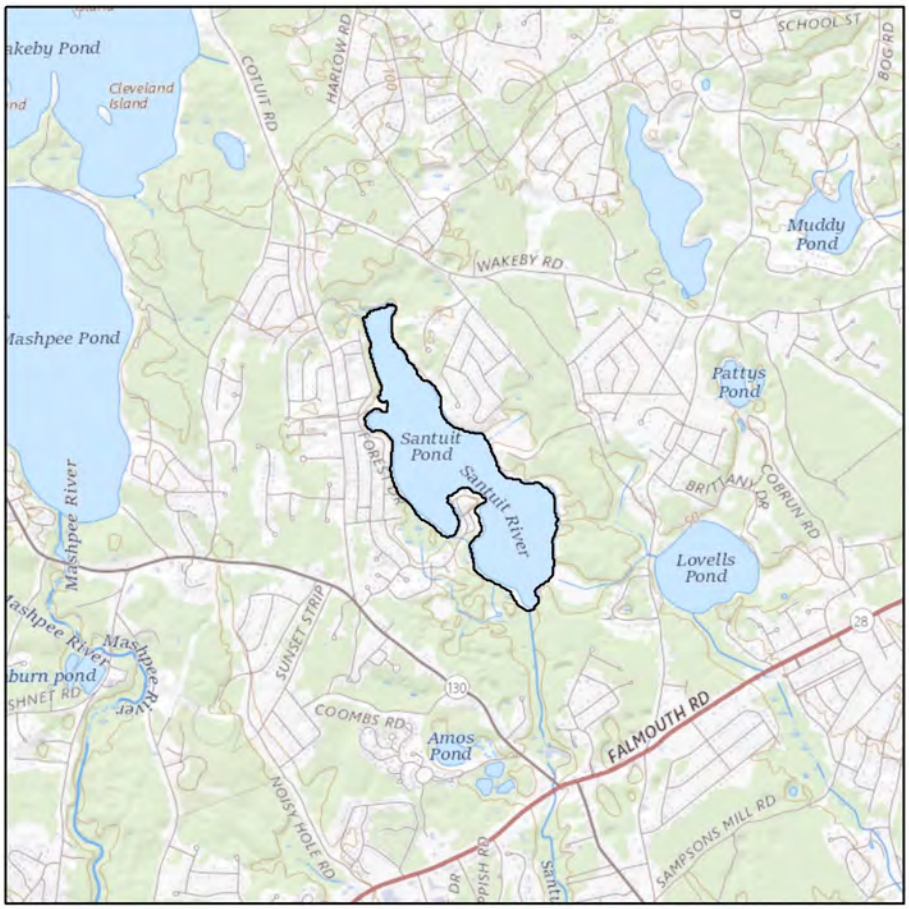
Sediment Sampling and Testing
In Support of Project Design FINAL

Santuit Pond - Section 206
Aquatic Ecosystem Restoration Project
Mashpee, MA



US Army Corps of Engineers
New England District

September 2021

SEDIMENT SAMPLING AND TESTING

IN SUPPORT OF PROJECT DESIGN

SANTUIT POND - SECTION 206
AQUATIC ECOSYSTEM RESTORATION PROJECT

MASHPEE, MASSACHUSETTS

September 2021

Prepared by:

Planning Division
Marine Operations Program
U.S. Army Corps of Engineers
New England District

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1.0 INTRODUCTION

Santuit Pond is a 170-acre kettle pond located in the town of Mashpee, Massachusetts (Figure 1). The pond is groundwater fed and forms the headwaters of the Santuit River, which flows in a southerly direction to Popponesset Bay. There are no surface water tributaries to Santuit Pond. The only outlet flows through a dam located along the southern shoreline. The original construction date of the dam is unknown, but it was modified by the Town and Natural Resources Conservation Service (NRCS) in 2013 to include a fish ladder for anadromous fish passage. Land use around the Pond includes moderate to high density residential developments along the western and northeastern shorelines, with conservation lands owned by the Town of Mashpee to the south. There are multiple man-made drainage channels located around the pond that historically provided water to adjacent cranberry bogs. However, these fields are now fallow and drainage channels have been blocked. There is minimal emergent or shrub/scrub wetland habitat along the perimeter of the pond because damming and impoundment raised the water level, turning existing wetlands into shallow aquatic habitat.

Water quality in Santuit Pond is impaired due to nutrient loading from failed septic systems, adjacent land use practices, and nonpoint source discharges. This has led to frequent algal blooms during the summer months. These blooms harm the aquatic habitat by inhibiting light penetration and raising pH levels during the growing season, and eventually lowering dissolved oxygen levels when they decompose. Additionally, the blooms can produce toxins that poison animals that ingest them. The conditions in Santuit Pond are further exacerbated by nutrient reserves in the organic rich bottom sediments, which support nuisance levels of rooted and floating plant communities

The New England District of the U.S. Army Corps of Engineers (USACE) is evaluating alternatives to improve water quality and anadromous fish habitat in Santuit Pond under Section 206 of the Water Resources Development Act of 1996. The anticipated project plan involves dredging sections of the pond to remove the nutrient rich bottom sediments and restore open water habitat. Some or all of the dredged material may be used to convert areas of shallow aquatic habitat to emergent wetland.

The sampling and analysis effort described in the sections below was conducted to gather information to support the proposed project design and to evaluate appropriate disposal or reuse alternatives for the sediments to be dredged. To support these goals sediment cores were collected from 19 locations within the proposed project area (Figure 2) to evaluate the thickness and distribution of organic sediments in the pond. In addition, samples from the anticipated dredge interval within a subset of these cores were selected to undergo physical and chemical analysis in accordance with the project sampling and analysis plan dated 5 April 2021 (Appendix A). This report describes the field methods employed, site conditions encountered, and results of physical and chemical analysis.

2.0 SAMPLE COLLECTION

Sediment sampling efforts were conducted from 26-27 April 2021. Work was carried out onboard the R/V Gloria H., a 24 foot pontoon style workboat outfitted with an A-frame and hydraulic winch for sampling through a moon pool located in the center of the vessel. A three point anchor system was used to maintain position while sampling. Vessel positioning was achieved using a Hemisphere Vector VS330™ position and heading system with an external A42 GPS antenna. This system was interfaced with a computer running Hypack® survey software for navigation in the field. Differential corrections were accessed and applied to all position data in real time. Horizontal position accuracy throughout the field effort was 3 feet or less. The water depth at each sample location was measured using a stadia rod and converted to a NAVD88 elevation based on water level measurements recorded from the gauge on the dam at the outlet.

Sediment cores were collected to a depth eight feet below the sediment surface or refusal at 19 sample locations (Figure 2) using a Navco BH-4 pneumatic vibracorer and 2.75" i.d. polycarbonate tubing for core liners. Upon collection the cores were secured in an upright position and allowed to settle before being remeasured. The overlying water in each core was drained by drilling a small hole in the core liner above the water-sediment interface, and any excess headspace was removed from the top of the core tube before it was capped and sealed for transport. Sampling equipment was cleaned with a brush and alconox solution then rinsed with site water prior to sampling and between each sample station. The core liners were assumed to be clean as-received from the supplier but were rinsed in site water prior to use.

With the exception of a sand and gravel bar that extended into the pond from the shoreline in the vicinity of stations N and Q, the surficial material throughout the proposed project area consisted of uniform organic silts with leafy debris. Multiple attempts were made to collect a core in the vicinity of station Q, but the core barrel was unable to penetrate more than one foot below the water-sediment interface due to the presence of densely packed sand and gravel. Station N was relocated to a point approximately 175 feet south of the target location in the project sampling plan to avoid similar coarse grained material in that area. Sandy material was encountered at depth in the cores along the perimeter of the proposed project area at stations D, G, I, K, L, N, Q, and R. An interval of sandy material was also observed at depth in the cores from stations J and S, but these layers persisted for less than one foot before transitioning back to organic silt. The thickness of overlying organic sediments in the other stations collected in the north and central portions of the project area was greater than the maximum core length of 8 feet. A summary of the sediment core collection data from this field effort is presented in Table 1. Sediment core logs and photographs are presented in Appendix B.

Table 1: Summary of Santuit Pond Sediment Core Collection Data

Station ID	Latitude (NAD 83)	Longitude (NAD 83)	Water Depth (FT)	Elevation (FT NAVD88)	Core Length (FT)	Organic Overburden (FT)	Sample Interval(s) (FT)	Sample Type		
								Grain Size	*Chemistry*	*Nutrient Analysis*
A	41.661422	-70.464423	-4.4	38.3	8.0	0-8.0+	-	-	-	-
B	41.660472	-70.463846	-6.4	36.3	8.0	0-8.0+	0-8.0	X	X	X
C	41.658795	-70.462990	-7.1	35.6	8.0	0-8.0+	-	-	-	-
D	41.656223	-70.463765	-4.9	37.8	4.3	0-3.0	0-3.0	X	X	X
E	41.656856	-70.461881	-9.1	33.6	8.0	0-8.0+	0-4.0. 4.0-6.0, 6.0-8.0	-	-	X
F	41.657287	-70.460727	-8.5	34.2	8.0	0-8.0+	3.2-8.2	X	X	X
G	41.653273	-70.462305	-7.6	35.1	7.0	0-6.8	0-3.0,3.0-5.0,5.0-7.0	-	-	X
H	41.654128	-70.459907	-10.6	32.1	8.0	0-8.0+	0-3.0	X	X	X
I	41.655098	-70.457140	-8.4	34.3	6.3	0-4.3	0-4.3	X	X	X
J	41.651185	-70.459519	-7.4	35.3	8.0	0-6.1 *	0-6.1	X	X	X
K	41.653394	-70.456680	-9.8	32.9	8.0	0-5.0	-	-	-	-
L	41.651590	-70.456599	-6.8	35.9	4.2	0-3.6	0-3.6	X	X	X
M	41.652135	-70.455256	-11.4	31.3	8.0	0-8.0+	0-2.0,2.0-4.0,6.0-8.0	-	-	X
N	41.652135	-70.453913	-9.9	32.8	7.2	0-2.6	0-2.6	X	X	X
O	41.649886	-70.456761	-7.9	34.8	8.0	0-8.0+	0-2.0,2.0-4.0,6.0-8.0	-	-	X
P	41.650391	-70.454869	-9.8	32.9	8.0	0-8.0+	0-6.7	X	X	X
Q	41.650835	-70.453093	-9.1	33.6	1.0	-	-	-	-	-
R	41.647771	-70.454346	-9.4	33.3	5.3	0-4.7	0-4.7	X	X	X
S	41.648444	-70.453246	-9.1	33.6	8.0	0-4.2 *	0-2.0,2.0-4.0,6.0-8.0	-	-	X

* Depth to a sand interval ≤ 1 foot thick, overlying additional layers of organic sediment

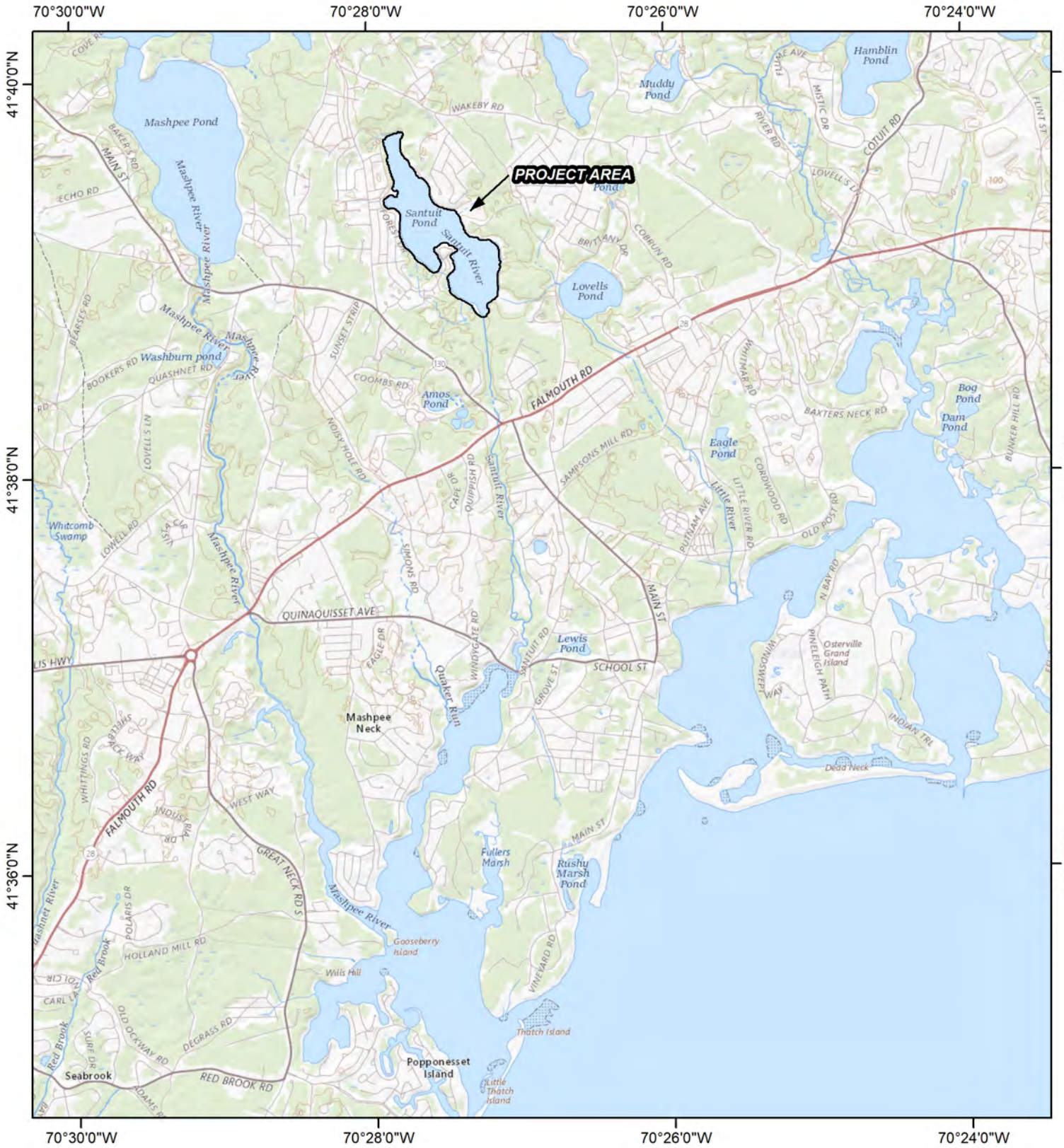

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FIGURE 1:
SANTUIT POND, MASHPEE, MA
LOCUS MAP

N
W E
S

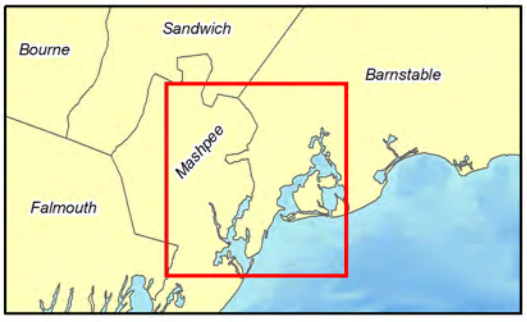
0 0.5 1 1.5 Miles

0 1 2 Kilometers

1:50,000

2020 USGS NATIONAL MAP

GCS NAD1983



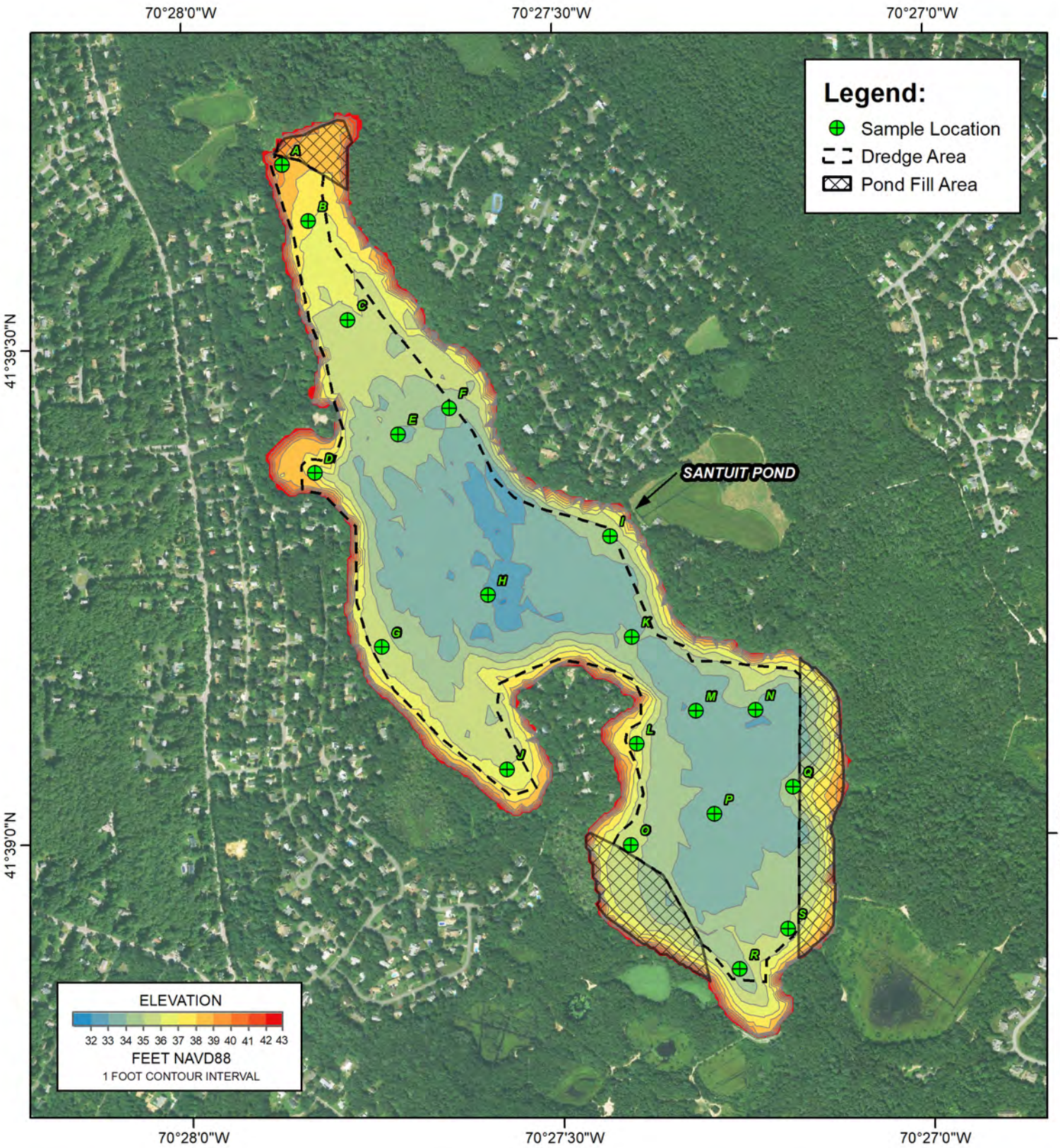


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FIGURE 2:
SANTUIT POND, MASHPEE, MA
2021 SEDIMENT CORE LOCATIONS

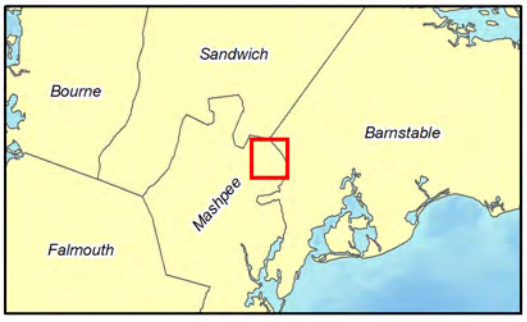
0 500 1,000 1,500 Feet

0 100 200 300 400 500 Meters

1:10,000

2018 NAIP AERIAL IMAGERY

GCS NAD1983



3.0 SAMPLE PROCESSING

All sediment cores were delivered to the USACE environmental laboratory located on Ft. Devens, MA at the conclusion of the field effort. The cores were maintained in an upright position and refrigerated at 4°C until processing took place. Each core liner was cut lengthwise in two places, approximately 180° apart, using electric shears. Clean stainless steel wire was then used to slice the length of the core into two halves. Immediately after a core was split and exposed to the atmosphere, it was photographed, described, and samples from the anticipated dredge interval, consisting of the overlying organic silt within each core, were homogenized and transferred into appropriate sample containers. Sample processing equipment was cleaned with a brush and alconox solution then rinsed with deionized water prior to processing and between the collection of each sample. Additional detail on each phase of the processing effort is provided below.

