ANALYTICAL REPORT

Lab Number:	L1848946
Client:	Normandeau Associates 25 Nashua Road Bedford, NH 03110
ATTN:	Adele Fiorillo
Phone:	(603) 319-5303
Project Name:	BELFAST BAY
Project Number:	Not Specified
Report Date:	12/14/18

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

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1848946-01	B3	SOIL	BELFAST, ME	11/29/18 10:30	11/30/18
L1848946-02	A6/A7 COMP	SOIL	BELFAST, ME	11/29/18 09:20	11/30/18
L1848946-03	TRIP BLANK	SOIL	BELFAST, ME	11/29/18 00:00	11/30/18
L1848946-04	A-7 (0-27)	SOIL	BELFAST, ME	11/29/18 08:45	11/30/18
L1848946-05	A-6 (0-12)	SOIL	BELFAST, ME	11/29/18 09:20	11/30/18
L1848946-06	B-3 (0-79)	SOIL	BELFAST, ME	11/29/18 10:30	11/30/18
L1848946-07	A-8 (0-10)	SOIL	BELFAST, ME	11/28/18 13:20	11/30/18
L1848946-08	A-8 (10-27)	SOIL	BELFAST, ME	11/28/18 13:20	11/30/18
L1848946-09	A-9 (0-10)	SOIL	BELFAST, ME	11/28/18 12:35	11/30/18
L1848946-10	A-9 (10-30)	SOIL	BELFAST, ME	11/28/18 12:35	11/30/18
L1848946-11	A-10 (0-10)	SOIL	BELFAST, ME	11/28/18 11:55	11/30/18
L1848946-12	A-10 (10-27)	SOIL	BELFAST, ME	11/28/18 11:55	11/30/18
L1848946-13	A-11 (0-7)	SOIL	BELFAST, ME	11/28/18 11:20	11/30/18
L1848946-14	A-11 (7-29)	SOIL	BELFAST, ME	11/28/18 11:20	11/30/18
L1848946-15	A-12 (0-7)	SOIL	BELFAST, ME	11/28/18 10:45	11/30/18
L1848946-16	A-12 (7-29)	SOIL	BELFAST, ME	11/28/18 10:45	11/30/18

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

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. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated 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.

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 table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

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 Client Service Representative 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 Client Services at 800-624-9220 with any questions.

Project Name: BELFAST BAY
Project Number: Not Specified
Lab Number: L1848946
Report Date: 12/14/18

Case Narrative (continued)

Report Submission

December 14, 2018: This final report includes the results of all requested analyses.

December 07, 2018: This is a preliminary report.

Semivolatile Organics

L1848946-01 and -02: The sample has elevated detection limits due to the limited sample volume utilized during extraction, as required by the sample matrix.

Semivolatile Organics by SIM

L1848946-01 and -02: The sample has elevated detection limits due to the limited sample volume utilized during extraction, as required by the sample matrix.

Total Metals

The WG1186026-3 MS recoveries, performed on L1848946-01, are outside the acceptance criteria for arsenic (73%), chromium (56%), and lead (73%). A post digestion spike was performed and was within acceptance criteria.

The WG1186026-4 Laboratory Duplicate RPD for lead (52%), performed on L1848946-01, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

Grain Size Analysis

The WG1184977-1 Laboratory Duplicate RPDs for % fine gravel (84%), % coarse sand (97%), % fine sand (22%), % silt fine (27%) and % clay fine (39%), performed on L1848946-04, are outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

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

Authorized Signature: Lisa Westerlind

Title: Technical Director/Representative Date: 12/14/18

ORGANICS

VOLATILES

Project Name: BELFAST BAY
Project Number: Not Specified
Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-01
Client ID: B3
Sample Location: BELFAST, ME
Date Collected: 11/29/18 10:30
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 12/05/18 15:19
Analyst: KJD
Percent Solids: 46%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	8.2	--	1
1,1-Dichloroethane	ND		ug/kg	1.6	--	1
Chloroform	ND		ug/kg	2.4	--	1
Carbon tetrachloride	ND		ug/kg	1.6	--	1
1,2-Dichloropropane	ND		ug/kg	1.6	--	1
Dibromochloromethane	ND		ug/kg	1.6	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.6	--	1
Tetrachloroethene	ND		ug/kg	0.82	--	1
Chlorobenzene	ND		ug/kg	0.82	--	1
Trichlorofluoromethane	ND		ug/kg	6.5	--	1
1,2-Dichloroethane	ND		ug/kg	1.6	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.82	--	1
Bromodichloromethane	ND		ug/kg	0.82	--	1
trans-1,3-Dichloropropene	ND		ug/kg	1.6	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.82	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.82	--	1
1,1-Dichloropropene	ND		ug/kg	0.82	--	1
Bromoform	ND		ug/kg	6.5	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.82	--	1
Benzene	ND		ug/kg	0.82	--	1
Toluene	ND		ug/kg	1.6	--	1
Ethylbenzene	ND		ug/kg	1.6	--	1
Chloromethane	ND		ug/kg	6.5	--	1
Bromomethane	ND		ug/kg	3.3	--	1
Vinyl chloride	ND		ug/kg	1.6	--	1
Chloroethane	ND		ug/kg	3.3	--	1
1,1-Dichloroethene	ND		ug/kg	1.6	--	1
trans-1,2-Dichloroethene	ND		ug/kg	2.4	--	1

Project Name: BELFAST BAY **Lab Number:** L1848946

Project Number: Not Specified **Report Date:** 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-01 Date Collected: 11/29/18 10:30

Client ID: B3 Date Received: 11/30/18

Sample Location: BELFAST, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-5035 - Westborough Lab						
Trichloroethene	ND		ug/kg	0.82	--	1
1,2-Dichlorobenzene	ND		ug/kg	3.3	--	1
1,3-Dichlorobenzene	ND		ug/kg	3.3	--	1
1,4-Dichlorobenzene	ND		ug/kg	3.3	--	1
Methyl tert butyl ether	ND		ug/kg	3.3	--	1
p/m-Xylene	ND		ug/kg	3.3	--	1
o-Xylene	ND		ug/kg	1.6	--	1
Xylenes, Total	ND		ug/kg	1.6	--	1
cis-1,2-Dichloroethene	ND		ug/kg	1.6	--	1
1,2-Dichloroethene, Total	ND		ug/kg	1.6	--	1
Dibromomethane	ND		ug/kg	3.3	--	1
1,4-Dichlorobutane	ND		ug/kg	16	--	1
1,2,3-Trichloropropane	ND		ug/kg	3.3	--	1
Styrene	ND		ug/kg	1.6	--	1
Dichlorodifluoromethane	ND		ug/kg	16	--	1
Acetone	40		ug/kg	16	--	1
Carbon disulfide	36		ug/kg	16	--	1
2-Butanone	ND		ug/kg	16	--	1
Vinyl acetate	ND		ug/kg	16	--	1
4-Methyl-2-pentanone	ND		ug/kg	16	--	1
2-Hexanone	ND		ug/kg	16	--	1
Ethyl methacrylate	ND		ug/kg	16	--	1
Acrylonitrile	ND		ug/kg	6.5	--	1
Bromochloromethane	ND		ug/kg	3.3	--	1
Tetrahydrofuran	ND		ug/kg	6.5	--	1
2,2-Dichloropropane	ND		ug/kg	3.3	--	1
1,2-Dibromoethane	ND		ug/kg	1.6	--	1
1,3-Dichloropropane	ND		ug/kg	3.3	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.82	--	1
Bromobenzene	ND		ug/kg	3.3	--	1
n-Butylbenzene	ND		ug/kg	1.6	--	1
sec-Butylbenzene	ND		ug/kg	1.6	--	1
tert-Butylbenzene	ND		ug/kg	3.3	--	1
o-Chlorotoluene	ND		ug/kg	3.3	--	1
p-Chlorotoluene	ND		ug/kg	3.3	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.9	--	1
Hexachlorobutadiene	ND		ug/kg	6.5	--	1

Project Name: BELFAST BAY
Project Number: Not Specified
Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-01
Client ID: B3
Sample Location: BELFAST, ME
Date Collected: 11/29/18 10:30
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-5035 - Westborough Lab						
Isopropylbenzene	ND		ug/kg	1.6	--	1
p-Isopropyltoluene	ND		ug/kg	1.6	--	1
Naphthalene	ND		ug/kg	6.5	--	1
n-Propylbenzene	ND		ug/kg	1.6	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	3.3	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	3.3	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	3.3	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	3.3	--	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	8.2	--	1
Ethyl ether	ND		ug/kg	3.3	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	109		70-130
4-Bromofluorobenzene	114		70-130
Dibromofluoromethane	114		70-130

Project Name: BELFAST BAY
Project Number: Not Specified
Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-02
Client ID: A6/A7 COMP
Sample Location: BELFAST, ME
Date Collected: 11/29/18 09:20
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 12/05/18 15:46
Analyst: KJD
Percent Solids: 61%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	6.6	--	1
1,1-Dichloroethane	ND		ug/kg	1.3	--	1
Chloroform	ND		ug/kg	2.0	--	1
Carbon tetrachloride	ND		ug/kg	1.3	--	1
1,2-Dichloropropane	ND		ug/kg	1.3	--	1
Dibromochloromethane	ND		ug/kg	1.3	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.3	--	1
Tetrachloroethene	ND		ug/kg	0.66	--	1
Chlorobenzene	ND		ug/kg	0.66	--	1
Trichlorofluoromethane	ND		ug/kg	5.3	--	1
1,2-Dichloroethane	ND		ug/kg	1.3	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.66	--	1
Bromodichloromethane	ND		ug/kg	0.66	--	1
trans-1,3-Dichloropropene	ND		ug/kg	1.3	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.66	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.66	--	1
1,1-Dichloropropene	ND		ug/kg	0.66	--	1
Bromoform	ND		ug/kg	5.3	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.66	--	1
Benzene	ND		ug/kg	0.66	--	1
Toluene	ND		ug/kg	1.3	--	1
Ethylbenzene	ND		ug/kg	1.3	--	1
Chloromethane	ND		ug/kg	5.3	--	1
Bromomethane	ND		ug/kg	2.6	--	1
Vinyl chloride	ND		ug/kg	1.3	--	1
Chloroethane	ND		ug/kg	2.6	--	1
1,1-Dichloroethene	ND		ug/kg	1.3	--	1
trans-1,2-Dichloroethene	ND		ug/kg	2.0	--	1

Project Name: BELFAST BAY **Lab Number:** L1848946

Project Number: Not Specified **Report Date:** 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-02 Date Collected: 11/29/18 09:20

Client ID: A6/A7 COMP Date Received: 11/30/18

Sample Location: BELFAST, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-5035 - Westborough Lab						
Trichloroethene	ND		ug/kg	0.66	--	1
1,2-Dichlorobenzene	ND		ug/kg	2.6	--	1
1,3-Dichlorobenzene	ND		ug/kg	2.6	--	1
1,4-Dichlorobenzene	ND		ug/kg	2.6	--	1
Methyl tert butyl ether	ND		ug/kg	2.6	--	1
p/m-Xylene	ND		ug/kg	2.6	--	1
o-Xylene	ND		ug/kg	1.3	--	1
Xylenes, Total	ND		ug/kg	1.3	--	1
cis-1,2-Dichloroethene	ND		ug/kg	1.3	--	1
1,2-Dichloroethene, Total	ND		ug/kg	1.3	--	1
Dibromomethane	ND		ug/kg	2.6	--	1
1,4-Dichlorobutane	ND		ug/kg	13	--	1
1,2,3-Trichloropropane	ND		ug/kg	2.6	--	1
Styrene	ND		ug/kg	1.3	--	1
Dichlorodifluoromethane	ND		ug/kg	13	--	1
Acetone	17		ug/kg	13	--	1
Carbon disulfide	ND		ug/kg	13	--	1
2-Butanone	ND		ug/kg	13	--	1
Vinyl acetate	ND		ug/kg	13	--	1
4-Methyl-2-pentanone	ND		ug/kg	13	--	1
2-Hexanone	ND		ug/kg	13	--	1
Ethyl methacrylate	ND		ug/kg	13	--	1
Acrylonitrile	ND		ug/kg	5.3	--	1
Bromochloromethane	ND		ug/kg	2.6	--	1
Tetrahydrofuran	ND		ug/kg	5.3	--	1
2,2-Dichloropropane	ND		ug/kg	2.6	--	1
1,2-Dibromoethane	ND		ug/kg	1.3	--	1
1,3-Dichloropropane	ND		ug/kg	2.6	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.66	--	1
Bromobenzene	ND		ug/kg	2.6	--	1
n-Butylbenzene	ND		ug/kg	1.3	--	1
sec-Butylbenzene	ND		ug/kg	1.3	--	1
tert-Butylbenzene	ND		ug/kg	2.6	--	1
o-Chlorotoluene	ND		ug/kg	2.6	--	1
p-Chlorotoluene	ND		ug/kg	2.6	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.9	--	1
Hexachlorobutadiene	ND		ug/kg	5.3	--	1

Project Name: BELFAST BAY
Project Number: Not Specified
Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-02
Client ID: A6/A7 COMP
Sample Location: BELFAST, ME
Date Collected: 11/29/18 09:20
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-5035 - Westborough Lab						
Isopropylbenzene	ND		ug/kg	1.3	--	1
p-Isopropyltoluene	ND		ug/kg	1.3	--	1
Naphthalene	ND		ug/kg	5.3	--	1
n-Propylbenzene	ND		ug/kg	1.3	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.6	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.6	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.6	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.6	--	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.6	--	1
Ethyl ether	ND		ug/kg	2.6	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	109		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	113		70-130

Project Name: BELFAST BAY
Project Number: Not Specified
Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-03
Client ID: TRIP BLANK
Sample Location: BELFAST, ME
Date Collected: 11/29/18 00:00
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 12/05/18 16:13
Analyst: KJD
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	5.0	--	1
1,1-Dichloroethane	ND		ug/kg	1.0	--	1
Chloroform	ND		ug/kg	1.5	--	1
Carbon tetrachloride	ND		ug/kg	1.0	--	1
1,2-Dichloropropane	ND		ug/kg	1.0	--	1
Dibromochloromethane	ND		ug/kg	1.0	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.0	--	1
Tetrachloroethene	ND		ug/kg	0.50	--	1
Chlorobenzene	ND		ug/kg	0.50	--	1
Trichlorofluoromethane	ND		ug/kg	4.0	--	1
1,2-Dichloroethane	ND		ug/kg	1.0	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.50	--	1
Bromodichloromethane	ND		ug/kg	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.50	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.50	--	1
1,1-Dichloropropene	ND		ug/kg	0.50	--	1
Bromoform	ND		ug/kg	4.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	--	1
Benzene	ND		ug/kg	0.50	--	1
Toluene	ND		ug/kg	1.0	--	1
Ethylbenzene	ND		ug/kg	1.0	--	1
Chloromethane	ND		ug/kg	4.0	--	1
Bromomethane	ND		ug/kg	2.0	--	1
Vinyl chloride	ND		ug/kg	1.0	--	1
Chloroethane	ND		ug/kg	2.0	--	1
1,1-Dichloroethene	ND		ug/kg	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	--	1

Project Name: BELFAST BAY **Lab Number:** L1848946

Project Number: Not Specified **Report Date:** 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-03 Date Collected: 11/29/18 00:00

Client ID: TRIP BLANK Date Received: 11/30/18

Sample Location: BELFAST, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-5035 - Westborough Lab						
Trichloroethene	ND		ug/kg	0.50	--	1
1,2-Dichlorobenzene	ND		ug/kg	2.0	--	1
1,3-Dichlorobenzene	ND		ug/kg	2.0	--	1
1,4-Dichlorobenzene	ND		ug/kg	2.0	--	1
Methyl tert butyl ether	ND		ug/kg	2.0	--	1
p/m-Xylene	ND		ug/kg	2.0	--	1
o-Xylene	ND		ug/kg	1.0	--	1
Xylenes, Total	ND		ug/kg	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--	1
1,2-Dichloroethene, Total	ND		ug/kg	1.0	--	1
Dibromomethane	ND		ug/kg	2.0	--	1
1,4-Dichlorobutane	ND		ug/kg	10	--	1
1,2,3-Trichloropropane	ND		ug/kg	2.0	--	1
Styrene	ND		ug/kg	1.0	--	1
Dichlorodifluoromethane	ND		ug/kg	10	--	1
Acetone	ND		ug/kg	10	--	1
Carbon disulfide	ND		ug/kg	10	--	1
2-Butanone	ND		ug/kg	10	--	1
Vinyl acetate	ND		ug/kg	10	--	1
4-Methyl-2-pentanone	ND		ug/kg	10	--	1
2-Hexanone	ND		ug/kg	10	--	1
Ethyl methacrylate	ND		ug/kg	10	--	1
Acrylonitrile	ND		ug/kg	4.0	--	1
Bromochloromethane	ND		ug/kg	2.0	--	1
Tetrahydrofuran	ND		ug/kg	4.0	--	1
2,2-Dichloropropane	ND		ug/kg	2.0	--	1
1,2-Dibromoethane	ND		ug/kg	1.0	--	1
1,3-Dichloropropane	ND		ug/kg	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	--	1
Bromobenzene	ND		ug/kg	2.0	--	1
n-Butylbenzene	ND		ug/kg	1.0	--	1
sec-Butylbenzene	ND		ug/kg	1.0	--	1
tert-Butylbenzene	ND		ug/kg	2.0	--	1
o-Chlorotoluene	ND		ug/kg	2.0	--	1
p-Chlorotoluene	ND		ug/kg	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	--	1
Hexachlorobutadiene	ND		ug/kg	4.0	--	1

Project Name: BELFAST BAY
Project Number: Not Specified
Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-03
Client ID: TRIP BLANK
Sample Location: BELFAST, ME
Date Collected: 11/29/18 00:00
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-5035 - Westborough Lab						
Isopropylbenzene	ND		ug/kg	1.0	--	1
p-Isopropyltoluene	ND		ug/kg	1.0	--	1
Naphthalene	ND		ug/kg	4.0	--	1
n-Propylbenzene	ND		ug/kg	1.0	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	--	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	--	1
Ethyl ether	ND		ug/kg	2.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	108		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	113		70-130

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 12/05/18 11:41
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-5035 - Westborough Lab for sample(s): 01-03 Batch: WG1186047-5					
Methylene chloride	ND		ug/kg	5.0	--
1,1-Dichloroethane	ND		ug/kg	1.0	--
Chloroform	ND		ug/kg	1.5	--
Carbon tetrachloride	ND		ug/kg	1.0	--
1,2-Dichloropropane	ND		ug/kg	1.0	--
Dibromochloromethane	ND		ug/kg	1.0	--
1,1,2-Trichloroethane	ND		ug/kg	1.0	--
2-Chloroethylvinyl ether	ND		ug/kg	20	--
Tetrachloroethene	ND		ug/kg	0.50	--
Chlorobenzene	ND		ug/kg	0.50	--
Trichlorofluoromethane	ND		ug/kg	4.0	--
1,2-Dichloroethane	ND		ug/kg	1.0	--
1,1,1-Trichloroethane	ND		ug/kg	0.50	--
Bromodichloromethane	ND		ug/kg	0.50	--
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--
cis-1,3-Dichloropropene	ND		ug/kg	0.50	--
1,3-Dichloropropene, Total	ND		ug/kg	0.50	--
1,1-Dichloropropene	ND		ug/kg	0.50	--
Bromoform	ND		ug/kg	4.0	--
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	--
Benzene	ND		ug/kg	0.50	--
Toluene	ND		ug/kg	1.0	--
Ethylbenzene	ND		ug/kg	1.0	--
Chloromethane	ND		ug/kg	4.0	--
Bromomethane	ND		ug/kg	2.0	--
Vinyl chloride	ND		ug/kg	1.0	--
Chloroethane	ND		ug/kg	2.0	--
1,1-Dichloroethene	ND		ug/kg	1.0	--
trans-1,2-Dichloroethene	ND		ug/kg	1.5	--

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 12/05/18 11:41
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-5035 - Westborough Lab for sample(s): 01-03 Batch: WG1186047-5					
Trichloroethene	ND		ug/kg	0.50	--
1,2-Dichlorobenzene	ND		ug/kg	2.0	--
1,3-Dichlorobenzene	ND		ug/kg	2.0	--
1,4-Dichlorobenzene	ND		ug/kg	2.0	--
Methyl tert butyl ether	ND		ug/kg	2.0	--
p/m-Xylene	ND		ug/kg	2.0	--
o-Xylene	ND		ug/kg	1.0	--
Xylenes, Total	ND		ug/kg	1.0	--
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--
1,2-Dichloroethene, Total	ND		ug/kg	1.0	--
Dibromomethane	ND		ug/kg	2.0	--
1,4-Dichlorobutane	ND		ug/kg	10	--
1,2,3-Trichloropropane	ND		ug/kg	2.0	--
Styrene	ND		ug/kg	1.0	--
Dichlorodifluoromethane	ND		ug/kg	10	--
Acetone	ND		ug/kg	10	--
Carbon disulfide	ND		ug/kg	10	--
2-Butanone	ND		ug/kg	10	--
Vinyl acetate	ND		ug/kg	10	--
4-Methyl-2-pentanone	ND		ug/kg	10	--
2-Hexanone	ND		ug/kg	10	--
Ethyl methacrylate	ND		ug/kg	10	--
Acrolein	ND		ug/kg	25	--
Acrylonitrile	ND		ug/kg	4.0	--
Bromochloromethane	ND		ug/kg	2.0	--
Tetrahydrofuran	ND		ug/kg	4.0	--
2,2-Dichloropropane	ND		ug/kg	2.0	--
1,2-Dibromoethane	ND		ug/kg	1.0	--
1,3-Dichloropropane	ND		ug/kg	2.0	--

