pine Drive
- 20 White Pine Drive
- 29 White Pine Drive
- 99 South Ashburnham Road

Remaining Private wells to be sampled as of April 29, 2022: (see Spreadsheet)

Access has been provided for 16 Amber Road. Private well sampling was attempted on April 28th but residents were not home and outdoor spigots were shut off. LEI has contacted the residents by email to arrange a sampling date.

Access has not been provided for the following properties.
Amber Road: 3, 8, 10, 12, 15
White Pine Drive: 12, 19,
Rock Maple Lane: 18, 21, 24
5 Taymax Road
Bean Porridge Hill Rd. : 98, 100, 104

Based on a preliminary laboratory result for 42 Bean Porridge Hill Road, LEI has requested that Lawson & Weitzen request sampling access to 16 Bean Porridge Hill Road.

Access Agreement List provided by Lawson & Weitzen (attached)

Laboratory Turnaround Time
Current laboratory turnaround time has been approximately 15 business days. LEI contacted Alpha Analytical and negotiated an improved 10 business day turnaround for up to 15 samples per week. LEI is also in the process of contacting other laboratories certified by the Commonwealth for PFAS analysis to identify alternatives.

Private Well Sampling Summary
The following is a summary of the private well sampling effort:

- Access has been requested for private wells at 58 residences.
- Access has been provided for 40 residences
- A total of 40 private wells were sampled as of April 29th

Pending Lab Results
LEI contacted Alpha Laboratories requesting the due dates of pending analytical results. Laboratory results are expected for the following lab reports from Alpha.

L2219379 collected 4/12 & 4/13 has a due date for May 5.
L2219804 from 04/14 is due May 10.
L22190219 from 04/18 is due May 06.
L2221194 from 4/22 is due on May 13

The Chains of Custody for these sample submittals are attached for location cross-reference.

Bottled Water
Bottled water deliveries have been requested for all addresses on White Pine Drive, Rock Maple Lane, and Amber Road. Bottled water is also being provided for certain addresses on Bean Porridge Hill Road. Forty (40) 5-gallon containers of bottled water are being staged at the MNF site in the event that residents run low on water,.

These response actions and activities are the latest performed for the IRA as of April 29, 2022. If you have any questions, please call Lawrence Lessard, at (978) 338-5541.

Sincerely,

Michael Backunas
Senior Project Manager

Attachments

Data Table
Laboratory Reports
COCs for Pending Samples

ANALYTICAL REPORT

Lab Number:	L2216627
Client:	Lessard Environmental 121 Loring Ave. Suite 342 Salem, MA 01970
ATTN:	Mike Backunas
Phone:	(978) 338-5541
Project Name:	MASS. NATURAL FERTILIZER
Project Number:	3291
Report Date:	04/22/22

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: MASS. NATURAL FERTILIZER
Project Number: 3291

Lab Number: L2216627
Report Date: 04/22/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2216627-01	FP-1	SOLID	65 BEAN PORRIDGE HILL RD, WESTMINSTER	03/30/22 11:45	03/31/22
L2216627-02	FP-2	SOLID	65 BEAN PORRIDGE HILL RD, WESTMINSTER	03/30/22 11:50	03/31/22
L2216627-03	FP-3	SOLID	65 BEAN PORRIDGE HILL RD, WESTMINSTER	03/30/22 11:55	03/31/22
L2216627-04	FP-4	SOLID	65 BEAN PORRIDGE HILL RD, WESTMINSTER	03/30/22 12:00	03/31/22
L2216627-05	SP-1	SOLID	65 BEAN PORRIDGE HILL RD, WESTMINSTER	03/30/22 12:20	03/31/22
L2216627-06	SP-2	SOLID	65 BEAN PORRIDGE HILL RD, WESTMINSTER	03/30/22 12:30	03/31/22
L2216627-07	SP-3	SOLID	65 BEAN PORRIDGE HILL RD, WESTMINSTER	03/30/22 12:35	03/31/22
L2216627-08	SP-4	SOLID	65 BEAN PORRIDGE HILL RD, WESTMINSTER	03/30/22 12:40	03/31/22
L2216627-09	SP-5	SOLID	65 BEAN PORRIDGE HILL RD, WESTMINSTER	03/30/22 12:45	03/31/22
L2216627-10	SP-6	SOLID	65 BEAN PORRIDGE HILL RD, WESTMINSTER	03/30/22 12:50	03/31/22

Project Name:	MASS. NATURAL FERTILIZER	**Lab Number:**	L2216627
Project Number:	3291	**Report Date:**	04/22/22

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:	MASS. NATURAL FERTILIZER	**Lab Number:**	L2216627
Project Number:	3291	**Report Date:**	04/22/22

Case Narrative (continued)

Report Submission

April 22, 2022: This final report include the results of all requested analyses.

April 22, 2022: This is a preliminary report.

Perfluorinated Alkyl Acids by Isotope Dilution

L2216627-01, -02, -03RE, -04, -05, -06, -07, -08, -09, and -10: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details.

L2216627-05, -06, -07, and -08: The sample has elevated detection limits due to the limited sample volume utilized during extraction, as required by the sample matrix.

L2216627-03RE: The sample was re-extracted with the method required holding time exceeded due to matrix interferences with internal standards in the original extraction. The results of the re-extraction are reported. The sample has elevated detection limits due to the dilution required by the sample matrix. The Extracted Internal Surrogate recoveries for perfluoro[1,2,3,4,6-13c5]hexanoic acid (m5pfhxa) (0%), perfluoro[1,2,3,4-13c4]heptanoic acid (m4pfhpa) (0%), perfluoro[13c8]octanoic acid (m8pfoa) (1%) and 2,3,3,3-tetrafluoro-2-[1,1,2,2,3,3,3-heptafluoropropoxy]-13c3-propanoic acid (m3hfpo-da) (0%) are below the acceptance criteria in both the original and re-extraction with lesser volume. The associated target compounds are not reported due to the insufficient recovery of these surrogates.

L2216627-09: The Extracted Internal Surrogate recovery for 2,3,3,3-tetrafluoro-2-[1,1,2,2,3,3,3-heptafluoropropoxy]-13c3-propanoic acid (m3hfpo-da) (1%) is below the acceptance criteria. The associated target compounds are not reported due to the insufficient recovery of this surrogate.

L2216627-10: The Extracted Internal Surrogate recovery for 2,3,3,3-tetrafluoro-2-[1,1,2,2,3,3,3-heptafluoropropoxy]-13c3-propanoic acid (m3hfpo-da) (0%) is below the acceptance criteria in both the original and re-extraction with lesser volume. The associated target compounds are not reported due to the insufficient recovery of this surrogate.

WG1624078-1, WG1624078-4, WG1629275-1, and WG1629275-2: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report

Project Name:	MASS. NATURAL FERTILIZER	**Lab Number:**	L2216627
Project Number:	3291	**Report Date:**	04/22/22

Case Narrative (continued)

for details.

The Extracted Internal Standard recovery for the WG1629275-1 Method Blank, associated with L2216627-03RE, is below the acceptance criteria for perfluoro[13c8]octanesulfonamide (m8fosa) (2%); however, the method blank is non-detect for all associated target analytes; therefore, no further action was taken.

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: Susan E O'Neil Susan O' Neil

Title: Technical Director/Representative Date: 04/22/22

ORGANICS

SEMIVOLATILES

Project Name: MASS. NATURAL FERTILIZER
Lab Number: L2216627
Project Number: 3291
Report Date: 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-01
Client ID: FP-1
Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER
Date Collected: 03/30/22 11:45
Date Received: 03/31/22
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/07/22 10:23
Analyst: HT
Percent Solids: 44%

Extraction Method: ALPHA 23528
Extraction Date: 04/06/22 16:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	1.09		ng/g	0.525	--	1
Perfluorohexanoic Acid (PFHxA)	5.39		ng/g	1.05	--	1
Perfluoroheptanoic Acid (PFHpA)	5.26		ng/g	0.525	--	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	0.525	--	1
Perfluorooctanoic Acid (PFOA)	16.9		ng/g	0.525	--	1
Perfluorononanoic Acid (PFNA)	6.75		ng/g	0.525	--	1
Perfluorooctanesulfonic Acid (PFOS)	35.6		ng/g	0.525	--	1
Perfluorodecanoic Acid (PFDA)	21.0		ng/g	0.525	--	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	2.32		ng/g	1.05	--	1
Perfluoroundecanoic Acid (PFUnA)	5.05		ng/g	1.05	--	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	28.9		ng/g	1.05	--	1
Perfluorododecanoic Acid (PFDoA)	8.15		ng/g	1.05	--	1
Perfluorotridecanoic Acid (PFTrDA)	2.11		ng/g	1.05	--	1
Perfluorotetradecanoic Acid (PFTA)	2.35		ng/g	1.05	--	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/g	21.0	--	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/g	2.10	--	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/g	2.10	--	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/g	2.10	--	1
PFOA/PFOS, Total	52.5		ng/g	0.525	--	1
PFAS, Total (5)	64.5		ng/g	0.525	--	1

Project Name: MASS. NATURAL FERTILIZER **Lab Number:** L2216627

Project Number: 3291 **Report Date:** 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-01 Date Collected: 03/30/22 11:45

Client ID: FP-1 Date Received: 03/31/22

Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER 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[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	103		74-139
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	**191**	Q	14-167
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	**55**	Q	66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	**57**	Q	71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	104		78-139
Perfluoro[13C8]Octanoic Acid (M8PFOA)	**64**	Q	75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**262**	Q	20-154
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	**67**	Q	72-140
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	99		79-136
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	**71**	Q	75-130
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	**28**	Q	31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	61		61-155
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	60		34-137
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	60		54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	74		24-159
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	43		10-203

Project Name: MASS. NATURAL FERTILIZER **Lab Number:** L2216627

Project Number: 3291 **Report Date:** 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-02
Client ID: FP-2
Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER

Date Collected: 03/30/22 11:50
Date Received: 03/31/22
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/07/22 11:13
Analyst: HT
Percent Solids: 64%

Extraction Method: ALPHA 23528
Extraction Date: 04/06/22 16:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	0.671		ng/g	0.359	--	1
Perfluorohexanoic Acid (PFHxA)	4.20		ng/g	0.719	--	1
Perfluoroheptanoic Acid (PFHpA)	4.95		ng/g	0.359	--	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	0.359	--	1
Perfluorooctanoic Acid (PFOA)	14.3		ng/g	0.359	--	1
Perfluorononanoic Acid (PFNA)	4.95		ng/g	0.359	--	1
Perfluorooctanesulfonic Acid (PFOS)	23.1		ng/g	0.359	--	1
Perfluorodecanoic Acid (PFDA)	12.8		ng/g	0.359	--	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	0.719	--	1
Perfluoroundecanoic Acid (PFUnA)	3.02		ng/g	0.719	--	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	15.7		ng/g	0.719	--	1
Perfluorododecanoic Acid (PFDoA)	5.00		ng/g	0.719	--	1
Perfluorotridecanoic Acid (PFTrDA)	1.19		ng/g	0.719	--	1
Perfluorotetradecanoic Acid (PFTA)	1.37	F	ng/g	0.719	--	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/g	14.4	--	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/g	1.44	--	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/g	1.44	--	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/g	1.44	--	1
PFOA/PFOS, Total	37.4		ng/g	0.359	--	1
PFAS, Total (5)	47.3		ng/g	0.359	--	1

Project Name: MASS. NATURAL FERTILIZER **Lab Number:** L2216627

Project Number: 3291 **Report Date:** 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-02 Date Collected: 03/30/22 11:50

Client ID: FP-2 Date Received: 03/31/22

Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER 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[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	104		74-139
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	124		14-167
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	79		66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	81		71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	107		78-139
Perfluoro[13C8]Octanoic Acid (M8PFOA)	94		75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**219**	Q	20-154
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	90		72-140
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	99		79-136
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	94		75-130
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	111		31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	86		61-155
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	96		34-137
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	97		54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	92		24-159
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	79		10-203

Project Name: MASS. NATURAL FERTILIZER
Lab Number: L2216627
Project Number: 3291
Report Date: 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-03 RE
Client ID: FP-3
Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER

Date Collected: 03/30/22 11:55
Date Received: 03/31/22
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/21/22 09:34
Analyst: MP
Percent Solids: 63%

Extraction Method: ALPHA 23528
Extraction Date: 04/20/22 17:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	1.27	--	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	1.27	--	1
Perfluorononanoic Acid (PFNA)	1.89	F	ng/g	1.27	--	1
Perfluorooctanesulfonic Acid (PFOS)	9.35		ng/g	1.27	--	1
Perfluorodecanoic Acid (PFDA)	2.40		ng/g	1.27	--	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	2.54	--	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/g	2.54	--	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	2.54	--	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/g	2.54	--	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/g	2.54	--	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/g	2.54	--	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/g	5.07	--	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/g	5.07	--	1

Project Name: MASS. NATURAL FERTILIZER **Lab Number:** L2216627

Project Number: 3291 **Report Date:** 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-03 RE Date Collected: 03/30/22 11:55

Client ID: FP-3 Date Received: 03/31/22

Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER 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[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	107		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)	**0**	Q	66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	**0**	Q	71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	112		78-139
Perfluoro[13C8]Octanoic Acid (M8PFOA)	**1**	Q	75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	92		20-154
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	**4**	Q	72-140
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	107		79-136
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	**13**	Q	75-130
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	**21**	Q	31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	**22**	Q	61-155
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	**23**	Q	34-137
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	**30**	Q	54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	40		24-159
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	**0**	Q	10-203