Each split core was photographed before undergoing the description process. All core photos included a stadia rod for scale and to reference the depth below the water-sediment interface. A photograph of each complete core was taken, as well as close-ups of any discrete layering or features of interest.

Cores were examined from top to bottom using a stadia rod to define the thickness of each sediment layer and the depth below the water-sediment interface. Each core was classified in accordance with ASTM D 2488, Standard Practice for Description and Identification of Soils (Visual-Manual Procedure). Notes on relative grain sizes, color, odor, strata, and other pertinent observations were recorded in the core log sheets presented in Appendix B.

After being described, samples from the anticipated dredge interval within ten cores selected to represent the typical conditions throughout the pond were transferred into stainless steel bowls and homogenized using a stainless steel spoon. A representative portion of the material from each sample was set aside for grain size analysis. Another portion of the homogenized material was transferred to appropriate sample containers to be analyzed for the remainder of the parameters listed in Table 2. Subsamples from an additional four core locations were collected for nutrient analysis following the protocol described above. Any remaining homogenized material was composited with the overlying organic sediments from unused cores into samples representing the organic material below the water-sediment interface in two foot depth increments (0-2', 2-4', 4-6', and 6-8'). This material was refrigerated and retained for bench scale testing that will be performed by USACE geotechnical staff.

All samples for chemical analysis were refrigerated or maintained in coolers on ice until they were delivered to Alpha Analytical Laboratory in Mansfield, MA by courier. Chain of Custody forms for these samples are presented in Appendix C.

4.0 PHYSICAL AND CHEMICAL TESTING

This section summarizes the analytical methods used for physical and chemical testing of sediments collected from the proposed footprint of the Santuit Pond aquatic ecosystem restoration project in Mashpee, MA. Grain size analysis was performed by the USACE environmental laboratory located on Ft. Devens, MA. All other testing was performed by Alpha Analytical Laboratory in Mansfield, MA. Physical testing included total solids, percent moisture, specific gravity, Atterberg limits, and bulk density measurements. Chemical analysis included total organic carbon (TOC), metals analysis, polycyclic aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPH), extractable petroleum hydrocarbons (EPH), polychlorinated biphenyls (PCBs), pesticides, and total phosphorus. Samples for Toxicity Characteristic Leaching Procedure (TCLP) extraction and analysis were collected but not used because none of the measured analyte concentrations exceeded the theoretical values at which TCLP criteria would be exceeded. A complete list of parameters and target detection limits is provided in Table 2. A routine set of quality control (QC) samples was prepared with each set of samples, by parameter and media, to monitor data quality in terms of accuracy and precision. The frequency and type of QC samples and QC acceptance criteria is discussed in the laboratory report presented in Appendix D.

4.1 Quality Assurance/Quality Control Procedures

All field and analytical activities performed in the collection and analysis of sediments for physical and chemical testing followed approved SOPs, referenced approved agency methods, or are detailed in the project SAP (Appendix A).

4.1.1 Chain of Custody

Sample custody forms accompanied all samples from the field to the laboratory. Copies of sample chain of custody forms are provided in the laboratory reports presented in Appendix C.

4.1.2 Data Audits/ QA Review

All data received internal verification and validation following established procedures at the laboratory where the data were generated. QA/QC narratives are provided in the laboratory reports presented in Appendix C. These narratives include a discussion of the chemistry QC results, a description of measurement quality objective exceedances, and the impact, if any, the exceedances may have on the usability of the data.

4.1.3 Protocol Deviations

There were no deviations from the established laboratory testing protocols.

Table 2: Analytical Methods and Reporting Limits

Parameter	Method Reference	Method Number	Project RL	RL Units
Physical Tests				
Grain Size (#4, 10, 40, 60, 200)	ASTM	D-422	N/A	%
Total Solids/Water Content	ASTM	D-2216	1.0	%
Specific Gravity	ASTM	D-854	0.01	-
Bulk Density	ASTM	D-4380	0.01	g/cm^3
Atterberg Limits	ASTM	D-4318	1	-
Total Organic Carbon (TOC)				
Total Organic Carbon (2 replicates)	SW-846	9060	0.1	%
Metals (RCRA 8)				
Arsenic	SW-846	6020A	0.5	ppm
Cadmium	SW-846	6020A	0.1	ppm
Chromium	SW-846	6020A	1.0	ppm
Copper	SW-846	6020A	1.0	ppm
Iron	SW-846	6020A	1.0	ppm
Lead	SW-846	7474	1.0	ppm
Mercury	SW-846	6020A	0.02	ppm
Nickel	SW-846	6020A	1.0	ppm
Zinc	SW-846	6020A	1.0	ppm
Nutrients				
Total Phosphorus	SW-846	365.2	0.075	ppm
Polychlorinated Biphenyls (PCBs)				
Congeners 8, 18, 28, 44, 49, 52, 66, 87, 101, 105, 118, 128, 138, 153, 170, 180, 183, 184, 187, 195, 206, 209	SW-846	8082	0.01	ppm
Semivolatiles				
Polycyclic Aromatic Hydrocarbons (PAHs)	SW-846	8270C-SIM	0.02	ppm
Petroleum Hydrocarbons				
Total Petroleum Hydrocarbons – DRO/GRO	SW-846	8015C	34/25	PPM
Extractable Petroleum Hydrocarbons	MADEP	EPH-04-1	25	ppm
Organochlorine Pesticides				
Pesticides	SW-846	8081B	0.001	ppm
Toxicity Characteristic Leaching Procedure (TCLP)				
TCLP Extraction & Metals Analysis	TCLP Method 1311 *			

** TCLP Will be performed on sediment where total concentrations of metals or organic compounds are equal to or greater than the theoretical concentration at which TCLP criteria may be exceeded: As>100, Cd>20, Cr>100, Pb>100, Hg>4 mg/kg.*

5.0 RESULTS OF ANALYSIS

This section summarizes results obtained from physical and chemical testing of sediments collected from the proposed footprint of the Santuit Pond aquatic ecosystem restoration project in Mashpee, MA in April of 2021. Sediment samples from ten individual stations were analyzed for grain size and bulk sediment chemistry. Subsamples from an additional four locations were analyzed for iron and total phosphorus. A summary of the results of physical and chemical analysis are presented in Tables 3 through 11. Complete testing results are provided in laboratory reports presented in Appendix C.

Table 3: Summary of Grain Size Results

Sample ID	% Cobble	% Gravel	% Coarse Sand	% Medium Sand	% Fine Sand	% Total Fines
B 0-8'	ND	0.2	0.3	2.6	3.7	93.1
D 0-3.0'	ND	0.1	0.0	1.5	3.8	94.6
E 3.2-8'	ND	0.1	0.3	1.4	1.7	96.6
H 0-8.0'	ND	ND	ND	ND	0.4	99.6
I 0-4.3'	ND	ND	ND	ND	0.3	99.7
J 0-6.1'	ND	ND	0.1	1.0	3.2	95.7
L 0-3.6'	ND	0.2	0.2	1.9	5.0	92.6
N 0-2.6'	ND	0.1	0.1	3.1	1.5	95.3
P 0-6.7'	ND	ND	0.1	0.3	0.9	98.7
R 0-4.7'	ND	0.1	0.1	0.9	2.2	96.7

ND = Not detected

Table 4: Summary of TOC and Total Solids Results

Sample ID	% TOC Average Value	% Total Solids	Sample ID	% TOC Average Value	% Total Solids
B 0-8'	18.2	17.3	**M 2.0-4.0'**	15	10.2
D 0-3.0'	9.81	14.1	**M 4.0-6.0'**	12.8	10.4
E 0-4.0'	6.92	16.9	**M 6.0-8.0'**	18.7	10.3
E 4.0-6.0'	8.27	13.7	**N 0-2.6'**	21.4	14.3
E 6.0-8.0'	11.5	12.7	**O 0-2.0'**	7.43	15.2
E 3.2-8'	19.2	11.8	**O 2.0-4.0'**	11.5	11.4
G 0-3.0'	6.54	17.1	**O 4.0-6.0'**	11.8	11.2
G3.0 0-5.0'	17.5	10.6	**O 6.0-8.0'**	15.4	13.4
G 5.0-6.8'	16	11.4	**P 0-6.7'**	21.5	13.3
H 0-8.0'	18.7	13.4	**R 0-4.7'**	15.9	10.7
I 0-4.3'	22.8	12	**S 0-2.0'**	7.68	16.2
J 0-6.1'	26.2	8.59	**S 2.0-4.0'**	18.9	10.8
L 0-3.6'	18.3	14.7	**S 4.0-6.0'**	17.4	10.1
M 0-2.0'	11.9	14.7	**S 6.0-8.0'**	16	12.1

Table 5: Summary of Additional Physical Testing

Sample ID	Moisture Content (%)	Specific Gravity	Bulk Density (lbs/ft3)	Dry Density (lbs/ft3)	Atterberg Limits		
					Liquid Limit	Plastic Limit	Plasticity Index
B 0-8'	81.8	3.5	66.0	13.3	380.0	260.0	120.0
D 0-3.0'	90.2	-	-	-	-	-	-
E 3.2-8'	80.8	2.7	66.4	13.3	390.0	220.0	170.0
H 0-8.0'	81.3	2.5	67.0	13.1	420.0	200.0	220.0
I 0-4.3'	77.2	2.9	69.4	18.9	360.0	200.0	160.0
J 0-6.1'	73.8	2.8	72.1	20.0	300.0	190.0	110.0
L 0-3.6'	81.7	-	-	-	-	-	-
N 0-2.6'	78.6	2.7	67.7	15.6	390.0	240.0	150.0
P 0-6.7'	78.5	-	-	-	-	-	-
R 0-4.7'	84.1	3.1	70.5	12.1	390.0	200.0	190.0

Samples for specific gravity, bulk density or atterberg limits were not collected from D 0-3.0', L 0-3.6', and P 0-6.7' due to high water content and the extremely loose consistency of the material observed during core processing

Table 6: Summary of Total Metals Results

Sample ID	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc
B 0-8'	141	10.7	43	219	41.8	0.105	88.4	369
D 0-3.0'	16.8	0.978	6.47	5.94	32.5	0.13	5.72	47
E 3.2-8'	26.4	0.434	17.1	4.39	4.2	0.034(J)	7.42	15.8
H 0-8.0'	20.6	0.407	19.5	4.13	2.71	0.039(J)	7.47	14.2
I 0-4.3'	32	0.463	16.2	4.07	7.26	0.039(J)	6.16	18.4
J 0-6.1'	29.3	0.304	18.2	3.1	3.92	0.028(J)	5.29	11.4
L 0-3.6'	28	0.726	8.83	6.49	40.2	0.083	7.33	46.1
N 0-2.6'	38.5	0.411	17.1	4.12	3.77	0.031(J)	7.45	17.6
P 0-6.7'	34.2	0.43	17.4	7.62	3.37	0.031(J)	9.65	17.8
R 0-4.7'	31.2	0.49	17.9	5.37	13.6	0.048(J)	8	23.2

J = Analyte detected at a concentration between the MDL and the project RL
All concentrations are presented as mg/kg
Results are reported as dry weight

Table 7: Summary of Nutrient and Iron Results

Sample ID	Phosphorus, Total	Iron, Total	Sample ID	Phosphorus, Total	Iron, Total
B 0-8'	27900	320	**M 2.0-4.0'**	280	16600
D 0-3.0'	7670	900	**M 4.0-6.0'**	1000	15800
E 0-4.0'	580	32700	**M 6.0-8.0'**	420	16700
E 4.0-6.0'	1600	28000	**N 0-2.6'**	14400	300
E 6.0-8.0'	500	21100	**O 0-2.0'**	220	24400
E 3.2-8'	14100	930	**O 2.0-4.0'**	1500	16600
G 0-3.0'	2100	57200	**O 4.0-6.0'**	260	15800
G3.0 0-5.0'	1600	36200	**O 6.0-8.0'**	1200	16200
G 5.0-6.8'	320	15200	**P 0-6.7'**	12200	310
H 0-8.0'	10500	360	**R 0-4.7'**	9500	470
I 0-4.3'	13100	350	**S 0-2.0'**	210	18700
J 0-6.1'	9420	660	**S 2.0-4.0'**	290	12200
L 0-3.6'	11300	730	**S 4.0-6.0'**	740	11200
M 0-2.0'	620	27500	**S 6.0-8.0'**	810	12000

All concentrations are presented as mg/kg
Results are reported as dry weight

Table 8: Summary of Petroleum Hydrocarbon Results

Sample ID	Extractable Petroleum Hydrocarbons				Gasoline Range Organics	Diesel Range Organics
	C11-C22 Aromatics	C11-C22 Aromatics, Adjusted	C19-C36 Aliphatics	C9-C18 Aliphatics		
B 0-8'	17.75(U)	17.75(U)	17.75(U)	17.75(U)	4.3(J)	108(J)
D 0-3.0'	33.2(U)	33.2(U)	33.2(U)	33.2(U)	8(J)	516.0
E 3.2-8'	16.5(U)	16.5(U)	16.5(U)	16.5(U)	3.9(J)	35.8(J)
H 0-8'	17.45(U)	17.45(U)	17.45(U)	17.45(U)	4.4(J)	52(J)
I 0-4.3'	14.1(U)	14.1(U)	14.1(U)	14.1(U)	3.8(J)	32.4(J)
J 0-6.1'	12(U)	12(U)	12(U)	12(U)	3(J)	116(J)
L 0-3.6'	17.2(U)	17.2(U)	17.2(U)	17.2(U)	4.5(J)	134(J)
N 0-2.6'	15.05(U)	15.05(U)	15.05(U)	15.05(U)	4.1(J)	64.3(J)
P 0-6.7'	35.6	31.7	14.65(U)	14.65(U)	3.9(J)	132(J)
R 0-4.7'	20.45(U)	20.45(U)	20.45(U)	20.45(U)	4.2(J)	95.1(J)

U = Non-detected analytes are reported as the half the MDL and qualified with a “U”.
J = Analyte detected at a concentration between the MDL and the project RL
All concentrations are presented as mg/kg
Results are reported as dry weight