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 12/05/18 11:41
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-5035 - Westborough Lab for sample(s): 01-03 Batch: WG1186047-5					
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	--
Bromobenzene	ND		ug/kg	2.0	--
n-Butylbenzene	ND		ug/kg	1.0	--
sec-Butylbenzene	ND		ug/kg	1.0	--
tert-Butylbenzene	ND		ug/kg	2.0	--
1,3,5-Trichlorobenzene	ND		ug/kg	2.0	--
o-Chlorotoluene	ND		ug/kg	2.0	--
p-Chlorotoluene	ND		ug/kg	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	--
Hexachlorobutadiene	ND		ug/kg	4.0	--
Isopropylbenzene	ND		ug/kg	1.0	--
p-Isopropyltoluene	ND		ug/kg	1.0	--
Naphthalene	ND		ug/kg	4.0	--
n-Propylbenzene	ND		ug/kg	1.0	--
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	--
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	--
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	--
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	--
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	--
Ethyl ether	ND		ug/kg	2.0	--
Methyl Acetate	ND		ug/kg	4.0	--
Ethyl Acetate	ND		ug/kg	10	--
Isopropyl Ether	ND		ug/kg	2.0	--
Cyclohexane	ND		ug/kg	10	--
Tert-Butyl Alcohol	ND		ug/kg	20	--
Ethyl-Tert-Butyl-Ether	ND		ug/kg	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/kg	2.0	--
1,4-Dioxane	ND		ug/kg	100	--
Methyl cyclohexane	ND		ug/kg	4.0	--

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 12/05/18 11:41
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-5035 - Westborough Lab for sample(s): 01-03 Batch: WG1186047-5					
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/kg	4.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	114		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-5035 - Westborough Lab Associated sample(s): 01-03 Batch: WG1186047-3 WG1186047-4								
Methylene chloride	90		93		70-130	3		30
1,1-Dichloroethane	96		98		70-130	2		30
Chloroform	97		100		70-130	3		30
Carbon tetrachloride	96		100		70-130	4		30
1,2-Dichloropropane	99		101		70-130	2		30
Dibromochloromethane	97		99		70-130	2		30
1,1,2-Trichloroethane	95		98		70-130	3		30
2-Chloroethylvinyl ether	98		98		70-130	0		30
Tetrachloroethene	95		98		70-130	3		30
Chlorobenzene	93		95		70-130	2		30
Trichlorofluoromethane	100		100		70-139	0		30
1,2-Dichloroethane	99		100		70-130	1		30
1,1,1-Trichloroethane	96		99		70-130	3		30
Bromodichloromethane	102		103		70-130	1		30
trans-1,3-Dichloropropene	93		94		70-130	1		30
cis-1,3-Dichloropropene	106		107		70-130	1		30
1,1-Dichloropropene	98		102		70-130	4		30
Bromoform	95		95		70-130	0		30
1,1,2,2-Tetrachloroethane	96		97		70-130	1		30
Benzene	97		99		70-130	2		30
Toluene	92		94		70-130	2		30
Ethylbenzene	94		96		70-130	2		30
Chloromethane	79		83		52-130	5		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: BELFAST BAY

Project Number: Not Specified

Lab Number: L1848946

Report Date: 12/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-5035 - Westborough Lab Associated sample(s): 01-03 Batch: WG1186047-3 WG1186047-4								
Bromomethane	105		101		57-147	4		30
Vinyl chloride	88		92		67-130	4		30
Chloroethane	93		90		50-151	3		30
1,1-Dichloroethene	99		99		65-135	0		30
trans-1,2-Dichloroethene	94		96		70-130	2		30
Trichloroethene	98		98		70-130	0		30
1,2-Dichlorobenzene	95		96		70-130	1		30
1,3-Dichlorobenzene	94		95		70-130	1		30
1,4-Dichlorobenzene	90		91		70-130	1		30
Methyl tert butyl ether	97		99		66-130	2		30
p/m-Xylene	96		98		70-130	2		30
o-Xylene	96		98		70-130	2		30
cis-1,2-Dichloroethene	98		101		70-130	3		30
Dibromomethane	101		104		70-130	3		30
1,4-Dichlorobutane	93		93		70-130	0		30
1,2,3-Trichloropropane	93		93		68-130	0		30
Styrene	98		100		70-130	2		30
Dichlorodifluoromethane	87		90		30-146	3		30
Acetone	86		90		54-140	5		30
Carbon disulfide	86		86		59-130	0		30
2-Butanone	82		100		70-130	20		30
Vinyl acetate	103		107		70-130	4		30
4-Methyl-2-pentanone	97		96		70-130	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: BELFAST BAY

Project Number: Not Specified

Lab Number: L1848946

Report Date: 12/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-5035 - Westborough Lab Associated sample(s): 01-03 Batch: WG1186047-3 WG1186047-4								
2-Hexanone	99		99		70-130	0		30
Ethyl methacrylate	95		95		70-130	0		30
Acrolein	82		89		70-130	8		30
Acrylonitrile	94		103		70-130	9		30
Bromochloromethane	102		103		70-130	1		30
Tetrahydrofuran	101		97		66-130	4		30
2,2-Dichloropropane	93		99		70-130	6		30
1,2-Dibromoethane	95		96		70-130	1		30
1,3-Dichloropropane	97		98		69-130	1		30
1,1,1,2-Tetrachloroethane	98		99		70-130	1		30
Bromobenzene	94		95		70-130	1		30
n-Butylbenzene	93		95		70-130	2		30
sec-Butylbenzene	92		93		70-130	1		30
tert-Butylbenzene	93		94		70-130	1		30
1,3,5-Trichlorobenzene	101		101		70-139	0		30
o-Chlorotoluene	90		91		70-130	1		30
p-Chlorotoluene	91		93		70-130	2		30
1,2-Dibromo-3-chloropropane	86		88		68-130	2		30
Hexachlorobutadiene	98		101		67-130	3		30
Isopropylbenzene	92		93		70-130	1		30
p-Isopropyltoluene	93		95		70-130	2		30
Naphthalene	93		95		70-130	2		30
n-Propylbenzene	92		93		70-130	1		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-5035 - Westborough Lab Associated sample(s): 01-03 Batch: WG1186047-3 WG1186047-4								
1,2,3-Trichlorobenzene	95		97		70-130	2		30
1,2,4-Trichlorobenzene	98		98		70-130	0		30
1,3,5-Trimethylbenzene	92		93		70-130	1		30
1,2,4-Trimethylbenzene	94		93		70-130	1		30
trans-1,4-Dichloro-2-butene	92		90		70-130	2		30
Ethyl ether	108		108		67-130	0		30
Methyl Acetate	93		97		65-130	4		30
Ethyl Acetate	108		108		70-130	0		30
Isopropyl Ether	103		104		66-130	1		30
Cyclohexane	99		100		70-130	1		30
Tert-Butyl Alcohol	91		102		70-130	11		30
Ethyl-Tert-Butyl-Ether	104		105		70-130	1		30
Tertiary-Amyl Methyl Ether	106		107		70-130	1		30
1,4-Dioxane	93		95		65-136	2		30
Methyl cyclohexane	103		107		70-130	4		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	94		96		70-130	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	110		112		70-130
Toluene-d8	108		108		70-130
4-Bromofluorobenzene	111		109		70-130
Dibromofluoromethane	115		116		70-130

SEMIVOLATILES

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-01
Client ID: B3
Sample Location: BELFAST, ME

Date Collected: 11/29/18 10:30
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 12/06/18 05:43
Analyst: EK
Percent Solids: 46%

Extraction Method: EPA 3546
Extraction Date: 12/03/18 22:48

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzidine	ND		ug/kg	6900	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	2100	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	1900	--	1
1,2-Dichlorobenzene	ND		ug/kg	2100	--	1
1,3-Dichlorobenzene	ND		ug/kg	2100	--	1
1,4-Dichlorobenzene	ND		ug/kg	2100	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	2100	--	1
2,4-Dinitrotoluene	ND		ug/kg	2100	--	1
2,6-Dinitrotoluene	ND		ug/kg	2100	--	1
Azobenzene	ND		ug/kg	2100	--	1
4-Chlorophenyl phenyl ether	ND		ug/kg	2100	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	2100	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	2500	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	2200	--	1
Hexachlorocyclopentadiene	ND		ug/kg	6000	--	1
Isophorone	ND		ug/kg	1900	--	1
Nitrobenzene	ND		ug/kg	1900	--	1
NDPA/DPA	ND		ug/kg	1700	--	1
n-Nitrosodi-n-propylamine	ND		ug/kg	2100	--	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	2100	--	1
Butyl benzyl phthalate	ND		ug/kg	2100	--	1
Di-n-butylphthalate	ND		ug/kg	2100	--	1
Di-n-octylphthalate	ND		ug/kg	2100	--	1
Diethyl phthalate	ND		ug/kg	2100	--	1
Dimethyl phthalate	ND		ug/kg	2100	--	1
Biphenyl	ND		ug/kg	4800	--	1
Aniline	ND		ug/kg	2500	--	1
4-Chloroaniline	ND		ug/kg	2100	--	1

Project Name: BELFAST BAY
Project Number: Not Specified
Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-01
Client ID: B3
Sample Location: BELFAST, ME
Date Collected: 11/29/18 10:30
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2-Nitroaniline	ND		ug/kg	2100	--	1
3-Nitroaniline	ND		ug/kg	2100	--	1
4-Nitroaniline	ND		ug/kg	2100	--	1
Dibenzofuran	ND		ug/kg	2100	--	1
n-Nitrosodimethylamine	ND		ug/kg	4200	--	1
2,4,6-Trichlorophenol	ND		ug/kg	1200	--	1
p-Chloro-m-cresol	ND		ug/kg	2100	--	1
2-Chlorophenol	ND		ug/kg	2100	--	1
2,4-Dichlorophenol	ND		ug/kg	1900	--	1
2,4-Dimethylphenol	ND		ug/kg	2100	--	1
2-Nitrophenol	ND		ug/kg	4500	--	1
4-Nitrophenol	ND		ug/kg	2900	--	1
2,4-Dinitrophenol	ND		ug/kg	10000	--	1
4,6-Dinitro-o-cresol	ND		ug/kg	5400	--	1
Phenol	ND		ug/kg	2100	--	1
2-Methylphenol	ND		ug/kg	2100	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	3000	--	1
2,4,5-Trichlorophenol	ND		ug/kg	2100	--	1
Benzoic Acid	ND		ug/kg	6800	--	1
Benzyl Alcohol	ND		ug/kg	2100	--	1
Carbazole	ND		ug/kg	2100	--	1
Pyridine	ND		ug/kg	2200	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	92		25-120
Phenol-d6	89		10-120
Nitrobenzene-d5	90		23-120
2-Fluorobiphenyl	75		30-120
2,4,6-Tribromophenol	99		10-136
4-Terphenyl-d14	71		18-120

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-01
Client ID: B3
Sample Location: BELFAST, ME

Date Collected: 11/29/18 10:30
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D-SIM
Analytical Date: 12/07/18 15:09
Analyst: DV
Percent Solids: 46%

Extraction Method: EPA 3546
Extraction Date: 12/03/18 22:48

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/kg	83	--	1
2-Chloronaphthalene	ND		ug/kg	83	--	1
Fluoranthene	95		ug/kg	83	--	1
Hexachlorobutadiene	ND		ug/kg	83	--	1
Naphthalene	ND		ug/kg	83	--	1
Benzo(a)anthracene	ND		ug/kg	83	--	1
Benzo(a)pyrene	ND		ug/kg	83	--	1
Benzo(b)fluoranthene	ND		ug/kg	83	--	1
Benzo(k)fluoranthene	ND		ug/kg	83	--	1
Chrysene	ND		ug/kg	83	--	1
Acenaphthylene	ND		ug/kg	83	--	1
Anthracene	ND		ug/kg	83	--	1
Benzo(ghi)perylene	ND		ug/kg	83	--	1
Fluorene	ND		ug/kg	83	--	1
Phenanthrene	ND		ug/kg	83	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	83	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	83	--	1
Pyrene	93		ug/kg	83	--	1
1-Methylnaphthalene	ND		ug/kg	83	--	1
2-Methylnaphthalene	ND		ug/kg	83	--	1
Pentachlorophenol	ND		ug/kg	330	--	1
Hexachlorobenzene	ND		ug/kg	83	--	1
Hexachloroethane	ND		ug/kg	83	--	1

Project Name: BELFAST BAY
Lab Number: L1848946
Project Number: Not Specified
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-01
Client ID: B3
Sample Location: BELFAST, ME
Date Collected: 11/29/18 10:30
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	94		25-120
Phenol-d6	101		10-120
Nitrobenzene-d5	90		23-120
2-Fluorobiphenyl	84		30-120
2,4,6-Tribromophenol	92		0-136
4-Terphenyl-d14	74		18-120

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-02
Client ID: A6/A7 COMP
Sample Location: BELFAST, ME

Date Collected: 11/29/18 09:20
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 12/06/18 06:36
Analyst: EK
Percent Solids: 61%

Extraction Method: EPA 3546
Extraction Date: 12/03/18 22:48

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzidine	ND		ug/kg	4700	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	1400	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	1300	--	1
1,2-Dichlorobenzene	ND		ug/kg	1400	--	1
1,3-Dichlorobenzene	ND		ug/kg	1400	--	1
1,4-Dichlorobenzene	ND		ug/kg	1400	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	1400	--	1
2,4-Dinitrotoluene	ND		ug/kg	1400	--	1
2,6-Dinitrotoluene	ND		ug/kg	1400	--	1
Azobenzene	ND		ug/kg	1400	--	1
4-Chlorophenyl phenyl ether	ND		ug/kg	1400	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	1400	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	1700	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	1500	--	1
Hexachlorocyclopentadiene	ND		ug/kg	4000	--	1
Isophorone	ND		ug/kg	1300	--	1
Nitrobenzene	ND		ug/kg	1300	--	1
NDPA/DPA	ND		ug/kg	1100	--	1
n-Nitrosodi-n-propylamine	ND		ug/kg	1400	--	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	1400	--	1
Butyl benzyl phthalate	ND		ug/kg	1400	--	1
Di-n-butylphthalate	ND		ug/kg	1400	--	1
Di-n-octylphthalate	ND		ug/kg	1400	--	1
Diethyl phthalate	ND		ug/kg	1400	--	1
Dimethyl phthalate	ND		ug/kg	1400	--	1
Biphenyl	ND		ug/kg	3200	--	1
Aniline	ND		ug/kg	1700	--	1
4-Chloroaniline	ND		ug/kg	1400	--	1

Project Name: BELFAST BAY
Project Number: Not Specified
Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-02
Client ID: A6/A7 COMP
Sample Location: BELFAST, ME
Date Collected: 11/29/18 09:20
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2-Nitroaniline	ND		ug/kg	1400	--	1
3-Nitroaniline	ND		ug/kg	1400	--	1
4-Nitroaniline	ND		ug/kg	1400	--	1
Dibenzofuran	ND		ug/kg	1400	--	1
n-Nitrosodimethylamine	ND		ug/kg	2800	--	1
2,4,6-Trichlorophenol	ND		ug/kg	850	--	1
p-Chloro-m-cresol	ND		ug/kg	1400	--	1
2-Chlorophenol	ND		ug/kg	1400	--	1
2,4-Dichlorophenol	ND		ug/kg	1300	--	1
2,4-Dimethylphenol	ND		ug/kg	1400	--	1
2-Nitrophenol	ND		ug/kg	3000	--	1
4-Nitrophenol	ND		ug/kg	2000	--	1
2,4-Dinitrophenol	ND		ug/kg	6800	--	1
4,6-Dinitro-o-cresol	ND		ug/kg	3700	--	1
Phenol	ND		ug/kg	1400	--	1
2-Methylphenol	ND		ug/kg	1400	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	2000	--	1
2,4,5-Trichlorophenol	ND		ug/kg	1400	--	1
Benzoic Acid	ND		ug/kg	4600	--	1
Benzyl Alcohol	ND		ug/kg	1400	--	1
Carbazole	ND		ug/kg	1400	--	1
Pyridine	ND		ug/kg	1500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	98		25-120
Phenol-d6	91		10-120
Nitrobenzene-d5	93		23-120
2-Fluorobiphenyl	81		30-120
2,4,6-Tribromophenol	110		10-136
4-Terphenyl-d14	81		18-120

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-02
Client ID: A6/A7 COMP
Sample Location: BELFAST, ME

Date Collected: 11/29/18 09:20
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D-SIM
Analytical Date: 12/07/18 15:35
Analyst: DV
Percent Solids: 61%

Extraction Method: EPA 3546
Extraction Date: 12/03/18 22:48

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/kg	56	--	1
2-Chloronaphthalene	ND		ug/kg	56	--	1
Fluoranthene	78		ug/kg	56	--	1
Hexachlorobutadiene	ND		ug/kg	56	--	1
Naphthalene	ND		ug/kg	56	--	1
Benzo(a)anthracene	ND		ug/kg	56	--	1
Benzo(a)pyrene	ND		ug/kg	56	--	1
Benzo(b)fluoranthene	ND		ug/kg	56	--	1
Benzo(k)fluoranthene	ND		ug/kg	56	--	1
Chrysene	ND		ug/kg	56	--	1
Acenaphthylene	ND		ug/kg	56	--	1
Anthracene	ND		ug/kg	56	--	1
Benzo(ghi)perylene	ND		ug/kg	56	--	1
Fluorene	ND		ug/kg	56	--	1
Phenanthrene	ND		ug/kg	56	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	56	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	56	--	1
Pyrene	70		ug/kg	56	--	1
1-Methylnaphthalene	ND		ug/kg	56	--	1
2-Methylnaphthalene	ND		ug/kg	56	--	1
Pentachlorophenol	ND		ug/kg	230	--	1
Hexachlorobenzene	ND		ug/kg	56	--	1
Hexachloroethane	ND		ug/kg	56	--	1

Project Name: BELFAST BAY
Lab Number: L1848946
Project Number: Not Specified
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-02
Client ID: A6/A7 COMP
Sample Location: BELFAST, ME
Date Collected: 11/29/18 09:20
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	93		25-120
Phenol-d6	100		10-120
Nitrobenzene-d5	94		23-120
2-Fluorobiphenyl	83		30-120
2,4,6-Tribromophenol	106		0-136
4-Terphenyl-d14	86		18-120

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 12/04/18 12:01
Analyst: ALS

Extraction Method: EPA 3546
Extraction Date: 12/03/18 22:48

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1185198-1					
Acenaphthene	ND		ug/kg	130	--
Benzidine	ND		ug/kg	540	--
1,2,4-Trichlorobenzene	ND		ug/kg	160	--
Hexachlorobenzene	ND		ug/kg	98	--
Bis(2-chloroethyl)ether	ND		ug/kg	150	--
2-Chloronaphthalene	ND		ug/kg	160	--
1,2-Dichlorobenzene	ND		ug/kg	160	--
1,3-Dichlorobenzene	ND		ug/kg	160	--
1,4-Dichlorobenzene	ND		ug/kg	160	--
3,3'-Dichlorobenzidine	ND		ug/kg	160	--
2,4-Dinitrotoluene	ND		ug/kg	160	--
2,6-Dinitrotoluene	ND		ug/kg	160	--
Azobenzene	ND		ug/kg	160	--
Fluoranthene	ND		ug/kg	98	--
4-Chlorophenyl phenyl ether	ND		ug/kg	160	--
4-Bromophenyl phenyl ether	ND		ug/kg	160	--
Bis(2-chloroisopropyl)ether	ND		ug/kg	200	--
Bis(2-chloroethoxy)methane	ND		ug/kg	180	--
Hexachlorobutadiene	ND		ug/kg	160	--
Hexachlorocyclopentadiene	ND		ug/kg	470	--
Hexachloroethane	ND		ug/kg	130	--
Isophorone	ND		ug/kg	150	--
Naphthalene	ND		ug/kg	160	--
Nitrobenzene	ND		ug/kg	150	--
NDPA/DPA	ND		ug/kg	130	--
n-Nitrosodi-n-propylamine	ND		ug/kg	160	--
Bis(2-ethylhexyl)phthalate	ND		ug/kg	160	--
Butyl benzyl phthalate	ND		ug/kg	160	--
Di-n-butylphthalate	ND		ug/kg	160	--

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 12/04/18 12:01
Analyst: ALS