Project Name: MASS. NATURAL FERTILIZER
Lab Number: L2216627
Project Number: 3291
Report Date: 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-04
Client ID: FP-4
Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER
Date Collected: 03/30/22 12:00
Date Received: 03/31/22
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/07/22 11:46
Analyst: HT
Percent Solids: 47%

Extraction Method: ALPHA 23528
Extraction Date: 04/06/22 16:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	0.904		ng/g	0.510	--	1
Perfluorohexanoic Acid (PFHxA)	2.67		ng/g	1.02	--	1
Perfluoroheptanoic Acid (PFHpA)	3.25		ng/g	0.510	--	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	0.510	--	1
Perfluorooctanoic Acid (PFOA)	10.6		ng/g	0.510	--	1
Perfluorononanoic Acid (PFNA)	3.81		ng/g	0.510	--	1
Perfluorooctanesulfonic Acid (PFOS)	20.2		ng/g	0.510	--	1
Perfluorodecanoic Acid (PFDA)	9.68		ng/g	0.510	--	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	1.02	--	1
Perfluoroundecanoic Acid (PFUnA)	2.09		ng/g	1.02	--	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	12.4		ng/g	1.02	--	1
Perfluorododecanoic Acid (PFDoA)	3.49		ng/g	1.02	--	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/g	1.02	--	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/g	1.02	--	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/g	20.4	--	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/g	2.04	--	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/g	2.04	--	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/g	2.04	--	1
PFOA/PFOS, Total	30.8		ng/g	0.510	--	1
PFAS, Total (5)	37.9		ng/g	0.510	--	1

Project Name: MASS. NATURAL FERTILIZER **Lab Number:** L2216627

Project Number: 3291 **Report Date:** 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-04 Date Collected: 03/30/22 12:00

Client ID: FP-4 Date Received: 03/31/22

Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER 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[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	90		74-139
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	162		14-167
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	**48**	Q	66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	**50**	Q	71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	92		78-139
Perfluoro[13C8]Octanoic Acid (M8PFOA)	**56**	Q	75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**254**	Q	20-154
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	**67**	Q	72-140
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	86		79-136
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	**70**	Q	75-130
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	**16**	Q	31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	62		61-155
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	59		34-137
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	70		54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	74		24-159
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	36		10-203

Project Name: MASS. NATURAL FERTILIZER **Lab Number:** L2216627

Project Number: 3291 **Report Date:** 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-05
Client ID: SP-1
Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER

Date Collected: 03/30/22 12:20
Date Received: 03/31/22
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/07/22 12:03
Analyst: HT
Percent Solids: 33%

Extraction Method: ALPHA 23528
Extraction Date: 04/06/22 16:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	2.02	--	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/g	4.04	--	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/g	2.02	--	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	2.02	--	1
Perfluorooctanoic Acid (PFOA)	ND		ng/g	2.02	--	1
Perfluorononanoic Acid (PFNA)	ND		ng/g	2.02	--	1
Perfluorooctanesulfonic Acid (PFOS)	6.79	F	ng/g	2.02	--	1
Perfluorodecanoic Acid (PFDA)	ND		ng/g	2.02	--	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	4.04	--	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/g	4.04	--	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	4.04	--	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/g	4.04	--	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/g	4.04	--	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/g	4.04	--	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/g	80.9	--	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/g	8.09	--	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/g	8.09	--	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/g	8.09	--	1
PFOA/PFOS, Total	6.79		ng/g	2.02	--	1
PFAS, Total (5)	6.79		ng/g	2.02	--	1

Project Name: MASS. NATURAL FERTILIZER **Lab Number:** L2216627

Project Number: 3291 **Report Date:** 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-05 Date Collected: 03/30/22 12:20

Client ID: SP-1 Date Received: 03/31/22

Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER 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[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	104		74-139
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	**244**	Q	14-167
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	76		66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	82		71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	105		78-139
Perfluoro[13C8]Octanoic Acid (M8PFOA)	98		75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**361**	Q	20-154
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	93		72-140
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	102		79-136
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	99		75-130
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	44		31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	105		61-155
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	92		34-137
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	104		54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	95		24-159
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	64		10-203

Project Name: MASS. NATURAL FERTILIZER **Lab Number:** L2216627

Project Number: 3291 **Report Date:** 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-06
Client ID: SP-2
Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER

Date Collected: 03/30/22 12:30
Date Received: 03/31/22
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/07/22 12:19
Analyst: HT
Percent Solids: 34%

Extraction Method: ALPHA 23528
Extraction Date: 04/06/22 16:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	1.89	--	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/g	3.78	--	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/g	1.89	--	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	1.89	--	1
Perfluorooctanoic Acid (PFOA)	1.97		ng/g	1.89	--	1
Perfluorononanoic Acid (PFNA)	ND		ng/g	1.89	--	1
Perfluorooctanesulfonic Acid (PFOS)	4.85	F	ng/g	1.89	--	1
Perfluorodecanoic Acid (PFDA)	ND		ng/g	1.89	--	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	3.78	--	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/g	3.78	--	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	3.78	--	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/g	3.78	--	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/g	3.78	--	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/g	3.78	--	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/g	75.6	--	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/g	7.56	--	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/g	7.56	--	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/g	7.56	--	1
PFOA/PFOS, Total	6.82		ng/g	1.89	--	1
PFAS, Total (5)	6.82		ng/g	1.89	--	1

Project Name: MASS. NATURAL FERTILIZER **Lab Number:** L2216627

Project Number: 3291 **Report Date:** 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-06 Date Collected: 03/30/22 12:30

Client ID: SP-2 Date Received: 03/31/22

Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER 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[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	98		74-139
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	**178**	Q	14-167
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	82		66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	87		71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	104		78-139
Perfluoro[13C8]Octanoic Acid (M8PFOA)	100		75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**256**	Q	20-154
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	99		72-140
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	101		79-136
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	96		75-130
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	**29**	Q	31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	94		61-155
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	105		34-137
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	95		54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	88		24-159
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	75		10-203

Project Name: MASS. NATURAL FERTILIZER **Lab Number:** L2216627

Project Number: 3291 **Report Date:** 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-07
Client ID: SP-3
Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER

Date Collected: 03/30/22 12:35
Date Received: 03/31/22
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/07/22 12:36
Analyst: HT
Percent Solids: 32%

Extraction Method: ALPHA 23528
Extraction Date: 04/06/22 16:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	2.17	--	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/g	4.34	--	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/g	2.17	--	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	2.17	--	1
Perfluorooctanoic Acid (PFOA)	2.34		ng/g	2.17	--	1
Perfluorononanoic Acid (PFNA)	ND		ng/g	2.17	--	1
Perfluorooctanesulfonic Acid (PFOS)	5.83	F	ng/g	2.17	--	1
Perfluorodecanoic Acid (PFDA)	ND		ng/g	2.17	--	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	4.34	--	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/g	4.34	--	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	4.34	--	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/g	4.34	--	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/g	4.34	--	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/g	4.34	--	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/g	86.8	--	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/g	8.68	--	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/g	8.68	--	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/g	8.68	--	1
PFOA/PFOS, Total	8.17		ng/g	2.17	--	1
PFAS, Total (5)	8.17		ng/g	2.17	--	1

Project Name: MASS. NATURAL FERTILIZER **Lab Number:** L2216627

Project Number: 3291 **Report Date:** 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-07 Date Collected: 03/30/22 12:35

Client ID: SP-3 Date Received: 03/31/22

Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER 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[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	99		74-139
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	**215**	Q	14-167
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	79		66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	82		71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	102		78-139
Perfluoro[13C8]Octanoic Acid (M8PFOA)	99		75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**329**	Q	20-154
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	99		72-140
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	102		79-136
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	97		75-130
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	81		31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	106		61-155
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	93		34-137
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	106		54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	88		24-159
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	61		10-203

Project Name: MASS. NATURAL FERTILIZER **Lab Number:** L2216627

Project Number: 3291 **Report Date:** 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-08
Client ID: SP-4
Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER

Date Collected: 03/30/22 12:40
Date Received: 03/31/22
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/07/22 12:52
Analyst: HT
Percent Solids: 35%

Extraction Method: ALPHA 23528
Extraction Date: 04/06/22 16:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	2.26	--	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/g	4.53	--	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/g	2.26	--	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	2.26	--	1
Perfluorooctanoic Acid (PFOA)	ND		ng/g	2.26	--	1
Perfluorononanoic Acid (PFNA)	ND		ng/g	2.26	--	1
Perfluorooctanesulfonic Acid (PFOS)	3.76		ng/g	2.26	--	1
Perfluorodecanoic Acid (PFDA)	ND		ng/g	2.26	--	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	4.53	--	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/g	4.53	--	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	4.53	--	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/g	4.53	--	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/g	4.53	--	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/g	4.53	--	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/g	90.6	--	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/g	9.06	--	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/g	9.06	--	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/g	9.06	--	1
PFOA/PFOS, Total	3.76		ng/g	2.26	--	1
PFAS, Total (5)	3.76		ng/g	2.26	--	1

Project Name: MASS. NATURAL FERTILIZER **Lab Number:** L2216627

Project Number: 3291 **Report Date:** 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-08 Date Collected: 03/30/22 12:40

Client ID: SP-4 Date Received: 03/31/22

Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER 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[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	101		74-139
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	**235**	Q	14-167
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	84		66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	89		71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	109		78-139
Perfluoro[13C8]Octanoic Acid (M8PFOA)	103		75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**349**	Q	20-154
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	100		72-140
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	103		79-136
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	100		75-130
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	**141**	Q	31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	62		61-155
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	70		34-137
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	82		54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	90		24-159
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	75		10-203

Project Name: MASS. NATURAL FERTILIZER
Lab Number: L2216627
Project Number: 3291
Report Date: 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-09
Client ID: SP-5
Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER
Date Collected: 03/30/22 12:45
Date Received: 03/31/22
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/07/22 13:09
Analyst: HT
Percent Solids: 33%

Extraction Method: ALPHA 23528
Extraction Date: 04/06/22 16:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	1.96	--	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/g	3.91	--	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/g	1.96	--	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	1.96	--	1
Perfluorooctanoic Acid (PFOA)	ND		ng/g	1.96	--	1
Perfluorononanoic Acid (PFNA)	ND		ng/g	1.96	--	1
Perfluorooctanesulfonic Acid (PFOS)	9.58	F	ng/g	1.96	--	1
Perfluorodecanoic Acid (PFDA)	ND		ng/g	1.96	--	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	3.91	--	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/g	3.91	--	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	3.91	--	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/g	3.91	--	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/g	3.91	--	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/g	3.91	--	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/g	7.83	--	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/g	7.83	--	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/g	7.83	--	1
PFOA/PFOS, Total	9.58		ng/g	1.96	--	1
PFAS, Total (5)	9.58		ng/g	1.96	--	1

Project Name: MASS. NATURAL FERTILIZER **Lab Number:** L2216627

Project Number: 3291 **Report Date:** 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-09 Date Collected: 03/30/22 12:45

Client ID: SP-5 Date Received: 03/31/22

Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER 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[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	102		74-139
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	**214**	Q	14-167
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	78		66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	84		71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	105		78-139
Perfluoro[13C8]Octanoic Acid (M8PFOA)	96		75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**323**	Q	20-154
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	93		72-140
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	104		79-136
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	94		75-130
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	**160**	Q	31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	104		61-155
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	79		34-137
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	**48**	Q	54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	86		24-159
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	**1**	Q	10-203

Project Name: MASS. NATURAL FERTILIZER **Lab Number:** L2216627

Project Number: 3291 **Report Date:** 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-10
Client ID: SP-6
Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER

Date Collected: 03/30/22 12:50
Date Received: 03/31/22
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/07/22 13:26
Analyst: HT
Percent Solids: 33%

Extraction Method: ALPHA 23528
Extraction Date: 04/06/22 16:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	1.97	--	1
Perfluorohexanoic Acid (PFHxA)	4.42		ng/g	3.95	--	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/g	1.97	--	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	1.97	--	1
Perfluorooctanoic Acid (PFOA)	2.08		ng/g	1.97	--	1
Perfluorononanoic Acid (PFNA)	ND		ng/g	1.97	--	1
Perfluorooctanesulfonic Acid (PFOS)	5.66		ng/g	1.97	--	1
Perfluorodecanoic Acid (PFDA)	ND		ng/g	1.97	--	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	3.95	--	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/g	3.95	--	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	3.95	--	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/g	3.95	--	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/g	3.95	--	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/g	3.95	--	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/g	7.89	--	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/g	7.89	--	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/g	7.89	--	1
PFOA/PFOS, Total	7.74		ng/g	1.97	--	1
PFAS, Total (5)	7.74		ng/g	1.97	--	1

Project Name: MASS. NATURAL FERTILIZER **Lab Number:** L2216627

Project Number: 3291 **Report Date:** 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-10 Date Collected: 03/30/22 12:50