Table 9: Summary of PAH Results

Parameter	B 0-8'	D 0-3.0'	E 3.2-8'	H 0-8'	I 0-4.3'	J 0-6.1'	L 0-3.6'	N 0-2.6'	P 0-6.7'	R 0-4.7'
Acenaphthene	1.38(U)	2.585(U)	1.26(U)	1.365(U)	1.085(U)	0.955(U)	1.37(U)	1.79(U)	1.17(U)	1.59(U)
Acenaphthylene	0.85(U)	15(J)	0.775(U)	0.84(U)	2.07(J)	1.53(J)	4.63(J)	3.54(J)	0.72(U)	2.29(J)
Anthracene	0.92(U)	21.5(J)	0.84(U)	0.91(U)	1.7(J)	1.59(J)	3.96(J)	1.19(U)	0.78(U)	2.99(J)
Naphthalene	13.7(J)	26(J)	6.33(J)	5.59(J)	4.94(J)	5.84(J)	13(J)	13.2(J)	6.34(J)	7.72(J)
Phenanthrene	4.95(J)	91.6	4.56(J)	3.83(J)	9.15(J)	7.07(J)	24.8	1.955(U)	2.76(J)	13.5(J)
Fluorene	0.77(U)	9.09(J)	2.75(J)	2.56(J)	2.66(J)	2.84(J)	2.98(J)	0.995(U)	3(J)	2.64(J)
Total LMW PAHs	22.57	165.775	16.515	15.095	21.605	19.825	50.74	22.67	14.77	30.73
Benz(a)anthracene	1.725(U)	71.8	1.575(U)	1.705(U)	6.62(J)	3.84(J)	22	2.235(U)	1.465(U)	7.45(J)
Benzo(a)pyrene	6.64(J)	71	2.925(U)	3.165(U)	6.32(J)	4.77(J)	23.2	4.155(U)	2.72(U)	3.695(U)
Benzo(b)fluoranthene	6.01(J)	134	2.185(U)	2.365(U)	8.9(J)	7.17(J)	36	3.1(U)	2.03(U)	12.5(J)
Benzo(ghi)perylene	13.6(J)	78.7	2.52(J)	0.76(U)	7.34(J)	5.36(J)	20.6	0.995(U)	0.65(U)	8.73(J)
Benzo(k)fluoranthene	5.54(J)	65.6	2.02(J)	1.085(U)	6.4(J)	4.25(J)	22.4	1.425(U)	0.935(U)	8.05(J)
Chrysene	1.675(U)	83.8	1.53(U)	1.655(U)	7.17(J)	4.95(J)	26.5	2.17(U)	1.42(U)	9.64(J)
Dibenz(a,h)anthracene	30.6	36.3	0.815(U)	0.88(U)	0.7(U)	0.62(U)	5.58(J)	1.155(U)	0.755(U)	1.03(U)
Fluoranthene	6.09(J)	188	5.97(J)	3.8(J)	16.8	12.2	57.4	5.2(J)	3.5(J)	22.2
Indeno(1,2,3-cd)Pyrene	19.7	70.3	3.31(J)	1.78(U)	7.11(J)	5.57(J)	20.5	2.34(U)	1.53(U)	8.29(J)
Pyrene	5.41(J)	159	1.825(U)	1.975(U)	14.8	11.5	54.3	2.59(U)	1.695(U)	20.2
Total HMW PAHs	96.99	958.5	24.675	19.17	82.16	60.23	288.48	25.365	16.7	101.785

U = Non-detected analytes are reported as the half the MDL and qualified with a “U”.
J = Analyte detected at a concentration between the MDL and the project RL
All concentrations are presented as ug/kg
Results are reported as dry weight

Table 10: Summary of PCB Results

Parameter	B 0-8'	D 0-3.0'	E 3.2-8'	H 0-8'	I 0-4.3'	J 0-6.1'	L 0-3.6'	N 0-2.6'	P 0-6.7'	R 0-4.7'
Cl2-BZ#8	0.1425(U)	0.576(J)	0.13(U)	0.1405(U)	0.112(U)	0.0985(U)	0.504(J)	0.1845(U)	0.121(U)	0.164(U)
Cl3-BZ#18	0.1035(U)	1.85(J)	0.0945(U)	0.102(U)	0.0815(U)	0.072(U)	0.103(U)	0.134(U)	0.088(U)	0.1195(U)
Cl3-BZ#28	0.176(U)	0.3295(U)	0.1605(U)	0.174(U)	0.1385(U)	0.122(U)	0.175(U)	0.228(U)	0.1495(U)	0.203(U)
Cl4-BZ#44	0.196(U)	1.08(J)	0.179(U)	0.194(U)	0.1545(U)	0.136(U)	0.195(U)	0.2545(U)	0.1665(U)	0.226(U)
Cl4-BZ#49	0.192(U)	0.3595(U)	0.175(U)	0.1895(U)	0.151(U)	0.133(U)	0.1905(U)	0.249(U)	0.163(U)	0.221(U)
Cl4-BZ#52	0.109(U)	0.584(J)	0.0995(U)	0.108(U)	0.086(U)	0.0755(U)	0.1085(U)	0.1415(U)	0.0925(U)	0.126(U)
Cl4-BZ#66	0.103(U)	0.522(J)	0.094(U)	0.1015(U)	0.081(U)	0.071(U)	0.102(U)	0.133(U)	0.087(U)	0.1185(U)
Cl5-BZ#87	0.0835(U)	0.573(J)	0.076(U)	0.0825(U)	0.0655(U)	0.058(U)	0.083(U)	0.108(U)	0.071(U)	0.096(U)
Cl5-BZ#101	0.1675(U)	0.996(J)	0.153(U)	0.1655(U)	0.1315(U)	0.116(U)	0.1665(U)	0.217(U)	0.142(U)	0.193(U)
Cl5-BZ#105	0.15(U)	0.281(U)	0.137(U)	0.1485(U)	0.118(U)	0.104(U)	0.149(U)	0.1945(U)	0.1275(U)	0.173(U)
Cl5-BZ#118	0.159(U)	0.756(J)	0.145(U)	0.157(U)	0.125(U)	0.11(U)	0.158(U)	0.206(U)	0.135(U)	0.183(U)
Cl6-BZ#128	0.1875(U)	0.351(U)	0.171(U)	0.1855(U)	0.1475(U)	0.13(U)	0.1865(U)	0.243(U)	0.159(U)	0.216(U)
Cl6-BZ#138	0.12(U)	1.62(J)	0.1095(U)	0.1185(U)	0.0945(U)	0.083(U)	0.119(U)	0.1555(U)	0.102(U)	0.1385(U)
Cl6-BZ#153	0.25(U)	0.961(J)	0.228(U)	0.247(U)	0.1965(U)	0.1735(U)	0.2485(U)	0.324(U)	0.212(U)	0.2885(U)
Cl7-BZ#170	0.092(U)	0.172(U)	0.084(U)	0.091(U)	0.0725(U)	0.064(U)	0.0915(U)	0.119(U)	0.078(U)	0.106(U)
Cl7-BZ#180	0.094(U)	0.176(U)	0.086(U)	0.093(U)	0.074(U)	0.065(U)	0.0935(U)	0.122(U)	0.08(U)	0.1085(U)
Cl7-BZ#183	0.0505(U)	0.095(U)	0.0465(U)	0.05(U)	0.04(U)	0.035(U)	0.0505(U)	0.0655(U)	0.043(U)	0.0585(U)
Cl7-BZ#184	0.1035(U)	0.194(U)	0.0945(U)	0.102(U)	0.0815(U)	0.072(U)	0.103(U)	0.134(U)	0.088(U)	0.1195(U)
Cl7-BZ#187	0.135(U)	0.253(U)	0.1235(U)	0.1335(U)	0.106(U)	0.0935(U)	0.134(U)	0.175(U)	0.1145(U)	0.156(U)
Cl8-BZ#195	0.177(U)	0.331(U)	0.1615(U)	0.1745(U)	0.139(U)	0.1225(U)	0.1755(U)	0.229(U)	0.15(U)	0.204(U)
Cl9-BZ#206	0.1805(U)	0.338(U)	0.1645(U)	0.178(U)	0.142(U)	0.125(U)	0.179(U)	0.234(U)	0.153(U)	0.208(U)
Cl10-BZ#209	0.207(U)	0.3875(U)	0.189(U)	0.2045(U)	0.163(U)	0.1435(U)	0.2055(U)	0.2685(U)	0.1755(U)	0.2385(U)
Total PCBs[1]	5.499	23.128	5.019	5.433	4.326	3.81	6.188	7.126	4.666	6.34

U = Non-detected analytes are reported as the half the MDL and qualified with a "U".
J = Analyte detected at a concentration between the MDL and the project RL
All concentrations are presented as ug/kg
Results are reported as dry weight
[1] Total PCBs calculated by summing the 18 PCB congeners (using ½ the MDL for non-detects) and multiplying the total by 2

Table 11: Summary of Pesticides Results

Parameter	B 0-8'	D 0-3.0'	E 3.2-8'	H 0-8'	I 0-4.3'	J 0-6.1'	L 0-3.6'	N 0-2.6'	P 0-6.7'	R 0-4.7'
4,4'-DDD	1.06	2.47	0.0245(U)	0.0265(U)	0.021(U)	0.0185(U)	0.027(U)	0.035(U)	0.023(U)	1.73
4,4'-DDE	1.25	29.3	0.015(U)	0.016(U)	0.97	0.716	6.18	0.0215(U)	0.014(U)	9.03
4,4'-DDT	0.839	0.756(J)	0.0325(U)	0.035(U)	0.028(U)	0.0245(U)	0.035(U)	0.046(U)	0.03(U)	0.041(U)
Aldrin	0.09(U)	0.168(U)	0.082(U)	0.089(U)	0.0705(U)	0.062(U)	0.089(U)	0.1165(U)	0.076(U)	0.1035(U)
Alpha-BHC	0.0545(U)	0.102(U)	0.05(U)	0.054(U)	0.043(U)	0.038(U)	0.054(U)	0.071(U)	0.0465(U)	0.063(U)
Beta-BHC	0.0375(U)	0.07(U)	0.034(U)	0.037(U)	0.0295(U)	0.026(U)	0.037(U)	0.0485(U)	0.0315(U)	0.043(U)
cis-Chlordane	0.934	1.03(J)	0.177(U)	0.1915(U)	0.1525(U)	0.1345(U)	0.1925(U)	0.2515(U)	0.1645(U)	0.2235(U)
cis-Nonachlor	0.026(U)	0.049(U)	0.024(U)	0.026(U)	0.0205(U)	0.018(U)	0.026(U)	0.034(U)	0.022(U)	0.03(U)
Delta-BHC	0.043(U)	0.08(U)	0.039(U)	0.0425(U)	0.0335(U)	0.0295(U)	0.0425(U)	0.0555(U)	0.0365(U)	0.0495(U)
Dieldrin	0.96	0.576(J)	0.0495(U)	0.0535(U)	0.0425(U)	0.0375(U)	0.054(U)	0.07(U)	0.046(U)	0.0625(U)
Endosulfan I	0.0495(U)	0.0925(U)	0.045(U)	0.049(U)	0.039(U)	0.0345(U)	0.049(U)	0.064(U)	0.042(U)	0.057(U)
Endosulfan II	0.0255(U)	0.048(U)	0.0235(U)	0.025(U)	0.02(U)	0.0175(U)	0.0255(U)	0.033(U)	0.0215(U)	0.0295(U)
Endosulfan sulfate	0.015(U)	0.0275(U)	0.0135(U)	0.0145(U)	0.0115(U)	0.01(U)	0.0145(U)	0.019(U)	0.0125(U)	0.017(U)
Endrin	0.0295(U)	0.055(U)	0.027(U)	0.029(U)	0.023(U)	0.0205(U)	0.0295(U)	0.038(U)	0.025(U)	0.034(U)
gamma-BHC	0.081(U)	0.152(U)	0.074(U)	0.08(U)	0.064(U)	0.0565(U)	0.0805(U)	0.105(U)	0.069(U)	0.0935(U)
Heptachlor	0.056(U)	0.1055(U)	0.0515(U)	0.0555(U)	0.0445(U)	0.039(U)	0.056(U)	0.073(U)	0.048(U)	0.065(U)
Heptachlor epoxide	0.1155(U)	0.2165(U)	0.1055(U)	0.1145(U)	0.091(U)	0.08(U)	0.115(U)	0.15(U)	0.098(U)	0.1335(U)
Hexachlorobenzene	0.4835(U)	0.905(U)	0.4415(U)	0.478(U)	0.3805(U)	0.3355(U)	0.4805(U)	0.625(U)	0.4105(U)	0.56(U)
Methoxychlor	0.128(U)	0.2395(U)	0.117(U)	0.1265(U)	0.1005(U)	0.0885(U)	0.127(U)	0.166(U)	0.1085(U)	0.1475(U)
Oxychlordane	0.1115(U)	0.2085(U)	0.1015(U)	0.11(U)	0.0875(U)	0.077(U)	0.1105(U)	0.1445(U)	0.0945(U)	0.1285(U)
Toxaphene	2.335(U)	4.375(U)	2.13(U)	2.31(U)	1.835(U)	1.62(U)	2.32(U)	3.03(U)	1.98(U)	2.695(U)
trans-Chlordane	0.956	0.347(J)	0.05(U)	0.054(U)	0.043(U)	0.038(U)	0.054(U)	0.071(U)	0.0465(U)	0.063(U)
trans-Nonachlor	0.024(U)	0.045(U)	0.022(U)	0.0235(U)	0.019(U)	0.0165(U)	0.024(U)	0.031(U)	0.0205(U)	0.0275(U)

U = Non-detected analytes are reported as the RL and qualified with a “U”.
J = Analyte detected at a concentration between the MDL and the project RL
All concentrations are presented as ug/kg
Results are reported as dry weight

APPENDIX A SAMPLING AND ANALYSIS PLAN

CENAE–PDE 5 April 2021

Sampling and Analysis Plan for the Santuit Pond Section 206 Aquatic Ecosystem Restoration Project, Mashpee, Massachusetts

1. **Project Description:** Santuit Pond is a 170-acre kettle pond located in the town of Mashpee, Massachusetts (Figure 1). The pond is groundwater fed and forms the headwaters of the Santuit River, which flows in a southerly direction to Popponesset Bay. There are no surface water tributaries to Santuit Pond. The only outlet flows through a dam located along the southern shoreline. The original construction date of the dam is unknown, but it was modified by the Town and Natural Resources Conservation Service (NRCS) in 2013 to include a fish ladder for anadromous fish passage. Land use around the Pond includes moderate to high density residential developments along the western and northeast shoreline, with conservation lands owned by the Town of Mashpee to the south. There are multiple man-made drainage channels located around the pond that historically provided water to adjacent cranberry bogs. However, these fields are now fallow and drainage channels have been blocked. There is minimal emergent or shrub/scrub wetland habitat along the perimeter of the pond because damming and impoundment raised the water level, turning existing wetlands into shallow aquatic habitat.

Water quality in Santuit Pond is impaired due to nutrient loading from failed septic systems, adjacent land use practices, and nonpoint source discharges. This has led to frequent algal blooms during the summer months. These blooms harm the aquatic habitat by inhibiting light penetration and raising pH levels during the growing season, and eventually lowering dissolved oxygen levels when they decompose. Additionally, the blooms can produce toxins that poison animals that ingest them. The conditions in Santuit Pond are further exacerbated by nutrient reserves in the organic rich bottom sediments, which support nuisance levels of rooted and floating plant communities

The New England District of the U.S. Army Corps of Engineers (USACE) is evaluating alternatives to improve water quality and anadromous fish habitat in Santuit Pond under Section 206 of the Water Resources Development Act of 1996. The anticipated project plan involves dredging sections of the pond to remove the nutrient rich bottom sediments and restore open water habitat. Some or all of the dredged material may be used to convert areas of shallow aquatic habitat to emergent wetland. The sampling and analysis plan described in the sections below was developed by USACE to gather information to support the proposed project design and to evaluate appropriate disposal or reuse alternatives for the sediments to be dredged. A series of sediment cores will be collected throughout the proposed project area (Figure 1) to evaluate the distribution and thickness of organic sediments in the pond. Subsamples from the anticipated dredge interval within these cores will undergo chemical analysis in accordance with the requirements of Massachusetts Regulation 314

CMR 9.07(2)(b)6 (Criteria for the Evaluation of Applications for Dredging and Dredged Material Management) as well as a suite of physical and geotechnical analyses selected by USACE.

2. **Sample Collection:** Sediment cores shall be collected at the 19 locations specified in Table 1 (also see Figure 2). These locations were selected based on the proposed project footprint and depth ranges of aquatic habitat identified from USACE bathymetry collected during the summer of 2020. All core samples shall be collected to a maximum depth of eight feet below the sediment surface or two feet into underlying coarse native material. To ensure that the core samples adequately represent the sediments at each location, all cores used for this project shall have a recovered length that is within 75% of the core penetration depth. In addition, any cores that display signs of significant disturbance such as compaction or wash out shall be disregarded. If the cores from any location do not meet the target length or acceptability criteria specified above after six attempts, then the best core from that location shall be retained for characterization and analysis.

Upon collection all cores shall be measured and maintained in an upright position for a minimum of 15 minutes to allow any fine-grained material to settle. After a core has settled it shall be re-measured before any overlying water is drained. All cores shall be split lengthwise, photographed with a stadia rod for scale, and described in accordance with ASTM D 2488 (Standard Practice for Description and Identification of Soils). A composite of the anticipated dredge interval within each core shall be sampled for physical testing and bulk chemical analysis as described in the sections below. If the dredge interval within any core contains significant stratification or obvious signs of contamination then subsamples shall be made of each layer.

All sediments held for testing shall be stored in accordance with the requirements in Table 2 ((from Table 8-2 in *Evaluation of Dredged Material Proposed for Ocean Disposal, Testing Manual, 1991)*. Chain of custody forms shall be maintained and will accompany all samples during the characterization and analysis process.

Positioning in the field shall be accomplished using a Global Positioning System (GPS) that has been calibrated on site using a known reference point. The required horizontal accuracy at each sample location shall be 10 feet or less. Water depths at each station are to be determined with an accuracy of ±0.1 foot (relative to NAVD88). All station data including date, time, latitude, longitude, water depth, water level correction, and estimated GPS accuracy shall be recorded in a sampling log and provided with the results of analysis. All coordinate data shall be reported in geographic NAD 83 decimal degree format. All depth data shall be reported in tenths of feet.

3. **Sample Analysis:** A total of eight samples consisting of the anticipated dredge interval within a subset of individual cores from the pond or a composite of the dredge interval within multiple cores grouped by area will undergo physical and chemical testing as specified in Table 3 of this document. The listed analytical methods are recommended but may be replaced by other methods that will provide the required reporting limits. The selection of individual or composite samples for analysis will be based on observations made during the core description process outlined above. These samples shall be selected to adequately represent the conditions encountered within the proposed dredge footprint in each area of the pond.

Additionally, a total of four five-gallon buckets containing a homogenized mixture of the anticipated dredge material from the 0-2, 2-4, 4-6, and 6-8 foot ranges from the sediment cores collected throughout the pond shall be retained and transferred to the USACE Geotechnical Engineering Section for bench scale testing. The analysis and reporting requirements for this testing will be determined by the Geotechnical Engineering Section and are not included in this sampling and analysis plan.