Extraction Method: EPA 3546
Extraction Date: 12/03/18 22:48

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1185198-1					
Di-n-octylphthalate	ND		ug/kg	160	--
Diethyl phthalate	ND		ug/kg	160	--
Dimethyl phthalate	ND		ug/kg	160	--
Benzo(a)anthracene	ND		ug/kg	98	--
Benzo(a)pyrene	ND		ug/kg	130	--
Benzo(b)fluoranthene	ND		ug/kg	98	--
Benzo(k)fluoranthene	ND		ug/kg	98	--
Chrysene	ND		ug/kg	98	--
Acenaphthylene	ND		ug/kg	130	--
Anthracene	ND		ug/kg	98	--
Benzo(ghi)perylene	ND		ug/kg	130	--
Fluorene	ND		ug/kg	160	--
Phenanthrene	ND		ug/kg	98	--
Dibenzo(a,h)anthracene	ND		ug/kg	98	--
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	--
Pyrene	ND		ug/kg	98	--
Biphenyl	ND		ug/kg	370	--
Aniline	ND		ug/kg	200	--
4-Chloroaniline	ND		ug/kg	160	--
1-Methylnaphthalene	ND		ug/kg	160	--
2-Nitroaniline	ND		ug/kg	160	--
3-Nitroaniline	ND		ug/kg	160	--
4-Nitroaniline	ND		ug/kg	160	--
Dibenzofuran	ND		ug/kg	160	--
2-Methylnaphthalene	ND		ug/kg	200	--
n-Nitrosodimethylamine	ND		ug/kg	330	--
2,4,6-Trichlorophenol	ND		ug/kg	98	--
p-Chloro-m-cresol	ND		ug/kg	160	--
2-Chlorophenol	ND		ug/kg	160	--

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 12/04/18 12:01
Analyst: ALS

Extraction Method: EPA 3546
Extraction Date: 12/03/18 22:48

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1185198-1					
2,4-Dichlorophenol	ND		ug/kg	150	--
2,4-Dimethylphenol	ND		ug/kg	160	--
2-Nitrophenol	ND		ug/kg	350	--
4-Nitrophenol	ND		ug/kg	230	--
2,4-Dinitrophenol	ND		ug/kg	780	--
4,6-Dinitro-o-cresol	ND		ug/kg	420	--
Pentachlorophenol	ND		ug/kg	130	--
Phenol	ND		ug/kg	160	--
2-Methylphenol	ND		ug/kg	160	--
3-Methylphenol/4-Methylphenol	ND		ug/kg	240	--
2,4,5-Trichlorophenol	ND		ug/kg	160	--
Benzoic Acid	ND		ug/kg	530	--
Benzyl Alcohol	ND		ug/kg	160	--
Carbazole	ND		ug/kg	160	--
Pyridine	ND		ug/kg	180	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	83		25-120
Phenol-d6	80		10-120
Nitrobenzene-d5	82		23-120
2-Fluorobiphenyl	80		30-120
2,4,6-Tribromophenol	95		10-136
4-Terphenyl-d14	79		18-120

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 12/04/18 15:51
Analyst: DV

Extraction Method: EPA 3546
Extraction Date: 12/03/18 22:48

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG1185199-1					
Acenaphthene	ND		ug/kg	6.5	--
2-Chloronaphthalene	ND		ug/kg	6.5	--
Fluoranthene	ND		ug/kg	6.5	--
Hexachlorobutadiene	ND		ug/kg	6.5	--
Naphthalene	ND		ug/kg	6.5	--
Benzo(a)anthracene	ND		ug/kg	6.5	--
Benzo(a)pyrene	ND		ug/kg	6.5	--
Benzo(b)fluoranthene	ND		ug/kg	6.5	--
Benzo(k)fluoranthene	ND		ug/kg	6.5	--
Chrysene	ND		ug/kg	6.5	--
Acenaphthylene	ND		ug/kg	6.5	--
Anthracene	ND		ug/kg	6.5	--
Benzo(ghi)perylene	ND		ug/kg	6.5	--
Fluorene	ND		ug/kg	6.5	--
Phenanthrene	ND		ug/kg	6.5	--
Dibenzo(a,h)anthracene	ND		ug/kg	6.5	--
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	6.5	--
Pyrene	ND		ug/kg	6.5	--
1-Methylnaphthalene	ND		ug/kg	6.5	--
2-Methylnaphthalene	ND		ug/kg	6.5	--
Pentachlorophenol	ND		ug/kg	26	--
Hexachlorobenzene	ND		ug/kg	6.5	--
Hexachloroethane	ND		ug/kg	6.5	--

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 12/04/18 15:51
Analyst: DV

Extraction Method: EPA 3546
Extraction Date: 12/03/18 22:48

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG1185199-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	69		25-120
Phenol-d6	74		10-120
Nitrobenzene-d5	71		23-120
2-Fluorobiphenyl	71		30-120
2,4,6-Tribromophenol	64		0-136
4-Terphenyl-d14	65		18-120

Lab Control Sample Analysis
Batch Quality Control

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1185198-2 WG1185198-3								
Acenaphthene	86		82		31-137	5		50
Benzidine	40		38		10-66	5		50
1,2,4-Trichlorobenzene	85		83		38-107	2		50
Hexachlorobenzene	99		99		40-140	0		50
Bis(2-chloroethyl)ether	84		81		40-140	4		50
2-Chloronaphthalene	91		85		40-140	7		50
1,2-Dichlorobenzene	82		80		40-140	2		50
1,3-Dichlorobenzene	81		80		40-140	1		50
1,4-Dichlorobenzene	83		81		28-104	2		50
3,3'-Dichlorobenzidine	70		66		40-140	6		50
2,4-Dinitrotoluene	112		110		40-132	2		50
2,6-Dinitrotoluene	109		100		40-140	9		50
Azobenzene	91		91		40-140	0		50
Fluoranthene	95		89		40-140	7		50
4-Chlorophenyl phenyl ether	90		93		40-140	3		50
4-Bromophenyl phenyl ether	94		96		40-140	2		50
Bis(2-chloroisopropyl)ether	80		78		40-140	3		50
Bis(2-chloroethoxy)methane	84		79		40-117	6		50
Hexachlorobutadiene	86		83		40-140	4		50
Hexachlorocyclopentadiene	83		80		40-140	4		50
Hexachloroethane	82		81		40-140	1		50
Isophorone	84		79		40-140	6		50
Naphthalene	89		86		40-140	3		50

Lab Control Sample Analysis

Batch Quality Control

Project Name: BELFAST BAY

Project Number: Not Specified

Lab Number: L1848946

Report Date: 12/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1185198-2 WG1185198-3								
Nitrobenzene	87		84		40-140	4		50
NDPA/DPA	94		96		36-157	2		50
n-Nitrosodi-n-propylamine	83		77		32-121	8		50
Bis(2-ethylhexyl)phthalate	104		99		40-140	5		50
Butyl benzyl phthalate	107		99		40-140	8		50
Di-n-butylphthalate	100		94		40-140	6		50
Di-n-octylphthalate	108		101		40-140	7		50
Diethyl phthalate	93		97		40-140	4		50
Dimethyl phthalate	94		87		40-140	8		50
Benzo(a)anthracene	88		83		40-140	6		50
Benzo(a)pyrene	102		96		40-140	6		50
Benzo(b)fluoranthene	99		94		40-140	5		50
Benzo(k)fluoranthene	98		91		40-140	7		50
Chrysene	91		85		40-140	7		50
Acenaphthylene	94		81		40-140	15		50
Anthracene	95		88		40-140	8		50
Benzo(ghi)perylene	103		95		40-140	8		50
Fluorene	94		96		40-140	2		50
Phenanthrene	90		85		40-140	6		50
Dibenzo(a,h)anthracene	95		93		40-140	2		50
Indeno(1,2,3-cd)pyrene	96		96		40-140	0		50
Pyrene	95		90		35-142	5		50
Biphenyl	95		90		54-104	5		50

Lab Control Sample Analysis

Batch Quality Control

Project Name: BELFAST BAY

Project Number: Not Specified

Lab Number: L1848946

Report Date: 12/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1185198-2 WG1185198-3								
Aniline	57		52		40-140	9		50
4-Chloroaniline	42		40		40-140	5		50
1-Methylnaphthalene	84		78		26-130	7		50
2-Nitroaniline	110		101		47-134	9		50
3-Nitroaniline	83		79		26-129	5		50
4-Nitroaniline	102		107		41-125	5		50
Dibenzofuran	93		89		40-140	4		50
2-Methylnaphthalene	90		85		40-140	6		50
n-Nitrosodimethylamine	82		79		22-100	4		50
2,4,6-Trichlorophenol	103		96		30-130	7		50
p-Chloro-m-cresol	98		90		26-103	9		50
2-Chlorophenol	92		89		25-102	3		50
2,4-Dichlorophenol	96		91		30-130	5		50
2,4-Dimethylphenol	93		88		30-130	6		50
2-Nitrophenol	105		104		30-130	1		50
4-Nitrophenol	105		100		11-114	5		50
2,4-Dinitrophenol	111		103		4-130	7		50
4,6-Dinitro-o-cresol	112		114		10-130	2		50
Pentachlorophenol	105		108		17-109	3		50
Phenol	90		85		26-90	6		50
2-Methylphenol	92		86		30-130.	7		50
3-Methylphenol/4-Methylphenol	91		86		30-130	6		50
2,4,5-Trichlorophenol	100		93		30-130	7		50

Lab Control Sample Analysis

Batch Quality Control

Project Name: BELFAST BAY

Project Number: Not Specified

Lab Number: L1848946

Report Date: 12/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1185198-2 WG1185198-3								
Benzoic Acid	82		87		10-110	6		50
Benzyl Alcohol	89		85		40-140	5		50
Carbazole	94		89		54-128	5		50
Pyridine	70		67		10-93	4		50

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	93		92		25-120
Phenol-d6	92		90		10-120
Nitrobenzene-d5	92		90		23-120
2-Fluorobiphenyl	93		86		30-120
2,4,6-Tribromophenol	113		115		10-136
4-Terphenyl-d14	92		86		18-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: BELFAST BAY

Project Number: Not Specified

Lab Number: L1848946

Report Date: 12/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1185199-2 WG1185199-3								
Acenaphthene	79		81		40-140	3		50
2-Chloronaphthalene	74		77		40-140	4		50
Fluoranthene	82		83		40-140	1		50
Hexachlorobutadiene	68		73		34-107	7		50
Naphthalene	65		68		40-140	5		50
Benzo(a)anthracene	79		80		40-140	1		50
Benzo(a)pyrene	92		90		40-140	2		50
Benzo(b)fluoranthene	87		85		40-140	2		50
Benzo(k)fluoranthene	96		91		40-140	5		50
Chrysene	80		80		40-140	0		50
Acenaphthylene	76		79		40-140	4		50
Anthracene	86		87		40-140	1		50
Benzo(ghi)perylene	96		94		40-140	2		50
Fluorene	80		83		40-140	4		50
Phenanthrene	93		94		40-140	1		50
Dibenzo(a,h)anthracene	95		94		40-140	1		50
Indeno(1,2,3-cd)Pyrene	96		94		40-140	2		50
Pyrene	84		84		35-142	0		50
1-Methylnaphthalene	71		74		40-140	4		50
2-Methylnaphthalene	70		74		40-140	6		50
Pentachlorophenol	40		43		17-109	7		50
Hexachlorobenzene	81		83		40-140	2		50
Hexachloroethane	73		78		29-106	7		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1185199-2 WG1185199-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	72		74		25-120
Phenol-d6	72		75		10-120
Nitrobenzene-d5	75		80		23-120
2-Fluorobiphenyl	71		76		30-120
2,4,6-Tribromophenol	73		76		0-136
4-Terphenyl-d14	65		65		18-120

PCBS

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-01
Client ID: B3
Sample Location: BELFAST, ME

Date Collected: 11/29/18 10:30
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 12/04/18 13:34
Analyst: AWS
Percent Solids: 46%

Extraction Method: EPA 3546
Extraction Date: 12/03/18 23:12
Cleanup Method: EPA 3665A
Cleanup Date: 12/04/18
Cleanup Method: EPA 3660B
Cleanup Date: 12/04/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	68.2	--	1	A
Aroclor 1221	ND		ug/kg	68.2	--	1	A
Aroclor 1232	ND		ug/kg	68.2	--	1	A
Aroclor 1242	ND		ug/kg	68.2	--	1	A
Aroclor 1248	ND		ug/kg	68.2	--	1	A
Aroclor 1254	ND		ug/kg	68.2	--	1	A
Aroclor 1260	ND		ug/kg	68.2	--	1	A
Aroclor 1262	ND		ug/kg	68.2	--	1	A
Aroclor 1268	ND		ug/kg	68.2	--	1	A
PCBs, Total	ND		ug/kg	68.2	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	55		30-150	B
Decachlorobiphenyl	39		30-150	B
2,4,5,6-Tetrachloro-m-xylene	63		30-150	A
Decachlorobiphenyl	63		30-150	A

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-02
Client ID: A6/A7 COMP
Sample Location: BELFAST, ME

Date Collected: 11/29/18 09:20
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 12/04/18 13:46
Analyst: AWS
Percent Solids: 61%

Extraction Method: EPA 3546
Extraction Date: 12/03/18 23:12
Cleanup Method: EPA 3665A
Cleanup Date: 12/04/18
Cleanup Method: EPA 3660B
Cleanup Date: 12/04/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	52.5	--	1	A
Aroclor 1221	ND		ug/kg	52.5	--	1	A
Aroclor 1232	ND		ug/kg	52.5	--	1	A
Aroclor 1242	ND		ug/kg	52.5	--	1	A
Aroclor 1248	ND		ug/kg	52.5	--	1	A
Aroclor 1254	ND		ug/kg	52.5	--	1	A
Aroclor 1260	ND		ug/kg	52.5	--	1	A
Aroclor 1262	ND		ug/kg	52.5	--	1	A
Aroclor 1268	ND		ug/kg	52.5	--	1	A
PCBs, Total	ND		ug/kg	52.5	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	60		30-150	B
Decachlorobiphenyl	47		30-150	B
2,4,5,6-Tetrachloro-m-xylene	61		30-150	A
Decachlorobiphenyl	60		30-150	A

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 12/04/18 12:57
Analyst: HT

Extraction Method: EPA 3546
Extraction Date: 12/03/18 23:12
Cleanup Method: EPA 3665A
Cleanup Date: 12/04/18
Cleanup Method: EPA 3660B
Cleanup Date: 12/04/18

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-02 Batch: WG1185202-1						
Aroclor 1016	ND		ug/kg	31.3	--	A
Aroclor 1221	ND		ug/kg	31.3	--	A
Aroclor 1232	ND		ug/kg	31.3	--	A
Aroclor 1242	ND		ug/kg	31.3	--	A
Aroclor 1248	ND		ug/kg	31.3	--	A
Aroclor 1254	ND		ug/kg	31.3	--	A
Aroclor 1260	ND		ug/kg	31.3	--	A
Aroclor 1262	ND		ug/kg	31.3	--	A
Aroclor 1268	ND		ug/kg	31.3	--	A
PCBs, Total	ND		ug/kg	31.3	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	72		30-150	B
Decachlorobiphenyl	54		30-150	B
2,4,5,6-Tetrachloro-m-xylene	75		30-150	A
Decachlorobiphenyl	79		30-150	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: BELFAST BAY

Project Number: Not Specified

Lab Number: L1848946

Report Date: 12/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-02 Batch: WG1185202-2 WG1185202-3									
Aroclor 1016	91		94		40-140	3		50	A
Aroclor 1260	88		97		40-140	10		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	75		75		30-150	B
Decachlorobiphenyl	54		59		30-150	B
2,4,5,6-Tetrachloro-m-xylene	76		76		30-150	A
Decachlorobiphenyl	72		83		30-150	A

PESTICIDES

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-01
Client ID: B3
Sample Location: BELFAST, ME

Date Collected: 11/29/18 10:30
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 12/05/18 06:28
Analyst: BM
Percent Solids: 46%

Extraction Method: EPA 3546
Extraction Date: 12/03/18 23:46
Cleanup Method: EPA 3620B
Cleanup Date: 12/05/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	3.36	--	1	A
Lindane	ND		ug/kg	1.40	--	1	A
Alpha-BHC	ND		ug/kg	1.40	--	1	A
Beta-BHC	ND		ug/kg	3.36	--	1	A
Heptachlor	ND		ug/kg	1.68	--	1	A
Aldrin	ND		ug/kg	3.36	--	1	A
Heptachlor epoxide	ND		ug/kg	6.30	--	1	A
Endrin	ND		ug/kg	1.40	--	1	A
Endrin aldehyde	ND		ug/kg	4.20	--	1	A
Endrin ketone	ND		ug/kg	3.36	--	1	A
Dieldrin	ND		ug/kg	2.10	--	1	A
4,4'-DDE	ND		ug/kg	3.36	--	1	A
4,4'-DDD	ND		ug/kg	3.36	--	1	A
4,4'-DDT	ND		ug/kg	6.30	--	1	A
Endosulfan I	ND		ug/kg	3.36	--	1	A
Endosulfan II	ND		ug/kg	3.36	--	1	A
Endosulfan sulfate	ND		ug/kg	1.40	--	1	A
Methoxychlor	ND		ug/kg	6.30	--	1	A
Toxaphene	ND		ug/kg	63.0	--	1	A
Chlordane	ND		ug/kg	27.3	--	1	A
cis-Chlordane	ND		ug/kg	4.20	--	1	A
trans-Chlordane	ND		ug/kg	4.20	--	1	A

Project Name: BELFAST BAY
Lab Number: L1848946
Project Number: Not Specified
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-01
Client ID: B3
Sample Location: BELFAST, ME
Date Collected: 11/29/18 10:30
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	99		30-150	B
Decachlorobiphenyl	80		30-150	B
2,4,5,6-Tetrachloro-m-xylene	**206**	Q	30-150	A
Decachlorobiphenyl	78		30-150	A

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-01
Client ID: B3
Sample Location: BELFAST, ME

Date Collected: 11/29/18 10:30
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 12/06/18 16:39
Analyst: AMC
Percent Solids: 46%
Methylation Date: 12/05/18 19:25

Extraction Method: EPA 8151A
Extraction Date: 12/04/18 13:16

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
MCPP	ND		ug/kg	7210	--	1	A
MCPA	ND		ug/kg	7210	--	1	A
Dalapon	ND		ug/kg	72.1	--	1	A
Dicamba	ND		ug/kg	72.1	--	1	A
Dichloroprop	ND		ug/kg	72.1	--	1	A
2,4-D	ND		ug/kg	360	--	1	A
2,4-DB	ND		ug/kg	360	--	1	A
2,4,5-T	ND		ug/kg	360	--	1	A
2,4,5-TP (Silvex)	ND		ug/kg	360	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	111		30-150	A
DCAA	99		30-150	B

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-02
Client ID: A6/A7 COMP
Sample Location: BELFAST, ME

Date Collected: 11/29/18 09:20
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 12/05/18 06:41
Analyst: BM
Percent Solids: 61%

Extraction Method: EPA 3546
Extraction Date: 12/03/18 23:46
Cleanup Method: EPA 3620B
Cleanup Date: 12/05/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	2.56	--	1	A
Lindane	ND		ug/kg	1.07	--	1	A
Alpha-BHC	ND		ug/kg	1.07	--	1	A
Beta-BHC	ND		ug/kg	2.56	--	1	A
Heptachlor	ND		ug/kg	1.28	--	1	A
Aldrin	ND		ug/kg	2.56	--	1	A
Heptachlor epoxide	ND		ug/kg	4.80	--	1	A
Endrin	ND		ug/kg	1.07	--	1	A
Endrin aldehyde	ND		ug/kg	3.20	--	1	A
Endrin ketone	ND		ug/kg	2.56	--	1	A
Dieldrin	ND		ug/kg	1.60	--	1	A
4,4'-DDE	ND		ug/kg	2.56	--	1	A
4,4'-DDD	ND		ug/kg	2.56	--	1	A
4,4'-DDT	ND		ug/kg	4.80	--	1	A
Endosulfan I	ND		ug/kg	2.56	--	1	A
Endosulfan II	ND		ug/kg	2.56	--	1	A
Endosulfan sulfate	ND		ug/kg	1.07	--	1	A
Methoxychlor	ND		ug/kg	4.80	--	1	A
Toxaphene	ND		ug/kg	48.0	--	1	A
Chlordane	ND		ug/kg	20.8	--	1	A
cis-Chlordane	ND		ug/kg	3.20	--	1	A
trans-Chlordane	ND		ug/kg	3.20	--	1	A

Project Name: BELFAST BAY
Project Number: Not Specified
Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-02
Client ID: A6/A7 COMP
Sample Location: BELFAST, ME
Date Collected: 11/29/18 09:20
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	87		30-150	B
Decachlorobiphenyl	74		30-150	B
2,4,5,6-Tetrachloro-m-xylene	**607**	Q	30-150	A
Decachlorobiphenyl	52		30-150	A

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-02
Client ID: A6/A7 COMP
Sample Location: BELFAST, ME

Date Collected: 11/29/18 09:20
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 12/06/18 16:58
Analyst: AMC
Percent Solids: 61%
Methylation Date: 12/05/18 19:25

Extraction Method: EPA 8151A
Extraction Date: 12/04/18 13:16

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
MCPP	ND		ug/kg	5330	--	1	A
MCPA	ND		ug/kg	5330	--	1	A
Dalapon	ND		ug/kg	53.3	--	1	A
Dicamba	ND		ug/kg	53.3	--	1	A
Dichloroprop	ND		ug/kg	53.3	--	1	A
2,4-D	ND		ug/kg	267	--	1	A
2,4-DB	ND		ug/kg	267	--	1	A
2,4,5-T	ND		ug/kg	267	--	1	A
2,4,5-TP (Silvex)	ND		ug/kg	267	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	105		30-150	A
DCAA	94		30-150	B