Client ID: SP-6 Date Received: 03/31/22

Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER 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[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	97		74-139
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	156		14-167
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	**29**	Q	66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	**37**	Q	71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	100		78-139
Perfluoro[13C8]Octanoic Acid (M8PFOA)	**52**	Q	75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**256**	Q	20-154
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	**59**	Q	72-140
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	95		79-136
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	**68**	Q	75-130
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	**25**	Q	31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	81		61-155
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	86		34-137
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	83		54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	79		24-159
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	**0**	Q	10-203

Project Name: MASS. NATURAL FERTILIZER **Lab Number:** L2216627

Project Number: 3291 **Report Date:** 04/22/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/07/22 07:21
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/06/22 16:40

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-02,04-10 Batch: WG1624078-1					
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	0.250	--
Perfluorohexanoic Acid (PFHxA)	ND		ng/g	0.500	--
Perfluoroheptanoic Acid (PFHpA)	ND		ng/g	0.250	--
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	0.250	--
Perfluorooctanoic Acid (PFOA)	ND		ng/g	0.250	--
Perfluorononanoic Acid (PFNA)	ND		ng/g	0.250	--
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/g	0.250	--
Perfluorodecanoic Acid (PFDA)	ND		ng/g	0.250	--
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	0.500	--
Perfluoroundecanoic Acid (PFUnA)	ND		ng/g	0.500	--
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	0.500	--
Perfluorododecanoic Acid (PFDoA)	ND		ng/g	0.500	--
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/g	0.500	--
Perfluorotetradecanoic Acid (PFTA)	ND		ng/g	0.500	--
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/g	10.0	--
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/g	1.00	--
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/g	1.00	--
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/g	1.00	--
PFOA/PFOS, Total	ND		ng/g	0.250	--
PFAS, Total (5)	ND		ng/g	0.250	--

Project Name: MASS. NATURAL FERTILIZER **Lab Number:** L2216627

Project Number: 3291 **Report Date:** 04/22/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/07/22 07:21
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/06/22 16:40

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-02,04-10 Batch: WG1624078-1					

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	78		61-135
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	76		58-150
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	83		74-139
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	60		14-167
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	70		66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	73		71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	87		78-139
Perfluoro[13C8]Octanoic Acid (M8PFOA)	77		75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	70		20-154
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	**71**	Q	72-140
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	**77**	Q	79-136
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	75		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)	58		31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	78		61-155
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	59		10-117
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	60		34-137
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	70		54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	49		24-159
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	23		10-203
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	**5**	Q	10-145
1H,1H,2H,2H-Perfluorododecane Sulfonate (M2D4-10:2FTS)	77		50-150

Project Name: MASS. NATURAL FERTILIZER
Project Number: 3291
Lab Number: L2216627
Report Date: 04/22/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/21/22 09:01
Analyst: MP

Extraction Method: ALPHA 23528
Extraction Date: 04/20/22 17:30

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 03 Batch: WG1629275-1					
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	0.250	--
Perfluorohexanoic Acid (PFHxA)	ND		ng/g	0.500	--
Perfluoroheptanoic Acid (PFHpA)	ND		ng/g	0.250	--
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	0.250	--
Perfluorooctanoic Acid (PFOA)	ND		ng/g	0.250	--
Perfluorononanoic Acid (PFNA)	ND		ng/g	0.250	--
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/g	0.250	--
Perfluorodecanoic Acid (PFDA)	ND		ng/g	0.250	--
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	0.500	--
Perfluoroundecanoic Acid (PFUnA)	ND		ng/g	0.500	--
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	0.500	--
Perfluorododecanoic Acid (PFDoA)	ND		ng/g	0.500	--
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/g	0.500	--
Perfluorotetradecanoic Acid (PFTA)	ND		ng/g	0.500	--
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/g	10.0	--
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/g	1.00	--
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/g	1.00	--
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/g	1.00	--
PFOA/PFOS, Total	ND		ng/g	0.250	--
PFAS, Total (5)	ND		ng/g	0.250	--

Project Name: MASS. NATURAL FERTILIZER **Lab Number:** L2216627

Project Number: 3291 **Report Date:** 04/22/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/21/22 09:01
Analyst: MP

Extraction Method: ALPHA 23528
Extraction Date: 04/20/22 17:30

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 03 Batch: WG1629275-1					

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	64		61-135
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	64		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)	45		14-167
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	**62**	Q	66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	**65**	Q	71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	**69**	Q	78-139
Perfluoro[13C8]Octanoic Acid (M8PFOA)	**66**	Q	75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	51		20-154
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	**61**	Q	72-140
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	**60**	Q	79-136
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	**65**	Q	75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	39		19-175
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	34		31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	**60**	Q	61-155
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	**2**	Q	10-117
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	37		34-137
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	**52**	Q	54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	28		24-159
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	65		10-203
1H,1H,2H,2H-Perfluorododecane Sulfonate (M2D4-10:2FTS)	**32**	Q	50-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: MASS. NATURAL FERTILIZER

Project Number: 3291

Lab Number: L2216627

Report Date: 04/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-02,04-10 Batch: WG1624078-2								
Perfluorobutanesulfonic Acid (PFBS)	94		-		72-128	-		30
Perfluorohexanoic Acid (PFHxA)	92		-		70-132	-		30
Perfluoroheptanoic Acid (PFHpA)	94		-		71-131	-		30
Perfluorohexanesulfonic Acid (PFHxS)	106		-		67-130	-		30
Perfluorooctanoic Acid (PFOA)	88		-		69-133	-		30
Perfluorononanoic Acid (PFNA)	100		-		72-129	-		30
Perfluorooctanesulfonic Acid (PFOS)	96		-		68-136	-		30
Perfluorodecanoic Acid (PFDA)	89		-		69-133	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	92		-		63-144	-		30
Perfluoroundecanoic Acid (PFUnA)	91		-		64-136	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	98		-		61-139	-		30
Perfluorododecanoic Acid (PFDoA)	96		-		69-135	-		30
Perfluorotridecanoic Acid (PFTrDA)	108		-		66-139	-		30
Perfluorotetradecanoic Acid (PFTA)	90		-		69-133	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	99		-		41-165	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	90		-		68-143	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	102		-		69-139	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	103		-		51-155	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: MASS. NATURAL FERTILIZER

Project Number: 3291

Lab Number: L2216627

Report Date: 04/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-02,04-10 Batch: WG1624078-2								

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	84				61-135
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	82				58-150
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	95				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)	79				66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	82				71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	94				78-139
Perfluoro[13C8]Octanoic Acid (M8PFOA)	87				75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	84				20-154
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	79				72-140
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	92				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)	84				19-175
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	67				31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	87				61-155
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	43				10-117
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	68				34-137
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	81				54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	68				24-159
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	31				10-203
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	11				10-145
1H,1H,2H,2H-Perfluorododecane Sulfonate (M2D4-10:2FTS)	99				50-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: MASS. NATURAL FERTILIZER

Project Number: 3291

Lab Number: L2216627

Report Date: 04/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 03 Batch: WG1629275-2								
Perfluorobutanesulfonic Acid (PFBS)	91		-		72-128	-		30
Perfluorohexanoic Acid (PFHxA)	89		-		70-132	-		30
Perfluoroheptanoic Acid (PFHpA)	90		-		71-131	-		30
Perfluorohexanesulfonic Acid (PFHxS)	102		-		67-130	-		30
Perfluorooctanoic Acid (PFOA)	86		-		69-133	-		30
Perfluorononanoic Acid (PFNA)	93		-		72-129	-		30
Perfluorooctanesulfonic Acid (PFOS)	98		-		68-136	-		30
Perfluorodecanoic Acid (PFDA)	87		-		69-133	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	92		-		63-144	-		30
Perfluoroundecanoic Acid (PFUnA)	99		-		64-136	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	94		-		61-139	-		30
Perfluorododecanoic Acid (PFDoA)	96		-		69-135	-		30
Perfluorotridecanoic Acid (PFTrDA)	114		-		66-139	-		30
Perfluorotetradecanoic Acid (PFTA)	92		-		69-133	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	122		-		41-165	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	91		-		68-143	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	104		-		69-139	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	100		-		51-155	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: MASS. NATURAL FERTILIZER

Project Number: 3291

Lab Number: L2216627

Report Date: 04/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 03 Batch: WG1629275-2								

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	70				61-135
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	71				58-150
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	80				74-139
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	57				14-167
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	68				66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	**70**	Q			71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	79				78-139
Perfluoro[13C8]Octanoic Acid (M8PFOA)	75				75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	62				20-154
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	**66**	Q			72-140
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	**70**	Q			79-136
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	**67**	Q			75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	55				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)	**57**	Q			61-155
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	41				10-117
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	36				34-137
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	54				54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	35				24-159
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	68				10-203
1H,1H,2H,2H-Perfluorododecane Sulfonate (M2D4-10:2FTS)	**46**	Q			50-150

Matrix Spike Analysis

Batch Quality Control

Project Name: MASS. NATURAL FERTILIZER

Project Number: 3291

Lab Number: L2216627

Report Date: 04/22/22

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): 01-02,04-10 QC Batch ID: WG1624078-3 QC Sample: L2212280-01 Client ID: MS Sample												
Perfluorobutanoic Acid (PFBA)	ND	15.9	15.1	90		-	-		71-135	-		30
Perfluoropentanoic Acid (PFPeA)	ND	15.9	14.9	94		-	-		69-132	-		30
Perfluorobutanesulfonic Acid (PFBS)	ND	14.1	13.3	94		-	-		72-128	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	14.8	14.4	97		-	-		62-145	-		30
Perfluorohexanoic Acid (PFHxA)	ND	15.9	14.9	94		-	-		70-132	-		30
Perfluoropentanesulfonic Acid (PFPeS)	ND	14.9	14.3	96		-	-		73-123	-		30
Perfluoroheptanoic Acid (PFHpA)	ND	15.9	14.9	94		-	-		71-131	-		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	14.5	15.6	108		-	-		67-130	-		30
Perfluorooctanoic Acid (PFOA)	ND	15.9	14.3	90		-	-		69-133	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	15.1	15.6	103		-	-		64-140	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	15.1	15.7	104		-	-		70-132	-		30
Perfluorononanoic Acid (PFNA)	ND	15.9	15.3	96		-	-		72-129	-		30
Perfluorooctanesulfonic Acid (PFOS)	ND	14.7	15.3	104		-	-		68-136	-		30
Perfluorodecanoic Acid (PFDA)	ND	15.9	14.5	91		-	-		69-133	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	15.2	14.6	96		-	-		65-137	-		30
Perfluorononanesulfonic Acid (PFNS)	ND	15.3	15.8	103		-	-		69-125	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	15.9	15.0	95		-	-		63-144	-		30
Perfluoroundecanoic Acid (PFUnA)	ND	15.9	14.3	90		-	-		64-136	-		30
Perfluorodecanesulfonic Acid (PFDS)	ND	15.3	16.2	106		-	-		59-134	-		30
Perfluorooctanesulfonamide (FOSA)	ND	15.9	13.4	84		-	-		67-137	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	15.9	15.9	100		-	-		61-139	-		30
Perfluorododecanoic Acid (PFDoA)	ND	15.9	15.6	98		-	-		69-135	-		30

Matrix Spike Analysis

Batch Quality Control

Project Name: MASS. NATURAL FERTILIZER
Project Number: 3291
Lab Number: L2216627
Report Date: 04/22/22

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): 01-02,04-10 QC Batch ID: WG1624078-3 QC Sample: L2212280-01 Client ID: MS Sample												
Perfluorotridecanoic Acid (PFTrDA)	ND	15.9	16.8	106		-	-		66-139	-		30
Perfluorotetradecanoic Acid (PFTA)	ND	15.9	15.0	95		-	-		69-133	-		30

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**367**	Q			19-175
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	**245**	Q			14-167
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**359**	Q			20-154
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	**159**	Q			34-137
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	**173**	Q			31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	114				61-155
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	106				75-130
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	83				66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	90				71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	115				78-139
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	113				54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	91				24-159
Perfluoro[13C4]Butanoic Acid (MPFBA)	98				61-135
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	82				58-150
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	10				10-117
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	106				79-136
Perfluoro[13C8]Octanoic Acid (M8PFOA)	102				75-130
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	100				72-140
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	112				74-139

Matrix Spike Analysis

Batch Quality Control

Project Name: MASS. NATURAL FERTILIZER

Project Number: 3291

Lab Number: L2216627

Report Date: 04/22/22

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): 03 QC Batch ID: WG1629275-3 QC Sample: L2220100-01 Client ID: MS Sample												
Perfluorobutanoic Acid (PFBA)	ND	5.2	4.60	87		-	-		71-135	-		30
Perfluoropentanoic Acid (PFPeA)	ND	5.2	4.84	93		-	-		69-132	-		30
Perfluorobutanesulfonic Acid (PFBS)	ND	4.62	4.14	90		-	-		72-128	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	4.87	4.29	88		-	-		62-145	-		30
Perfluorohexanoic Acid (PFHxA)	ND	5.2	4.86	93		-	-		70-132	-		30
Perfluoropentanesulfonic Acid (PFPeS)	ND	4.89	4.82	99		-	-		73-123	-		30
Perfluoroheptanoic Acid (PFHpA)	ND	5.2	4.66	90		-	-		71-131	-		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	4.76	4.97	104		-	-		67-130	-		30
Perfluorooctanoic Acid (PFOA)	ND	5.2	4.53	86		-	-		69-133	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	4.96	5.32	107		-	-		64-140	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	4.97	5.85	118		-	-		70-132	-		30
Perfluorononanoic Acid (PFNA)	ND	5.2	5.35	103		-	-		72-129	-		30
Perfluorooctanesulfonic Acid (PFOS)	ND	4.83	5.12	106		-	-		68-136	-		30
Perfluorodecanoic Acid (PFDA)	ND	5.2	4.61	89		-	-		69-133	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	5	5.76	115		-	-		65-137	-		30
Perfluorononanesulfonic Acid (PFNS)	ND	5.01	4.35	87		-	-		69-125	-		30
Perfluoroundecanoic Acid (PFUnA)	ND	5.2	5.34	103		-	-		64-136	-		30
Perfluorodecanesulfonic Acid (PFDS)	ND	5.03	2.39	**48**	Q	-	-		59-134	-		30
Perfluorododecanoic Acid (PFDoA)	ND	5.2	5.34	103		-	-		69-135	-		30