5. **Reporting:** Sediment coring information and the results of physical and chemical testing will be provided to the USACE Project Delivery Team (PDT) in a final project report. This report shall include a narrative describing the field effort, data summary tables, an appendix containing core photographs and descriptions, and an appendix containing full laboratory testing reports.

6. **Contact Information:** Questions about this plan should be directed to Richard Loyd (phone: 978-318-8048 e-mail: Richard.B.Loyd@usace.army.mil).

RICHARD B. LOYD
Marine Operations Program Manager
New England District
US Army Corps of Engineers

TABLE 1: SEDIMENT CORE SAMPLE LOCATIONS

Station	Latitude (NAD 83)	Longitude (NAD83)	Elevation (NAVD88)	Water Depth (FT)*	Core Length (FT)**
A	41.661396	-70.464468	39.2	-3.8	8.0
B	41.660415	-70.463802	37.0	-6.0	8.0
C	41.658811	-70.463015	35.6	-7.4	8.0
D	41.656211	-70.463772	37.4	-5.6	8.0
E	41.656840	-70.461942	33.8	-9.2	8.0
F	41.657304	-70.460749	34.5	-8.5	8.0
G	41.653249	-70.462293	35.3	-7.7	8.0
H	41.654129	-70.459907	33.0	-10.0	8.0
I	41.655103	-70.457194	34.7	-8.3	8.0
J	41.651226	-70.459564	35.9	-7.1	8.0
K	41.653394	-70.456668	34.9	-8.1	8.0
L	41.651601	-70.456601	36.4	-6.6	8.0
M	41.652101	-70.455310	33.2	-9.8	8.0
N	41.652636	-70.453920	35.5	-7.5	8.0
O	41.649897	-70.456792	35.4	-7.6	8.0
P	41.650378	-70.454834	33.7	-9.3	8.0
Q	41.650825	-70.453089	35.0	-8.0	8.0
R	41.647791	-70.454357	34.4	-8.6	8.0
S	41.648414	-70.453275	35.1	-7.9	8.0

**Based on an assumed water level of 43.0 ft NAVD88*
***All cores will be collected to a depth of 8.0 ft below the sediment surface or 2 feet into underlying glacial material. If shallow refusal is encountered a maximum of 6 attempts will be made to collect the required core length from at any station.*

TABLE 2: RECOMMENDED PROCEDURES FOR SAMPLE COLLECTION, PRESERVATION, AND STORAGE

Analyses	Collection Method	Sample Volume	Container	Preservation Technique	Storage Conditions	Holding Time[b]
Sediment – Physical/Chemical Analyses						
Metals	Grab/corer	200 mL	Precleaned polyethylene jar[c]	Refrigerate. Dry ice[b] or freezer storage is recommended for extended holding times.	≤ 4° C[c]	Hg - 28 days Others - 6 Months[d]
Organic Compounds	Grab/corer	475 mL	Solvent-rinsed glass jar with Teflon lid[c]	Refrigerate. Dry ice[b] or freezer storage is recommended for extended holding times.	≤ 4° C/dark[d]	14 days[e]
Particle Size	Grab/corer	75 mL	Whirl-pac bag[b]	Refrigerate	≤ 4° C	Undetermined
Total Organic Carbon	Grab/corer	3 L	Heat treated glass vial with Teflon lined lid[c]	Refrigerate. Dry ice[c] or freezer storage is recommended for extended holding times.	≤ 4° C[c]	14 days
Total Solids/ Specific Gravity	Grab/corer	50g	Whirl-pac bag	Refrigerate	≤ 4° C	Undetermined
Miscellaneous	Grab/corer	≥50g	Whirl-pac bag	Refrigerate	≤ 4° C	Undetermined

[a] *This table contains only a summary of collection, preservation, and storage procedures for samples. The cited references should be consulted for a more detailed description of these procedures.*

[b] *These holding times are for sediment, water, and tissue based on guidance that is sometimes administrative rather than technical in nature. There are no promulgated, scientifically based holding time criteria for sediments, tissues, or elutriates. References should be consulted if holding times for sample extracts are desired. Holding times are from the time of sample collection.*

[c] *NOAA (1989).*

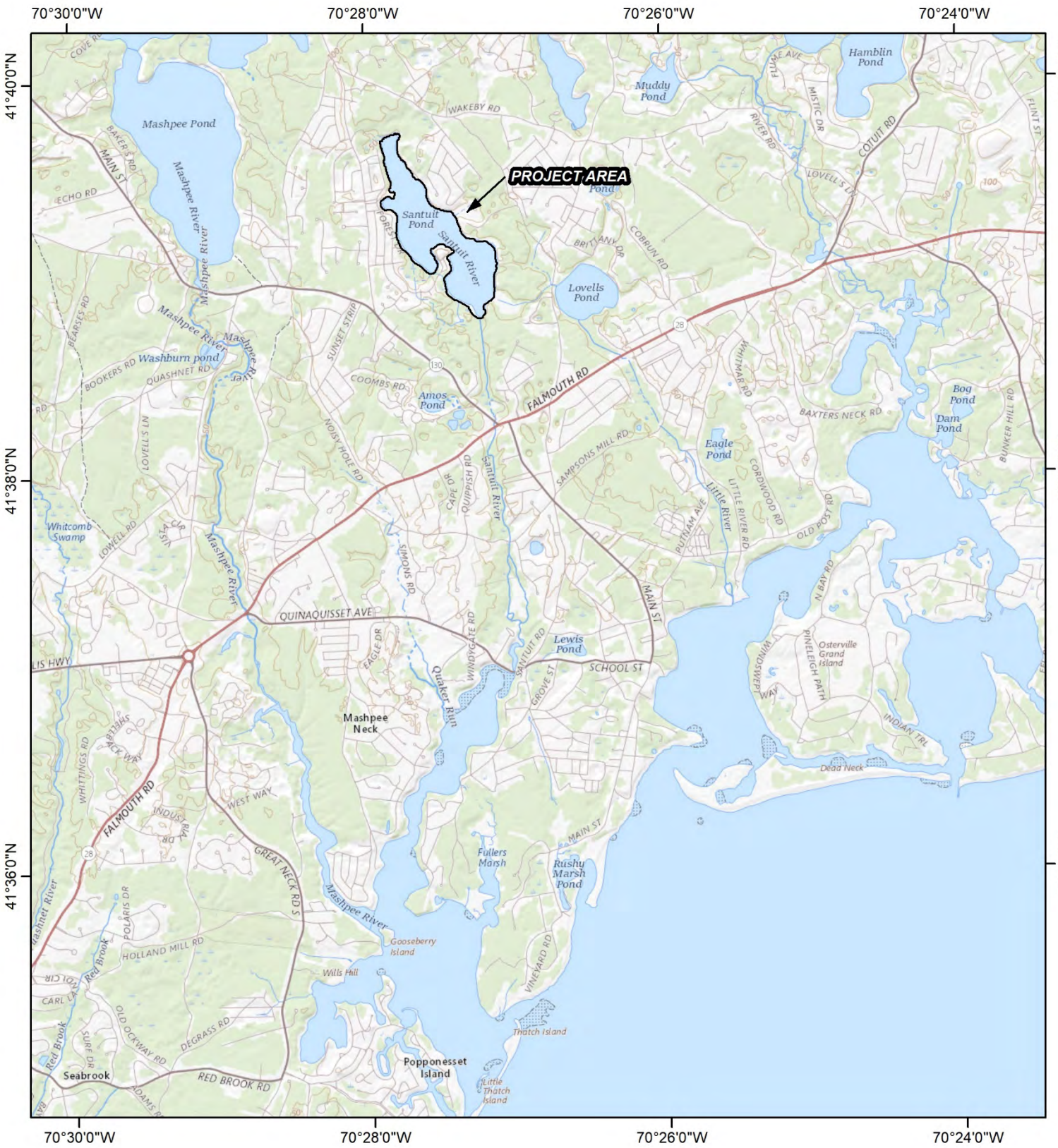
[d] *Tetra Tech (1986a)*

[e] *Sample may be held for up to one year if maintained ≤ -20° C*

TABLE 3: ANALYTICAL METHODS AND REPORTING LIMITS

Parameter	Method Reference	Method Number	Project RL	RL Units
Physical Tests				
Grain Size (#4, 10, 40, 60, 200)	ASTM	D-422	N/A	%
Total Solids/Water Content	ASTM	D-2216	1.0	%
Specific Gravity	ASTM	D-854	0.01	-
Bulk Density	ASTM	D-4380	0.01	g/cm^3
Total Organic Carbon (TOC)				
Total Organic Carbon (2 replicates)	SW-846	9060	0.1	%
Metals (RCRA 8)				
Arsenic	SW 846	6020A	0.5	ppm
Cadmium	SW 846	6020A	0.1	ppm
Chromium	SW 846	6020A	1.0	ppm
Copper	SW 846	6020A	1.0	ppm
Iron	SW 846	6020A	1.0	ppm
Lead	SW 846	7474	1.0	ppm
Mercury	SW 846	6020A	0.02	ppm
Nickel	SW 846	6020A	1.0	ppm
Zinc	SW 846	6020A	1.0	ppm
Nutrients				
Total Phosphorus	SW 846	365.2	0.075	ppm
Polychlorinated Biphenyls (PCBs)				
Congeners 8, 18, 28, 44, 49, 52, 66, 87, 101, 105, 118, 128, 138, 153, 170, 180, 183, 184, 187, 195, 206, 209	SW-846	8082	0.01	ppm
Semivolatiles				
Polycyclic Aromatic Hydrocarbons (PAHs)	SW-846	8270C-SIM	0.02	ppm
Petroleum Hydrocarbons				
Extractable Petroleum Hydrocarbons	MADEP	EPH-04-1	25	ppm
Organochlorine Pesticides				
Pesticides	SW-846	8081B	0.001	ppm
Toxicity Characteristic Leaching Procedure (TCLP)				
TCLP Extraction & Metals Analysis	TCLP Method 1311 *			

** TCLP Will be performed on sediment where total concentrations of metals or organic compounds are equal to or greater than the theoretical concentration at which TCLP criteria may be exceeded: As>100, Cd>20, Cr>100, Pb>100, Hg>4 mg/kg.*



US Army Corps
of Engineers
New England District

FIGURE 1:
SANTUIT POND, MASHPEE, MA
LOCUS MAP

N
W E
S

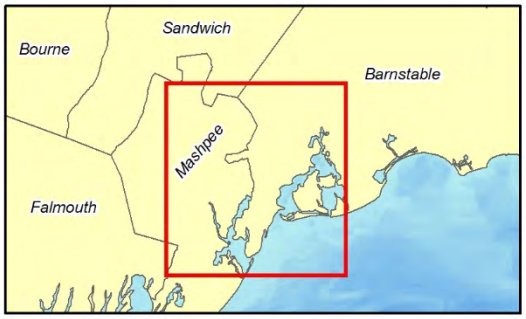
0 0.5 1 1.5 Miles

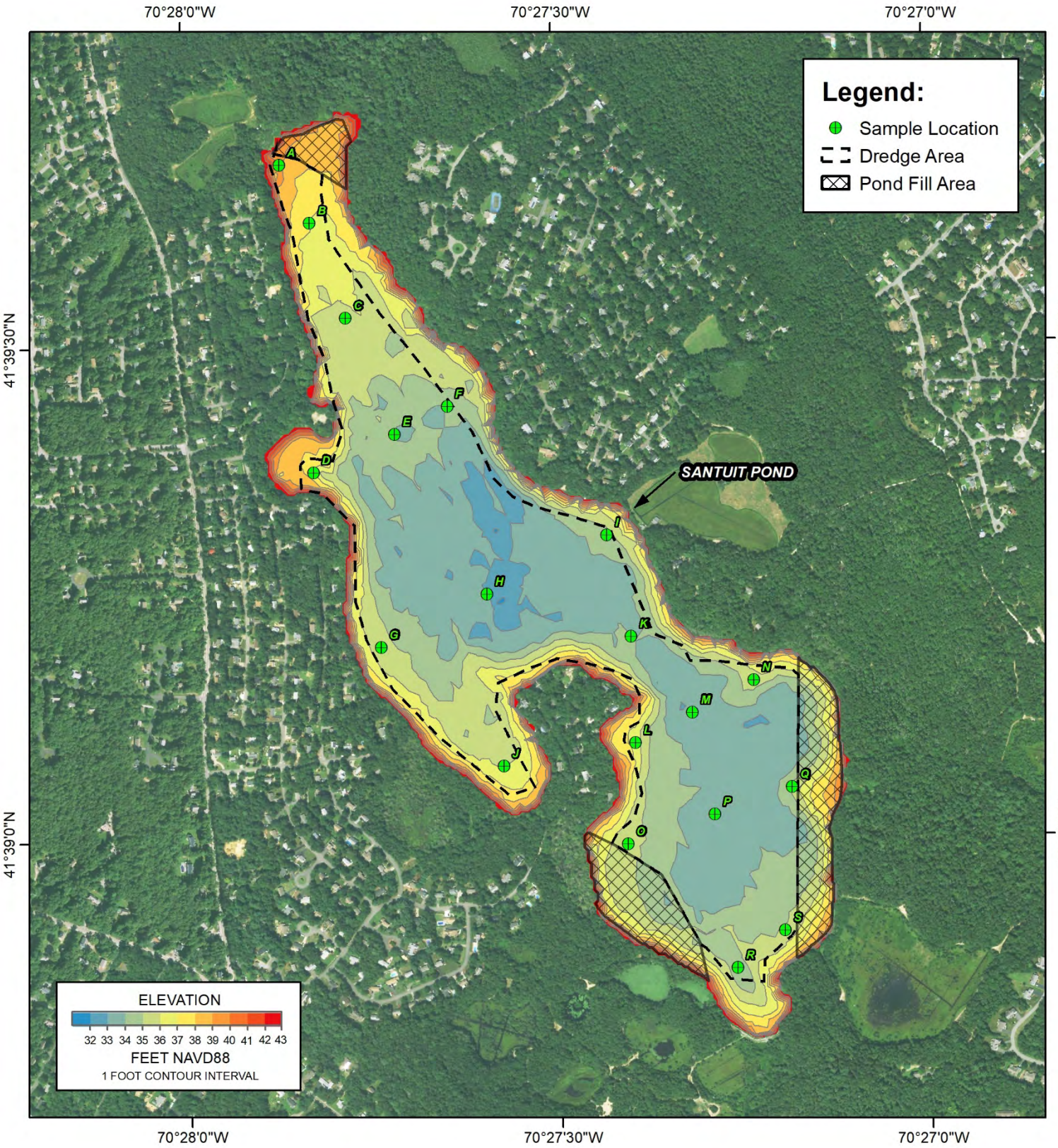
0 1 2 Kilometers

1:50,000

2020 USGS NATIONAL MAP

GCS NAD1983





US Army Corps
of Engineers
New England District

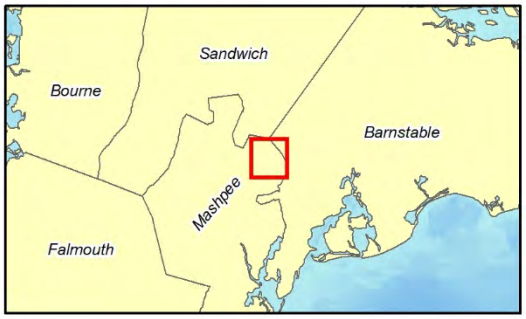
FIGURE 2:
SANTUIT POND, MASHPEE, MA
2021 SEDIMENT CORE LOCATIONS

N
W E
S

0 500 1,000 1,500 Feet
0 100 200 300 400 500 Meters
1:10,000

2018 NAIP AERIAL IMAGERY

GCS NAD1983



APPENDIX B SEDIMENT CORE LOGS

PROJECT NAME: *Santuit Pond Section 206* DATE: *4/26/2021*

PROJECT LOCATION: *Mashpee, MA* SEA STATE: *Windy, light chop*

VESSEL: *R/V Gloria H.* POSITIONING EQUIPMENT: *Hemisphere VS330 - Differential Corrections*

SAMPLING EQUIPMENT: *BH4 core head - 3" rigid polycarbonate liner with nose cone and core catcher*

SAMPLING PERSONNEL: *RBL, ADH* LOGGED BY: *HAJ*

CORE ID: ***STATION A*** TIME: *13:50*

LATITUDE: *41.661422* LONGITUDE: *-70.464423* POSITION ACCURACY: *3.0'*

MEASURED WATER DEPTH: *4.4'* CORRECTED WATER DEPTH: *38.3' NAVD88*

TARGET PENETRATION: *8.0'/Refusal* ACTUAL PENETRATION: *8.0'* RECOVERY: *8.0'*

COMMENTS: *1 attempt. Driven to core head. Settled length is 6.5'. Material is very loose organic silt.*

SAMPLE INTERVAL(S): -

CORE PHOTO:	CORE DESCRIPTION:
	0-3.0' Dark olive brown SILT, little to some organic debris, very soft, non-plastic, saturated (OL) *3.1-6.5' Dark olive brown SILT, little to some organic debris, very soft to soft, non-plastic, wet (OL)*

PROJECT NAME: *Santuit Pond Section 206* DATE: *4/26/2021*

PROJECT LOCATION: *Mashpee, MA* SEA STATE: *Windy, light chop*

VESSEL: *R/V Gloria H.* POSITIONING EQUIPMENT: *Hemisphere VS330 - Differential Corrections*

SAMPLING EQUIPMENT: *BH4 core head - 3" rigid polycarbonate liner with nose cone and core catcher*

SAMPLING PERSONNEL: *RBL, ADH* LOGGED BY: *HAJ*

CORE ID: ***STATION B*** TIME: *14:06*

LATITUDE: *41.660472* LONGITUDE: *-70.463846* POSITION ACCURACY: *3.0'*

MEASURED WATER DEPTH: *6.4'* CORRECTED WATER DEPTH: *36.3' NAVD88*

TARGET PENETRATION: *8.0'/Refusal* ACTUAL PENETRATION: *8.0'* RECOVERY: *8.0'*

COMMENTS: *1 attempt. Driven to core head. Material is soft organic silt over sand..*