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 12/05/18 05:50
Analyst: KB

Extraction Method: EPA 3546
Extraction Date: 12/03/18 23:46
Cleanup Method: EPA 3620B
Cleanup Date: 12/05/18

Parameter	Result	Qualifier	Units	RL	MDL	Column
Pesticides by GC - Westborough Lab for sample(s): 01-02 Batch: WG1185208-1						
Delta-BHC	ND		ug/kg	1.58	--	A
Lindane	ND		ug/kg	0.660	--	A
Alpha-BHC	ND		ug/kg	0.660	--	A
Beta-BHC	ND		ug/kg	1.58	--	A
Heptachlor	ND		ug/kg	0.792	--	A
Aldrin	ND		ug/kg	1.58	--	A
Heptachlor epoxide	ND		ug/kg	2.97	--	A
Endrin	ND		ug/kg	0.660	--	A
Endrin aldehyde	ND		ug/kg	1.98	--	A
Endrin ketone	ND		ug/kg	1.58	--	A
Dieldrin	ND		ug/kg	0.990	--	A
4,4'-DDE	ND		ug/kg	1.58	--	A
4,4'-DDD	ND		ug/kg	1.58	--	A
4,4'-DDT	ND		ug/kg	2.97	--	A
Endosulfan I	ND		ug/kg	1.58	--	A
Endosulfan II	ND		ug/kg	1.58	--	A
Endosulfan sulfate	ND		ug/kg	0.660	--	A
Methoxychlor	ND		ug/kg	2.97	--	A
Toxaphene	ND		ug/kg	29.7	--	A
Chlordane	ND		ug/kg	12.9	--	A
cis-Chlordane	ND		ug/kg	1.98	--	A
trans-Chlordane	ND		ug/kg	1.98	--	A

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 12/05/18 05:50
Analyst: KB

Extraction Method: EPA 3546
Extraction Date: 12/03/18 23:46
Cleanup Method: EPA 3620B
Cleanup Date: 12/05/18

Parameter	Result	Qualifier	Units	RL	MDL	Column
Pesticides by GC - Westborough Lab for sample(s): 01-02 Batch: WG1185208-1						

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	101		30-150	B
Decachlorobiphenyl	73		30-150	B
2,4,5,6-Tetrachloro-m-xylene	101		30-150	A
Decachlorobiphenyl	81		30-150	A

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8151A
Analytical Date: 12/05/18 09:18
Analyst: DGM

Extraction Method: EPA 8151A
Extraction Date: 12/04/18 01:03

Methylation Date: 12/04/18 19:19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Chlorinated Herbicides by GC - Westborough Lab for sample(s): 01-02 Batch: WG1185220-1						
MCPP	ND		ug/kg	3250	--	B
MCPA	ND		ug/kg	3250	--	B
Dalapon	ND		ug/kg	32.5	--	B
Dicamba	ND		ug/kg	32.5	--	B
Dichloroprop	ND		ug/kg	32.5	--	B
2,4-D	ND		ug/kg	162	--	B
2,4-DB	ND		ug/kg	162	--	B
2,4,5-T	ND		ug/kg	162	--	B
2,4,5-TP (Silvex)	ND		ug/kg	162	--	B

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DCAA	87		30-150	A
DCAA	82		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BELFAST BAY

Project Number: Not Specified

Lab Number: L1848946

Report Date: 12/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Pesticides by GC - Westborough Lab Associated sample(s): 01-02 Batch: WG1185208-2 WG1185208-3									
Delta-BHC	97		87		30-150	11		30	A
Lindane	92		83		30-150	10		30	A
Alpha-BHC	98		90		30-150	9		30	A
Beta-BHC	110		107		30-150	3		30	A
Heptachlor	114		101		30-150	12		30	A
Aldrin	102		90		30-150	13		30	A
Heptachlor epoxide	97		87		30-150	11		30	A
Endrin	104		91		30-150	13		30	A
Endrin aldehyde	83		77		30-150	8		30	A
Endrin ketone	98		92		30-150	6		30	A
Dieldrin	107		96		30-150	11		30	A
4,4'-DDE	98		86		30-150	13		30	A
4,4'-DDD	98		91		30-150	7		30	A
4,4'-DDT	97		89		30-150	9		30	A
Endosulfan I	98		88		30-150	11		30	A
Endosulfan II	102		92		30-150	10		30	A
Endosulfan sulfate	92		80		30-150	14		30	A
Methoxychlor	95		87		30-150	9		30	A
cis-Chlordane	88		76		30-150	15		30	A
trans-Chlordane	91		79		30-150	14		30	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: BELFAST BAY

Project Number: Not Specified

Lab Number: L1848946

Report Date: 12/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Pesticides by GC - Westborough Lab Associated sample(s): 01-02 Batch: WG1185208-2 WG1185208-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	99		93		30-150	B
Decachlorobiphenyl	85		77		30-150	B
2,4,5,6-Tetrachloro-m-xylene	102		91		30-150	A
Decachlorobiphenyl	73		65		30-150	A

Lab Control Sample Analysis
Batch Quality Control

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Chlorinated Herbicides by GC - Westborough Lab Associated sample(s): 01-02 Batch: WG1185220-2 WG1185220-3									
MCPP	111		94		30-150	17		30	B
MCPA	103		90		30-150	13		30	B
Dalapon	75		69		30-150	8		30	B
Dicamba	91		88		30-150	3		30	B
Dichloroprop	103		98		30-150	5		30	B
2,4-D	93		90		30-150	3		30	B
2,4-DB	99		93		30-150	6		30	B
2,4,5-T	94		90		30-150	4		30	B
2,4,5-TP (Silvex)	86		81		30-150	6		30	B

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	87		88		30-150	A
DCAA	90		93		30-150	B

METALS

Project Name: BELFAST BAY
Project Number: Not Specified
Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-01
Client ID: B3
Sample Location: BELFAST, ME
Date Collected: 11/29/18 10:30
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 46%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	13.2		mg/kg	0.845	--	1	12/05/18 20:00	12/06/18 19:18	EPA 3050B	1,6010D	MC
Barium, Total	22.9		mg/kg	0.845	--	1	12/05/18 20:00	12/06/18 19:18	EPA 3050B	1,6010D	MC
Cadmium, Total	ND		mg/kg	0.845	--	1	12/05/18 20:00	12/06/18 19:18	EPA 3050B	1,6010D	MC
Chromium, Total	33.4		mg/kg	0.845	--	1	12/05/18 20:00	12/06/18 19:18	EPA 3050B	1,6010D	MC
Lead, Total	14.2		mg/kg	4.22	--	1	12/05/18 20:00	12/06/18 19:18	EPA 3050B	1,6010D	MC
Mercury, Total	0.267		mg/kg	0.136	--	1	12/06/18 08:00	12/06/18 21:44	EPA 7471B	1,7471B	MG
Selenium, Total	ND		mg/kg	1.69	--	1	12/05/18 20:00	12/06/18 19:18	EPA 3050B	1,6010D	MC
Silver, Total	ND		mg/kg	0.845	--	1	12/05/18 20:00	12/06/18 19:18	EPA 3050B	1,6010D	MC

Project Name: BELFAST BAY
Project Number: Not Specified
Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-02
Client ID: A6/A7 COMP
Sample Location: BELFAST, ME
Date Collected: 11/29/18 09:20
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 61%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	6.65		mg/kg	0.650	--	1	12/05/18 20:00	12/06/18 19:50	EPA 3050B	1,6010D	MC
Barium, Total	11.9		mg/kg	0.650	--	1	12/05/18 20:00	12/06/18 19:50	EPA 3050B	1,6010D	MC
Cadmium, Total	ND		mg/kg	0.650	--	1	12/05/18 20:00	12/06/18 19:50	EPA 3050B	1,6010D	MC
Chromium, Total	21.0		mg/kg	0.650	--	1	12/05/18 20:00	12/06/18 19:50	EPA 3050B	1,6010D	MC
Lead, Total	7.85		mg/kg	3.25	--	1	12/05/18 20:00	12/06/18 19:50	EPA 3050B	1,6010D	MC
Mercury, Total	ND		mg/kg	0.103	--	1	12/06/18 08:00	12/06/18 21:46	EPA 7471B	1,7471B	MG
Selenium, Total	ND		mg/kg	1.30	--	1	12/05/18 20:00	12/06/18 19:50	EPA 3050B	1,6010D	MC
Silver, Total	ND		mg/kg	0.650	--	1	12/05/18 20:00	12/06/18 19:50	EPA 3050B	1,6010D	MC

Project Name: BELFAST BAY
Project Number: Not Specified
Lab Number: L1848946
Report Date: 12/14/18

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1186026-1										
Arsenic, Total	ND		mg/kg	0.400	--	1	12/05/18 20:00	12/06/18 17:56	1,6010D	MC
Barium, Total	ND		mg/kg	0.400	--	1	12/05/18 20:00	12/06/18 17:56	1,6010D	MC
Cadmium, Total	ND		mg/kg	0.400	--	1	12/05/18 20:00	12/06/18 17:56	1,6010D	MC
Chromium, Total	ND		mg/kg	0.400	--	1	12/05/18 20:00	12/06/18 17:56	1,6010D	MC
Lead, Total	ND		mg/kg	2.00	--	1	12/05/18 20:00	12/06/18 17:56	1,6010D	MC
Selenium, Total	ND		mg/kg	0.800	--	1	12/05/18 20:00	12/06/18 17:56	1,6010D	MC
Silver, Total	ND		mg/kg	0.400	--	1	12/05/18 20:00	12/06/18 17:56	1,6010D	MC

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1186191-1										
Mercury, Total	ND		mg/kg	0.083	--	1	12/06/18 08:00	12/06/18 20:35	1,7471B	MG

Prep Information

Digestion Method: EPA 7471B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BELFAST BAY

Project Number: Not Specified

Lab Number: L1848946

Report Date: 12/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1186026-2 SRM Lot Number: D102-540								
Arsenic, Total	104		-		83-117	-		
Barium, Total	101		-		83-118	-		
Cadmium, Total	98		-		83-118	-		
Chromium, Total	102		-		83-117	-		
Lead, Total	101		-		82-118	-		
Selenium, Total	103		-		79-121	-		
Silver, Total	104		-		80-120	-		
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1186191-2 SRM Lot Number: D102-540								
Mercury, Total	85		-		72-128	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1186026-3 QC Sample: L1848946-01 Client ID: B3												
Arsenic, Total	13.2	19.6	27.5	**73**	Q	-	-		75-125	-		20
Barium, Total	22.9	327	305	86		-	-		75-125	-		20
Cadmium, Total	ND	8.34	7.56	91		-	-		75-125	-		20
Chromium, Total	33.4	32.7	51.7	**56**	Q	-	-		75-125	-		20
Lead, Total	14.2	83.4	75.0	**73**	Q	-	-		75-125	-		20
Selenium, Total	ND	19.6	17.5	89		-	-		75-125	-		20
Silver, Total	ND	49.1	48.3	98		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1186191-3 WG1186191-4 QC Sample: L1849060-03 Client ID: MS Sample												
Mercury, Total	2.40	0.252	2.23	**0**	Q	2.57	**67**	Q	80-120	14		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: BELFAST BAY

Project Number: Not Specified

Lab Number: L1848946

Report Date: 12/14/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1186026-4 QC Sample: L1848946-01 Client ID: B3						
Arsenic, Total	13.2	15.6	mg/kg	17		20
Barium, Total	22.9	23.0	mg/kg	0		20
Cadmium, Total	ND	ND	mg/kg	NC		20
Chromium, Total	33.4	36.2	mg/kg	8		20
Lead, Total	14.2	24.3	mg/kg	**52**	Q	20
Selenium, Total	ND	ND	mg/kg	NC		20
Silver, Total	ND	ND	mg/kg	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-01
Client ID: B3
Sample Location: BELFAST, ME

Date Collected: 11/29/18 10:30
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Soil
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	12/06/18 09:10	1,1030	GD

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-02
Client ID: A6/A7 COMP
Sample Location: BELFAST, ME

Date Collected: 11/29/18 09:20
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Soil
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	12/06/18 09:10	1,1030	GD

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-01
Client ID: B3
Sample Location: BELFAST, ME

Date Collected: 11/29/18 10:30
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	45.9		%	0.100	NA	1	-	12/01/18 10:03	121,2540G	RI
pH (H)	7.9		SU	-	NA	1	-	12/01/18 01:38	1,9045D	JW
Cyanide, Reactive	ND		mg/kg	10	--	1	12/02/18 12:13	12/02/18 13:46	125,7.3	RM
Sulfide, Reactive	ND		mg/kg	10	--	1	12/02/18 12:13	12/02/18 13:20	125,7.3	RM
Paint Filter Liquid	NEGATIVE		-	0	NA	1	-	12/03/18 17:43	1,9095B	AS

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-02
Client ID: A6/A7 COMP
Sample Location: BELFAST, ME

Date Collected: 11/29/18 09:20
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	60.7		%	0.100	NA	1	-	12/01/18 10:03	121,2540G	RI
pH (H)	7.3		SU	-	NA	1	-	12/01/18 01:38	1,9045D	JW
Cyanide, Reactive	ND		mg/kg	10	--	1	12/02/18 12:13	12/02/18 13:46	125,7.3	RM
Sulfide, Reactive	ND		mg/kg	10	--	1	12/02/18 12:13	12/02/18 13:21	125,7.3	RM
Paint Filter Liquid	NEGATIVE		-	0	NA	1	-	12/03/18 17:43	1,9095B	AS

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-04
Client ID: A-7 (0-27)
Sample Location: BELFAST, ME

Date Collected: 11/29/18 08:45
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Grain Size Analysis - Mansfield Lab										
Cobbles	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Gravel	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Gravel	2.70		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Sand	18.7		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Medium Sand	15.6		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Sand	24.9		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Silt Fine	17.4		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Clay Fine	20.7		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-05
Client ID: A-6 (0-12)
Sample Location: BELFAST, ME

Date Collected: 11/29/18 09:20
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Grain Size Analysis - Mansfield Lab										
Cobbles	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Gravel	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Gravel	5.30		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Sand	20.3		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Medium Sand	55.3		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Sand	16.7		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Silt Fine	2.10		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Clay Fine	0.300		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-06
Client ID: B-3 (0-79)
Sample Location: BELFAST, ME

Date Collected: 11/29/18 10:30
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Grain Size Analysis - Mansfield Lab										
Cobbles	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Gravel	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Gravel	10.2		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Sand	15.3		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Medium Sand	10.9		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Sand	15.3		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Silt Fine	32.5		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Clay Fine	15.8		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-07
Client ID: A-8 (0-10)
Sample Location: BELFAST, ME

Date Collected: 11/28/18 13:20
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Grain Size Analysis - Mansfield Lab										
Cobbles	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Gravel	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Gravel	0.600		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Sand	4.60		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Medium Sand	6.00		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Sand	6.20		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Silt Fine	56.1		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Clay Fine	26.5		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-08
Client ID: A-8 (10-27)
Sample Location: BELFAST, ME

Date Collected: 11/28/18 13:20
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Grain Size Analysis - Mansfield Lab										
Cobbles	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Gravel	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Gravel	2.80		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Sand	9.30		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Medium Sand	4.50		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Sand	5.80		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Silt Fine	55.1		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Clay Fine	22.5		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-09
Client ID: A-9 (0-10)
Sample Location: BELFAST, ME

Date Collected: 11/28/18 12:35
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Grain Size Analysis - Mansfield Lab										
Cobbles	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Gravel	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Gravel	7.90		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Sand	37.9		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Medium Sand	20.4		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Sand	9.20		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Silt Fine	18.4		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Clay Fine	6.20		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-10
Client ID: A-9 (10-30)
Sample Location: BELFAST, ME

Date Collected: 11/28/18 12:35
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Grain Size Analysis - Mansfield Lab										
Cobbles	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Gravel	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Gravel	4.00		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Sand	16.8		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Medium Sand	11.4		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Sand	8.70		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Silt Fine	45.0		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Clay Fine	14.1		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-11
Client ID: A-10 (0-10)
Sample Location: BELFAST, ME

Date Collected: 11/28/18 11:55
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Grain Size Analysis - Mansfield Lab										
Cobbles	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Gravel	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Gravel	10.0		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Sand	30.8		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Medium Sand	16.8		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Sand	7.80		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Silt Fine	27.4		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Clay Fine	7.20		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-12
Client ID: A-10 (10-27)
Sample Location: BELFAST, ME

Date Collected: 11/28/18 11:55
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Grain Size Analysis - Mansfield Lab										
Cobbles	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Gravel	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Gravel	10.5		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Sand	21.2		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Medium Sand	14.8		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Sand	12.2		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Silt Fine	30.3		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Clay Fine	11.0		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-13
Client ID: A-11 (0-7)
Sample Location: BELFAST, ME

Date Collected: 11/28/18 11:20
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Grain Size Analysis - Mansfield Lab										
Cobbles	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Gravel	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Gravel	15.3		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Sand	36.1		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Medium Sand	18.2		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Sand	8.10		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Silt Fine	16.8		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Clay Fine	5.50		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-14
Client ID: A-11 (7-29)
Sample Location: BELFAST, ME

Date Collected: 11/28/18 11:20
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Grain Size Analysis - Mansfield Lab										
Cobbles	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Gravel	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Gravel	0.200		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Sand	15.8		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Medium Sand	29.0		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Sand	20.3		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Silt Fine	24.9		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Clay Fine	9.80		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-15
Client ID: A-12 (0-7)
Sample Location: BELFAST, ME

Date Collected: 11/28/18 10:45
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Grain Size Analysis - Mansfield Lab										
Cobbles	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Gravel	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Gravel	5.40		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Sand	28.0		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Medium Sand	24.6		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Sand	12.9		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Silt Fine	16.7		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Clay Fine	12.4		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

SAMPLE RESULTS

Lab ID: L1848946-16
Client ID: A-12 (7-29)
Sample Location: BELFAST, ME

Date Collected: 11/28/18 10:45
Date Received: 11/30/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Grain Size Analysis - Mansfield Lab										
Cobbles	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Gravel	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Gravel	ND		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Coarse Sand	10.7		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Medium Sand	22.7		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Fine Sand	24.9		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Silt Fine	31.9		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD
% Clay Fine	9.80		%	0.100	NA	1	-	12/03/18 11:18	12,D6913/D7928	GD

Project Name: BELFAST BAY
Project Number: Not Specified
Lab Number: L1848946
Report Date: 12/14/18

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1184775-1										
Sulfide, Reactive	ND		mg/kg	10	--	1	12/02/18 12:13	12/02/18 13:16	125,7.3	RM
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1184776-1										
Cyanide, Reactive	ND		mg/kg	10	--	1	12/02/18 12:13	12/02/18 13:41	125,7.3	RM

Lab Control Sample Analysis

Batch Quality Control

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1184586-1								
pH	99		-		99-101	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1184775-2								
Sulfide, Reactive	81		-		60-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1184776-2								
Cyanide, Reactive	52		-		30-125	-		40

Lab Duplicate Analysis
Batch Quality Control

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1184586-2 QC Sample: L1849103-01 Client ID: DUP Sample						
pH	8.2	8.1	SU	1		5
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1184604-1 QC Sample: L1849071-01 Client ID: DUP Sample						
Solids, Total	77.3	76.1	%	2		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1184775-3 QC Sample: L1849008-02 Client ID: DUP Sample						
Sulfide, Reactive	ND	ND	mg/kg	NC		40
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1184776-3 QC Sample: L1849008-02 Client ID: DUP Sample						
Cyanide, Reactive	ND	ND	mg/kg	NC		40
Grain Size Analysis - Mansfield Lab Associated sample(s): 04-16 QC Batch ID: WG1184977-1 QC Sample: L1848946-04 Client ID: A-7 (0-27)						
Cobbles	ND	ND	%	NC		20
% Coarse Gravel	ND	ND	%	NC		20
% Fine Gravel	2.70	1.10	%	**84**	Q	20
% Coarse Sand	18.7	6.50	%	**97**	Q	20
% Medium Sand	15.6	17.6	%	12		20
% Fine Sand	24.9	30.9	%	**22**	Q	20
% Silt Fine	17.4	13.2	%	**27**	Q	20
% Clay Fine	20.7	30.7	%	**39**	Q	20