Matrix Spike Analysis

Batch Quality Control

Project Name: MASS. NATURAL FERTILIZER

Project Number: 3291

Lab Number: L2216627

Report Date: 04/22/22

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): 03 QC Batch ID: WG1629275-3 QC Sample: L2220100-01 Client ID: MS Sample												

Surrogate (Extracted Internal Standard)	*MS % Recovery*	*MS Qualifier*	*MSD % Recovery*	*MSD Qualifier*	*Acceptance Criteria*
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**12**	Q			19-175
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	26				14-167
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	24				20-154
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	**2**	Q			34-137
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	**2**	Q			31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	**20**	Q			61-155
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	**26**	Q			75-130
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	**33**	Q			66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	**35**	Q			71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	**37**	Q			78-139
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	**10**	Q			54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	**0**	Q			24-159
Perfluoro[13C4]Butanoic Acid (MPFBA)	**36**	Q			61-135
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	**35**	Q			58-150
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	**26**	Q			79-136
Perfluoro[13C8]Octanoic Acid (M8PFOA)	**33**	Q			75-130
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	**27**	Q			72-140
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	**40**	Q			74-139

Lab Duplicate Analysis
Batch Quality Control

Project Name: MASS. NATURAL FERTILIZER
Project Number: 3291

Lab Number: L2216627
Report Date: 04/22/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-02,04-10 QC Batch ID: WG1624078-4 QC Sample: L2216627-01 Client ID: FP-1						
Perfluorobutanesulfonic Acid (PFBS)	1.09	1.10	ng/g	1		30
Perfluorohexanoic Acid (PFHxA)	5.39	5.79	ng/g	7		30
Perfluoroheptanoic Acid (PFHpA)	5.26	5.29	ng/g	1		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	ND	ng/g	NC		30
Perfluorooctanoic Acid (PFOA)	16.9	16.8	ng/g	1		30
Perfluorononanoic Acid (PFNA)	6.75	6.37	ng/g	6		30
Perfluorooctanesulfonic Acid (PFOS)	35.6	34.4	ng/g	3		30
Perfluorodecanoic Acid (PFDA)	21.0	18.4	ng/g	13		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	2.32	1.94	ng/g	18		30
Perfluoroundecanoic Acid (PFUnA)	5.05	4.58	ng/g	10		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	28.9	23.0	ng/g	23		30
Perfluorododecanoic Acid (PFDoA)	8.15	6.63	ng/g	21		30
Perfluorotridecanoic Acid (PFTrDA)	2.11	1.90	ng/g	10		30
Perfluorotetradecanoic Acid (PFTA)	2.35	1.89F	ng/g	22		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	ND	ng/g	NC		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	ND	ng/g	NC		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	ND	ng/g	NC		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	ND	ng/g	NC		30

Lab Duplicate Analysis
Batch Quality Control

Project Name: MASS. NATURAL FERTILIZER
Project Number: 3291

Lab Number: L2216627
Report Date: 04/22/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-02,04-10 QC Batch ID: WG1624078-4 QC Sample: L2216627-01 Client ID: FP-1

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	103		96		74-139
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	**191**	Q	**183**	Q	14-167
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	**55**	Q	**45**	Q	66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	**57**	Q	**50**	Q	71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	104		97		78-139
Perfluoro[13C8]Octanoic Acid (M8PFOA)	**64**	Q	**60**	Q	75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**262**	Q	**252**	Q	20-154
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	**67**	Q	**64**	Q	72-140
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	99		89		79-136
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	**71**	Q	**72**	Q	75-130
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	**28**	Q	**29**	Q	31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	61		**43**	Q	61-155
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	60		58		34-137
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	60		**51**	Q	54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	74		78		24-159
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	43		34		10-203

Lab Duplicate Analysis
Batch Quality Control

Project Name: MASS. NATURAL FERTILIZER
Project Number: 3291

Lab Number: L2216627
Report Date: 04/22/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 03 QC Batch ID: WG1629275-4 QC Sample: L2220100-02 Client ID: DUP Sample						
Perfluorobutanoic Acid (PFBA)	ND	ND	ng/g	NC		30
Perfluoropentanoic Acid (PFPeA)	ND	ND	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	ND	ng/g	NC		30
Perfluoropentanesulfonic Acid (PFPeS)	ND	ND	ng/g	NC		30
Perfluoroheptanoic Acid (PFHpA)	ND	ND	ng/g	NC		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	ND	ng/g	NC		30
Perfluorooctanoic Acid (PFOA)	ND	ND	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)	ND	ND	ng/g	NC		30
Perfluorooctanesulfonic Acid (PFOS)	ND	ND	ng/g	NC		30
Perfluorodecanoic Acid (PFDA)	ND	ND	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)	ND	ND	ng/g	NC		30
Perfluorodecanesulfonic Acid (PFDS)	ND	ND	ng/g	NC		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ng/g	NC		30

Lab Duplicate Analysis
Batch Quality Control

Project Name: MASS. NATURAL FERTILIZER
Project Number: 3291

Lab Number: L2216627
Report Date: 04/22/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 03 QC Batch ID: WG1629275-4 QC Sample: L2220100-02 Client ID: DUP Sample						
Perfluorododecanoic Acid (PFDoA)	ND	ND	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)	88		86		61-135
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	90		89		58-150
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	96		97		74-139
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	69		69		14-167
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	84		82		66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	89		85		71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	103		99		78-139
Perfluoro[13C8]Octanoic Acid (M8PFOA)	88		88		75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	79		78		20-154
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	85		80		72-140
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	88		92		79-136
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	91		87		75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	72		78		19-175
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	60		60		31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	80		83		61-155
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	61		64		34-137
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	73		73		54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	47		53		24-159

INORGANICS
&
MISCELLANEOUS

Project Name: MASS. NATURAL FERTILIZER
Project Number: 3291
Lab Number: L2216627
Report Date: 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-01
Client ID: FP-1
Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER
Sample Depth:
Matrix: Solid
Date Collected: 03/30/22 11:45
Date Received: 03/31/22
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	43.9		%	0.100	--	1	-	04/07/22 11:35	121,2540G	AL

Project Name: MASS. NATURAL FERTILIZER
Project Number: 3291
Lab Number: L2216627
Report Date: 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-02
Client ID: FP-2
Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER
Sample Depth:
Matrix: Solid

Date Collected: 03/30/22 11:50
Date Received: 03/31/22
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	64.1		%	0.100	--	1	-	04/07/22 11:35	121,2540G	AL

Project Name: MASS. NATURAL FERTILIZER
Project Number: 3291
Lab Number: L2216627
Report Date: 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-03
Client ID: FP-3
Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER
Sample Depth:
Matrix: Solid

Date Collected: 03/30/22 11:55
Date Received: 03/31/22
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	62.6		%	0.100	--	1	-	04/07/22 11:35	121,2540G	AL

Project Name: MASS. NATURAL FERTILIZER
Project Number: 3291
Lab Number: L2216627
Report Date: 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-04
Client ID: FP-4
Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER
Sample Depth:
Matrix: Solid

Date Collected: 03/30/22 12:00
Date Received: 03/31/22
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	47.0		%	0.100	--	1	-	04/07/22 11:35	121,2540G	AL

Project Name: MASS. NATURAL FERTILIZER
Project Number: 3291
Lab Number: L2216627
Report Date: 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-05
Client ID: SP-1
Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER
Sample Depth:
Matrix: Solid

Date Collected: 03/30/22 12:20
Date Received: 03/31/22
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	33.2		%	0.100	--	1	-	04/07/22 11:35	121,2540G	AL

Project Name: MASS. NATURAL FERTILIZER
Project Number: 3291
Lab Number: L2216627
Report Date: 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-06
Client ID: SP-2
Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER
Sample Depth:
Matrix: Solid

Date Collected: 03/30/22 12:30
Date Received: 03/31/22
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	33.9		%	0.100	--	1	-	04/07/22 11:35	121,2540G	AL

Project Name: MASS. NATURAL FERTILIZER
Project Number: 3291
Lab Number: L2216627
Report Date: 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-07
Client ID: SP-3
Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER
Sample Depth:
Matrix: Solid

Date Collected: 03/30/22 12:35
Date Received: 03/31/22
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	32.0		%	0.100	--	1	-	04/07/22 11:35	121,2540G	AL

Project Name: MASS. NATURAL FERTILIZER
Project Number: 3291
Lab Number: L2216627
Report Date: 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-08
Client ID: SP-4
Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER
Sample Depth:
Matrix: Solid
Date Collected: 03/30/22 12:40
Date Received: 03/31/22
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	34.5		%	0.100	--	1	-	04/07/22 11:35	121,2540G	AL

Project Name: MASS. NATURAL FERTILIZER
Project Number: 3291
Lab Number: L2216627
Report Date: 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-09
Client ID: SP-5
Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER
Sample Depth:
Matrix: Solid

Date Collected: 03/30/22 12:45
Date Received: 03/31/22
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	33.4		%	0.100	--	1	-	04/07/22 11:35	121,2540G	AL

Project Name: MASS. NATURAL FERTILIZER
Project Number: 3291
Lab Number: L2216627
Report Date: 04/22/22

SAMPLE RESULTS

Lab ID: L2216627-10
Client ID: SP-6
Sample Location: 65 BEAN PORRIDGE HILL RD, WESTMINSTER
Sample Depth:
Matrix: Solid

Date Collected: 03/30/22 12:50
Date Received: 03/31/22
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	32.9		%	0.100	--	1	-	04/07/22 11:35	121,2540G	AL

Lab Duplicate Analysis

Batch Quality Control

Project Name: MASS. NATURAL FERTILIZER

Project Number: 3291

Lab Number: L2216627

Report Date: 04/22/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1624671-1 QC Sample: L2217309-01 Client ID: DUP Sample						
Solids, Total	91.0	90.8	%	0		10

Project Name: MASS. NATURAL FERTILIZER
Project Number: 3291

Lab Number: L2216627
Report Date: 04/22/22

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2216627-01A	Plastic 8oz unpreserved	A	NA		4.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2216627-01B	Plastic 2oz unpreserved for TS	A	NA		4.1	Y	Absent		A2-TS(7)
L2216627-02A	Plastic 8oz unpreserved	A	NA		4.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2216627-02B	Plastic 2oz unpreserved for TS	A	NA		4.1	Y	Absent		A2-537-ISOTOPE-36(14),A2-TS(7)
L2216627-03A	Plastic 8oz unpreserved	A	NA		4.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2216627-03B	Plastic 2oz unpreserved for TS	A	NA		4.1	Y	Absent		A2-537-ISOTOPE-36(14),A2-TS(7)
L2216627-04A	Plastic 8oz unpreserved	A	NA		4.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2216627-04B	Plastic 2oz unpreserved for TS	A	NA		4.1	Y	Absent		A2-537-ISOTOPE-36(14),A2-TS(7)
L2216627-05A	Plastic 8oz unpreserved	A	NA		4.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2216627-05B	Plastic 2oz unpreserved for TS	A	NA		4.1	Y	Absent		A2-537-ISOTOPE-36(14),A2-TS(7)
L2216627-06A	Plastic 8oz unpreserved	A	NA		4.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2216627-06B	Plastic 2oz unpreserved for TS	A	NA		4.1	Y	Absent		A2-537-ISOTOPE-36(14),A2-TS(7)
L2216627-07A	Plastic 8oz unpreserved	A	NA		4.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2216627-07B	Plastic 2oz unpreserved for TS	A	NA		4.1	Y	Absent		A2-537-ISOTOPE-36(14),A2-TS(7)
L2216627-08A	Plastic 8oz unpreserved	A	NA		4.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2216627-08B	Plastic 2oz unpreserved for TS	A	NA		4.1	Y	Absent		A2-537-ISOTOPE-36(14),A2-TS(7)
L2216627-09A	Plastic 8oz unpreserved	A	NA		4.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2216627-09B	Plastic 2oz unpreserved for TS	A	NA		4.1	Y	Absent		A2-537-ISOTOPE-36(14),A2-TS(7)
L2216627-10A	Plastic 8oz unpreserved	A	NA		4.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2216627-10B	Plastic 2oz unpreserved for TS	A	NA		4.1	Y	Absent		A2-537-ISOTOPE-36(14),A2-TS(7)

*Values in parentheses indicate holding time in days

Project Name: MASS. NATURAL FERTILIZER
Project Number: 3291

Lab Number: L2216627
Report Date: 04/22/22

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	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	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
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	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:	MASS. NATURAL FERTILIZER	**Lab Number:**	L2216627
Project Number:	3291	**Report Date:**	04/22/22

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: Data Usability Report

Project Name:	MASS. NATURAL FERTILIZER	**Lab Number:**	L2216627
Project Number:	3291	**Report Date:**	04/22/22

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.