SAMPLE INTERVAL(S): *0-8.0' grain size & chemistry*

CORE PHOTO:	CORE DESCRIPTION:
	0-8.0' Dark olive brown SILT, some organic debris, very soft, non-plastic, saturated (OL)

PROJECT NAME: *Santuit Pond Section 206* DATE: *4/27/2021*

PROJECT LOCATION: *Mashpee, MA* SEA STATE: *Windy, light chop*

VESSEL: *R/V Gloria H.* POSITIONING EQUIPMENT: *Hemisphere VS330 - Differential Corrections*

SAMPLING EQUIPMENT: *BH4 core head - 3" rigid polycarbonate liner with nose cone and core catcher*

SAMPLING PERSONNEL: *RBL, ADH* LOGGED BY: *HAJ*

CORE ID: ***STATION C*** TIME: *9:20*

LATITUDE: *41.658795* LONGITUDE: *-70.462990* POSITION ACCURACY: *3.0'*

MEASURED WATER DEPTH: *7.1'* CORRECTED WATER DEPTH: *35.6' NAVD88*

TARGET PENETRATION: *8.0'/Refusal* ACTUAL PENETRATION: *8.0'* RECOVERY: *8.0'*

COMMENTS: *1 attempt. Driven to core head in soft organic silt.*

SAMPLE INTERVAL(S): -

CORE PHOTO:	CORE DESCRIPTION:
	0-4.2' Dark olive brown SILT, little organic debris, very soft, non-plastic, saturated (OL) *4.2-8.0' Dark olive brown SILT, little organic debris, very soft to soft, non-plastic, wet (OL)*

PROJECT NAME: *Santuit Pond Section 206* DATE: *4/27/2021*

PROJECT LOCATION: *Mashpee, MA* SEA STATE: *Windy, light chop*

VESSEL: *R/V Gloria H.* POSITIONING EQUIPMENT: *Hemisphere VS330 - Differential Corrections*

SAMPLING EQUIPMENT: *BH4 core head - 3" rigid polycarbonate liner with nose cone and core catcher*

SAMPLING PERSONNEL: *RBL, ADH* LOGGED BY: *HAJ*

CORE ID: ***STATION D*** TIME: *10:24*

LATITUDE: *41.656223* LONGITUDE: *-70.463765* POSITION ACCURACY: *3.0'*

MEASURED WATER DEPTH: *4.9'* CORRECTED WATER DEPTH: *37.8' NAVD88*

TARGET PENETRATION: *8.0'/Refusal* ACTUAL PENETRATION: *4.3'* RECOVERY: *4.3'*

COMMENTS: *2 attempts. Refusal in packed sand.*

SAMPLE INTERVAL(S): *0-3.0' grain size & chemistry*

CORE PHOTO:	CORE DESCRIPTION:
	0-3.0' Dark olive brown SILT, little organic debris, very soft, non-plastic, saturated (OL) *3.0-4.3' Dark brown fine to medium SAND, some silt, trace fine subrounded gravel, loose to firm, wet (SM)* *Lens of dark brown silt and root material (OL) from 3.9 to 4.0'*

PROJECT NAME: *Santuit Pond Section 206* DATE: *4/27/2021*

PROJECT LOCATION: *Mashpee, MA* SEA STATE: *Windy, light chop*

VESSEL: *R/V Gloria H.* POSITIONING EQUIPMENT: *Hemisphere VS330 - Differential Corrections*

SAMPLING EQUIPMENT: *BH4 core head - 3" rigid polycarbonate liner with nose cone and core catcher*

SAMPLING PERSONNEL: *RBL, ADH* LOGGED BY: *HAJ*

CORE ID: ***STATION E*** TIME: *9:56*

LATITUDE: *41.656856* LONGITUDE: *-70.461881* POSITION ACCURACY: *3.0'*

MEASURED WATER DEPTH: *9.1'* CORRECTED WATER DEPTH: *33.6' NAVD88*

TARGET PENETRATION: *8.0'/Refusal* ACTUAL PENETRATION: *8.0'* RECOVERY: *8.0'*

COMMENTS: *1 attempt. Driven to core head in soft organic silt.*

SAMPLE INTERVAL(S): *0-4.0', 4.0-6.0', 6.0-8.0' nutrient analysis*

CORE PHOTO:	CORE DESCRIPTION:
	0-5.2' Dark olive brown SILT, little to some organic debris, loose, non-plastic, saturated (OL) *5.2-8.0' Dark olive brown SILT, little organic debris, very soft to soft, non-plastic, wet (OL)*

PROJECT NAME: *Santuit Pond Section 206* DATE: *4/27/2021*

PROJECT LOCATION: *Mashpee, MA* SEA STATE: *Windy, light chop*

VESSEL: *R/V Gloria H.* POSITIONING EQUIPMENT: *Hemisphere VS330 - Differential Corrections*

SAMPLING EQUIPMENT: *BH4 core head - 3" rigid polycarbonate liner with nose cone and core catcher*

SAMPLING PERSONNEL: *RBL, ADH* LOGGED BY: *HAJ*

CORE ID: ***STATION F*** TIME: *9:37*

LATITUDE: *41.657287* LONGITUDE: *-70.460727* POSITION ACCURACY: *3.0'*

MEASURED WATER DEPTH: *8.5'* CORRECTED WATER DEPTH: *34.2' NAVD88*

TARGET PENETRATION: *8.0'/Refusal* ACTUAL PENETRATION: *8.0'* RECOVERY: *8.0'*

COMMENTS: *1 attempt. Driven to core head in soft organic silt. Upper interval is very loose.*

SAMPLE INTERVAL(S): *3.2-8.0' grain size & chemistry*

CORE PHOTO:	CORE DESCRIPTION:
	0-3.2' Dark olive brown SILT, loose, non-plastic, saturated (OL)- water content is too high for chemical analysis *3.2-8.0' Dark olive brown SILT, little organic debris, very soft to soft, non-plastic, wet to moist (OL)*

PROJECT NAME: *Santuit Pond Section 206* DATE: *4/27/2021*

PROJECT LOCATION: *Mashpee, MA* SEA STATE: *Windy, light chop*

VESSEL: *R/V Gloria H.* POSITIONING EQUIPMENT: *Hemisphere VS330 - Differential Corrections*

SAMPLING EQUIPMENT: *BH4 core head - 3" rigid polycarbonate liner with nose cone and core catcher*

SAMPLING PERSONNEL: *RBL, ADH* LOGGED BY: *HAJ*

CORE ID: ***STATION G*** TIME: *10:35*

LATITUDE: *41.653273* LONGITUDE: *-70.462305* POSITION ACCURACY: *3.0'*

MEASURED WATER DEPTH: *7.6'* CORRECTED WATER DEPTH: *35.1' NAVD88*

TARGET PENETRATION: *8.0'/Refusal* ACTUAL PENETRATION: *8.0'* RECOVERY: *7.0'*

COMMENTS: *3 attempts. Driven to core head in soft organic silt. Some sand present at depth.*

SAMPLE INTERVAL(S): *0-3.0', 3.0-5.0', 5.0-7.0' nutrient analysis*

CORE PHOTO:	CORE DESCRIPTION:
	0-3.2' Dark olive brown SILT, little organic debris, loose, non-plastic, saturated (OL) *3.2-6.8' Dark olive brown SILT, trace to little organic debris, very soft to soft, non-plastic, wet to moist (OL)* *6.8-7.0' Dark brown to grey fine to medium SAND, trace silt and organic debris, firm, wet (SP)*

PROJECT NAME: *Santuit Pond Section 206* DATE: *4/27/2021*

PROJECT LOCATION: *Mashpee, MA* SEA STATE: *Windy, light chop*

VESSEL: *R/V Gloria H.* POSITIONING EQUIPMENT: *Hemisphere VS330 - Differential Corrections*

SAMPLING EQUIPMENT: *BH4 core head - 3" rigid polycarbonate liner with nose cone and core catcher*

SAMPLING PERSONNEL: *RBL, ADH* LOGGED BY: *HAJ*

CORE ID: ***STATION H*** TIME: *10:48*

LATITUDE: *41.654128* LONGITUDE: *-70.459907* POSITION ACCURACY: *3.0'*

MEASURED WATER DEPTH: *10.6'* CORRECTED WATER DEPTH: *32.1' NAVD88*

TARGET PENETRATION: *8.0'/Refusal* ACTUAL PENETRATION: *8.0'* RECOVERY: *8.0'*

COMMENTS: *1 attempt. Driven to core head in soft organic silt.*

SAMPLE INTERVAL(S): *0-8.0' grain size & chemistry*

CORE PHOTO:	CORE DESCRIPTION:
	0-8.0' Dark olive brown SILT, little organic debris, very soft, non-plastic, wet (OL)

PROJECT NAME: *Santuit Pond Section 206* DATE: *4/27/2021*

PROJECT LOCATION: *Mashpee, MA* SEA STATE: *Windy, light chop*

VESSEL: *R/V Gloria H.* POSITIONING EQUIPMENT: *Hemisphere VS330 - Differential Corrections*

SAMPLING EQUIPMENT: *BH4 core head - 3" rigid polycarbonate liner with nose cone and core catcher*

SAMPLING PERSONNEL: *RBL, ADH* LOGGED BY: *HAJ*

CORE ID: ***STATION I*** TIME: *11:03*

LATITUDE: *41.655098* LONGITUDE: *-70.457140* POSITION ACCURACY: *3.0'*

MEASURED WATER DEPTH: *8.4'* CORRECTED WATER DEPTH: *34.3' NAVD88*

TARGET PENETRATION: *8.0'/Refusal* ACTUAL PENETRATION: *6.3'* RECOVERY: *6.3'*

COMMENTS: *1 attempt. Refusal in packed sand.*

SAMPLE INTERVAL(S): *0-4.3' grain size & chemistry*

CORE PHOTO:	CORE DESCRIPTION:
	0-2.0' Dark olive brown SILT, little organic debris, very soft, non-plastic, saturated (OL) *2.0-4.3' Dark olive brown SILT, little organic debris, very soft, non-plastic, wet (OL) – few plastic debris at 2.3'* *4.3-6.3' Dark brown fine to medium SAND, little silt, trace organic debris, firm, wet (SP)* *Lenses of dark brown sand and silt (SM) from 5.7-5.8'*

PROJECT NAME: *Santuit Pond Section 206* DATE: *4/26/2021*

PROJECT LOCATION: *Mashpee, MA* SEA STATE: *Windy, light chop*

VESSEL: *R/V Gloria H.* POSITIONING EQUIPMENT: *Hemisphere VS330 - Differential Corrections*

SAMPLING EQUIPMENT: *BH4 core head - 3" rigid polycarbonate liner with nose cone and core catcher*

SAMPLING PERSONNEL: *RBL, ADH* LOGGED BY: *HAJ*

CORE ID: ***STATION J*** TIME: *13:21*

LATITUDE: *41.651185* LONGITUDE: *-70.459519* POSITION ACCURACY: *3.0'*

MEASURED WATER DEPTH: *7.4'* CORRECTED WATER DEPTH: *35.3' NAVD88*

TARGET PENETRATION: *8.0'/Refusal* ACTUAL PENETRATION: *8.0'* RECOVERY: *8.0'*

COMMENTS: *1 attempt. Driven to core head. Material is soft organic silt over sand.*

SAMPLE INTERVAL(S): *0-6.1' grain size & chemistry*

CORE PHOTO:	CORE DESCRIPTION:
	0-3.7' Dark olive brown SILT, little organic debris, very soft, non-plastic, saturated (OL) *3.7-6.1' Dark olive brown SILT, trace fine sand, little organic debris, very soft to soft, non-plastic, wet (OL)* *6.1-6.8' Brown/ dark brown fine to medium SAND, trace silt, firm, wet (SP)* *6.8-8.0' Dark olive brown SILT, some organic debris, soft, low to no plasticity, moist (OL)*

PROJECT NAME: *Santuit Pond Section 206* DATE: *4/26/2021*

PROJECT LOCATION: *Mashpee, MA* SEA STATE: *Windy, light chop*

VESSEL: *R/V Gloria H.* POSITIONING EQUIPMENT: *Hemisphere VS330 - Differential Corrections*

SAMPLING EQUIPMENT: *BH4 core head - 3" rigid polycarbonate liner with nose cone and core catcher*

SAMPLING PERSONNEL: *RBL, ADH* LOGGED BY: *HAJ*

CORE ID: ***STATION K*** TIME: *12:58*

LATITUDE: *41.653394* LONGITUDE: *-70.456680* POSITION ACCURACY: *3.0'*

MEASURED WATER DEPTH: *9.8'* CORRECTED WATER DEPTH: *32.9' NAVD88*

TARGET PENETRATION: *8.0'/Refusal* ACTUAL PENETRATION: *8.0'* RECOVERY: *8.0'*

COMMENTS: *1 attempt. Driven to core head. Material is soft organic silt over sand.*

SAMPLE INTERVAL(S): -

CORE PHOTO:	CORE DESCRIPTION:
	0-4.2' Dark olive brown SILT, little organic debris, very soft, non-plastic, saturated (OL) *4.2-5.0' Dark olive brown SILT, trace fine sand, little organic debris, very soft to soft, non-plastic, wet (OL)* *5.0-8.0' Tan to grey fine to medium SAND, trace silt, firm to very firm, wet (SP)* *Some medium to coarse rounded gravel from 7.7-8.0'*

PROJECT NAME: *Santuit Pond Section 206* DATE: *4/26/2021*

PROJECT LOCATION: *Mashpee, MA* SEA STATE: *Windy, light chop*

VESSEL: *R/V Gloria H.* POSITIONING EQUIPMENT: *Hemisphere VS330 - Differential Corrections*

SAMPLING EQUIPMENT: *BH4 core head - 3" rigid polycarbonate liner with nose cone and core catcher*

SAMPLING PERSONNEL: *RBL, ADH* LOGGED BY: *HAJ*

CORE ID: ***STATION L*** TIME: *12:42*

LATITUDE: *41.651590* LONGITUDE: *-70.456599* POSITION ACCURACY: *3.0'*

MEASURED WATER DEPTH: *6.8'* CORRECTED WATER DEPTH: *35.9' NAVD88*

TARGET PENETRATION: *8.0'/Refusal* ACTUAL PENETRATION: *4.2'* RECOVERY: *4.2'*

COMMENTS: *1 attempt. Refusal in packed sand.*

SAMPLE INTERVAL(S): *0-3.6' grain size & chemistry – no geotechnical analysis due to very high % moisture*

CORE PHOTO:	CORE DESCRIPTION:
	0-3.0' Dark olive brown SILT, little organic debris, loose, non-plastic, saturated (OL) *3.0-3.6' Dark olive brown SILT, little organic debris, very soft, non-plastic, wet (OL)* *3.6-3.8' Dark brown fine to medium SAND, some silt, firm, wet (SM)* *3.8-4.2' Dark brown fine medium to coarse subangular GRAVEL, some fine to medium sand, little silt, firm (GM)*

PROJECT NAME: *Santuit Pond Section 206* DATE: *4/26/2021*

PROJECT LOCATION: *Mashpee, MA* SEA STATE: *Windy, light chop*

VESSEL: *R/V Gloria H.* POSITIONING EQUIPMENT: *Hemisphere VS330 - Differential Corrections*

SAMPLING EQUIPMENT: *BH4 core head - 3" rigid polycarbonate liner with nose cone and core catcher*

SAMPLING PERSONNEL: *RBL, ADH* LOGGED BY: *HAJ*

CORE ID: ***STATION M*** TIME: *11:49*

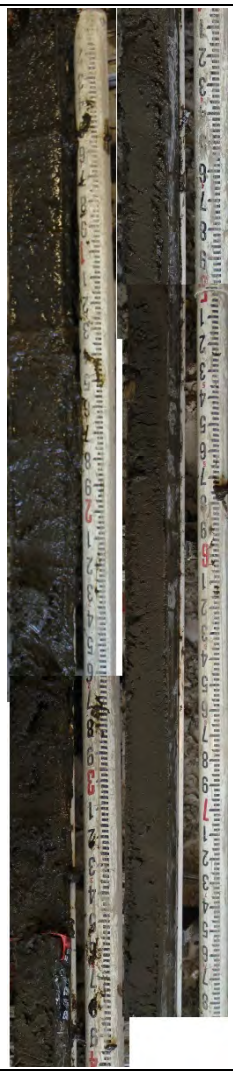
LATITUDE: *41.652135* LONGITUDE: *-70.455256* POSITION ACCURACY: *3.0'*

MEASURED WATER DEPTH: *11.4'* CORRECTED WATER DEPTH: *31.3' NAVD88*

TARGET PENETRATION: *8.0'/Refusal* ACTUAL PENETRATION: *8.0'* RECOVERY: *8.0'*

COMMENTS: *1 attempt. Driven to core head in soft organic silt.*

SAMPLE INTERVAL(S): *0-2.0', 2.0-4.0', 4.0-6.0, 6.0-8.0' nutrient analysis*

CORE PHOTO:	CORE DESCRIPTION:
	*0-2.4' Dark olive brown SILT, some organic debris, very soft, non-plastic, saturated (OL)* *2.4-8.0' Dark olive brown SILT, trace to little organic debris, very soft to soft, non-plastic, wet (OL)*

PROJECT NAME: *Santuit Pond Section 206* DATE: *4/26/2021*

PROJECT LOCATION: *Mashpee, MA* SEA STATE: *Windy, light chop*

VESSEL: *R/V Gloria H.* POSITIONING EQUIPMENT: *Hemisphere VS330 - Differential Corrections*

SAMPLING EQUIPMENT: *BH4 core head - 3" rigid polycarbonate liner with nose cone and core catcher*