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

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(*)
L1848946-01A	Vial MeOH preserved	A	NA		3.9	Y	Absent		8260HLW(14)
L1848946-01B	Vial water preserved	A	NA		3.9	Y	Absent	30-NOV-18 23:24	8260HLW(14)
L1848946-01C	Vial water preserved	A	NA		3.9	Y	Absent	30-NOV-18 23:24	8260HLW(14)
L1848946-01D	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.9	Y	Absent		AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L1848946-01E	Plastic 2oz unpreserved for TS	A	NA		3.9	Y	Absent		ME-TS-2540(7)
L1848946-01F	Plastic 2oz unpreserved for TS	A	NA		3.9	Y	Absent		ME-TS-2540(7)
L1848946-01G	Plastic 2oz unpreserved for TS	A	NA		3.9	Y	Absent		ME-TS-2540(7)
L1848946-01H	Glass 60mL/2oz unpreserved	A	NA		3.9	Y	Absent		8270TCL(14),IGNIT-1030(14),REACTS(14),PCB-8082(14),PH-9045(1),8270TCL-SIM(14),PAINTF(),PEST-8081(14),HERB-8151(14),REACTCN(14)
L1848946-01J	Glass 60mL/2oz unpreserved	A	NA		3.9	Y	Absent		8270TCL(14),IGNIT-1030(14),REACTS(14),PCB-8082(14),PH-9045(1),8270TCL-SIM(14),PAINTF(),PEST-8081(14),HERB-8151(14),REACTCN(14)
L1848946-01K	Glass 500ml/16oz unpreserved	A	NA		3.9	Y	Absent		8270TCL(14),IGNIT-1030(14),REACTS(14),PCB-8082(14),PH-9045(1),8270TCL-SIM(14),PAINTF(),PEST-8081(14),HERB-8151(14),REACTCN(14)
L1848946-01L	Glass 500ml/16oz unpreserved	A	NA		3.9	Y	Absent		8270TCL(14),IGNIT-1030(14),REACTS(14),PCB-8082(14),PH-9045(1),8270TCL-SIM(14),PAINTF(),PEST-8081(14),HERB-8151(14),REACTCN(14)
L1848946-02A	Vial MeOH preserved	A	NA		3.9	Y	Absent		8260HLW(14)
L1848946-02B	Vial water preserved	A	NA		3.9	Y	Absent	30-NOV-18 23:24	8260HLW(14)
L1848946-02C	Vial water preserved	A	NA		3.9	Y	Absent	30-NOV-18 23:24	8260HLW(14)
L1848946-02D	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.9	Y	Absent		AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L1848946-02E	Plastic 2oz unpreserved for TS	A	NA		3.9	Y	Absent		ME-TS-2540(7)

*Values in parentheses indicate holding time in days

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1848946-02F	Plastic 2oz unpreserved for TS	A	NA		3.9	Y	Absent		ME-TS-2540(7)
L1848946-02G	Plastic 2oz unpreserved for TS	A	NA		3.9	Y	Absent		ME-TS-2540(7)
L1848946-02H	Glass 60mL/2oz unpreserved	A	NA		3.9	Y	Absent		8270TCL(14),IGNIT-1030(14),REACTS(14),PCB-8082(14),PH-9045(1),8270TCL-SIM(14),PAINTF(),PEST-8081(14),HERB-8151(14),REACTCN(14)
L1848946-02J	Glass 60mL/2oz unpreserved	A	NA		3.9	Y	Absent		8270TCL(14),IGNIT-1030(14),REACTS(14),PCB-8082(14),PH-9045(1),8270TCL-SIM(14),PAINTF(),PEST-8081(14),HERB-8151(14),REACTCN(14)
L1848946-02K	Glass 500ml/16oz unpreserved	A	NA		3.9	Y	Absent		8270TCL(14),IGNIT-1030(14),REACTS(14),PCB-8082(14),PH-9045(1),8270TCL-SIM(14),PAINTF(),PEST-8081(14),HERB-8151(14),REACTCN(14)
L1848946-02L	Glass 500ml/16oz unpreserved	A	NA		3.9	Y	Absent		8270TCL(14),IGNIT-1030(14),REACTS(14),PCB-8082(14),PH-9045(1),8270TCL-SIM(14),PAINTF(),PEST-8081(14),HERB-8151(14),REACTCN(14)
L1848946-03A	Vial MeOH preserved	A	NA		3.9	Y	Absent		8260HLW(14)
L1848946-03B	Vial water preserved	A	NA		3.9	Y	Absent	30-NOV-18 23:24	8260HLW(14)
L1848946-04A	Bag	A	NA		3.9	Y	Absent		A2-HYDRO-CFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-COBBLES(),A2-HYDRO-FGRAVEL()
L1848946-05A	Bag	A	NA		3.9	Y	Absent		A2-HYDRO-CFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-COBBLES(),A2-HYDRO-FGRAVEL()
L1848946-06A	Bag	A	NA		3.9	Y	Absent		A2-HYDRO-CFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-COBBLES(),A2-HYDRO-FGRAVEL()
L1848946-07A	Bag	A	NA		3.9	Y	Absent		A2-HYDRO-CFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-COBBLES(),A2-HYDRO-FGRAVEL()
L1848946-08A	Bag	A	NA		3.9	Y	Absent		A2-HYDRO-CFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-COBBLES(),A2-HYDRO-FGRAVEL()

*Values in parentheses indicate holding time in days

Project Name: BELFAST BAY
Project Number: Not Specified

Lab Number: L1848946
Report Date: 12/14/18

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1848946-09A	Bag	A	NA		3.9	Y	Absent		A2-HYDRO-CFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-COBBLES(),A2-HYDRO-FGRAVEL()
L1848946-10A	Bag	A	NA		3.9	Y	Absent		A2-HYDRO-CFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-COBBLES(),A2-HYDRO-FGRAVEL()
L1848946-11A	Bag	A	NA		3.9	Y	Absent		A2-HYDRO-CFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-COBBLES(),A2-HYDRO-FGRAVEL()
L1848946-12A	Bag	A	NA		3.9	Y	Absent		A2-HYDRO-CFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-COBBLES(),A2-HYDRO-FGRAVEL()
L1848946-13A	Bag	A	NA		3.9	Y	Absent		A2-HYDRO-CFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-COBBLES(),A2-HYDRO-FGRAVEL()
L1848946-14A	Bag	A	NA		3.9	Y	Absent		A2-HYDRO-CFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-COBBLES(),A2-HYDRO-FGRAVEL()
L1848946-15A	Bag	A	NA		3.9	Y	Absent		A2-HYDRO-CFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-COBBLES(),A2-HYDRO-FGRAVEL()
L1848946-16A	Bag	A	NA		3.9	Y	Absent		A2-HYDRO-CFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-COBBLES(),A2-HYDRO-FGRAVEL()

*Values in parentheses indicate holding time in days

Project Name:	BELFAST BAY	**Lab Number:**	L1848946
Project Number:	Not Specified	**Report Date:**	12/14/18

GLOSSARY

Acronyms

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.
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.
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.
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.

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.

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.

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.

Report Format: Data Usability Report

Project Name:	BELFAST BAY	**Lab Number:**	L1848946
Project Number:	Not Specified	**Report Date:**	12/14/18

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

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.

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.

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

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.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

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

Report Format: Data Usability Report

Project Name: BELFAST BAY
Project Number: Not Specified
Lab Number: L1848946
Report Date: 12/14/18

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

12 Annual Book of ASTM Standards. (American Society for Testing and Materials) ASTM International.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

125 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates IIIA, April 1998.

LIMITATION OF LIABILITIES

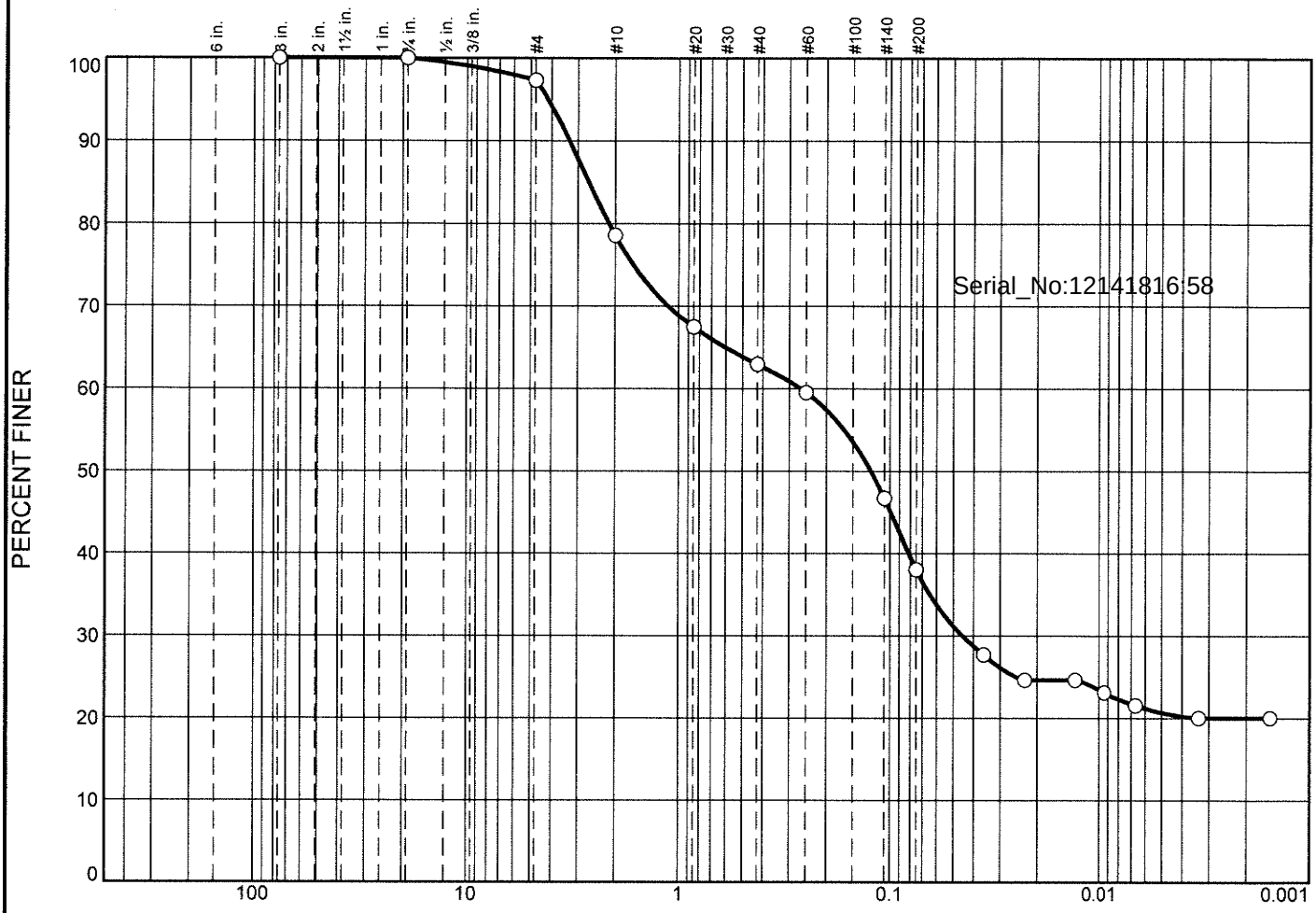
Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held 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.

ASTM D6913/D7928

GRAIN SIZE ANALYSIS

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	2.7	18.7	15.6	24.9	17.4	20.7

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				2.6689	0.2650	0.1230	0.0452				

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source of Sample:** A-7 (0-27) **Sample Number:** L1848946-04

Date: ○

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

12/14/2018

Location: A-7 (0-27)

Sample Number: L1848946-04

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 29.56
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
29.56	0.00	3	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	0.79	0.00	97.3
		#10	5.55	0.00	78.6
		#20	3.27	0.00	67.5
		#40	1.34	0.00	63.0
		#60	1.01	0.00	59.5
		#140	3.79	0.00	46.7
		#200	2.56	0.00	38.1

Serial_No:12141816:58

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 38.1
Weight of hydrometer sample =19.85
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.2	1.0090	1.0090	0.0136	9.0	13.9	0.0359	27.7
5.00	20.2	1.0080	1.0080	0.0136	8.0	14.2	0.0229	24.6
15.00	20.2	1.0080	1.0080	0.0136	8.0	14.2	0.0132	24.6
30.00	20.2	1.0075	1.0075	0.0136	7.5	14.3	0.0094	23.1
60.00	20.2	1.0070	1.0070	0.0136	7.0	14.4	0.0067	21.6
240.00	20.2	1.0065	1.0065	0.0136	6.5	14.6	0.0034	20.0
1140.00	20.2	1.0065	1.0065	0.0136	6.5	14.6	0.0015	20.0

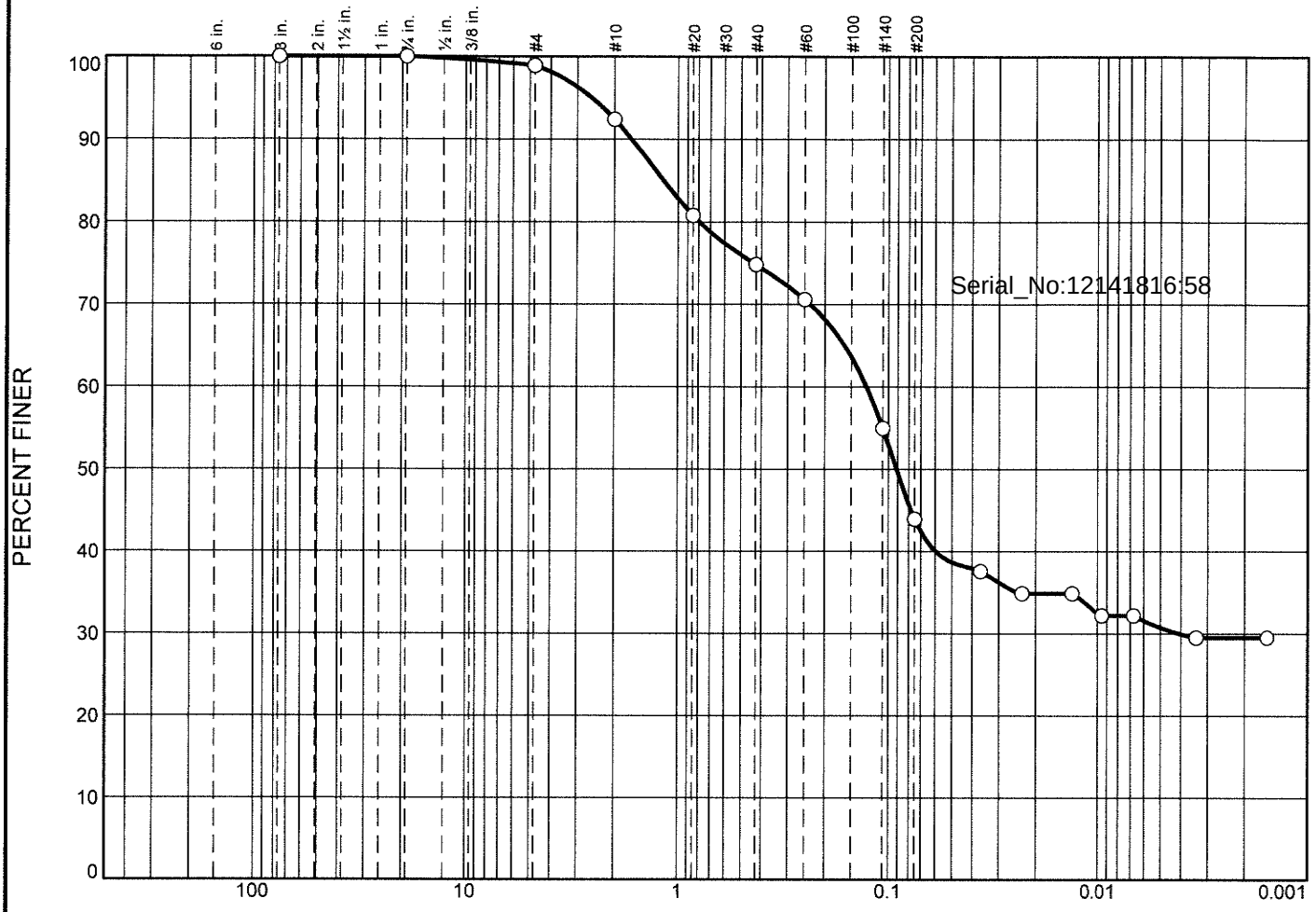
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	2.7	2.7	18.7	15.6	24.9	59.2	17.4	20.7	38.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0452	0.0814	0.1230	0.2650	2.1444	2.6689	3.2958	4.1583

Fineness Modulus
1.72

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	1.1	6.5	17.6	30.9	13.2	30.7

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				1.1706	0.1268	0.0914	0.0041				

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** A-7 (0-27) **Sample Number:** WG1184977-1

Date: ○

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

12/14/2018

Location: A-7 (0-27)

Sample Number: WG1184977-1

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 23.12
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
23.12	0.00	3	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	0.25	0.00	98.9
		#10	1.51	0.00	92.4
		#20	2.68	0.00	80.8
		#40	1.38	0.00	74.8
		#60	0.98	0.00	70.6
		#140	3.61	0.00	55.0
		#200	2.55	0.00	43.9

Serial_No:12141816:58

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 43.9
Weight of hydrometer sample =13.15
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.2	1.0070	1.0070	0.0136	7.0	14.4	0.0366	37.6
5.00	20.2	1.0065	1.0065	0.0136	6.5	14.6	0.0232	34.9
15.00	20.2	1.0065	1.0065	0.0136	6.5	14.6	0.0134	34.9
30.00	20.2	1.0060	1.0060	0.0136	6.0	14.7	0.0095	32.2
60.00	20.2	1.0060	1.0060	0.0136	6.0	14.7	0.0067	32.2
240.00	20.2	1.0055	1.0055	0.0136	5.5	14.8	0.0034	29.5
1140.00	20.2	1.0055	1.0055	0.0136	5.5	14.8	0.0016	29.5

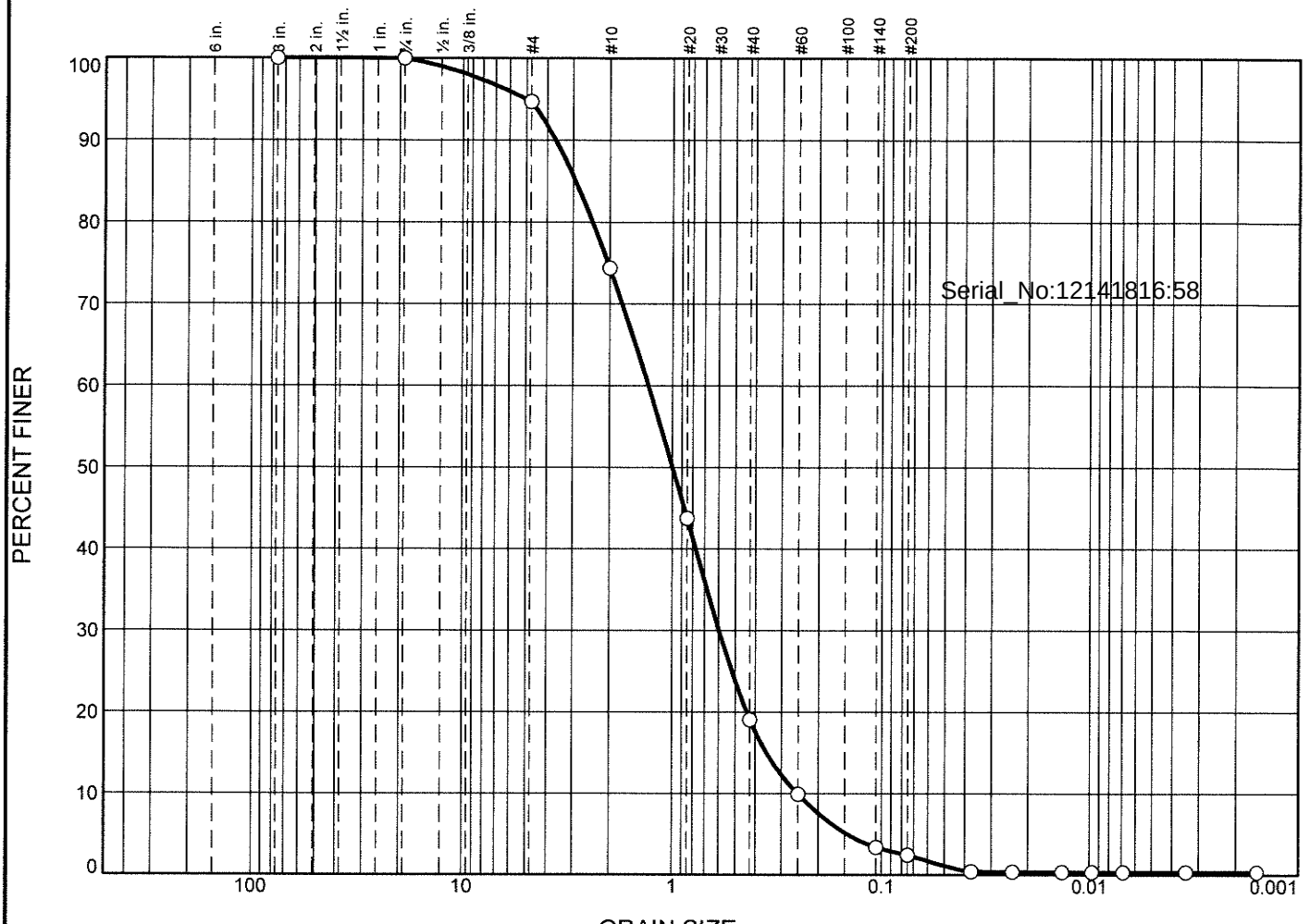
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	1.1	1.1	6.5	17.6	30.9	55.0	13.2	30.7	43.9

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0041	0.0597	0.0914	0.1268	0.7913	1.1706	1.6627	2.5601

Fineness Modulus
1.09

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	5.3	20.3	55.3	16.7	2.1	0.3

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				2.9197	1.3046	0.9976	0.5970	0.3541	0.2518	1.08	5.18

	Material Description	USCS	AASHTO
○		SP	

Project No. **Client:**

Project:

○ **Source of Sample:** A-6 (0-12) **Sample Number:** L1848946-05

Date: ○

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

12/14/2018

Location: A-6 (0-12)
Sample Number: L1848946-05
USCS Classification: SP

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 47.00
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Serial_No:12141816:58