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'.

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.

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.)

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. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: Data Usability Report

Project Name:	MASS. NATURAL FERTILIZER	**Lab Number:**	L2216627
Project Number:	3291	**Report Date:**	04/22/22

Data Qualifiers

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: Data Usability Report

Project Name:	MASS. NATURAL FERTILIZER	**Lab Number:**	L2216627
Project Number:	3291	**Report Date:**	04/22/22

REFERENCES

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.

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, SM4500Cl-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.

Serial_No:04222216:52

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 3/31/22

ALPHA Job #: L2216627

ALPHA ANALYTICAL

WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193

MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: LESSARD ENVIRONMENTAL

Address: 121 LORING AVE, Suite 455 SALEM, MA 01970

Phone:

Fax:

Email: mbackunas@lessardenvironmental.com

❑ These samples have been previously analyzed by Alpha

Project Information

Project Name: MASS. NATURAL FERTILIZER

Project Location: 65 Bean Porridge Hill Rd. WESTMINSTER

Project #: 3291

Project Manager: MIKE BACKUNAS

ALPHA Quote #:

Turn-Around Time

☑ Standard ❑ RUSH (only confirmed if pre-approved!)

Date Due: Time:

Report Information - Data Deliverables

❑ FAX ❑ EMAIL

❑ ADEx ❑ Add'l Deliverables

Billing Information

❑ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program | Criteria

Other Project Specific Requirements/Comments/Detection Limits:

ANALYSIS: PFAS 537.1 List of 18; TS

SAMPLE HANDLING

Filtration ___

❑ Done

❑ Not needed

❑ Lab to do

Preservation

❑ Lab to do

(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PFAS 537.1 List of 18	TS	Sample Specific Comments	TOTAL # BOTTLES
16627-01	FP-1	03-30-22	11:45	SOLID	CM	✓	✓		2
-02	FP-2	↓	11:50	↓	CM	✓	✓		2
-03	FP-3	↓	11:55	↓	CM	✓	✓		2
-04	FP-4	↓	12:00	↓	CM	✓	✓		2
-05	SP-1	↓	12:20	↓	CM	✓	✓		2
-06	SP-2	↓	12:30	↓	CM	✓	✓		2
-07	SP-3	↓	12:35	↓	CM	✓	✓		2
-08	SP-4	↓	12:40	↓	CM	✓	✓		2
-09	SP-5	↓	12:45	↓	CM	✓	✓		2
-10	SP-6	↓	12:50	↓	CM	✓	✓		2

	PFAS	TS
Container Type	P	P
Preservative	A	A

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	3-31-22/12:40	Rob Mauto AAL	3/31/22 1240
Rob [signature]	3/31/22 1715	[signature]	3/31/22 1715
Joseph C. [signature]	3/31/22 2045	Joseph C. [signature]	3/31/22 2000
		[signature] AAL	3/31/22 20[illegible]

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 14-OCT-07)

65 Bean Porridge Hill Road, Westminster, MA

Raw and Finish Product Stockpiles - PFAS 6 Concentrations

	SP-1	SP-2	SP-3	SP-4	SP-5	SP-6	FP-1	FP-2	FP-3	FP-4
PFOA/PFOS Total	6.79	**6.82**	8.17	3.76	9.58	7.74	52.5	37.4	-	30.8
PFAS Total	6.79	6.82	8.17	3.76	9.58	7.74	64.5	47.3	13.64	37.9

RC- Reportable Concentration
Results in nanogram per gram ng/g
When convereted to mg'kg, all SP and FP results are below the applicable RCs.

ANALYTICAL REPORT

Lab Number:	L2218063
Client:	Lessard Environmental 121 Loring Ave. Suite 342 Salem, MA 01970
ATTN:	Mike Backunas
Phone:	(978) 338-5541
Project Name:	MA NATURAL FERTILIZER
Project Number:	3291
Report Date:	04/27/22

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: MA NATURAL FERTILIZER
Project Number: 3291

Lab Number: L2218063
Report Date: 04/27/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2218063-01	64 BEAN PORRIDGE, INF	DW	65 BEAN PORRIDGE HILL RD	04/06/22 10:30	04/07/22
L2218063-02	64 BEAN PORRIDGE, EFF	DW	65 BEAN PORRIDGE HILL RD	04/06/22 10:30	04/07/22
L2218063-03	64 BEAN PORRIDGE, FB	DW	65 BEAN PORRIDGE HILL RD	04/06/22 10:30	04/07/22
L2218063-04	66 BEAN PORRIDGE, INF	DW	65 BEAN PORRIDGE HILL RD	04/06/22 10:45	04/07/22
L2218063-05	66 BEAN PORRIDGE, EFF	DW	65 BEAN PORRIDGE HILL RD	04/06/22 10:45	04/07/22
L2218063-06	66 BEAN PORRIDGE, FB	DW	65 BEAN PORRIDGE HILL RD	04/06/22 10:45	04/07/22
L2218063-07	68 BEAN PORRIDGE, INF	DW	65 BEAN PORRIDGE HILL RD	04/06/22 11:10	04/07/22
L2218063-08	68 BEAN PORRIDGE, EFF	DW	65 BEAN PORRIDGE HILL RD	04/06/22 11:10	04/07/22
L2218063-09	68 BEAN PORRIDGE, FB	DW	65 BEAN PORRIDGE HILL RD	04/06/22 11:10	04/07/22
L2218063-10	72 BEAN PORR INF	DW	65 BEAN PORRIDGE HILL RD	04/06/22 11:30	04/07/22
L2218063-11	72 BEAN PORRIDGE, EFF	DW	65 BEAN PORRIDGE HILL RD	04/06/22 11:30	04/07/22
L2218063-12	72 BEAN PORRIDGE, FB	DW	65 BEAN PORRIDGE HILL RD	04/06/22 11:30	04/07/22

Project Name:	MA NATURAL FERTILIZER	**Lab Number:**	L2218063
Project Number:	3291	**Report Date:**	04/27/22

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:	MA NATURAL FERTILIZER	**Lab Number:**	L2218063
Project Number:	3291	**Report Date:**	04/27/22

Case Narrative (continued)

Report Submission

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

Perfluorinated Alkyl Acids by EPA 537.1

L2218063-01, -04, -07, and -10: The sample was re-analyzed on dilution in order to quantitate the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

L2218063-01, -04, -07, and -10: The sample has a detection that exceeds the the Maximum Contaminant Level (MCL).

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: Susan E O'Neil Susan O' Neil

Title: Technical Director/Representative Date: 04/27/22

ORGANICS

SEMIVOLATILES

Project Name: MA NATURAL FERTILIZER
Lab Number: L2218063
Project Number: 3291
Report Date: 04/27/22

SAMPLE RESULTS

Lab ID: L2218063-01
Client ID: 64 BEAN PORRIDGE, INF
Sample Location: 65 BEAN PORRIDGE HILL RD

Date Collected: 04/06/22 10:30
Date Received: 04/07/22
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 04/18/22 11:43
Analyst: AC

Extraction Method: EPA 537.1
Extraction Date: 04/17/22 15:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	1.46	J	ng/l	1.97	0.660	1
Perfluorohexanoic Acid (PFHxA)	40.0		ng/l	1.97	0.660	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	1.97	0.660	1
Perfluoroheptanoic Acid (PFHpA)	71.0		ng/l	1.97	0.660	1
Perfluorohexanesulfonic Acid (PFHxS)	1.14	J	ng/l	1.97	0.660	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.97	0.660	1
Perfluorooctanoic Acid (PFOA)	221		ng/l	1.97	0.660	1
Perfluorononanoic Acid (PFNA)	72.4		ng/l	1.97	0.660	1
Perfluorooctanesulfonic Acid (PFOS)	932	E	ng/l	1.97	0.660	1
Perfluorodecanoic Acid (PFDA)	3.08		ng/l	1.97	0.660	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.97	0.660	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.97	0.660	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.97	0.660	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.97	0.660	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.97	0.660	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.97	0.660	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.97	0.660	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.97	0.660	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	116		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	111		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	111		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	107		70-130

Project Name: MA NATURAL FERTILIZER
Lab Number: L2218063
Project Number: 3291
Report Date: 04/27/22

SAMPLE RESULTS

Lab ID: L2218063-01 D
Client ID: 64 BEAN PORRIDGE, INF
Sample Location: 65 BEAN PORRIDGE HILL RD

Date Collected: 04/06/22 10:30
Date Received: 04/07/22
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 04/18/22 15:13
Analyst: AC

Extraction Method: EPA 537.1
Extraction Date: 04/17/22 15:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorooctanesulfonic Acid (PFOS)	798		ng/l	9.87	3.30	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	106		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	114		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	98		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	95		70-130

Project Name: MA NATURAL FERTILIZER
Lab Number: L2218063
Project Number: 3291
Report Date: 04/27/22

SAMPLE RESULTS

Lab ID: L2218063-02
Client ID: 64 BEAN PORRIDGE, EFF
Sample Location: 65 BEAN PORRIDGE HILL RD

Date Collected: 04/06/22 10:30
Date Received: 04/07/22
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 04/18/22 11:52
Analyst: AC

Extraction Method: EPA 537.1
Extraction Date: 04/17/22 15:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.95	0.650	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.95	0.650	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	1.95	0.650	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.95	0.650	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.95	0.650	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.95	0.650	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.95	0.650	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.95	0.650	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.95	0.650	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.95	0.650	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.95	0.650	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.95	0.650	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.95	0.650	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.95	0.650	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.95	0.650	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.95	0.650	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.95	0.650	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.95	0.650	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	106		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	102		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	103		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	120		70-130

Project Name: MA NATURAL FERTILIZER
Lab Number: L2218063
Project Number: 3291
Report Date: 04/27/22

SAMPLE RESULTS

Lab ID: L2218063-04
Client ID: 66 BEAN PORRIDGE, INF
Sample Location: 65 BEAN PORRIDGE HILL RD

Date Collected: 04/06/22 10:45
Date Received: 04/07/22
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 04/18/22 12:10
Analyst: AC

Extraction Method: EPA 537.1
Extraction Date: 04/17/22 15:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	1.31	J	ng/l	1.92	0.642	1
Perfluorohexanoic Acid (PFHxA)	37.0		ng/l	1.92	0.642	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	1.92	0.642	1
Perfluoroheptanoic Acid (PFHpA)	66.6		ng/l	1.92	0.642	1
Perfluorohexanesulfonic Acid (PFHxS)	1.08	J	ng/l	1.92	0.642	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.92	0.642	1
Perfluorooctanoic Acid (PFOA)	203		ng/l	1.92	0.642	1
Perfluorononanoic Acid (PFNA)	62.8		ng/l	1.92	0.642	1
Perfluorooctanesulfonic Acid (PFOS)	849	E	ng/l	1.92	0.642	1
Perfluorodecanoic Acid (PFDA)	2.73		ng/l	1.92	0.642	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.92	0.642	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.92	0.642	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.92	0.642	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.92	0.642	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.92	0.642	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.92	0.642	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.92	0.642	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.92	0.642	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	113		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	108		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	105		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	92		70-130

Project Name: MA NATURAL FERTILIZER
Lab Number: L2218063
Project Number: 3291
Report Date: 04/27/22

SAMPLE RESULTS

Lab ID: L2218063-04 D
Client ID: 66 BEAN PORRIDGE, INF
Sample Location: 65 BEAN PORRIDGE HILL RD

Date Collected: 04/06/22 10:45
Date Received: 04/07/22
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 04/18/22 15:22
Analyst: AC

Extraction Method: EPA 537.1
Extraction Date: 04/17/22 15:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorooctanesulfonic Acid (PFOS)	707		ng/l	9.61	3.21	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	105		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	103		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	99		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	91		70-130

Project Name: MA NATURAL FERTILIZER
Lab Number: L2218063
Project Number: 3291
Report Date: 04/27/22

SAMPLE RESULTS

Lab ID: L2218063-05
Client ID: 66 BEAN PORRIDGE, EFF
Sample Location: 65 BEAN PORRIDGE HILL RD

Date Collected: 04/06/22 10:45
Date Received: 04/07/22
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 04/18/22 12:18
Analyst: AC

Extraction Method: EPA 537.1
Extraction Date: 04/17/22 15:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.667	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.667	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	2.00	0.667	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.667	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.667	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.667	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.667	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.667	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.667	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.667	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.667	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.667	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.667	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.667	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.667	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.667	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.667	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.667	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	101		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	102		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	101		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	109		70-130

Project Name: MA NATURAL FERTILIZER
Lab Number: L2218063
Project Number: 3291
Report Date: 04/27/22

SAMPLE RESULTS

Lab ID: L2218063-07
Client ID: 68 BEAN PORRIDGE, INF
Sample Location: 65 BEAN PORRIDGE HILL RD

Date Collected: 04/06/22 11:10
Date Received: 04/07/22
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 04/18/22 12:36
Analyst: AC