SAMPLING PERSONNEL: *RBL, ADH* LOGGED BY: *HAJ*

CORE ID: ***STATION N*** TIME: *11:35*

LATITUDE: *41.652135* LONGITUDE: *-70.453913* POSITION ACCURACY: *3.0'*

MEASURED WATER DEPTH: *9.9'* CORRECTED WATER DEPTH: *32.8' NAVD88*

TARGET PENETRATION: *8.0'/Refusal* ACTUAL PENETRATION: *7.2'* RECOVERY: *7.2'*

COMMENTS: *1 attempt. Refusal in packed sand.*

SAMPLE INTERVAL(S): *0-2.6' grain size & chemistry*

CORE PHOTO:	CORE DESCRIPTION:
	0-2.6' Dark olive brown SILT, little organic debris, very soft to soft, non-plastic, saturated to wet (OL) *2.6-3.8' Dark brown fine to medium SAND, some silt, firm, wet (SM) - lenses of black silt and organic debris (OL) at 3.2-3.3', 3.5-3.6', 3.7-3.8'* *3.8-7.2' Brown fine to medium SAND, trace silt and organic debris, firm to very firm, wet to moist (SP)*

PROJECT NAME: *Santuit Pond Section 206* DATE: *4/26/2021*

PROJECT LOCATION: *Mashpee, MA* SEA STATE: *Windy, light chop*

VESSEL: *R/V Gloria H.* POSITIONING EQUIPMENT: *Hemisphere VS330 - Differential Corrections*

SAMPLING EQUIPMENT: *BH4 core head - 3" rigid polycarbonate liner with nose cone and core catcher*

SAMPLING PERSONNEL: *RBL, ADH* LOGGED BY: *HAJ*

CORE ID: ***STATION O*** TIME: *12:23*

LATITUDE: *41.649886* LONGITUDE: *-70.456761* POSITION ACCURACY: *3.0'*

MEASURED WATER DEPTH: *7.9'* CORRECTED WATER DEPTH: *34.8' NAVD88*

TARGET PENETRATION: *8.0'/Refusal* ACTUAL PENETRATION: *8.0'* RECOVERY: *8.0'*

COMMENTS: *1 attempt. Driven to core head in soft organic silt.*

SAMPLE INTERVAL(S): *0-2.0', 2.0-4.0', 4.0-6.0, 6.0-8.0' nutrient analysis*

CORE PHOTO:	CORE DESCRIPTION:
	0-3.5' Dark olive brown SILT, some organic debris, very soft, non-plastic, saturated (OL) *2.4-8.0' Dark olive brown SILT, trace to little organic debris, very soft to soft, non-plastic, wet (OL)*

PROJECT NAME: *Santuit Pond Section 206* DATE: *4/26/2021*

PROJECT LOCATION: *Mashpee, MA* SEA STATE: *Windy, light chop*

VESSEL: *R/V Gloria H.* POSITIONING EQUIPMENT: *Hemisphere VS330 - Differential Corrections*

SAMPLING EQUIPMENT: *BH4 core head - 3" rigid polycarbonate liner with nose cone and core catcher*

SAMPLING PERSONNEL: *RBL, ADH* LOGGED BY: *HAJ*

CORE ID: ***STATION P*** TIME: *12:07*

LATITUDE: *41.650391* LONGITUDE: *-70.454869* POSITION ACCURACY: *3.0'*

MEASURED WATER DEPTH: *9.8'* CORRECTED WATER DEPTH: *32.9' NAVD88*

TARGET PENETRATION: *8.0'/Refusal* ACTUAL PENETRATION: *8.0'* RECOVERY: *8.0'*

COMMENTS: *1 attempt. Driven to core head in soft organic silt.*

SAMPLE INTERVAL(S): *0-8.0' grain size & chemistry*

CORE PHOTO:	CORE DESCRIPTION:
	0-3.5' Dark olive brown SILT, some organic debris, very soft, non-plastic, wet (OL) *2.4-8.0' Dark olive brown SILT, trace organic debris, soft, non-plastic, wet to moist (OL)*

PROJECT NAME: *Santuit Pond Section 206* DATE: *4/26/2021*

PROJECT LOCATION: *Mashpee, MA* SEA STATE: *Windy, light chop*

VESSEL: *R/V Gloria H.* POSITIONING EQUIPMENT: *Hemisphere VS330 - Differential Corrections*

SAMPLING EQUIPMENT: *BH4 core head - 3" rigid polycarbonate liner with nose cone and core catcher*

SAMPLING PERSONNEL: *RBL, ADH* LOGGED BY: *HAJ*

CORE ID: ***STATION Q*** TIME: *10:53*

LATITUDE: *41.650835* LONGITUDE: *-70.453093* POSITION ACCURACY: *3.0'*

MEASURED WATER DEPTH: *9.1'* CORRECTED WATER DEPTH: *33.6' NAVD88*

TARGET PENETRATION: *8.0'/Refusal* ACTUAL PENETRATION: *1.0'* RECOVERY: *1.0'*

COMMENTS: *6 attempts and 2 relocations with no greater than 1.0' penetration. Refusal on packed sand/gravel.*

SAMPLE INTERVAL(S): -

CORE PHOTO:	CORE DESCRIPTION:
	0-0.4' Dark brown fine to medium SAND, some fine sub-angular gravel, little silt, firm, wet (SP) *0.4-1.0' Dark brown medium to coarse sub-angular gravel little fine to medium sand and silt, firm, wet (GM)*

PROJECT NAME: *Santuit Pond Section 206* DATE: *4/26/2021*

PROJECT LOCATION: *Mashpee, MA* SEA STATE: *Windy, light chop*

VESSEL: *R/V Gloria H.* POSITIONING EQUIPMENT: *Hemisphere VS330 - Differential Corrections*

SAMPLING EQUIPMENT: *BH4 core head - 3" rigid polycarbonate liner with nose cone and core catcher*

SAMPLING PERSONNEL: *RBL, ADH* LOGGED BY: *HAJ*

CORE ID: ***STATION R*** TIME: *10:11*

LATITUDE: *41.647771* LONGITUDE: *-70.454346* POSITION ACCURACY: *3.0'*

MEASURED WATER DEPTH: *9.4'* CORRECTED WATER DEPTH: *33.3' NAVD88*

TARGET PENETRATION: *8.0'/Refusal* ACTUAL PENETRATION: *5.3'* RECOVERY: *5.3'*

COMMENTS: *1 attempt. Core driven to firm refusal in packed sand.*

SAMPLE INTERVAL(S): *0-4.7' grain size & chemistry*

CORE PHOTO:	CORE DESCRIPTION:
	0-3.2' Dark olive brown SILT, little organic debris, very soft, non-plastic, saturated (OL) *3.2-4.7' Dark olive brown SILT, trace fine sand, little organic debris, very soft, non-plastic, wet (OL)* *4.7-5.3' Dark brown fine to medium SAND, some silt, trace organic debris, firm, wet (SM)*

PROJECT NAME: *Santuit Pond Section 206* DATE: *4/26/2021*

PROJECT LOCATION: *Mashpee, MA* SEA STATE: *Windy, light chop*

VESSEL: *R/V Gloria H.* POSITIONING EQUIPMENT: *Hemisphere VS330 - Differential Corrections*

SAMPLING EQUIPMENT: *BH4 core head - 3" rigid polycarbonate liner with nose cone and core catcher*

SAMPLING PERSONNEL: *RBL, ADH* LOGGED BY: *HAJ*

CORE ID: ***STATION S*** TIME: *10:33*

LATITUDE: *41.648444* LONGITUDE: *-70.453246* POSITION ACCURACY: *3.0'*

MEASURED WATER DEPTH: *9.1'* CORRECTED WATER DEPTH: *33.6' NAVD88*

TARGET PENETRATION: *8.0'/Refusal* ACTUAL PENETRATION: *8.0'* RECOVERY: *8.0'*

COMMENTS: *1 attempt. Driven to core head in soft organic silt.*

SAMPLE INTERVAL(S): *0-2.0', 2.0-4.0', 4.0-6.0, 6.0-8.0' nutrient analysis*

CORE PHOTO:	CORE DESCRIPTION:
	0-4.2' Dark olive brown SILT, little organic debris, very soft to soft, non-plastic, saturated to wet (OL) *4.2-4.8' Brown to dark brown fine to medium SAND, trace silt and organic debris, firm, wet (SP)* *4.8-8.0' Dark olive brown SILT, trace organic debris, soft, non-plastic, wet (OL)*

APPENDIX C LABORATORY TESTING REPORTS

ANALYTICAL REPORT

Lab Number:	L2124064
Client:	U.S. Army Corps of Engineers 696 Virginia Road Concord, MA 01742-2751
ATTN:	Richard Loyd
Phone:	(978) 318-8048
Project Name:	SANTUIT POND
Project Number:	Not Specified
Report Date:	06/15/21

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

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

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

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2124064-01	B 0-8'	SEDIMENT	MASHPEE, MA	04/29/21 14:06	05/07/21
L2124064-02	D 0-3.0'	SEDIMENT	MASHPEE, MA	04/29/21 14:20	05/07/21
L2124064-03	E 3.2-8'	SEDIMENT	MASHPEE, MA	04/29/21 15:20	05/07/21
L2124064-04	I 0-4.3'	SEDIMENT	MASHPEE, MA	04/29/21 12:10	05/07/21
L2124064-05	H 0-8'	SEDIMENT	MASHPEE, MA	04/29/21 12:55	05/07/21
L2124064-06	J 0-6.1'	SEDIMENT	MASHPEE, MA	04/29/21 15:00	05/07/21
L2124064-07	L 0-3.6'	SEDIMENT	MASHPEE, MA	04/29/21 13:25	05/07/21
L2124064-08	N 0-2.6'	SEDIMENT	MASHPEE, MA	04/29/21 14:35	05/07/21
L2124064-09	P 0-6.7'	SEDIMENT	MASHPEE, MA	04/29/21 13:10	05/07/21
L2124064-10	R 0-4.7'	SEDIMENT	MASHPEE, MA	04/29/21 13:00	05/07/21

Project Name:	SANTUIT POND	**Lab Number:**	L2124064
Project Number:	Not Specified	**Report Date:**	06/15/21

Case Narrative

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

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

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

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

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

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

Project Name:	SANTUIT POND	**Lab Number:**	L2124064
Project Number:	Not Specified	**Report Date:**	06/15/21

Case Narrative (continued)

Report Submission

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

Semivolatile Organics

L2124064: Samples were frozen upon receipt in order to arrest the holding time.

L2124064: The samples have elevated detection limits due to high moisture content and did not meet the RIM RLs.

Gasoline Range Organics

L2124064-02, -06, and -10: The analysis was performed utilizing volume from a previously used (EPH/TPH) container, which may have had headspace.

Pesticides

L2124064: The samples have elevated detection limits due to high moisture content and did not meet the RIM RLs.

The WG1506803-2/-3 LCS/LCSD recoveries and RPD, associated with L2124064-01 through -10, are outside the RIM acceptance criteria for individual target compounds, but within the overall lab SOP method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for hexachlorobenzene (48%/48%), beta-BHC (48%-LCSD only), gamma-BHC (48%/47%), delta-bhc (48%/43%), endrin (48%-LCSD only) and methoxychlor (33% RPD).

The WG1509046-2/-3 LCS/LCSD recoveries and RPDs, associated with L2124064-08, are outside the RIM acceptance criteria for individual target compounds, but within the overall lab SOP method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for hexachlorobenzene (47%) and gamma-BHC (48%). In addition, the WG1509046-2/-3 LCS/LCSD RPD(s) are above the RIM acceptance criteria for heptachlor epoxide (34%), oxychlordane (32%), endosulfan II (34%).

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

Case Narrative (continued)

Total Metals

L2124064: The samples have elevated detection limits due to high moisture content and did not meet the RIM RLs.

Total Mercury

L2124064: Samples were frozen upon receipt in order to arrest the holding time.

Total Organic Carbon

L2124064: Samples were frozen upon receipt in order to arrest the holding time.

L2124064-07: The Sample Replicate RPD is outside the acceptance criteria of 30%. A double-burn re-analysis was performed with a confirming result. The results of the original analysis are reported. The elevated RPD has been attributed to the non-homogeneous nature of the sample.

The WG1509884-4/-5 MS/MSD recoveries (Rep1 - 320%/68%) / (Rep2 - 53%/175%) performed on L2124064-01, do not apply because the sample concentrations are greater than four times the spike amounts added. In addition, the WG1509884-4/-5 MS/MSD RPD (Rep1 - 27%), performed on L2124064-01, is outside the acceptance criteria of 25%. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

The WG1509884-3 Laboratory Duplicate RPD (Rep1 - 31%), performed on L2124064-01, is outside the acceptance criteria of 25%. 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: Elizabeth Porta

Title: Technical Director/Representative Date: 06/15/21

ORGANICS

SEMIVOLATILES

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-01
Client ID: B 0-8'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 14:06
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 06/09/21 13:30
Analyst: GP
Percent Solids: 18%

Extraction Method: EPA 3570
Extraction Date: 06/02/21 21:47
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	13.7	J	ug/kg	14.4	2.37	1
Acenaphthylene	ND		ug/kg	14.4	1.70	1
Acenaphthene	ND		ug/kg	14.4	2.76	1
Fluorene	ND		ug/kg	14.4	1.54	1
Phenanthrene	4.95	J	ug/kg	14.4	3.02	1
Anthracene	ND		ug/kg	14.4	1.84	1
Fluoranthene	6.09	J	ug/kg	14.4	2.72	1
Pyrene	5.41	J	ug/kg	14.4	4.00	1
Benz(a)anthracene	ND		ug/kg	14.4	3.45	1
Chrysene	ND		ug/kg	14.4	3.35	1
Benzo(b)fluoranthene	6.01	J	ug/kg	14.4	4.79	1
Benzo(k)fluoranthene	5.54	J	ug/kg	14.4	2.20	1
Benzo(a)pyrene	6.64	J	ug/kg	14.4	6.41	1
Indeno(1,2,3-cd)Pyrene	19.7		ug/kg	14.4	3.61	1
Dibenz(a,h)anthracene	30.6		ug/kg	14.4	1.78	1
Benzo(ghi)perylene	13.6	J	ug/kg	14.4	1.54	1
Cl2-BZ#8	ND		ug/kg	1.44	0.285	1
Cl3-BZ#18	ND		ug/kg	1.44	0.207	1
Cl3-BZ#28	ND		ug/kg	1.44	0.352	1
Cl4-BZ#44	ND		ug/kg	1.44	0.392	1
Cl4-BZ#49	ND		ug/kg	1.44	0.384	1
Cl4-BZ#52	ND		ug/kg	1.44	0.218	1
Cl4-BZ#66	ND		ug/kg	1.44	0.206	1
Cl5-BZ#87	ND		ug/kg	1.44	0.167	1
Cl5-BZ#101	ND		ug/kg	1.44	0.335	1
Cl5-BZ#105	ND		ug/kg	1.44	0.300	1
Cl5-BZ#118	ND		ug/kg	1.44	0.318	1
Cl6-BZ#128	ND		ug/kg	1.44	0.375	1

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-01
Client ID: B 0-8'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 14:06
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl6-BZ#138	ND		ug/kg	1.44	0.240	1
Cl6-BZ#153	ND		ug/kg	1.44	0.500	1
Cl7-BZ#170	ND		ug/kg	1.44	0.184	1
Cl7-BZ#180	ND		ug/kg	1.44	0.188	1
Cl7-BZ#183	ND		ug/kg	1.44	0.101	1
Cl7-BZ#184	ND		ug/kg	1.44	0.207	1
Cl7-BZ#187	ND		ug/kg	1.44	0.270	1
Cl8-BZ#195	ND		ug/kg	1.44	0.354	1
Cl9-BZ#206	ND		ug/kg	1.44	0.361	1
Cl10-BZ#209	ND		ug/kg	1.44	0.414	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	79		30-150
Pyrene-d10	76		30-150
Benzo(b)fluoranthene-d12	66		30-150
DBOB	69		30-150
BZ 198	62		30-150

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-02
Client ID: D 0-3.0'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 14:20
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 06/09/21 14:06
Analyst: GP
Percent Solids: 10%

Extraction Method: EPA 3570
Extraction Date: 06/02/21 21:47
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	26.0	J	ug/kg	26.9	4.44	1
Acenaphthylene	15.0	J	ug/kg	26.9	3.18	1
Acenaphthene	ND		ug/kg	26.9	5.17	1
Fluorene	9.09	J	ug/kg	26.9	2.88	1
Phenanthrene	91.6		ug/kg	26.9	5.65	1
Anthracene	21.5	J	ug/kg	26.9	3.44	1
Fluoranthene	188		ug/kg	26.9	5.09	1
Pyrene	159		ug/kg	26.9	7.48	1
Benz(a)anthracene	71.8		ug/kg	26.9	6.46	1
Chrysene	83.8		ug/kg	26.9	6.27	1
Benzo(b)fluoranthene	134		ug/kg	26.9	8.96	1
Benzo(k)fluoranthene	65.6		ug/kg	26.9	4.12	1
Benzo(a)pyrene	71.0		ug/kg	26.9	12.0	1
Indeno(1,2,3-cd)Pyrene	70.3		ug/kg	26.9	6.76	1
Dibenz(a,h)anthracene	36.3		ug/kg	26.9	3.34	1
Benzo(ghi)perylene	78.7		ug/kg	26.9	2.88	1
Cl2-BZ#8	0.576	J	ug/kg	2.69	0.533	1
Cl3-BZ#18	1.85	J	ug/kg	2.69	0.388	1
Cl3-BZ#28	ND		ug/kg	2.69	0.659	1
Cl4-BZ#44	1.08	J	ug/kg	2.69	0.735	1
Cl4-BZ#49	ND		ug/kg	2.69	0.719	1
Cl4-BZ#52	0.584	J	ug/kg	2.69	0.409	1
Cl4-BZ#66	0.522	J	ug/kg	2.69	0.385	1
Cl5-BZ#87	0.573	J	ug/kg	2.69	0.312	1
Cl5-BZ#101	0.996	J	ug/kg	2.69	0.627	1
Cl5-BZ#105	ND		ug/kg	2.69	0.562	1
Cl5-BZ#118	0.756	J	ug/kg	2.69	0.595	1
Cl6-BZ#128	ND		ug/kg	2.69	0.702	1