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
47.00	0.00	3	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	2.49	0.00	94.7
		#10	9.55	0.00	74.4
		#20	14.39	0.00	43.8
		#40	11.61	0.00	19.1
		#60	4.30	0.00	9.9
		#140	3.07	0.00	3.4
		#200	0.45	0.00	2.4

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 2.4
Weight of hydrometer sample =47.79
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.2	1.0050	1.0050	0.0136	5.0	15.0	0.0372	0.4
5.00	20.2	1.0045	1.0045	0.0136	4.5	15.1	0.0237	0.4
15.00	20.2	1.0040	1.0040	0.0136	4.0	15.2	0.0137	0.3
30.00	20.2	1.0040	1.0040	0.0136	4.0	15.2	0.0097	0.3
60.00	20.2	1.0040	1.0040	0.0136	4.0	15.2	0.0069	0.3
240.00	20.2	1.0040	1.0040	0.0136	4.0	15.2	0.0034	0.3
1140.00	20.2	1.0040	1.0040	0.0136	4.0	15.2	0.0016	0.3

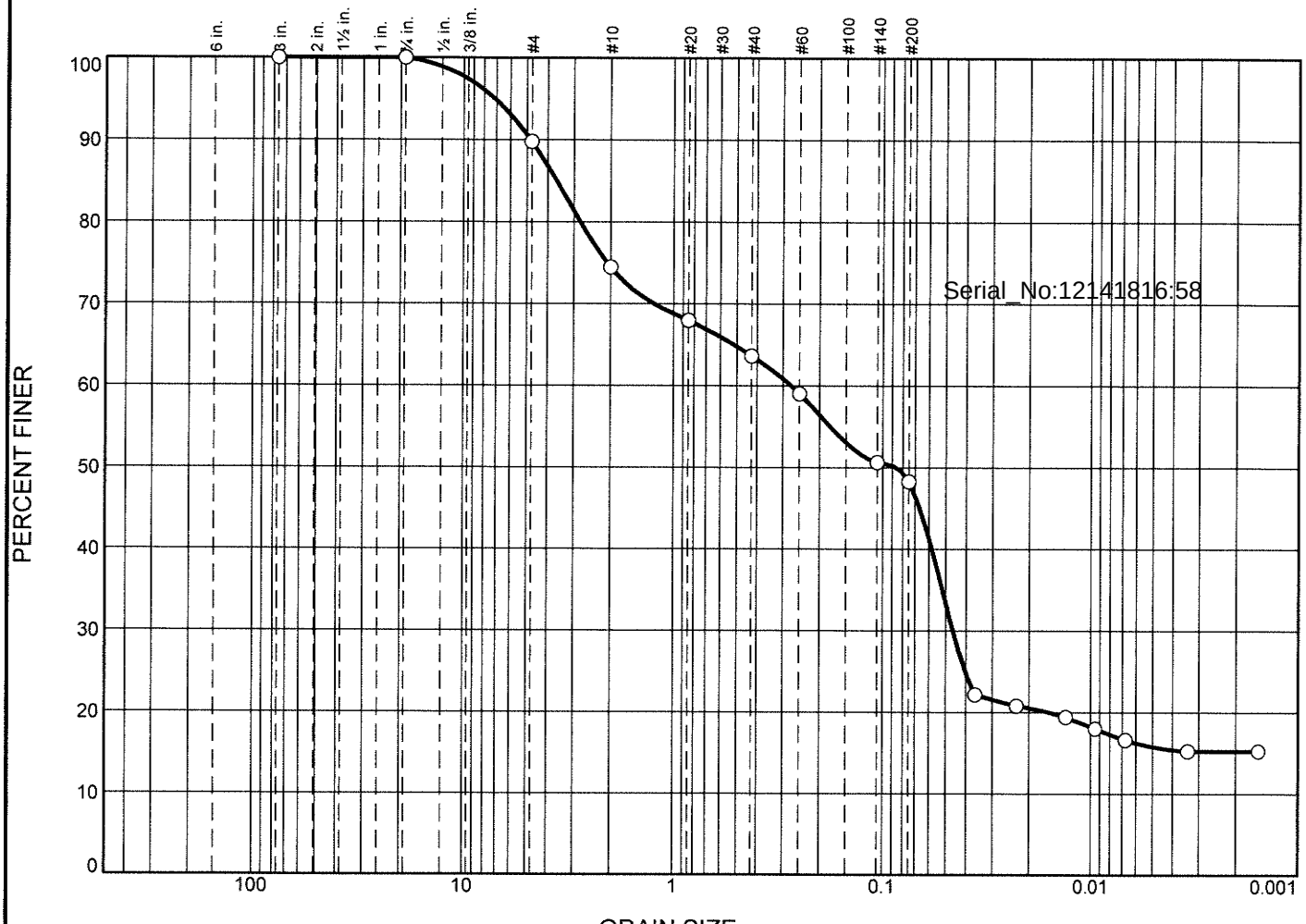
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	5.3	5.3	20.3	55.3	16.7	92.3	2.1	0.3	2.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.1458	0.2518	0.3541	0.4401	0.5970	0.7729	0.9976	1.3046	2.4182	2.9197	3.6370	5.0071

Fineness Modulus	C_u	C_c
3.24	5.18	1.08

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	10.2	15.3	10.9	15.3	32.5	15.8

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				3.6291	0.2745	0.0860	0.0461				

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** B-3 (0-79) **Sample Number:** L1848946-06

Date: ○

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

12/14/2018

Location: B-3 (0-79)

Sample Number: L1848946-06

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 36.44
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
36.44	0.00	3	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	3.72	0.00	89.8
		#10	5.58	0.00	74.5
		#20	2.37	0.00	68.0
		#40	1.58	0.00	63.6
		#60	1.68	0.00	59.0
		#140	3.06	0.00	50.6
		#200	0.86	0.00	48.3

Serial_No:12141816:58

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 48.3
Weight of hydrometer sample =27.97
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.2	1.0080	1.0080	0.0136	8.0	14.2	0.0362	22.2
5.00	20.2	1.0075	1.0075	0.0136	7.5	14.3	0.0230	20.8
15.00	20.2	1.0070	1.0070	0.0136	7.0	14.4	0.0134	19.4
30.00	20.2	1.0065	1.0065	0.0136	6.5	14.6	0.0095	18.0
60.00	20.2	1.0060	1.0060	0.0136	6.0	14.7	0.0067	16.6
240.00	20.2	1.0055	1.0055	0.0136	5.5	14.8	0.0034	15.2
1140.00	20.2	1.0055	1.0055	0.0136	5.5	14.8	0.0016	15.2

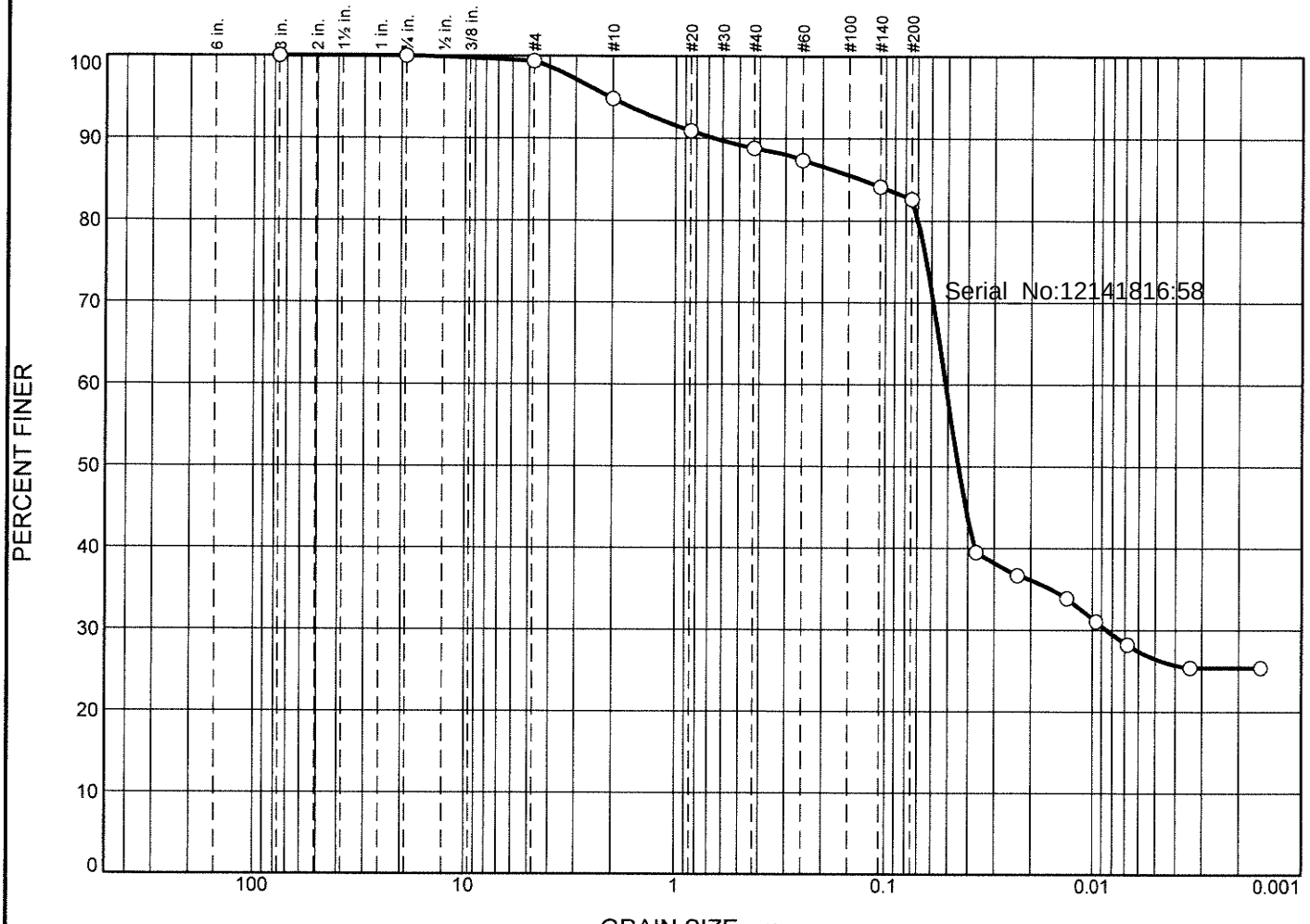
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	10.2	10.2	15.3	10.9	15.3	41.5	32.5	15.8	48.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0162	0.0461	0.0582	0.0860	0.2745	2.7920	3.6291	4.8125	7.1129

Fineness Modulus
1.86

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.6	4.6	6.0	6.2	56.1	26.5

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				0.1311	0.0512	0.0445	0.0085				

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** A-8 (0-10) **Sample Number:** L1848946-07

Date: ○

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

12/14/2018

Location: A-8 (0-10)

Sample Number: L1848946-07

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 24.19
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
24.19	0.00	3	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	0.15	0.00	99.4
		#10	1.10	0.00	94.8
		#20	0.95	0.00	90.9
		#40	0.51	0.00	88.8
		#60	0.35	0.00	87.4
		#140	0.78	0.00	84.1
		#200	0.37	0.00	82.6

Serial_No:12141816:58

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 82.6
Weight of hydrometer sample =23.5
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.2	1.0070	1.0070	0.0136	7.0	14.4	0.0366	39.5
5.00	20.2	1.0065	1.0065	0.0136	6.5	14.6	0.0232	36.7
15.00	20.2	1.0060	1.0060	0.0136	6.0	14.7	0.0135	33.9
30.00	20.2	1.0055	1.0055	0.0136	5.5	14.8	0.0096	31.0
60.00	20.2	1.0050	1.0050	0.0136	5.0	15.0	0.0068	28.2
240.00	20.2	1.0045	1.0045	0.0136	4.5	15.1	0.0034	25.4
1140.00	20.2	1.0045	1.0045	0.0136	4.5	15.1	0.0016	25.4

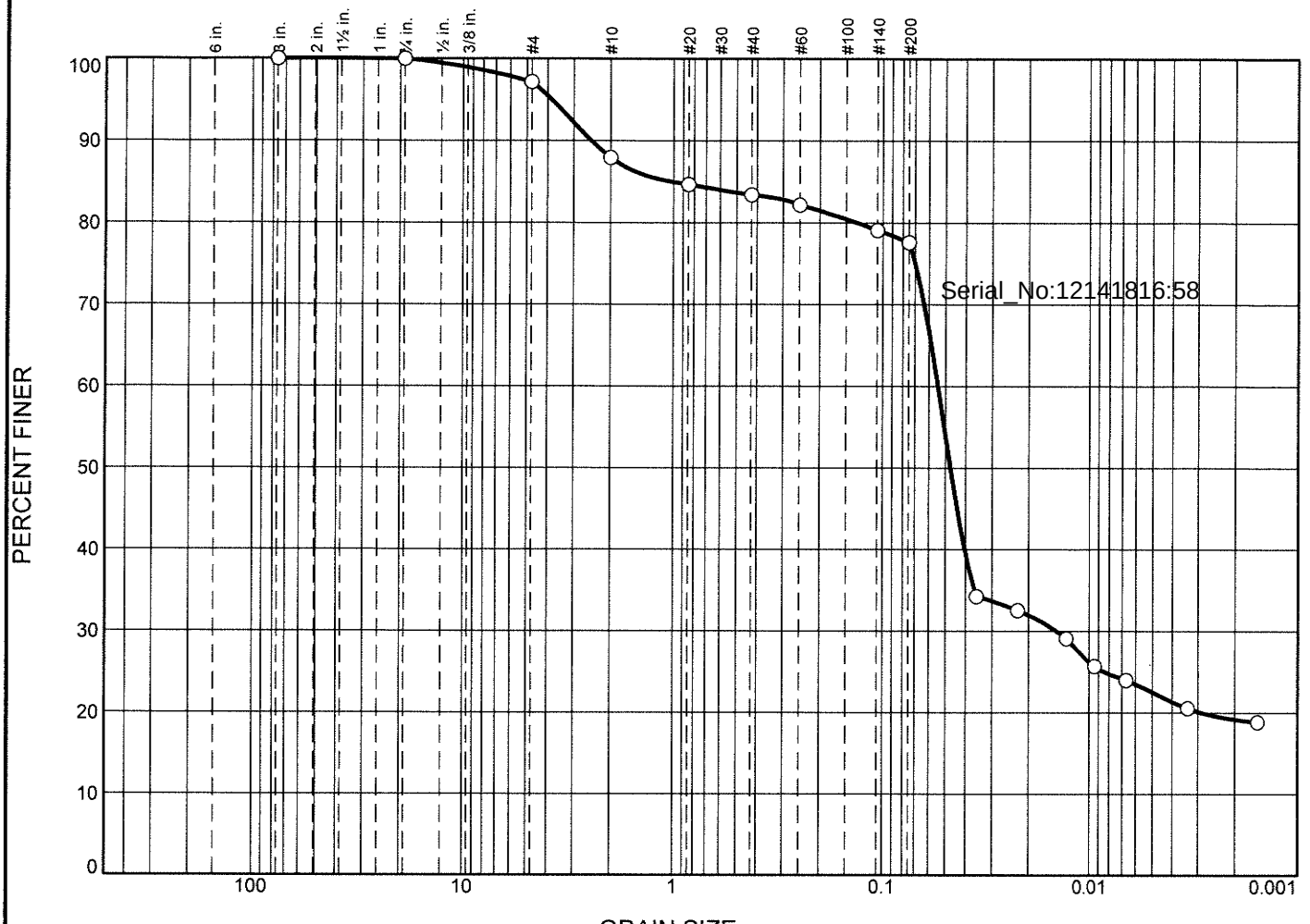
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.6	0.6	4.6	6.0	6.2	16.8	56.1	26.5	82.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0085	0.0371	0.0445	0.0512	0.0700	0.1311	0.6596	2.0608

Fineness Modulus
0.50

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	2.8	9.3	4.5	5.8	55.1	22.5

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				1.0170	0.0544	0.0473	0.0147				

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** A-8 (10-27) **Sample Number:** L1848946-08

Date: ○

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

12/14/2018

Location: A-8 (10-27)

Sample Number: L1848946-08

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 30.85
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
30.85	0.00	3	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	0.87	0.00	97.2
		#10	2.85	0.00	87.9
		#20	1.01	0.00	84.7
		#40	0.39	0.00	83.4
		#60	0.38	0.00	82.2
		#140	0.95	0.00	79.1
		#200	0.46	0.00	77.6

Serial_No:12141816:58

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 77.6
Weight of hydrometer sample =36.4
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.2	1.0100	1.0100	0.0136	10.0	13.6	0.0356	34.2
5.00	20.2	1.0095	1.0095	0.0136	9.5	13.8	0.0226	32.5
15.00	20.2	1.0085	1.0085	0.0136	8.5	14.0	0.0132	29.1
30.00	20.2	1.0075	1.0075	0.0136	7.5	14.3	0.0094	25.7
60.00	20.2	1.0070	1.0070	0.0136	7.0	14.4	0.0067	24.0
240.00	20.2	1.0060	1.0060	0.0136	6.0	14.7	0.0034	20.5
1140.00	20.2	1.0055	1.0055	0.0136	5.5	14.8	0.0016	18.8

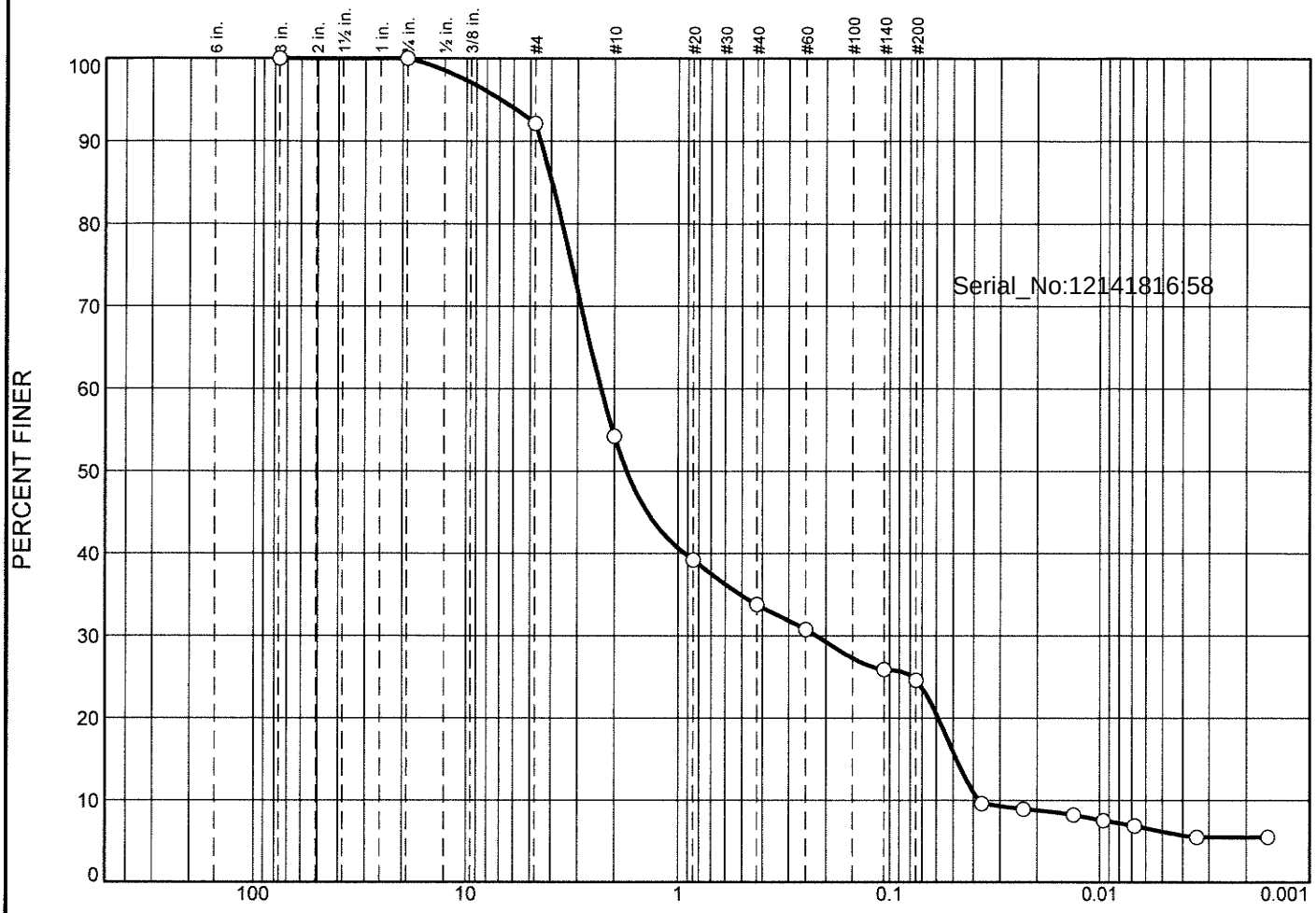
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	2.8	2.8	9.3	4.5	5.8	19.6	55.1	22.5	77.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0029	0.0147	0.0405	0.0473	0.0544	0.1333	1.0170	2.4743	3.8196

Fineness Modulus
0.82

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	7.9	37.9	20.4	9.2	18.4	6.2

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				3.9545	2.3149	1.7472	0.2226	0.0482	0.0378	0.57	61.30