Extraction Method: EPA 537.1
Extraction Date: 04/17/22 15:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	0.862	J	ng/l	2.05	0.686	1
Perfluorohexanoic Acid (PFHxA)	28.9		ng/l	2.05	0.686	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	2.05	0.686	1
Perfluoroheptanoic Acid (PFHpA)	48.7		ng/l	2.05	0.686	1
Perfluorohexanesulfonic Acid (PFHxS)	0.862	J	ng/l	2.05	0.686	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.05	0.686	1
Perfluorooctanoic Acid (PFOA)	189		ng/l	2.05	0.686	1
Perfluorononanoic Acid (PFNA)	46.1		ng/l	2.05	0.686	1
Perfluorooctanesulfonic Acid (PFOS)	548	E	ng/l	2.05	0.686	1
Perfluorodecanoic Acid (PFDA)	1.64	J	ng/l	2.05	0.686	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.05	0.686	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.05	0.686	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.05	0.686	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.05	0.686	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.05	0.686	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.05	0.686	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.05	0.686	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.05	0.686	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	105		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	98		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	110		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	116		70-130

Project Name: MA NATURAL FERTILIZER
Lab Number: L2218063
Project Number: 3291
Report Date: 04/27/22

SAMPLE RESULTS

Lab ID: L2218063-07 D
Client ID: 68 BEAN PORRIDGE, INF
Sample Location: 65 BEAN PORRIDGE HILL RD

Date Collected: 04/06/22 11:10
Date Received: 04/07/22
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 04/18/22 15:31
Analyst: AC

Extraction Method: EPA 537.1
Extraction Date: 04/17/22 15:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorooctanesulfonic Acid (PFOS)	483		ng/l	10.3	3.43	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	105		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	107		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	93		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	102		70-130

Project Name: MA NATURAL FERTILIZER
Lab Number: L2218063
Project Number: 3291
Report Date: 04/27/22

SAMPLE RESULTS

Lab ID: L2218063-08
Client ID: 68 BEAN PORRIDGE, EFF
Sample Location: 65 BEAN PORRIDGE HILL RD

Date Collected: 04/06/22 11:10
Date Received: 04/07/22
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 04/18/22 12:44
Analyst: AC

Extraction Method: EPA 537.1
Extraction Date: 04/17/22 15:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.98	0.660	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.98	0.660	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	1.98	0.660	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.98	0.660	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.98	0.660	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.98	0.660	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.98	0.660	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.98	0.660	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.98	0.660	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.98	0.660	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.98	0.660	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.98	0.660	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.98	0.660	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.98	0.660	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.98	0.660	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.98	0.660	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.98	0.660	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.98	0.660	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	100		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	104		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	105		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	114		70-130

Project Name: MA NATURAL FERTILIZER
Lab Number: L2218063
Project Number: 3291
Report Date: 04/27/22

SAMPLE RESULTS

Lab ID: L2218063-10
Client ID: 72 BEAN PORR INF
Sample Location: 65 BEAN PORRIDGE HILL RD

Date Collected: 04/06/22 11:30
Date Received: 04/07/22
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 04/18/22 13:02
Analyst: AC

Extraction Method: EPA 537.1
Extraction Date: 04/17/22 15:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	3.79		ng/l	1.86	0.621	1
Perfluorohexanoic Acid (PFHxA)	50.8		ng/l	1.86	0.621	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	1.86	0.621	1
Perfluoroheptanoic Acid (PFHpA)	79.8		ng/l	1.86	0.621	1
Perfluorohexanesulfonic Acid (PFHxS)	1.00	J	ng/l	1.86	0.621	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.86	0.621	1
Perfluorooctanoic Acid (PFOA)	244		ng/l	1.86	0.621	1
Perfluorononanoic Acid (PFNA)	113		ng/l	1.86	0.621	1
Perfluorooctanesulfonic Acid (PFOS)	1930	E	ng/l	1.86	0.621	1
Perfluorodecanoic Acid (PFDA)	6.36		ng/l	1.86	0.621	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.86	0.621	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.86	0.621	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.86	0.621	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.86	0.621	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.86	0.621	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.86	0.621	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.86	0.621	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.86	0.621	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	114		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	115		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	113		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	119		70-130

Project Name: MA NATURAL FERTILIZER
Lab Number: L2218063
Project Number: 3291
Report Date: 04/27/22

SAMPLE RESULTS

Lab ID: L2218063-10 D
Client ID: 72 BEAN PORR INF
Sample Location: 65 BEAN PORRIDGE HILL RD

Date Collected: 04/06/22 11:30
Date Received: 04/07/22
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 04/18/22 15:39
Analyst: AC

Extraction Method: EPA 537.1
Extraction Date: 04/17/22 15:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorooctanesulfonic Acid (PFOS)	1470		ng/l	18.6	6.21	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	98		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	96		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	93		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	98		70-130

Project Name: MA NATURAL FERTILIZER
Lab Number: L2218063
Project Number: 3291
Report Date: 04/27/22

SAMPLE RESULTS

Lab ID: L2218063-11
Client ID: 72 BEAN PORRIDGE, EFF
Sample Location: 65 BEAN PORRIDGE HILL RD

Date Collected: 04/06/22 11:30
Date Received: 04/07/22
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 04/18/22 13:19
Analyst: AC

Extraction Method: EPA 537.1
Extraction Date: 04/17/22 15:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.98	0.661	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.98	0.661	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	1.98	0.661	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.98	0.661	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.98	0.661	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.98	0.661	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.98	0.661	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.98	0.661	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.98	0.661	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.98	0.661	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.98	0.661	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.98	0.661	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.98	0.661	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.98	0.661	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.98	0.661	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.98	0.661	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.98	0.661	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.98	0.661	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	102		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	102		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	103		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	112		70-130

Project Name: MA NATURAL FERTILIZER
Project Number: 3291
Lab Number: L2218063
Report Date: 04/27/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 133,537.1
Analytical Date: 04/18/22 11:26
Analyst: AC

Extraction Method: EPA 537.1
Extraction Date: 04/17/22 15:50

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab for sample(s): 01-02,04-05,07-08,10-11 Batch: WG1628134-1					
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.668
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.668
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	2.00	0.668
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.668
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.668
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.668
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.668
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.668
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.668
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.668
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.668
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.668
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.668
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.668
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.668
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.668
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.668
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.668

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	99		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	104		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	104		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	109		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: MA NATURAL FERTILIZER

Project Number: 3291

Lab Number: L2218063

Report Date: 04/27/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-02,04-05,07-08,10-11 Batch: WG1628134-2								
Perfluorobutanesulfonic Acid (PFBS)	95		-		50-150	-		30
Perfluorohexanoic Acid (PFHxA)	100		-		50-150	-		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	78		-		50-150	-		30
Perfluoroheptanoic Acid (PFHpA)	106		-		50-150	-		30
Perfluorohexanesulfonic Acid (PFHxS)	98		-		50-150	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	121		-		50-150	-		30
Perfluorooctanoic Acid (PFOA)	110		-		50-150	-		30
Perfluorononanoic Acid (PFNA)	112		-		50-150	-		30
Perfluorooctanesulfonic Acid (PFOS)	99		-		50-150	-		30
Perfluorodecanoic Acid (PFDA)	106		-		50-150	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	86		-		50-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	112		-		50-150	-		30
Perfluoroundecanoic Acid (PFUnA)	108		-		50-150	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	98		-		50-150	-		30
Perfluorododecanoic Acid (PFDoA)	100		-		50-150	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	95		-		50-150	-		30
Perfluorotridecanoic Acid (PFTrDA)	100		-		50-150	-		30
Perfluorotetradecanoic Acid (PFTA)	106		-		50-150	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: MA NATURAL FERTILIZER

Project Number: 3291

Lab Number: L2218063

Report Date: 04/27/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-02,04-05,07-08,10-11 Batch: WG1628134-2

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	99				70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	102				70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	96				70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	108				70-130

Matrix Spike Analysis

Batch Quality Control

Project Name: MA NATURAL FERTILIZER

Project Number: 3291

Lab Number: L2218063

Report Date: 04/27/22

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 EPA 537.1 - Mansfield Lab Associated sample(s): 01-02,04-05,07-08,10-11 QC Batch ID: WG1628134-3 QC Sample: L2218560-01 Client ID: MS Sample												
Perfluorobutanesulfonic Acid (PFBS)	3.81	1.83	5.52	94		-	-		50-150	-		30
Perfluorohexanoic Acid (PFHxA)	4.08	2.06	6.10	98		-	-		50-150	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	2.06	1.81J	88		-	-		50-150	-		30
Perfluoroheptanoic Acid (PFHpA)	1.83J	2.06	4.49	**218**	Q	-	-		50-150	-		30
Perfluorohexanesulfonic Acid (PFHxS)	6.44	1.88	8.12	89		-	-		50-150	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	1.95	2.06	106		-	-		50-150	-		30
Perfluorooctanoic Acid (PFOA)	9.27	2.06	11.1	89		-	-		50-150	-		30
Perfluorononanoic Acid (PFNA)	ND	2.06	2.84	138		-	-		50-150	-		30
Perfluorooctanesulfonic Acid (PFOS)	18.3	1.91	20.0	89		-	-		50-150	-		30
Perfluorodecanoic Acid (PFDA)	ND	2.06	2.23	108		-	-		50-150	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	1.92	1.57J	82		-	-		50-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	2.06	2.02J	98		-	-		50-150	-		30
Perfluoroundecanoic Acid (PFUnA)	ND	2.06	2.02J	98		-	-		50-150	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	2.06	2.02J	98		-	-		50-150	-		30
Perfluorododecanoic Acid (PFDoA)	ND	2.06	2.02J	98		-	-		50-150	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	1.94	2.35	121		-	-		50-150	-		30
Perfluorotridecanoic Acid (PFTrDA)	ND	2.06	2.14	104		-	-		50-150	-		30
Perfluorotetradecanoic Acid (PFTA)	ND	2.06	2.06	100		-	-		50-150	-		30

Matrix Spike Analysis

Batch Quality Control

Project Name: MA NATURAL FERTILIZER

Project Number: 3291

Lab Number: L2218063

Report Date: 04/27/22

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 EPA 537.1 - Mansfield Lab Associated sample(s): 01-02,04-05,07-08,10-11 QC Batch ID: WG1628134-3 QC Sample: L2218560-01 Client ID: MS Sample												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	89				70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	105				70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	91				70-130
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	99				70-130

Lab Duplicate Analysis
Batch Quality Control

Project Name: MA NATURAL FERTILIZER
Project Number: 3291

Lab Number: L2218063
Report Date: 04/27/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-02,04-05,07-08,10-11 QC Batch ID: WG1628134-4 QC Sample: L2218560-03 Client ID: DUP Sample						
Perfluorobutanesulfonic Acid (PFBS)	3.69	4.26	ng/l	14		30
Perfluorohexanoic Acid (PFHxA)	4.24	4.73	ng/l	11		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
Perfluoroheptanoic Acid (PFHpA)	1.98	2.96	ng/l	**40**	Q	30
Perfluorohexanesulfonic Acid (PFHxS)	0.778J	0.867J	ng/l	NC		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	ND	ng/l	NC		30
Perfluorooctanoic Acid (PFOA)	10.4	13.9	ng/l	29		30
Perfluorononanoic Acid (PFNA)	ND	0.828J	ng/l	NC		30
Perfluorooctanesulfonic Acid (PFOS)	ND	ND	ng/l	NC		30
Perfluorodecanoic Acid (PFDA)	ND	ND	ng/l	NC		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	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
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ng/l	NC		30
Perfluorododecanoic Acid (PFDoA)	ND	ND	ng/l	NC		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	ND	ng/l	NC		30
Perfluorotridecanoic Acid (PFTrDA)	ND	ND	ng/l	NC		30
Perfluorotetradecanoic Acid (PFTA)	ND	ND	ng/l	NC		30

Lab Duplicate Analysis
Batch Quality Control

Project Name: MA NATURAL FERTILIZER
Project Number: 3291

Lab Number: L2218063
Report Date: 04/27/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-02,04-05,07-08,10-11 QC Batch ID: WG1628134-4 QC Sample: L2218560-03 Client ID: DUP Sample

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	96		101		70-130
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	94		95		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	95		95		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	101		112		70-130

Project Name: MA NATURAL FERTILIZER
Project Number: 3291

Lab Number: L2218063
Report Date: 04/27/22

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2218063-01A	Plastic 250ml Trizma preserved	A	NA		4.2	Y	Absent		A2-537.1(14)
L2218063-01B	Plastic 250ml Trizma preserved	A	NA		4.2	Y	Absent		A2-537.1(14)
L2218063-02A	Plastic 250ml Trizma preserved	A	NA		4.2	Y	Absent		A2-537.1(14)
L2218063-02B	Plastic 250ml Trizma preserved	A	NA		4.2	Y	Absent		A2-537.1(14)
L2218063-03A	Plastic 250ml Trizma preserved	A	NA		4.2	Y	Absent		A2-L-EXT-537(14)
L2218063-04A	Plastic 250ml Trizma preserved	A	NA		4.2	Y	Absent		A2-537.1(14)
L2218063-04B	Plastic 250ml Trizma preserved	A	NA		4.2	Y	Absent		A2-537.1(14)
L2218063-05A	Plastic 250ml Trizma preserved	A	NA		4.2	Y	Absent		A2-537.1(14)
L2218063-05B	Plastic 250ml Trizma preserved	A	NA		4.2	Y	Absent		A2-537.1(14)
L2218063-06A	Plastic 250ml Trizma preserved	A	NA		4.2	Y	Absent		A2-L-EXT-537(14)
L2218063-07A	Plastic 250ml Trizma preserved	A	NA		4.2	Y	Absent		A2-537.1(14)
L2218063-07B	Plastic 250ml Trizma preserved	A	NA		4.2	Y	Absent		A2-537.1(14)
L2218063-08A	Plastic 250ml Trizma preserved	A	NA		4.2	Y	Absent		A2-537.1(14)
L2218063-08B	Plastic 250ml Trizma preserved	A	NA		4.2	Y	Absent		A2-537.1(14)
L2218063-09A	Plastic 250ml Trizma preserved	A	NA		4.2	Y	Absent		A2-L-EXT-537(14)
L2218063-10A	Plastic 250ml Trizma preserved	A	NA		4.2	Y	Absent		A2-537.1(14)
L2218063-10B	Plastic 250ml Trizma preserved	A	NA		4.2	Y	Absent		A2-537.1(14)
L2218063-11A	Plastic 250ml Trizma preserved	A	NA		4.2	Y	Absent		A2-537.1(14)
L2218063-11B	Plastic 250ml Trizma preserved	A	NA		4.2	Y	Absent		A2-537.1(14)
L2218063-12A	Plastic 250ml Trizma preserved	A	NA		4.2	Y	Absent		A2-L-EXT-537(14)

*Values in parentheses indicate holding time in days

Project Name: MA NATURAL FERTILIZER
Project Number: 3291

Lab Number: L2218063
Report Date: 04/27/22

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	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	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
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	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:	MA NATURAL FERTILIZER	**Lab Number:**	L2218063
Project Number:	3291	**Report Date:**	04/27/22

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:	MA NATURAL FERTILIZER	**Lab Number:**	L2218063
Project Number:	3291	**Report Date:**	04/27/22

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.