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-02
Client ID: D 0-3.0'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 14:20
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl6-BZ#138	1.62	J	ug/kg	2.69	0.449	1
Cl6-BZ#153	0.961	J	ug/kg	2.69	0.937	1
Cl7-BZ#170	ND		ug/kg	2.69	0.344	1
Cl7-BZ#180	ND		ug/kg	2.69	0.352	1
Cl7-BZ#183	ND		ug/kg	2.69	0.190	1
Cl7-BZ#184	ND		ug/kg	2.69	0.388	1
Cl7-BZ#187	ND		ug/kg	2.69	0.506	1
Cl8-BZ#195	ND		ug/kg	2.69	0.662	1
Cl9-BZ#206	ND		ug/kg	2.69	0.676	1
Cl10-BZ#209	ND		ug/kg	2.69	0.775	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	69		30-150
Pyrene-d10	68		30-150
Benzo(b)fluoranthene-d12	60		30-150
DBOB	66		30-150
BZ 198	63		30-150

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-03
Client ID: E 3.2-8'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 15:20
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 06/14/21 12:07
Analyst: GP
Percent Solids: 19%

Extraction Method: EPA 3570
Extraction Date: 05/25/21 22:15
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	6.33	J	ug/kg	13.1	2.16	1
Acenaphthylene	ND		ug/kg	13.1	1.55	1
Acenaphthene	ND		ug/kg	13.1	2.52	1
Fluorene	2.75	J	ug/kg	13.1	1.40	1
Phenanthrene	4.56	J	ug/kg	13.1	2.76	1
Anthracene	ND		ug/kg	13.1	1.68	1
Fluoranthene	5.97	J	ug/kg	13.1	2.48	1
Pyrene	ND		ug/kg	13.1	3.65	1
Benz(a)anthracene	ND		ug/kg	13.1	3.15	1
Chrysene	ND		ug/kg	13.1	3.06	1
Benzo(b)fluoranthene	ND		ug/kg	13.1	4.37	1
Benzo(k)fluoranthene	2.02	J	ug/kg	13.1	2.01	1
Benzo(a)pyrene	ND		ug/kg	13.1	5.85	1
Indeno(1,2,3-cd)Pyrene	3.31	J	ug/kg	13.1	3.29	1
Dibenz(a,h)anthracene	ND		ug/kg	13.1	1.63	1
Benzo(ghi)perylene	2.52	J	ug/kg	13.1	1.40	1
Cl2-BZ#8	ND		ug/kg	1.31	0.260	1
Cl3-BZ#18	ND		ug/kg	1.31	0.189	1
Cl3-BZ#28	ND		ug/kg	1.31	0.321	1
Cl4-BZ#44	ND		ug/kg	1.31	0.358	1
Cl4-BZ#49	ND		ug/kg	1.31	0.350	1
Cl4-BZ#52	ND		ug/kg	1.31	0.199	1
Cl4-BZ#66	ND		ug/kg	1.31	0.188	1
Cl5-BZ#87	ND		ug/kg	1.31	0.152	1
Cl5-BZ#101	ND		ug/kg	1.31	0.306	1
Cl5-BZ#105	ND		ug/kg	1.31	0.274	1
Cl5-BZ#118	ND		ug/kg	1.31	0.290	1
Cl6-BZ#128	ND		ug/kg	1.31	0.342	1

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-03
Client ID: E 3.2-8'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 15:20
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl6-BZ#138	ND		ug/kg	1.31	0.219	1
Cl6-BZ#153	ND		ug/kg	1.31	0.456	1
Cl7-BZ#170	ND		ug/kg	1.31	0.168	1
Cl7-BZ#180	ND		ug/kg	1.31	0.172	1
Cl7-BZ#183	ND		ug/kg	1.31	0.093	1
Cl7-BZ#184	ND		ug/kg	1.31	0.189	1
Cl7-BZ#187	ND		ug/kg	1.31	0.247	1
Cl8-BZ#195	ND		ug/kg	1.31	0.323	1
Cl9-BZ#206	ND		ug/kg	1.31	0.329	1
Cl10-BZ#209	ND		ug/kg	1.31	0.378	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	59		30-150
Pyrene-d10	65		30-150
Benzo(b)fluoranthene-d12	60		30-150
DBOB	66		30-150
BZ 198	61		30-150

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-04
Client ID: I 0-4.3'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 12:10
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 06/14/21 12:40
Analyst: GP
Percent Solids: 23%

Extraction Method: EPA 3570
Extraction Date: 05/25/21 22:15
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	4.94	J	ug/kg	11.3	1.86	1
Acenaphthylene	2.07	J	ug/kg	11.3	1.33	1
Acenaphthene	ND		ug/kg	11.3	2.17	1
Fluorene	2.66	J	ug/kg	11.3	1.21	1
Phenanthrene	9.15	J	ug/kg	11.3	2.37	1
Anthracene	1.70	J	ug/kg	11.3	1.45	1
Fluoranthene	16.8		ug/kg	11.3	2.14	1
Pyrene	14.8		ug/kg	11.3	3.14	1
Benz(a)anthracene	6.62	J	ug/kg	11.3	2.71	1
Chrysene	7.17	J	ug/kg	11.3	2.63	1
Benzo(b)fluoranthene	8.90	J	ug/kg	11.3	3.76	1
Benzo(k)fluoranthene	6.40	J	ug/kg	11.3	1.73	1
Benzo(a)pyrene	6.32	J	ug/kg	11.3	5.04	1
Indeno(1,2,3-cd)Pyrene	7.11	J	ug/kg	11.3	2.84	1
Dibenz(a,h)anthracene	ND		ug/kg	11.3	1.40	1
Benzo(ghi)perylene	7.34	J	ug/kg	11.3	1.21	1
Cl2-BZ#8	ND		ug/kg	1.13	0.224	1
Cl3-BZ#18	ND		ug/kg	1.13	0.163	1
Cl3-BZ#28	ND		ug/kg	1.13	0.277	1
Cl4-BZ#44	ND		ug/kg	1.13	0.309	1
Cl4-BZ#49	ND		ug/kg	1.13	0.302	1
Cl4-BZ#52	ND		ug/kg	1.13	0.172	1
Cl4-BZ#66	ND		ug/kg	1.13	0.162	1
Cl5-BZ#87	ND		ug/kg	1.13	0.131	1
Cl5-BZ#101	ND		ug/kg	1.13	0.263	1
Cl5-BZ#105	ND		ug/kg	1.13	0.236	1
Cl5-BZ#118	ND		ug/kg	1.13	0.250	1
Cl6-BZ#128	ND		ug/kg	1.13	0.295	1

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-04
Client ID: I 0-4.3'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 12:10
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl6-BZ#138	ND		ug/kg	1.13	0.189	1
Cl6-BZ#153	ND		ug/kg	1.13	0.393	1
Cl7-BZ#170	ND		ug/kg	1.13	0.145	1
Cl7-BZ#180	ND		ug/kg	1.13	0.148	1
Cl7-BZ#183	ND		ug/kg	1.13	0.080	1
Cl7-BZ#184	ND		ug/kg	1.13	0.163	1
Cl7-BZ#187	ND		ug/kg	1.13	0.212	1
Cl8-BZ#195	ND		ug/kg	1.13	0.278	1
Cl9-BZ#206	ND		ug/kg	1.13	0.284	1
Cl10-BZ#209	ND		ug/kg	1.13	0.326	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	66		30-150
Pyrene-d10	72		30-150
Benzo(b)fluoranthene-d12	67		30-150
DBOB	77		30-150
BZ 198	73		30-150

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-05
Client ID: H 0-8'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 12:55
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 06/14/21 13:13
Analyst: GP
Percent Solids: 19%

Extraction Method: EPA 3570
Extraction Date: 05/25/21 22:15
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	5.59	J	ug/kg	14.2	2.34	1
Acenaphthylene	ND		ug/kg	14.2	1.68	1
Acenaphthene	ND		ug/kg	14.2	2.73	1
Fluorene	2.56	J	ug/kg	14.2	1.52	1
Phenanthrene	3.83	J	ug/kg	14.2	2.98	1
Anthracene	ND		ug/kg	14.2	1.82	1
Fluoranthene	3.80	J	ug/kg	14.2	2.68	1
Pyrene	ND		ug/kg	14.2	3.95	1
Benz(a)anthracene	ND		ug/kg	14.2	3.41	1
Chrysene	ND		ug/kg	14.2	3.31	1
Benzo(b)fluoranthene	ND		ug/kg	14.2	4.73	1
Benzo(k)fluoranthene	ND		ug/kg	14.2	2.17	1
Benzo(a)pyrene	ND		ug/kg	14.2	6.33	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	14.2	3.56	1
Dibenz(a,h)anthracene	ND		ug/kg	14.2	1.76	1
Benzo(ghi)perylene	ND		ug/kg	14.2	1.52	1
Cl2-BZ#8	ND		ug/kg	1.42	0.281	1
Cl3-BZ#18	ND		ug/kg	1.42	0.204	1
Cl3-BZ#28	ND		ug/kg	1.42	0.348	1
Cl4-BZ#44	ND		ug/kg	1.42	0.388	1
Cl4-BZ#49	ND		ug/kg	1.42	0.379	1
Cl4-BZ#52	ND		ug/kg	1.42	0.216	1
Cl4-BZ#66	ND		ug/kg	1.42	0.203	1
Cl5-BZ#87	ND		ug/kg	1.42	0.165	1
Cl5-BZ#101	ND		ug/kg	1.42	0.331	1
Cl5-BZ#105	ND		ug/kg	1.42	0.297	1
Cl5-BZ#118	ND		ug/kg	1.42	0.314	1
Cl6-BZ#128	ND		ug/kg	1.42	0.371	1

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-05
Client ID: H 0-8'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 12:55
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl6-BZ#138	ND		ug/kg	1.42	0.237	1
Cl6-BZ#153	ND		ug/kg	1.42	0.494	1
Cl7-BZ#170	ND		ug/kg	1.42	0.182	1
Cl7-BZ#180	ND		ug/kg	1.42	0.186	1
Cl7-BZ#183	ND		ug/kg	1.42	0.100	1
Cl7-BZ#184	ND		ug/kg	1.42	0.204	1
Cl7-BZ#187	ND		ug/kg	1.42	0.267	1
Cl8-BZ#195	ND		ug/kg	1.42	0.349	1
Cl9-BZ#206	ND		ug/kg	1.42	0.356	1
Cl10-BZ#209	ND		ug/kg	1.42	0.409	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	61		30-150
Pyrene-d10	66		30-150
Benzo(b)fluoranthene-d12	62		30-150
DBOB	67		30-150
BZ 198	63		30-150

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-06
Client ID: J 0-6.1'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 15:00
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 06/14/21 13:46
Analyst: GP
Percent Solids: 26%

Extraction Method: EPA 3570
Extraction Date: 05/25/21 22:15
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	5.84	J	ug/kg	9.96	1.64	1
Acenaphthylene	1.53	J	ug/kg	9.96	1.18	1
Acenaphthene	ND		ug/kg	9.96	1.91	1
Fluorene	2.84	J	ug/kg	9.96	1.07	1
Phenanthrene	7.07	J	ug/kg	9.96	2.09	1
Anthracene	1.59	J	ug/kg	9.96	1.28	1
Fluoranthene	12.2		ug/kg	9.96	1.88	1
Pyrene	11.5		ug/kg	9.96	2.77	1
Benz(a)anthracene	3.84	J	ug/kg	9.96	2.39	1
Chrysene	4.95	J	ug/kg	9.96	2.32	1
Benzo(b)fluoranthene	7.17	J	ug/kg	9.96	3.32	1
Benzo(k)fluoranthene	4.25	J	ug/kg	9.96	1.52	1
Benzo(a)pyrene	4.77	J	ug/kg	9.96	4.44	1
Indeno(1,2,3-cd)Pyrene	5.57	J	ug/kg	9.96	2.50	1
Dibenz(a,h)anthracene	ND		ug/kg	9.96	1.24	1
Benzo(ghi)perylene	5.36	J	ug/kg	9.96	1.07	1
Cl2-BZ#8	ND		ug/kg	0.996	0.197	1
Cl3-BZ#18	ND		ug/kg	0.996	0.144	1
Cl3-BZ#28	ND		ug/kg	0.996	0.244	1
Cl4-BZ#44	ND		ug/kg	0.996	0.272	1
Cl4-BZ#49	ND		ug/kg	0.996	0.266	1
Cl4-BZ#52	ND		ug/kg	0.996	0.151	1
Cl4-BZ#66	ND		ug/kg	0.996	0.142	1
Cl5-BZ#87	ND		ug/kg	0.996	0.116	1
Cl5-BZ#101	ND		ug/kg	0.996	0.232	1
Cl5-BZ#105	ND		ug/kg	0.996	0.208	1
Cl5-BZ#118	ND		ug/kg	0.996	0.220	1
Cl6-BZ#128	ND		ug/kg	0.996	0.260	1

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-06
Client ID: J 0-6.1'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 15:00
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl6-BZ#138	ND		ug/kg	0.996	0.166	1
Cl6-BZ#153	ND		ug/kg	0.996	0.347	1
Cl7-BZ#170	ND		ug/kg	0.996	0.128	1
Cl7-BZ#180	ND		ug/kg	0.996	0.130	1
Cl7-BZ#183	ND		ug/kg	0.996	0.070	1
Cl7-BZ#184	ND		ug/kg	0.996	0.144	1
Cl7-BZ#187	ND		ug/kg	0.996	0.187	1
Cl8-BZ#195	ND		ug/kg	0.996	0.245	1
Cl9-BZ#206	ND		ug/kg	0.996	0.250	1
Cl10-BZ#209	ND		ug/kg	0.996	0.287	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	76		30-150
Pyrene-d10	83		30-150
Benzo(b)fluoranthene-d12	79		30-150
DBOB	85		30-150
BZ 198	80		30-150

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-07
Client ID: L 0-3.6'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 13:25
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 06/09/21 17:05
Analyst: GP
Percent Solids: 18%

Extraction Method: EPA 3570
Extraction Date: 06/02/21 21:47
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	13.0	J	ug/kg	14.3	2.36	1
Acenaphthylene	4.63	J	ug/kg	14.3	1.68	1
Acenaphthene	ND		ug/kg	14.3	2.74	1
Fluorene	2.98	J	ug/kg	14.3	1.53	1
Phenanthrene	24.8		ug/kg	14.3	3.00	1
Anthracene	3.96	J	ug/kg	14.3	1.83	1
Fluoranthene	57.4		ug/kg	14.3	2.70	1
Pyrene	54.3		ug/kg	14.3	3.97	1
Benz(a)anthracene	22.0		ug/kg	14.3	3.43	1
Chrysene	26.5		ug/kg	14.3	3.33	1
Benzo(b)fluoranthene	36.0		ug/kg	14.3	4.75	1
Benzo(k)fluoranthene	22.4		ug/kg	14.3	2.18	1
Benzo(a)pyrene	23.2		ug/kg	14.3	6.37	1
Indeno(1,2,3-cd)Pyrene	20.5		ug/kg	14.3	3.58	1
Dibenz(a,h)anthracene	5.58	J	ug/kg	14.3	1.77	1
Benzo(ghi)perylene	20.6		ug/kg	14.3	1.53	1
Cl2-BZ#8	0.504	J	ug/kg	1.43	0.283	1
Cl3-BZ#18	ND		ug/kg	1.43	0.206	1
Cl3-BZ#28	ND		ug/kg	1.43	0.350	1
Cl4-BZ#44	ND		ug/kg	1.43	0.390	1
Cl4-BZ#49	ND		ug/kg	1.43	0.381	1
Cl4-BZ#52	ND		ug/kg	1.43	0.217	1
Cl4-BZ#66	ND		ug/kg	1.43	0.204	1
Cl5-BZ#87	ND		ug/kg	1.43	0.166	1
Cl5-BZ#101	ND		ug/kg	1.43	0.333	1
Cl5-BZ#105	ND		ug/kg	1.43	0.298	1
Cl5-BZ#118	ND		ug/kg	1.43	0.316	1
Cl6-BZ#128	ND		ug/kg	1.43	0.373	1

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-07
Client ID: L 0-3.6'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 13:25
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl6-BZ#138	ND		ug/kg	1.43	0.238	1
Cl6-BZ#153	ND		ug/kg	1.43	0.497	1
Cl7-BZ#170	ND		ug/kg	1.43	0.183	1
Cl7-BZ#180	ND		ug/kg	1.43	0.187	1
Cl7-BZ#183	ND		ug/kg	1.43	0.101	1
Cl7-BZ#184	ND		ug/kg	1.43	0.206	1
Cl7-BZ#187	ND		ug/kg	1.43	0.268	1
Cl8-BZ#195	ND		ug/kg	1.43	0.351	1
Cl9-BZ#206	ND		ug/kg	1.43	0.358	1
Cl10-BZ#209	ND		ug/kg	1.43	0.411	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	64		30-150
Pyrene-d10	61		30-150
Benzo(b)fluoranthene-d12	56		30-150
DBOB	72		30-150
BZ 198	74		30-150

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-08
Client ID: N 0-2.6'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 14:35
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 06/09/21 17:41
Analyst: GP
Percent Solids: 21%