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** A-9 (0-10) **Sample Number:** L1848946-09

Date: ○

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

12/14/2018

Location: A-9 (0-10)

Sample Number: L1848946-09

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 23.82
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
23.82	0.00	3	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	1.87	0.00	92.1
		#10	9.03	0.00	54.2
		#20	3.58	0.00	39.2
		#40	1.29	0.00	33.8
		#60	0.72	0.00	30.8
		#140	1.16	0.00	25.9
		#200	0.31	0.00	24.6

Serial_No:12141816:58

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 24.6
Weight of hydrometer sample =28.85
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.2	1.0070	1.0070	0.0136	7.0	14.4	0.0366	9.6
5.00	20.2	1.0065	1.0065	0.0136	6.5	14.6	0.0232	8.9
15.00	20.2	1.0060	1.0060	0.0136	6.0	14.7	0.0135	8.2
30.00	20.2	1.0055	1.0055	0.0136	5.5	14.8	0.0096	7.5
60.00	20.2	1.0050	1.0050	0.0136	5.0	15.0	0.0068	6.8
240.00	20.2	1.0040	1.0040	0.0136	4.0	15.2	0.0034	5.5
1140.00	20.2	1.0040	1.0040	0.0136	4.0	15.2	0.0016	5.5

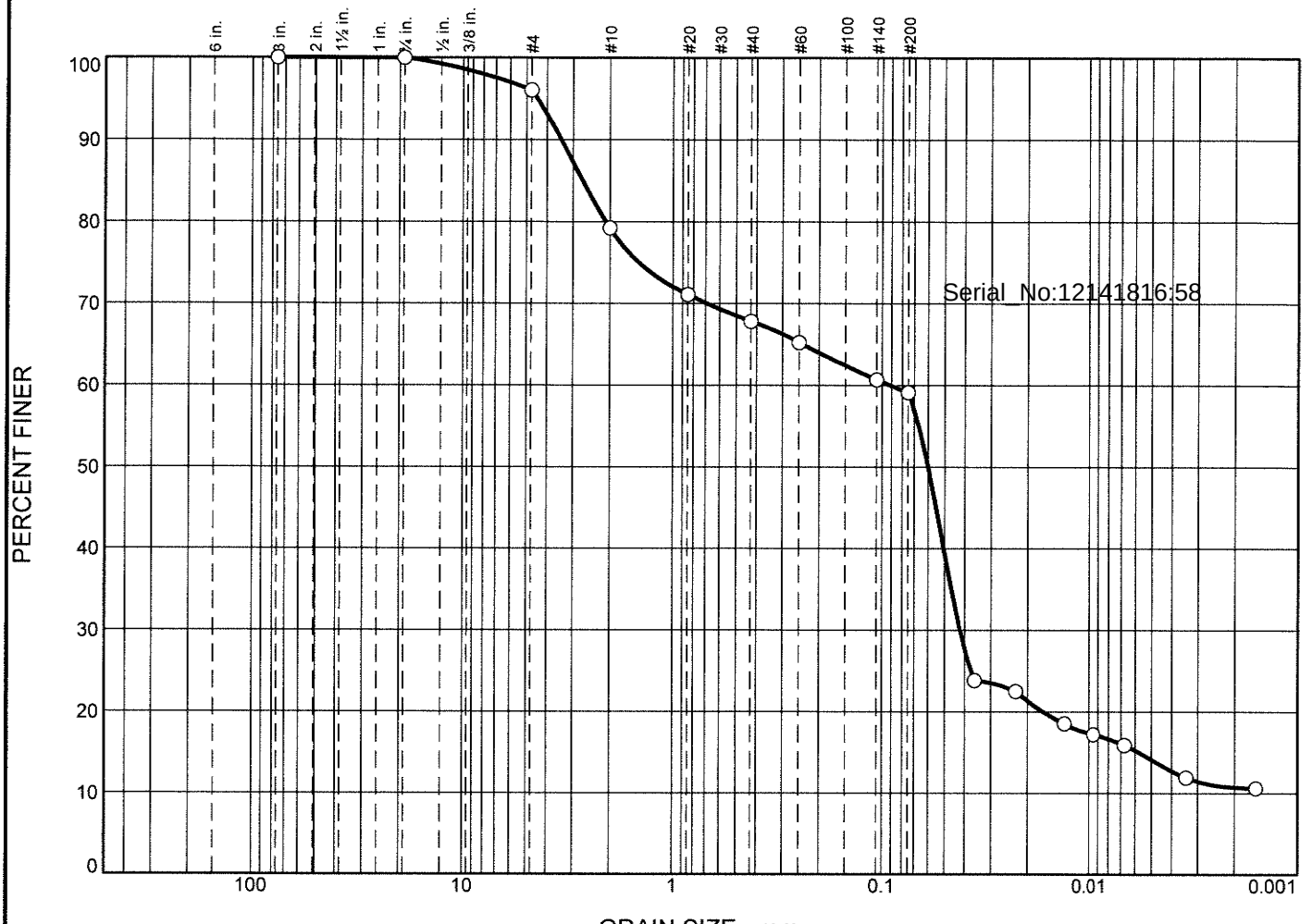
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	7.9	7.9	37.9	20.4	9.2	67.5	18.4	6.2	24.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0378	0.0482	0.0588	0.2226	0.9304	1.7472	2.3149	3.5406	3.9545	4.4723	6.8682

Fineness Modulus	C_u	C_c
3.12	61.30	0.57

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	4.0	16.8	11.4	8.7	45.0	14.1

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				2.7002	0.0913	0.0601	0.0422	0.0058			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** A-9 (10-30) **Sample Number:** L1848946-10

Date: ○

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

12/14/2018

Location: A-9 (10-30)

Sample Number: L1848946-10

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 32.09
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
32.09	0.00	3	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	1.27	0.00	96.0
		#10	5.40	0.00	79.2
		#20	2.60	0.00	71.1
		#40	1.06	0.00	67.8
		#60	0.83	0.00	65.2
		#140	1.45	0.00	60.7
		#200	0.51	0.00	59.1

Serial_No:12141816:58

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 59.1
Weight of hydrometer sample =35.85
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.2	1.0090	1.0090	0.0136	9.0	13.9	0.0359	23.8
5.00	20.2	1.0085	1.0085	0.0136	8.5	14.0	0.0228	22.5
15.00	20.2	1.0070	1.0070	0.0136	7.0	14.4	0.0134	18.5
30.00	20.2	1.0065	1.0065	0.0136	6.5	14.6	0.0095	17.2
60.00	20.2	1.0060	1.0060	0.0136	6.0	14.7	0.0067	15.9
240.00	20.2	1.0045	1.0045	0.0136	4.5	15.1	0.0034	11.9
1140.00	20.2	1.0040	1.0040	0.0136	4.0	15.2	0.0016	10.6

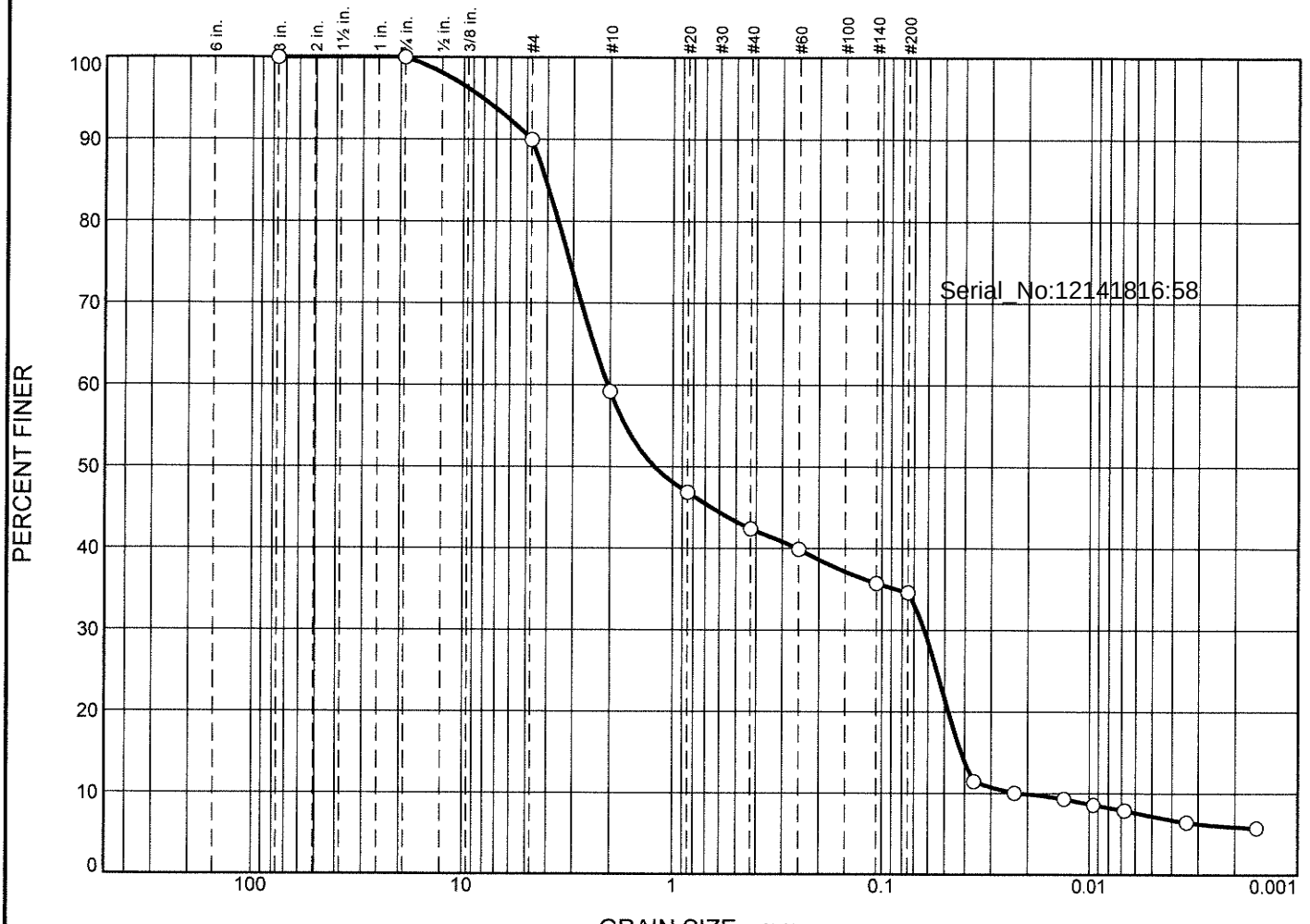
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	4.0	4.0	16.8	11.4	8.7	36.9	45.0	14.1	59.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0058	0.0169	0.0422	0.0505	0.0601	0.0913	2.0939	2.7002	3.4182	4.4456

Fineness Modulus
1.52

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	10.0	30.8	16.8	7.8	27.4	7.2

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				4.0660	2.0552	1.2226	0.0625	0.0416	0.0227	0.08	90.58

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** A-10 (0-10) **Sample Number:** L1848946-11

Date: ○

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

12/14/2018

Location: A-10 (0-10)

Sample Number: L1848946-11

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 34.59
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
34.59	0.00	3	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	3.47	0.00	90.0
		#10	10.64	0.00	59.2
		#20	4.27	0.00	46.9
		#40	1.54	0.00	42.4
		#60	0.87	0.00	39.9
		#140	1.44	0.00	35.7
		#200	0.39	0.00	34.6

Serial_No:12141816:58

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 34.6
Weight of hydrometer sample =38.84
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.2	1.0080	1.0080	0.0136	8.0	14.2	0.0362	11.4
5.00	20.2	1.0070	1.0070	0.0136	7.0	14.4	0.0231	10.0
15.00	20.2	1.0065	1.0065	0.0136	6.5	14.6	0.0134	9.3
30.00	20.2	1.0060	1.0060	0.0136	6.0	14.7	0.0095	8.6
60.00	20.2	1.0055	1.0055	0.0136	5.5	14.8	0.0068	7.9
240.00	20.2	1.0045	1.0045	0.0136	4.5	15.1	0.0034	6.4
1140.00	20.2	1.0040	1.0040	0.0136	4.0	15.2	0.0016	5.7

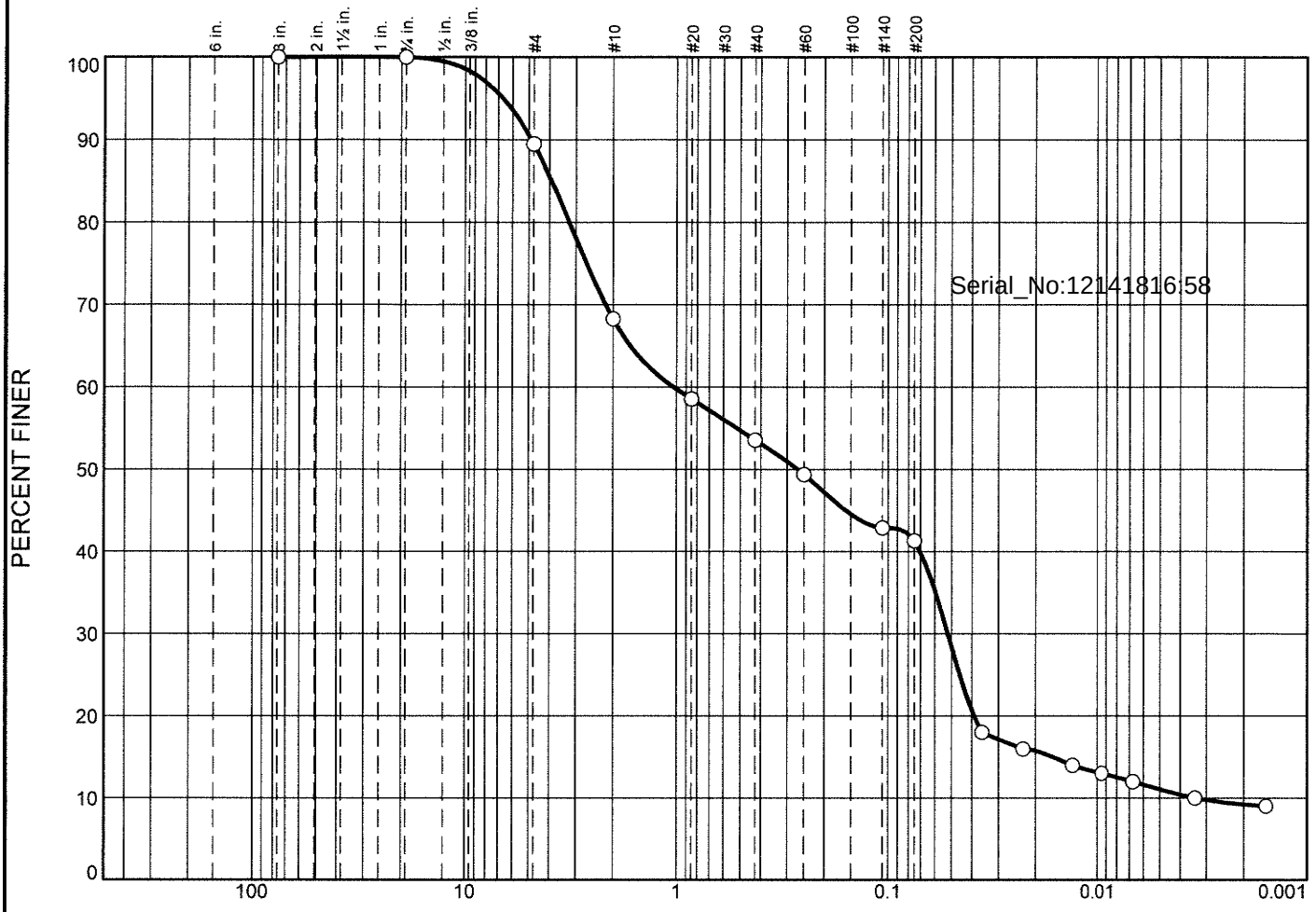
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	10.0	10.0	30.8	16.8	7.8	55.4	27.4	7.2	34.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0227	0.0416	0.0479	0.0625	0.2546	1.2226	2.0552	3.5465	4.0660	4.7640	8.0889

Fineness Modulus	C_u	C_c
2.77	90.58	0.08

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	10.5	21.2	14.8	12.2	30.3	11.0

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				3.9122	1.0340	0.2681	0.0521	0.0166	0.0034	0.77	302.74

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** A-10 (10-27) **Sample Number:** L1848946-12

Date: ○

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

12/14/2018

Location: A-10 (10-27)

Sample Number: L1848946-12

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 35.93
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
35.93	0.00	3	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	3.78	0.00	89.5
		#10	7.62	0.00	68.3
		#20	3.49	0.00	58.6
		#40	1.80	0.00	53.5
		#60	1.50	0.00	49.4
		#140	2.33	0.00	42.9
		#200	0.57	0.00	41.3

Serial_No:12141816:58

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 41.3
Weight of hydrometer sample =33.2
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.2	1.0090	1.0090	0.0136	9.0	13.9	0.0359	18.0
5.00	20.2	1.0080	1.0080	0.0136	8.0	14.2	0.0229	16.0
15.00	20.2	1.0070	1.0070	0.0136	7.0	14.4	0.0134	14.0
30.00	20.2	1.0065	1.0065	0.0136	6.5	14.6	0.0095	13.0
60.00	20.2	1.0060	1.0060	0.0136	6.0	14.7	0.0067	12.0
240.00	20.2	1.0050	1.0050	0.0136	5.0	15.0	0.0034	10.0
1140.00	20.2	1.0045	1.0045	0.0136	4.5	15.1	0.0016	9.0

Fractional Components

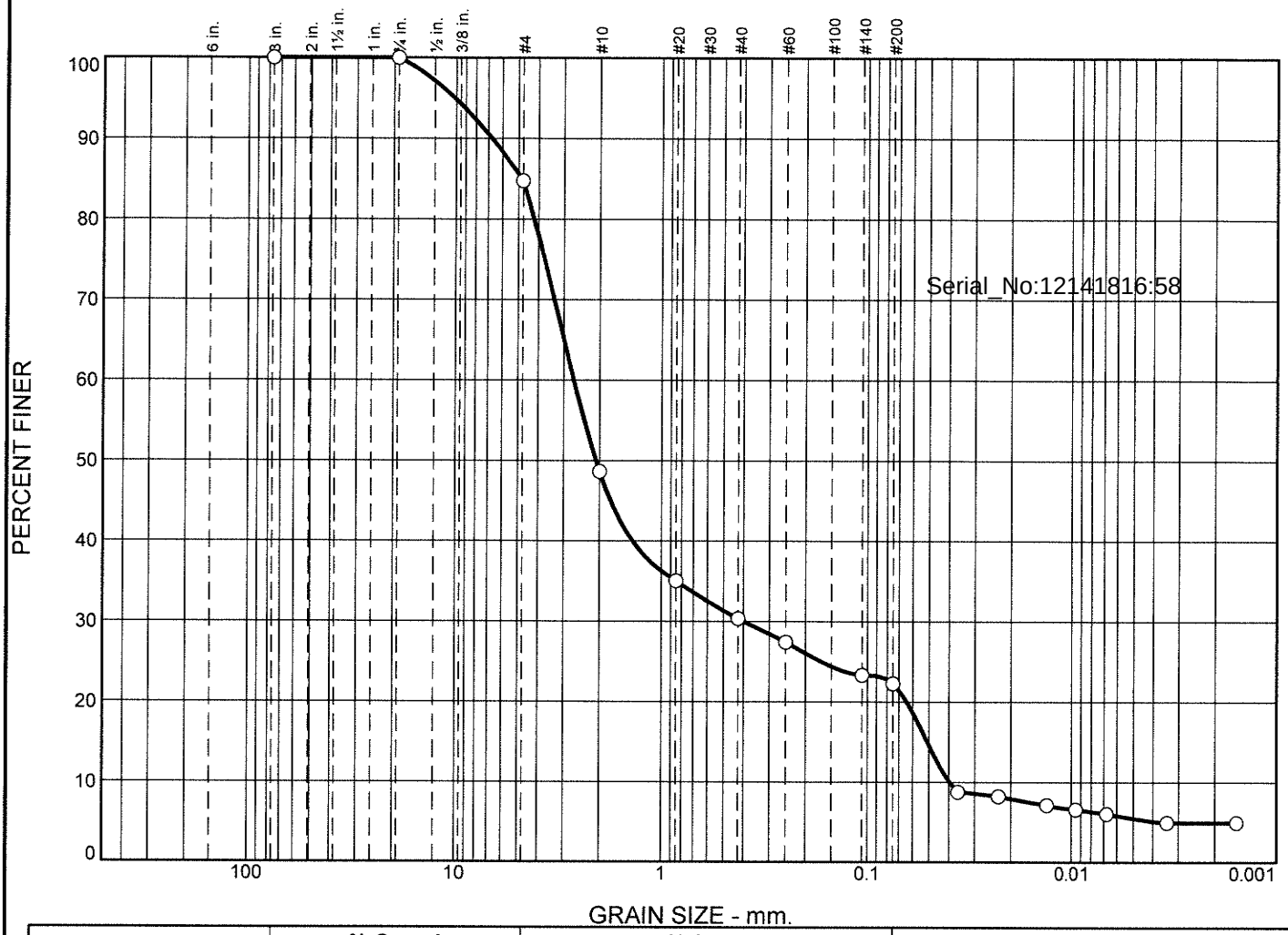
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	10.5	10.5	21.2	14.8	12.2	48.2	30.3	11.0	41.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0034	0.0166	0.0391	0.0521	0.0703	0.2681	1.0340	3.2272	3.9122	4.8725	6.6416