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'.

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.

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.)

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 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.

Report Format: DU Report with 'J' Qualifiers

Project Name:	MA NATURAL FERTILIZER	**Lab Number:**	L2218063
Project Number:	3291	**Report Date:**	04/27/22

Data Qualifiers

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

REFERENCES

133 Determination of Selected Per- and Polyfluorinated Alkyl Substances in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS). EPA Method 537.1, EPA/600/R-18/352. Version 1.0, November 2018.

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.

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, SM4500Cl-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.

Serial_No:04272214:43

CHAIN OF CUSTODY

PAGE I OF II

ALPHA ANALYTICAL

WESTBORO, MA
TEL: 508-898-9220
FAX: 508-898-9193

MANSFIELD, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab: 4/8/22

ALPHA Job #: L2218063

Client Information

Client: Lessard Environmental
Address: 121 Loring Ave. Salem, MA 0197?
Phone: 978-338-5341
Fax:
Email: mbackunas@lessard-envi
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: MA Natural Fertilizer
Project Location: 65 Bean Porridge Hill Rd
Project #: 3291
Project Manager: Mike Backunas
ALPHA Quote #:

Turn-Around Time

☐ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☑ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☑ Same as Client info PO #: 3291

Regulatory Requirements/Report Limits

State /Fed Program: MCP Criteria

Other Project Specific Requirements/Comments/Detection Limits:
HOLD Field Blanks unless Eff detections then run.

ANALYSIS: PFAS 537.1 (18)

SAMPLE HANDLING
Filtration
☐ Done
☐ Not needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PFAS 537.1 (18)	Sample Specific Comments	TOTAL # BOTTLES
8063-01	64 Bean Porridge, Inf	4/6/22	10:30	DW	MB	X		2
-02	64 Bean Porridge, Eff	4/6/22	10:30	DW	MB	X		2
-03	64 Bean Porridge, FB	4/6/22	10:30	FB	MB	X	Hold - Run if Eff det	2
-04	66 Bean Porridge Inf	4/6/22	10:45	DW	MB	X		2
-05	66 Bean Porridge, Eff	4/6/22	10:45	DW	MB	X		2
-06	66 Bean Porridge, FB	4/6/22	10:45	FB	MB	X	Hold - Run if Eff det	2
-07	68 Bean Porridge Inf	4/6/22	11:10	DW	MB	X		2
-08	68 Bean Porridge, Eff	4/6/22	11:10	DW	MB	X		2
-09	68 Bean Porridge FB	4/6/22	11:10	DW	MB	X	Hold - Run if Eff det	2

Container Type: P
Preservative: D

Relinquished By:	Date/Time	Received By:	Date/Time
Mike Backunas	4/7/22 16	C. Zebeau	4/7/22 1600
Alissa Wood	4/7/22 2300	Joseph C. Bergeron	4/7/22 2300
Joseph C. Bergeron	4/8/22 0038	[illegible]	4/7/22 0038

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 14-OCT-07)

CHAIN OF CUSTODY

PAGE II OF II

ALPHA ANALYTICAL
WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193
MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 4/8/22

ALPHA Job #: L2218663

Client Information

Client: Lessard Environmental
Address: 131 Loring Ave. Salem, MA 01970
Phone: 978-338-5541
Fax:
Email: mbackunas@lessard-enviro

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: MA Natural Fertilizer
Project Location: 65 Bean Porridge Hill Rd
Project #: 3291
Project Manager: Mike Backunas
ALPHA Quote #:

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☑ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☑ Same as Client info PO #: 3291

Regulatory Requirements/Report Limits

State /Fed Program: MCP Criteria:

Other Project Specific Requirements/Comments/Detection Limits:

HOLD Field Blank unless EFF detection, then run.

ANALYSIS: PFAS 537.1 (18)

SAMPLE HANDLING
Filtration ____
☐ Done
☐ Not needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PFAS 537.1 (18)	Sample Specific Comments	TOTAL # BOTTLES
	~~64 Bean Porridge Hill Rd~~	~~4/6/22~~	~~10:30~~	~~DW~~	~~MB~~	~~X~~		
80663-10	~~64~~ 72 Bean Porr Int	4/6/22	11:30	DW	MB	X		2
-11	72 Bean Porridge Eff	4/6/22	11/30	DW	MB	X		2
-12	72 Bean Porridge FB	4/6/22	11:30		MB	X	Hold - run if eff det	2

Container Type: P
Preservative: O

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]		[signature]	4/7/22 0916
[signature]	4/7/22 11-	C. Delear	4/7/22 1600
Melissa Wood	4/7/22 2300	Joseph C. [signature]	4/7/22 2300
Joseph C. [signature]	4/8/22 0038	[signature]	4/7/22 00:38

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 14-OCT-07)

Massachusetts Natural Fertilizer
Site Access Agreements
As of 4-29-2022

Access Agreements for Sampling

Name	Address	Status	Date Sent	Date Signed	Sampled
1. Brayan Aleman and Arielle Aleman	15 Rock Maple Lane	Signed	3/29/2022	4/2/2022	4/12/22
2. Steven P. Hecker	42 Bean Porridge Hill Road	Signed	3/30/2022	4/4/2022	4/12/22
3. Edward Lyonnais and Melissa Lyonnais	46 Bean Porridge Hill Road	Signed	3/30/2022	4/6/2022	4/14/22
4. Kofi Ansah and Yvonne Ansah	2 Rock Maple Lane	Sent	3/29/2022		4/14/22
5. Paul Bartkus and Doris Bartkus	5 White Pine Drive	Signed *Modified*	3/29/2022	4/11/2022	4/14/22
6. Steven P. Burt and Michelle Burt	16 Amber Road	Signed	3/30/2022	4/19/2022	
7. Michael and Alana Sunderland	11 Bean Porridge Hill Road	Sent/Reviewing Agreement	4/14/2022		
8. Anthony Costella and Amanda Costella	37 White Pine Drive	Sent	New owner is Erin Irizarry (see below)		4/21/22
9. Daniel and Siobhan Bartkus	150 Bean Porridge Hill Road	Signed *Modified*	3/29/2022	4/11/2022	4/14/22
10. Tianzhi Fan and Ling Wang	5 Taymax Road	Sent	3/30/2022		
11. Lori Fiandaca	31 White Maple Lane	Signed	3/30/2022	4/8/2022	4/12/22
12. Jorge Gonzalez and Cristina Gonzalez	1 Rock Maple Lane	Sent	3/30/2022		4/14/22
13. John W & Josephine Grant Trust	15 Amber Road	Sent/Reviewing Agreement	3/30/2022		
14. Darcy Linnus	100 Bean Porridge Hill Road	Sent	3/30/2022		

15. Norma Avelar and Savik Luy	29 White Pine Drive	Signed	3/30/2022	4/14/2022	4/28/22
16. Peter Marashio and Beth Marashio	7 Rock Maple Lane	Signed	3/30/2022	4/13/2022	4/21/22
17. Danielle and Thomas Membrino	11 Rock Maple Lane	Signed	3/30/2022	4/12/2022	4/13/22
18. Nansy Swanson	104 Bean Porridge Hill Road	Sent	3/30/2022		
19. Timothy Tarr and Maureen Tarr	6 Rock Maple Drive	Signed	3/30/2022	4/19/2022	4/21/22
20. Danielle Vallera and Kaitlin Vallera	12 Amber Road	Sent	3/30/2022		
21. Mark Jr. Wyman and Sara Wyman	18 Rock Maple Lane	Sent	3/30/2022		
22. Traditional Concepts, Inc./Carrie-Ann Carlson	4 White Pine Drive	Signed	4/7/2022	4/8/2022	4/12/22
23. Michael Conti	12 White Pine Drive and 14 White Pine Drive	Signed	4/13/2022	4/15/2022	4/21/22
24. Matthew Elliott	23 White Pine Drive	Signed	4/12/2022	4/12/2022	4/14/22
25. Michael Ferris and Marina Muehlke	32 White Pine Drive	Signed	4/12/2022	4/13/2022	4/13/22
26. Ashley Rodgers	9 White Pine Drive	Signed	4/12/2022	4/15/2022	4/21/22
27. Kate Duffy	18 White Pine Drive	Signed	4/12/2022	4/18/2022	4/21/22
28. Aimee Martinez	16 White Pine Drive	Signed	4/11/2022	4/11/2022	4/12/22
29. Deborah and Charles Hooper	14 Amber Road	Signed	4/12/2022	4/22/2022	4/28/22
30. Tina and Scott Ladue	11 Amber Road	Signed	4/12/2022	4/20/2022	4/21/22
31. Amanda Zalegowski	20 White Pine Drive	Signed	4/13/2022	4/15/2022	4/28/22
32. Lucas Wafer	22 Rock Maple Lane	Signed	4/13/2022	4/13/2022	4/28/22
33. Elizabeth and Thomas Ferrick	5 Amber Road	Signed	4/13/2022	4/14/2022	4/21/22
34. Jesse and Stacey Sutela	6 Amber Road	Signed	4/13/2022	4/19/2022	4/21/22
35. Derek Brasili	3 Amber Road	Sent	4/13/2022		
36. Patricia Eidinger	4 Amber Road	Signed	4/13/2022	4/22/2022	4/28/22

37. Michaela Montecalvo	28 White Pine Drive	Signed	4/9/2022	4/12/2022	4/13/22
38. Nancy Moz	26 White Pine Drive	Signed	4/12/2022	4/12/2022	4/13/22
39. Ross Montolio	14 White Pine Drive	Signed	4/13/2022	4/21/2022	4/21/22
40. Margaret Bujald	98 Bean Porridge Hill Road	Signed	4/13/2022	4/25/22	
41. Talya Marshall	13 White Pine Drive	Sent	4/14/2022		
42. Oksana Zavidij	24 Rock Maple Lane	Sent	4/14/2022		
43. Jamison and Andrea Yi	38 White Pine Drive	Signed	4/14/2022	4/17/2022	4/21/22
44. Michael Wood	11 White Pine Drive	Signed	4/14/2022	4/17/2022	4/28/22
45. Marie Madhere	33 White Pine Drive	Signed	4/14/2022	4/17/2022	4/21/22
46. Konstantin Zhuravlyov	21 Rock Maple Lane	Sent	4/19/2022		
47. John and Melody Perea	24 Rock Maple Lane	Sent	4/19/2022		
48. Moncrieffe and Thessamar Wentworth	38 White Pine Drive	Sent	4/19/2022		4/21/22
49. Khalid Benhar and Assia Moslih	24 White Pine Drive	Sent	4/19/2022		
50. Christopher Primeau and Tricia Khan	19 White Pine Drive	Sent	4/20/2022		
51. Nabila and Nagy Bishara	2 Amber Road	Sent	4/20/2022		4/28/22
52. Michele and Vincent Miola	1 Amber Road	Signed – does not approve installation of filter	4/20/2022	4/23/2022	4/28/22
53. Brian and Emily Morin	8 Amber Road	Sent	4/20/2022		
54. Tammy Hawkins and Robert Behringer	10 Amber Road	Sent	4/20/2022		
55. David H. Smith	22 White Pine Drive	Sent	4/19/2022		4/21/22
56. Erin Irizarry	37 White Pine Drive	Signed	4/20/2022	4/21/2022	4/21/22
57. Blaine Brennecke	3 Rock Maple Lane	Sent	4/21/2022		
58. Donald Seifert	99 South Ashburnham Road	Sent	2/22/2022		4/28/22
59. Golf Course	23 Rock Maple Lane				4/14/22

Access Agreements for Carbon Filters

Name	Address	Status	Date Sent	Date Signed
59. Salvatore Albert and Wendy Albert	66 Bean Porridge Hill Road	Signed	3/24/2022	3/30/2022
60. Sean M. Gallagher and Ashley A. Sultan	68 Bean Porridge Hill Road	Signed	3/24/2022	3/29/2022
61. Joseph and Helen Gannon	72 Bean Porridge Hill Road	Signed	3/18/2022	3/29/2022
62. Timothy W. Maus and Lauren Opie	67 Bean Porridge Hill Road	Signed	3/18/2022	3/23/2022
63. William R. Michalowski and Nicol Michalczyk	70 Bean Porridge Hill Road	Signed	3/18/2022	
64. Thomas E. Ryan and Susan M. Ryan	64 Bean Porridge Hill Road	Signed	3/18/2022	3/25/2022

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 4/14/22

ALPHA Job #: L2219379

ALPHA ANALYTICAL
WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193
MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: Lessard Environmental
Address: 121 Loring Ave
Salem, MA 01970
Phone: 978-338-5541
Fax:
Email: mbackunas@lessard-cn
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: Mass Natural Fertility
Project Location: 65 Bean Porridge
Project #: 3291
Project Manager: Mike Backunas
ALPHA Quote #:

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☑ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☑ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program MADEP Criteria CAM

Other Project Specific Requirements/Comments/Detection Limits:

All samples collected in Westminster, MA

ANALYSIS: PFAS - 537.1 (8) Field Blanks

SAMPLE HANDLING

Filtration
☐ Done
☐ Not needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials			Sample Specific Comments	TOTAL # BOTTLES
19379-01,02	42 Bean Porridge Hill	4/12/22	1000	DW	MB	X	X	Hold - FB unless detection	4
03,04	4 White Pine Dr	4/12/22	1020	DW	MB	X	X	"	4
05,06	31 White Pine Dr,	4/12/22	1040	DW	MB	X	X	"	4
07,08	16 White Pine Dr,	4/12/22	1100	DW	MB	X	X	"	4
09,10	15 Rock Maple Ln	4/12/22	1120	DW	MB	X	X	"	4
11,12	32 White Pine Dr	4/13/22	1210	DW	MB	X	X	"	4
13,14	26 White Pine Dr,	4/13/22	1230	DW	MB	X	X	"	4
15,16	28 White Pine Dr	4/13/22	100	DW	MB	X	X	"	4
17,18	11 Rock Maple Ln	4/13/22	130	DW	MB	X	X	"	4

Container Type	P	P
Preservative	0	0

Relinquished By:	Date/Time	Received By:	Date/Time
	4/14/22 830		4/14/22 0837
	4/14/22 0900		4/14/22 900
	4/14/22 0900		4/14/22 0900
	4/14/22 1000		4/14/22 1000

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL
WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193
MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 4/15/22

ALPHA Job #: L2219804

Client Information

Client: Lessard Environmental LLC
Address: 121 Loring Ave.
Salem, MA 01970
Phone: 978.338.5541
Fax:
Email: mbackunas@lessard-env.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: Mass Natural Fertilizer
Project Location: 65 Beam Porridge Hill Rd
Project #: 3291
Project Manager: Mike Backunas
ALPHA Quote #:

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☑ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☑ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program MCP Criteria CAM

Other Project Specific Requirements/Comments/Detection Limits:

All water samples collected in Westminster, MA

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: PFAS 537.1 (18)	ANALYSIS: Field Blank	SAMPLE HANDLING	Sample Specific Comments	TOTAL # BOTTLES
19804-01,02	46 Beam Porridge Hill Rd	4/14/22	100	DW	MB	X	X		Hold- Field Blank	4
-03,04	22 White Pine Dr.	4/14/22	120	DW	MB	X	X		- Run if detections	4
-05,06	23 White Pine Dr	4/14/22	145	DW	MB	X	X		"	4
-07,08	1 Rock Maple Lane	4/14/22	210	DW	MB	X	X		"	4
-09,10	2 Rock Maple Lane	4/14/22	235	DW	MB	X	X		"	4
-11,12	23 Rock Maple Ln Goat Court	4/14/22	247	DW	MB	X	X		"	4
-13,14	5 White Pine Dr	4/14/22	317	DW	MB	X	X		"	4
-15,16	150 Beam Porridge Hill Rd	4/14/22	340	DW	MB	X	X		"	4

SAMPLE HANDLING
Filtration
☐ Done
☐ Not needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

Container Type	P	P
Preservative	0	0

Relinquished By:	Date/Time	Received By:	Date/Time
	4/15/22 1305		4/15/22 1301
	4/15/22 1333		4/15/22 1323
	4/15/22 1515		4/15/22 1515
	4/15/22 1641		4/15/22 1641

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FORM NO: 01-01 (rev. 14-OCT-07)

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 4/19/22

ALPHA Job #: L2220219

ALPHA ANALYTICAL

WESTBORO, MA
TEL: 508-898-9220
FAX: 508-898-9193

MANSFIELD, MA
TEL: 508-822-9300
FAX: 508-822-3288

Client Information

Client: LESSARD ENVIRONMENTAL

Address: 121 LORING AVE, Suite 455
SALEM, MA 01970

Phone:

Fax:

Email: mbackunas@lessard-environmental.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: MASS. NATURAL FERTILIZER

Project Location: 65 Bean Porridge Hill Rd. Westminster MA

Project #: 3291

Project Manager: MIKE BACKUNAS

ALPHA Quote #:

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☐ EMAIL

☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program | Criteria: CONSULT PM

Other Project Specific Requirements/Comments/Detection Limits:
CONSULT PM

ANALYSIS: PFAS 537.1 List of 18

SAMPLE HANDLING
Filtration
☐ Done
☐ Not needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PFAS 537.1 List of 18	Sample Specific Comments	TOTAL # BOTTLES
20219-01	26 WHITE PINE DR	04-18-22	10:45	DW	CM	✓		2
02	29 WHITE PINE DR	↓	11:00	↓	CM	✓		2
03	30 WHITE PINE DR	↓	11:25	↓	CM	✓		2
04	FIELD BLANK	↓	11:30	↓	CM	✓		2
05	12 WHITE PINE DR	↓	11:40	↓	CM	✓		2
06	11 WHITE PINE DR	↓	11:50	↓	CM	✓		2

Container Type: P
Preservative: O

Relinquished By:	Date/Time	Received By:	Date/Time
C.V.B. Matthews		[signature] Plum AAL	4/19/22 1330
[signature]	4/19/22 1627	[signature]	4/19/22 1627
[signature] Joseph C. [signature]	4/19/22 2000	Joseph C. [signature]	4/19/22 2000
	4/19/22 2054	[signature]	4/19/22 2054

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 14-OCT-07)

CHAIN OF CUSTODY

PAGE 1 OF 3

Date Rec'd in Lab: 4/22/22

ALPHA Job #: L2221194

ALPHA ANALYTICAL

WESTBORO, MA
TEL: 508-898-9220
FAX: 508-898-9193

MANSFIELD, MA
TEL: 508-822-9300
FAX: 508-822-3288

Client Information

Client: LESSARD ENVIRONMENTAL

Address: 121 LORING AVE, Suite 455 SALEM, MA 01970

Phone:

Fax:

Email: mbackunas@lessard-environmental.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: Mass. Natural Fertilizer

Project Location: 65 Bean Porridge Hill Rd

Project #: 3291

Project Manager: MIKE BACKUNAS

ALPHA Quote #:

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☐ EMAIL

☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program | Criteria

Other Project Specific Requirements/Comments/Detection Limits:

ANALYSIS: PFAS 537.1 list of 18

SAMPLE HANDLING

Filtration
☐ Done
☐ Not needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PFAS 537.1 list of 18	Sample Specific Comments	TOTAL # BOTTLES
21194-01	11 AMBER RD	04.21.22	08:52	DW	CM	✓		2
-02	↓ FIELD BLANK	↓	08:53		CM	✓		2
-03	6 AMBER RD	↓	09:17	DW	CM	✓		2
-04	↓ FIELD BLANK	↓	09:18		CM	✓		2
-05	AMBER RD. STREAM	↓	09:25 ~~09:19~~	SW	CM	✓		2
-06	↓ FIELD BLANK	↓	09:26		CM	✓		2
-07	33 WHITE PINE DR	↓	10:00	DW	CM	✓		2
-08	↓ FIELD BLANK	↓	10:01		CM	✓		2
-09	150 Bean Porridge Hill Rd	↓	10:40	GW	CM	✓		2
-10	↓ FIELD BLANK	↓	10:41		CM	✓		2

Container Type	P
Preservative	O

Relinquished By:	Date/Time	Received By:	Date/Time
C.K.D. Matthews	4-22-22 1230	James Martin AAL	4-22-22 1230
James Martin AAL	4-22-22 1800	[signature]	4/22 1800
[signature]	4/22 2000	Ryan Sole	4/22/22 2000
Ryan Sole	4/22/22 2100	[signature] AAL	4/22/22 2100

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 14-OCT-07)

CHAIN OF CUSTODY

Date Rec'd in Lab: 4/22/22

ALPHA Job #: L2221194

ALPHA ANALYTICAL
WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193
MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: LESSARD ENVIRONMENTAL

Address:

Phone:

Fax:

Email: mbackunas@lessard-environmental.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: Mass Natural Fertilizer

Project Location:

Project #: 3291

Project Manager: MIKE BACKUNAS

ALPHA Quote #:

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☐ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program	Criteria

Other Project Specific Requirements/Comments/Detection Limits:

ANALYSIS: PFAS 537.1 List of 18

SAMPLE HANDLING
Filtration
☐ Done
☐ Not needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PFAS 537.1 List of 18	Sample Specific Comments	TOTAL # BOTTLES
-11	9 WHITE PINE DR	04-21-22	10:58	DW	CM	✓		2
-12	↓ FIELD BLANK	↓	10:59		CM	✓		2
-13	14 WHITE PINE DR		11:15	DW	CM	✓		2
-14	↓ FIELD BLANK		11:16		CM	✓		2
-15	18 WHITE PINE DR		11:30	DW	CM	✓		2
-16	↓ FIELD BLANK		11:31		CM	✓		2
-17	38 WHITE PINE DR		11:50	DW	CM	✓		2
-18	↓ FIELD BLANK		11:51		CM	✓		2
-19	5 AMBER RD		13:10	DW	CM	✓		2
-20	↓ FIELD BLANK	↓	13:11		CM	✓		2

Container Type	P
Preservative	O

Relinquished By:	Date/Time	Received By:	Date/Time
J.V.D. Matthews	4-22-22 1230	[signature] AAL	4-22-22 12:30
[signature] AAL	4-22-22 1800	[signature]	4/22/22
[signature]	4/22/22	Ryane Sill	4/22/22 2000
Ryane Sill	4/22/22 2100	[signature] AAL	4/22/22 2100

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

CHAIN OF CUSTODY

PAGE 3 OF 3

Date Rec'd in Lab: 4/22/22

ALPHA Job #: L2221194

ALPHA ANALYTICAL

8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Client Information

Client: LESSARD ENVIRONMENTAL
Address: 121 LORING AVE, Suite 455
SALEM, MA 01970
Phone:
Email: mbackunas@lessard-environmental.com

Project Information

Project Name: Mass. Natural Fertilizer
Project Location:
Project #: 3291
Project Manager: M. BACKUNAS
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due:

Additional Project Information:

Report Information - Data Deliverables

☐ ADEx ☐ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program ____ Criteria ____

ANALYSIS: VOC: ☐ 8260 ☐ 624 ☐ 524.2; SVOC: ☐ ABN ☐ PAH; METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15; METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13; EPH: ☐ Ranges & Targets ☐ Ranges Only; VPH: ☐ Ranges & Targets ☐ Ranges Only; ☐ PCB ☐ PEST; TPH: ☐ Quant Only ☐ Fingerprint; PFAS 537.1 List of 18

SAMPLE INFO — Filtration: ☐ Field ☐ Lab to do; Preservation: ☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	PFAS 537.1 List of 18	Sample Comments	TOTAL # BOTTLES
-21	6 ROCK MAPLE LN.	04.21.22	13:30	DW	CM	✓		2
-22	↓ FIELD BLANK	↓	13:31		CM	✓		2
-23	7 ROCK MAPLE LN.	↓	13:50	DW	CM	✓		2
-24	↓ FIELD BLANK	↓	13:51		CM	✓		2
-25	37 WHITE PINE DR	↓	16:20	DW	CM	✓		2
-26	↓ FIELD BLANK	↓	16:21		CM	✓		2

	PFAS 537.1 List of 18
Container Type	P
Preservative	O

Container Type: P= Plastic, A= Amber glass, V= Vial, G= Glass, B= Bacteria cup, C= Cube, O= Other, E= Encore, D= BOD Bottle

Preservative: A= None, B= HCl, C= HNO_3, D= H_2SO_4, E= NaOH, F= MeOH, G= $NaHSO_4$, H = $Na_2S_2O_3$, I= Ascorbic Acid, J = NH_4Cl, K= Zn Acetate, O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	4-22-22 1230	[signature] AAL	4-22-22 1230
[signature] AAL	4-22-22 1800	[signature]	4/22/22 1800
[signature]	4/22/22	[signature]	4/22/22 2000
[signature]	4/22/22 2100	[signature] AAL	4/22/22 2100

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FORM NO: 01-01 (rev. 12-Mar-2012)