Fineness Modulus	C_u	C_c
2.28	302.74	0.77

Alpha Analytical

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	15.3	36.1	18.2	8.1	16.8	5.5

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				4.8246	2.6724	2.0824	0.3989	0.0509	0.0398	1.50	67.14

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** A-11 (0-7) **Sample Number:** L1848946-13

Date: ○

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

12/14/2018

Location: A-11 (0-7)

Sample Number: L1848946-13

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 33.43
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
33.43	0.00	3	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	5.10	0.00	84.7
		#10	12.07	0.00	48.6
		#20	4.55	0.00	35.0
		#40	1.56	0.00	30.4
		#60	0.98	0.00	27.4
		#140	1.37	0.00	23.3
		#200	0.35	0.00	22.3

Serial_No:12141816:58

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 22.3
Weight of hydrometer sample =32.66
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.2	1.0080	1.0080	0.0136	8.0	14.2	0.0362	8.8
5.00	20.2	1.0075	1.0075	0.0136	7.5	14.3	0.0230	8.2
15.00	20.2	1.0065	1.0065	0.0136	6.5	14.6	0.0134	7.1
30.00	20.2	1.0060	1.0060	0.0136	6.0	14.7	0.0095	6.6
60.00	20.2	1.0055	1.0055	0.0136	5.5	14.8	0.0068	6.0
240.00	20.2	1.0045	1.0045	0.0136	4.5	15.1	0.0034	4.9
1140.00	20.2	1.0045	1.0045	0.0136	4.5	15.1	0.0016	4.9

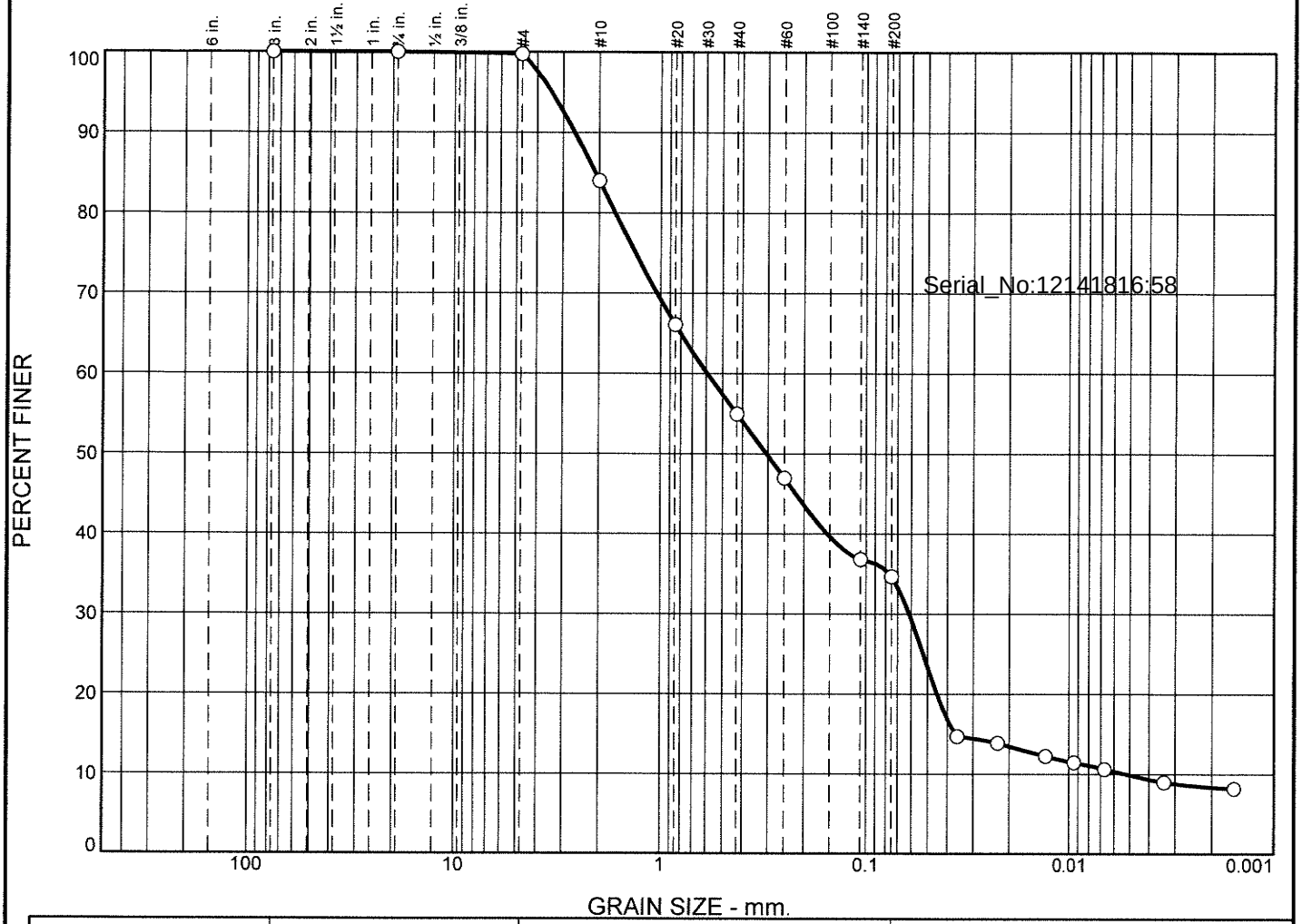
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	15.3	15.3	36.1	18.2	8.1	62.4	16.8	5.5	22.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0037	0.0398	0.0509	0.0642	0.3989	1.3823	2.0824	2.6724	4.1915	4.8246	6.7269	10.1726

Fineness Modulus	C_u	C_c
3.43	67.14	1.50

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.2	15.8	29.0	20.3	24.9	9.8

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				2.0901	0.5922	0.3050	0.0615	0.0366	0.0053	1.20	111.67

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** A-11 (7-29) **Sample Number:** L1848946-14

Date: ○

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

12/14/2018

Location: A-11 (7-29)

Sample Number: L1848946-14

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 29.36
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
29.36	0.00	3	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	0.07	0.00	99.8
		#10	4.62	0.00	84.0
		#20	5.27	0.00	66.1
		#40	3.26	0.00	55.0
		#60	2.35	0.00	47.0
		#140	2.98	0.00	36.8
		#200	0.63	0.00	34.7

Serial_No:12141816:58

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 34.7
Weight of hydrometer sample =34.1
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.2	1.0090	1.0090	0.0136	9.0	13.9	0.0359	14.7
5.00	20.2	1.0085	1.0085	0.0136	8.5	14.0	0.0228	13.9
15.00	20.2	1.0075	1.0075	0.0136	7.5	14.3	0.0133	12.2
30.00	20.2	1.0070	1.0070	0.0136	7.0	14.4	0.0094	11.4
60.00	20.2	1.0065	1.0065	0.0136	6.5	14.6	0.0067	10.6
240.00	20.2	1.0055	1.0055	0.0136	5.5	14.8	0.0034	9.0
1140.00	20.2	1.0050	1.0050	0.0136	5.0	15.0	0.0016	8.2

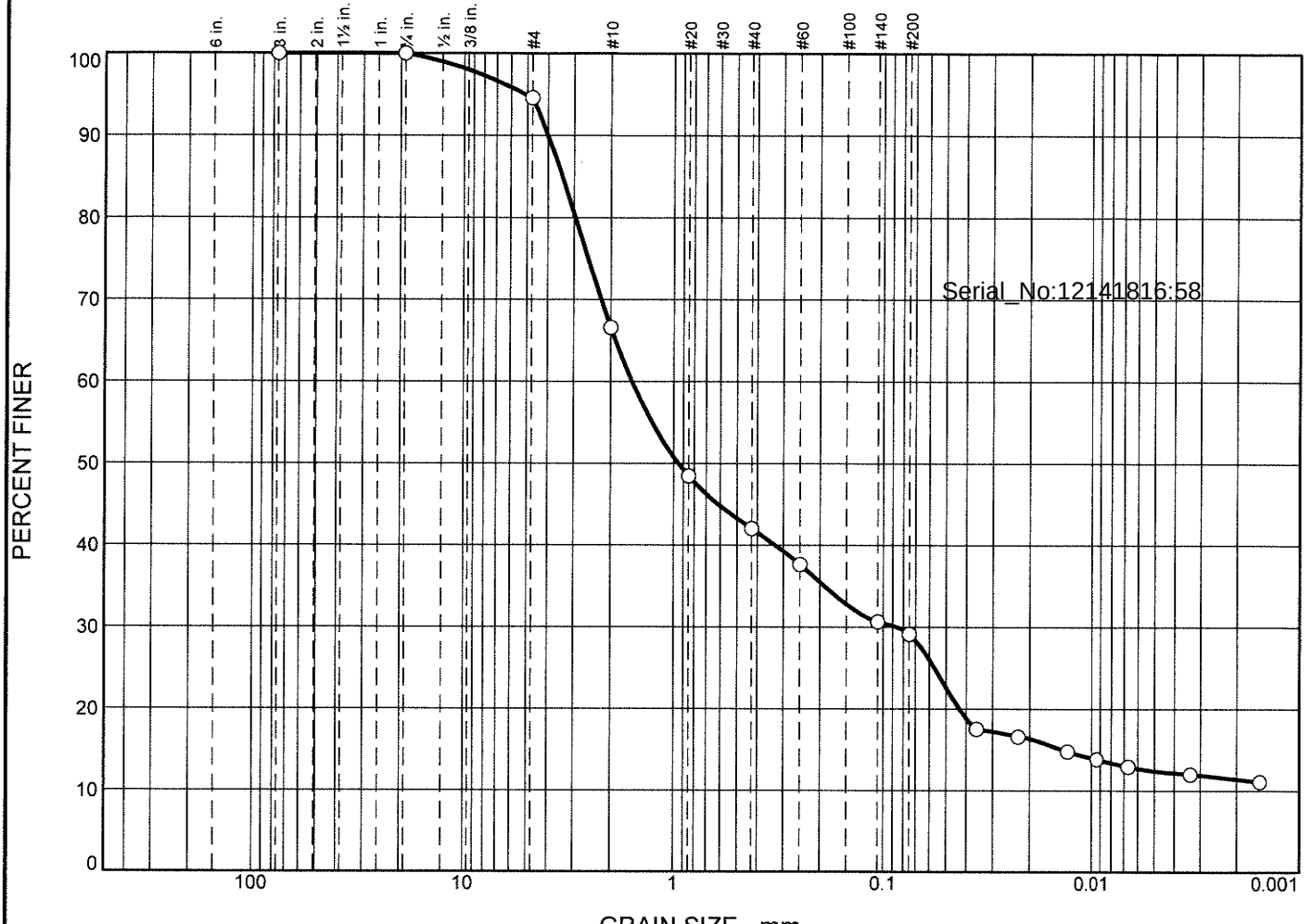
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.2	0.2	15.8	29.0	20.3	65.1	24.9	9.8	34.7

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0053	0.0366	0.0450	0.0615	0.1544	0.3050	0.5922	1.6676	2.0901	2.6350	3.4112

Fineness Modulus	C_u	C_c
1.91	111.67	1.20

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	5.4	28.0	24.6	12.9	16.7	12.4

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				3.4179	1.5808	0.9497	0.0857	0.0141			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** A-12 (0-7) **Sample Number:** L1848946-15

Date: ○

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

12/14/2018

Location: A-12 (0-7)

Sample Number: L1848946-15

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 20.69
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
20.69	0.00	3	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	1.12	0.00	94.6
		#10	5.79	0.00	66.6
		#20	3.75	0.00	48.5
		#40	1.33	0.00	42.0
		#60	0.91	0.00	37.7
		#140	1.45	0.00	30.6
		#200	0.31	0.00	29.1

Serial_No:12141816:58

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 29.1
Weight of hydrometer sample =25.38
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.2	1.0095	1.0095	0.0136	9.5	13.8	0.0357	17.5
5.00	20.2	1.0090	1.0090	0.0136	9.0	13.9	0.0227	16.6
15.00	20.2	1.0080	1.0080	0.0136	8.0	14.2	0.0132	14.8
30.00	20.2	1.0075	1.0075	0.0136	7.5	14.3	0.0094	13.8
60.00	20.2	1.0070	1.0070	0.0136	7.0	14.4	0.0067	12.9
240.00	20.2	1.0065	1.0065	0.0136	6.5	14.6	0.0034	12.0
1140.00	20.2	1.0060	1.0060	0.0136	6.0	14.7	0.0015	11.1

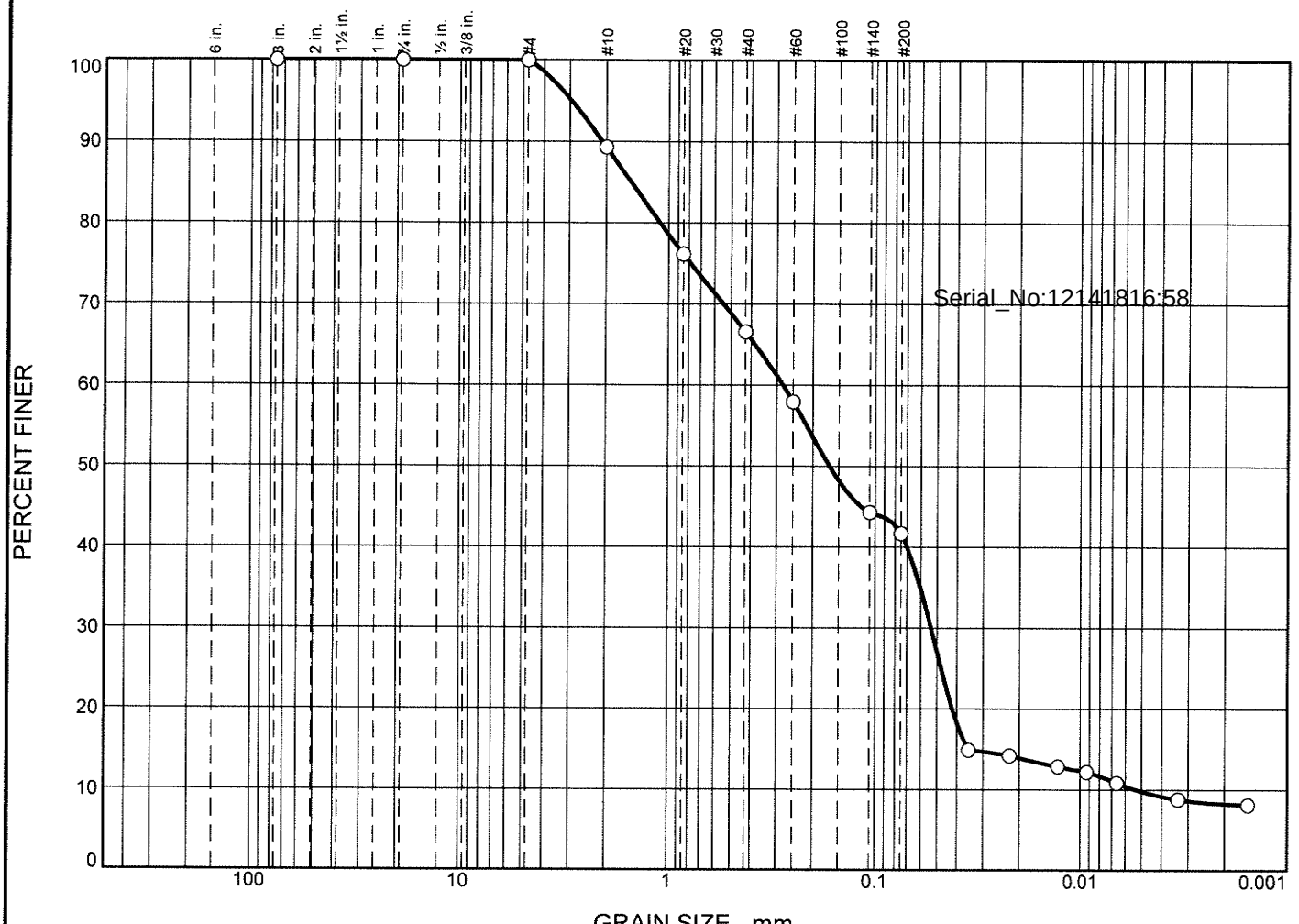
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	5.4	5.4	28.0	24.6	12.9	65.5	16.7	12.4	29.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0141	0.0432	0.0857	0.3275	0.9497	1.5808	2.9574	3.4179	3.9995	5.1041

Fineness Modulus
2.65

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	10.7	22.7	24.9	31.9	9.8

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				1.5179	0.2805	0.1660	0.0536	0.0354	0.0054	1.91	52.33

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** A-12 (7-29) **Sample Number:** L1848946-16

Date: ○

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

12/14/2018

Location: A-12 (7-29)

Sample Number: L1848946-16

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 38.28
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
38.28	0.00	3	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#10	4.09	0.00	89.3
		#20	5.04	0.00	76.1
		#40	3.67	0.00	66.6
		#60	3.31	0.00	57.9
		#140	5.21	0.00	44.3
		#200	1.00	0.00	41.7

Serial_No:12141816:58

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 41.7
Weight of hydrometer sample =49.51
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.2	1.0110	1.0110	0.0136	11.0	13.4	0.0352	14.9
5.00	20.2	1.0105	1.0105	0.0136	10.5	13.5	0.0224	14.2
15.00	20.2	1.0095	1.0095	0.0136	9.5	13.8	0.0130	12.8
30.00	20.2	1.0090	1.0090	0.0136	9.0	13.9	0.0093	12.2
60.00	20.2	1.0080	1.0080	0.0136	8.0	14.2	0.0066	10.8
240.00	20.2	1.0065	1.0065	0.0136	6.5	14.6	0.0034	8.8
1140.00	20.2	1.0060	1.0060	0.0136	6.0	14.7	0.0015	8.1

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	10.7	22.7	24.9	58.3	31.9	9.8	41.7

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0054	0.0354	0.0422	0.0536	0.0699	0.1660	0.2805	1.1013	1.5179	2.0908	2.9515

Fineness Modulus	C_u	C_c
1.46	52.33	1.91

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
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

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**
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.**

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.

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:12141816:58

CHAIN OF CUSTODY

PAGE 1 OF 2

Date Rec'd in Lab: 11/30/18

ALPHA Job #: L1848946

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: Normandeau Assoc.

Address: 30 Intl Dr., Ste. 6, Portsmouth, NH 03801

Phone: 603-319-5303

Email: afiorillo@normandeau.com

Additional Project Information:

Project Information

Project Name: Belfast Bay

Project Location: Belfast, ME

Project #:

Project Manager: Adele Fiorillo

ALPHA Quote #:

Turn-Around Time

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

Date Due:

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 ____

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	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 Herb	TPH: ☐Quant Only ☐Fingerprint	RCRA Charac	Total Solids	Paint Filter	Grain Size			Sample Comments	TOTAL # BOTTLES
48946-01	B3	11/29	1030	Soil	EF	X	X		X			X		X	X	X					11
02	A6/A7 Comp	11/29	0920	Soil	EF	X	X		X			X		X	X	X					11
03	Trip Blank					X															
04	A-7 (0-27)	11/29	0845	Soil	EF												X				1
05	A-6 (0-12)	11/29	0920	Soil	EF												X				1
06	B-3 (0-79)	11/29	1030	Soil	EF												X				1

Container Type:

Preservative:

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
Ed FB[illegible]	11/30/18 1020	[illegible] AAL	11/30/18 10:2[illegible]
[illegible] AAL	11/30/18 1700	R Maeto AAL	11-30-18 1700
Rob Maeto	11-30-18 1855	[illegible]	11/30/18 1855

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

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

CHAIN OF CUSTODY

PAGE 2 OF 2

Date Rec'd in Lab: 11/30/18

ALPHA Job #: L1848946

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: Normandeau Assoc
Address: 30 Int'l Dr., Ste 6
Portsmouth, NH 03801
Phone: 603-319-5303
Email: afiorillo@normandeau.com

Additional Project Information:

Project Information

Project Name: Belfast Bay
Project Location: Belfast, ME
Project #:
Project Manager: Adele Fiorillo
ALPHA Quote #:

Turn-Around Time

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

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
Grain Size

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	Grain Size	Sample Comments	TOTAL # BOTTLES
48946-07	A-8 (0-10)	11/28	1320	Soil	EF	X		1
08	A-8 (10-27)		1320			X		
09	A-9 (0-10)		1235			X		
10	A-9 (10-30)		1235			X		
11	A-10 (0-10)		1155			X		
12	A-10 (10-27)		1155			X		
13	A-11 (0-7)		1120			X		
14	A-11 (7-29)		1120			X		
15	A-12 (0-7)		1045			X		
16	A-12 (7-29)		1045			X		

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

Container Type	
Preservative	

Relinquished By:	Date/Time	Received By:	Date/Time
EF	11/30/18 1020	AAL	11/30/18 1020
AAL	11/30/18 1700	R. Maesto AAL	11-30-18 1700
R. Maesto	11-30-18 1855		11/30/18 1855

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

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