Extraction Method: EPA 3570
Extraction Date: 06/08/21 11:16
Cleanup Method: EPA 3630
Cleanup Date: 06/08/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	13.2	J	ug/kg	18.6	3.07	1
Acenaphthylene	3.54	J	ug/kg	18.6	2.20	1
Acenaphthene	ND		ug/kg	18.6	3.58	1
Fluorene	ND		ug/kg	18.6	1.99	1
Phenanthrene	ND		ug/kg	18.6	3.91	1
Anthracene	ND		ug/kg	18.6	2.38	1
Fluoranthene	5.20	J	ug/kg	18.6	3.52	1
Pyrene	ND		ug/kg	18.6	5.18	1
Benz(a)anthracene	ND		ug/kg	18.6	4.47	1
Chrysene	ND		ug/kg	18.6	4.34	1
Benzo(b)fluoranthene	ND		ug/kg	18.6	6.20	1
Benzo(k)fluoranthene	ND		ug/kg	18.6	2.85	1
Benzo(a)pyrene	ND		ug/kg	18.6	8.31	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	18.6	4.68	1
Dibenz(a,h)anthracene	ND		ug/kg	18.6	2.31	1
Benzo(ghi)perylene	ND		ug/kg	18.6	1.99	1
Cl2-BZ#8	ND		ug/kg	1.86	0.369	1
Cl3-BZ#18	ND		ug/kg	1.86	0.268	1
Cl3-BZ#28	ND		ug/kg	1.86	0.456	1
Cl4-BZ#44	ND		ug/kg	1.86	0.509	1
Cl4-BZ#49	ND		ug/kg	1.86	0.498	1
Cl4-BZ#52	ND		ug/kg	1.86	0.283	1
Cl4-BZ#66	ND		ug/kg	1.86	0.266	1
Cl5-BZ#87	ND		ug/kg	1.86	0.216	1
Cl5-BZ#101	ND		ug/kg	1.86	0.434	1
Cl5-BZ#105	ND		ug/kg	1.86	0.389	1
Cl5-BZ#118	ND		ug/kg	1.86	0.412	1
Cl6-BZ#128	ND		ug/kg	1.86	0.486	1

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-08
Client ID: N 0-2.6'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 14:35
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl6-BZ#138	ND		ug/kg	1.86	0.311	1
Cl6-BZ#153	ND		ug/kg	1.86	0.648	1
Cl7-BZ#170	ND		ug/kg	1.86	0.238	1
Cl7-BZ#180	ND		ug/kg	1.86	0.244	1
Cl7-BZ#183	ND		ug/kg	1.86	0.131	1
Cl7-BZ#184	ND		ug/kg	1.86	0.268	1
Cl7-BZ#187	ND		ug/kg	1.86	0.350	1
Cl8-BZ#195	ND		ug/kg	1.86	0.458	1
Cl9-BZ#206	ND		ug/kg	1.86	0.468	1
Cl10-BZ#209	ND		ug/kg	1.86	0.537	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	74		30-150
Pyrene-d10	80		30-150
Benzo(b)fluoranthene-d12	77		30-150
DBOB	90		30-150
BZ 198	91		30-150

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-09
Client ID: P 0-6.7'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 13:10
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 06/14/21 14:19
Analyst: GP
Percent Solids: 22%

Extraction Method: EPA 3570
Extraction Date: 05/25/21 22:15
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	6.34	J	ug/kg	12.2	2.01	1
Acenaphthylene	ND		ug/kg	12.2	1.44	1
Acenaphthene	ND		ug/kg	12.2	2.34	1
Fluorene	3.00	J	ug/kg	12.2	1.30	1
Phenanthrene	2.76	J	ug/kg	12.2	2.56	1
Anthracene	ND		ug/kg	12.2	1.56	1
Fluoranthene	3.50	J	ug/kg	12.2	2.30	1
Pyrene	ND		ug/kg	12.2	3.39	1
Benz(a)anthracene	ND		ug/kg	12.2	2.93	1
Chrysene	ND		ug/kg	12.2	2.84	1
Benzo(b)fluoranthene	ND		ug/kg	12.2	4.06	1
Benzo(k)fluoranthene	ND		ug/kg	12.2	1.87	1
Benzo(a)pyrene	ND		ug/kg	12.2	5.44	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	12.2	3.06	1
Dibenz(a,h)anthracene	ND		ug/kg	12.2	1.51	1
Benzo(ghi)perylene	ND		ug/kg	12.2	1.30	1
Cl2-BZ#8	ND		ug/kg	1.22	0.242	1
Cl3-BZ#18	ND		ug/kg	1.22	0.176	1
Cl3-BZ#28	ND		ug/kg	1.22	0.299	1
Cl4-BZ#44	ND		ug/kg	1.22	0.333	1
Cl4-BZ#49	ND		ug/kg	1.22	0.326	1
Cl4-BZ#52	ND		ug/kg	1.22	0.185	1
Cl4-BZ#66	ND		ug/kg	1.22	0.174	1
Cl5-BZ#87	ND		ug/kg	1.22	0.142	1
Cl5-BZ#101	ND		ug/kg	1.22	0.284	1
Cl5-BZ#105	ND		ug/kg	1.22	0.255	1
Cl5-BZ#118	ND		ug/kg	1.22	0.270	1
Cl6-BZ#128	ND		ug/kg	1.22	0.318	1

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-09
Client ID: P 0-6.7'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 13:10
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl6-BZ#138	ND		ug/kg	1.22	0.204	1
Cl6-BZ#153	ND		ug/kg	1.22	0.424	1
Cl7-BZ#170	ND		ug/kg	1.22	0.156	1
Cl7-BZ#180	ND		ug/kg	1.22	0.160	1
Cl7-BZ#183	ND		ug/kg	1.22	0.086	1
Cl7-BZ#184	ND		ug/kg	1.22	0.176	1
Cl7-BZ#187	ND		ug/kg	1.22	0.229	1
Cl8-BZ#195	ND		ug/kg	1.22	0.300	1
Cl9-BZ#206	ND		ug/kg	1.22	0.306	1
Cl10-BZ#209	ND		ug/kg	1.22	0.351	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	52		30-150
Pyrene-d10	56		30-150
Benzo(b)fluoranthene-d12	52		30-150
DBOB	55		30-150
BZ 198	56		30-150

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-10
Client ID: R 0-4.7'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 13:00
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 06/14/21 14:52
Analyst: GP
Percent Solids: 16%

Extraction Method: EPA 3570
Extraction Date: 05/25/21 22:15
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	7.72	J	ug/kg	16.6	2.73	1
Acenaphthylene	2.29	J	ug/kg	16.6	1.96	1
Acenaphthene	ND		ug/kg	16.6	3.18	1
Fluorene	2.64	J	ug/kg	16.6	1.77	1
Phenanthrene	13.5	J	ug/kg	16.6	3.48	1
Anthracene	2.99	J	ug/kg	16.6	2.12	1
Fluoranthene	22.2		ug/kg	16.6	3.13	1
Pyrene	20.2		ug/kg	16.6	4.61	1
Benz(a)anthracene	7.45	J	ug/kg	16.6	3.98	1
Chrysene	9.64	J	ug/kg	16.6	3.86	1
Benzo(b)fluoranthene	12.5	J	ug/kg	16.6	5.52	1
Benzo(k)fluoranthene	8.05	J	ug/kg	16.6	2.54	1
Benzo(a)pyrene	ND		ug/kg	16.6	7.39	1
Indeno(1,2,3-cd)Pyrene	8.29	J	ug/kg	16.6	4.16	1
Dibenz(a,h)anthracene	ND		ug/kg	16.6	2.06	1
Benzo(ghi)perylene	8.73	J	ug/kg	16.6	1.77	1
Cl2-BZ#8	ND		ug/kg	1.66	0.328	1
Cl3-BZ#18	ND		ug/kg	1.66	0.239	1
Cl3-BZ#28	ND		ug/kg	1.66	0.406	1
Cl4-BZ#44	ND		ug/kg	1.66	0.452	1
Cl4-BZ#49	ND		ug/kg	1.66	0.442	1
Cl4-BZ#52	ND		ug/kg	1.66	0.252	1
Cl4-BZ#66	ND		ug/kg	1.66	0.237	1
Cl5-BZ#87	ND		ug/kg	1.66	0.192	1
Cl5-BZ#101	ND		ug/kg	1.66	0.386	1
Cl5-BZ#105	ND		ug/kg	1.66	0.346	1
Cl5-BZ#118	ND		ug/kg	1.66	0.366	1
Cl6-BZ#128	ND		ug/kg	1.66	0.432	1

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-10
Client ID: R 0-4.7'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 13:00
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl6-BZ#138	ND		ug/kg	1.66	0.277	1
Cl6-BZ#153	ND		ug/kg	1.66	0.577	1
Cl7-BZ#170	ND		ug/kg	1.66	0.212	1
Cl7-BZ#180	ND		ug/kg	1.66	0.217	1
Cl7-BZ#183	ND		ug/kg	1.66	0.117	1
Cl7-BZ#184	ND		ug/kg	1.66	0.239	1
Cl7-BZ#187	ND		ug/kg	1.66	0.312	1
Cl8-BZ#195	ND		ug/kg	1.66	0.408	1
Cl9-BZ#206	ND		ug/kg	1.66	0.416	1
Cl10-BZ#209	ND		ug/kg	1.66	0.477	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	56		30-150
Pyrene-d10	60		30-150
Benzo(b)fluoranthene-d12	57		30-150
DBOB	59		30-150
BZ 198	59		30-150

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 06/14/21 09:22
Analyst: GP

Extraction Method: EPA 3570
Extraction Date: 05/25/21 22:15
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab for sample(s): 03-06,09-10 Batch: WG1503534-1					
Naphthalene	0.892	J	ug/kg	2.67	0.440
Acenaphthylene	ND		ug/kg	2.67	0.315
Acenaphthene	ND		ug/kg	2.67	0.512
Fluorene	ND		ug/kg	2.67	0.285
Phenanthrene	ND		ug/kg	2.67	0.560
Anthracene	ND		ug/kg	2.67	0.341
Fluoranthene	ND		ug/kg	2.67	0.504
Pyrene	ND		ug/kg	2.67	0.741
Benz(a)anthracene	ND		ug/kg	2.67	0.640
Chrysene	ND		ug/kg	2.67	0.621
Benzo(b)fluoranthene	ND		ug/kg	2.67	0.888
Benzo(k)fluoranthene	ND		ug/kg	2.67	0.408
Benzo(a)pyrene	ND		ug/kg	2.67	1.19
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	2.67	0.669
Dibenz(a,h)anthracene	ND		ug/kg	2.67	0.331
Benzo(ghi)perylene	ND		ug/kg	2.67	0.285
Cl2-BZ#8	ND		ug/kg	0.267	0.053
Cl3-BZ#18	ND		ug/kg	0.267	0.038
Cl3-BZ#28	ND		ug/kg	0.267	0.065
Cl4-BZ#44	ND		ug/kg	0.267	0.073
Cl4-BZ#49	ND		ug/kg	0.267	0.071
Cl4-BZ#52	ND		ug/kg	0.267	0.041
Cl4-BZ#66	ND		ug/kg	0.267	0.038
Cl5-BZ#87	ND		ug/kg	0.267	0.031
Cl5-BZ#101	ND		ug/kg	0.267	0.062
Cl5-BZ#105	ND		ug/kg	0.267	0.056
Cl5-BZ#118	ND		ug/kg	0.267	0.059
Cl6-BZ#128	ND		ug/kg	0.267	0.070
Cl6-BZ#138	ND		ug/kg	0.267	0.045

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 06/14/21 09:22
Analyst: GP

Extraction Method: EPA 3570
Extraction Date: 05/25/21 22:15
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab for sample(s): 03-06,09-10 Batch: WG1503534-1					
Cl6-BZ#153	ND		ug/kg	0.267	0.093
Cl7-BZ#170	ND		ug/kg	0.267	0.034
Cl7-BZ#180	ND		ug/kg	0.267	0.035
Cl7-BZ#183	ND		ug/kg	0.267	0.019
Cl7-BZ#184	ND		ug/kg	0.267	0.038
Cl7-BZ#187	ND		ug/kg	0.267	0.050
Cl8-BZ#195	ND		ug/kg	0.267	0.066
Cl9-BZ#206	ND		ug/kg	0.267	0.067
Cl10-BZ#209	ND		ug/kg	0.267	0.077

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	88		30-150
Pyrene-d10	91		30-150
Benzo(b)fluoranthene-d12	94		30-150
DBOB	95		30-150
BZ 198	89		30-150

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 06/10/21 12:20
Analyst: GP

Extraction Method: EPA 3570
Extraction Date: 06/02/21 21:47
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab for sample(s): 01-02,07 Batch: WG1506802-1					
Naphthalene	1.81	J	ug/kg	2.67	0.440
Acenaphthylene	ND		ug/kg	2.67	0.315
Acenaphthene	ND		ug/kg	2.67	0.512
Fluorene	ND		ug/kg	2.67	0.285
Phenanthrene	ND		ug/kg	2.67	0.560
Anthracene	ND		ug/kg	2.67	0.341
Fluoranthene	ND		ug/kg	2.67	0.504
Pyrene	ND		ug/kg	2.67	0.741
Benz(a)anthracene	ND		ug/kg	2.67	0.640
Chrysene	ND		ug/kg	2.67	0.621
Benzo(b)fluoranthene	ND		ug/kg	2.67	0.888
Benzo(k)fluoranthene	ND		ug/kg	2.67	0.408
Benzo(a)pyrene	ND		ug/kg	2.67	1.19
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	2.67	0.669
Dibenz(a,h)anthracene	ND		ug/kg	2.67	0.331
Benzo(ghi)perylene	ND		ug/kg	2.67	0.285
Cl2-BZ#8	ND		ug/kg	0.267	0.053
Cl3-BZ#18	ND		ug/kg	0.267	0.038
Cl3-BZ#28	ND		ug/kg	0.267	0.065
Cl4-BZ#44	ND		ug/kg	0.267	0.073
Cl4-BZ#49	ND		ug/kg	0.267	0.071
Cl4-BZ#52	ND		ug/kg	0.267	0.041
Cl4-BZ#66	ND		ug/kg	0.267	0.038
Cl5-BZ#87	ND		ug/kg	0.267	0.031
Cl5-BZ#101	ND		ug/kg	0.267	0.062
Cl5-BZ#105	ND		ug/kg	0.267	0.056
Cl5-BZ#118	ND		ug/kg	0.267	0.059
Cl6-BZ#128	ND		ug/kg	0.267	0.070
Cl6-BZ#138	ND		ug/kg	0.267	0.045

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 06/10/21 12:20
Analyst: GP

Extraction Method: EPA 3570
Extraction Date: 06/02/21 21:47
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab for sample(s): 01-02,07 Batch: WG1506802-1					
Cl6-BZ#153	ND		ug/kg	0.267	0.093
Cl7-BZ#170	ND		ug/kg	0.267	0.034
Cl7-BZ#180	ND		ug/kg	0.267	0.035
Cl7-BZ#183	ND		ug/kg	0.267	0.019
Cl7-BZ#184	ND		ug/kg	0.267	0.038
Cl7-BZ#187	ND		ug/kg	0.267	0.050
Cl8-BZ#195	ND		ug/kg	0.267	0.066
Cl9-BZ#206	ND		ug/kg	0.267	0.067
Cl10-BZ#209	ND		ug/kg	0.267	0.077

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	94		30-150
Pyrene-d10	97		30-150
Benzo(b)fluoranthene-d12	99		30-150
DBOB	103		30-150
BZ 198	93		30-150

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 06/10/21 12:52
Analyst: GP

Extraction Method: EPA 3570
Extraction Date: 06/08/21 11:16
Cleanup Method: EPA 3630
Cleanup Date: 06/08/21

Parameter	Result	Qualifier	Units	RL	MDL
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab for sample(s): 08 Batch: WG1509047-1					
Naphthalene	2.14	J	ug/kg	4.00	0.660
Acenaphthylene	1.16	J	ug/kg	4.00	0.472
Acenaphthene	ND		ug/kg	4.00	0.768
Fluorene	ND		ug/kg	4.00	0.428
Phenanthrene	ND		ug/kg	4.00	0.840
Anthracene	ND		ug/kg	4.00	0.512
Fluoranthene	ND		ug/kg	4.00	0.756
Pyrene	ND		ug/kg	4.00	1.11
Benz(a)anthracene	ND		ug/kg	4.00	0.960
Chrysene	ND		ug/kg	4.00	0.932
Benzo(b)fluoranthene	ND		ug/kg	4.00	1.33
Benzo(k)fluoranthene	ND		ug/kg	4.00	0.612
Benzo(a)pyrene	ND		ug/kg	4.00	1.78
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	4.00	1.00
Dibenz(a,h)anthracene	ND		ug/kg	4.00	0.496
Benzo(ghi)perylene	ND		ug/kg	4.00	0.428
Cl2-BZ#8	ND		ug/kg	0.400	0.079
Cl3-BZ#18	ND		ug/kg	0.400	0.058
Cl3-BZ#28	ND		ug/kg	0.400	0.098
Cl4-BZ#44	ND		ug/kg	0.400	0.109
Cl4-BZ#49	ND		ug/kg	0.400	0.107
Cl4-BZ#52	ND		ug/kg	0.400	0.061
Cl4-BZ#66	ND		ug/kg	0.400	0.057
Cl5-BZ#87	ND		ug/kg	0.400	0.046
Cl5-BZ#101	ND		ug/kg	0.400	0.093
Cl5-BZ#105	ND		ug/kg	0.400	0.084
Cl5-BZ#118	ND		ug/kg	0.400	0.088
Cl6-BZ#128	ND		ug/kg	0.400	0.104
Cl6-BZ#138	ND		ug/kg	0.400	0.067

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 06/10/21 12:52
Analyst: GP

Extraction Method: EPA 3570
Extraction Date: 06/08/21 11:16
Cleanup Method: EPA 3630
Cleanup Date: 06/08/21

Parameter	Result	Qualifier	Units	RL	MDL
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab for sample(s): 08 Batch: WG1509047-1					
Cl6-BZ#153	ND		ug/kg	0.400	0.139
Cl7-BZ#170	ND		ug/kg	0.400	0.051
Cl7-BZ#180	ND		ug/kg	0.400	0.052
Cl7-BZ#183	ND		ug/kg	0.400	0.028
Cl7-BZ#184	ND		ug/kg	0.400	0.058
Cl7-BZ#187	ND		ug/kg	0.400	0.075
Cl8-BZ#195	ND		ug/kg	0.400	0.098
Cl9-BZ#206	ND		ug/kg	0.400	0.100
Cl10-BZ#209	ND		ug/kg	0.400	0.115

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	86		30-150
Pyrene-d10	95		30-150
Benzo(b)fluoranthene-d12	100		30-150
DBOB	92		30-150
BZ 198	96		30-150

Lab Control Sample Analysis
Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 03-06,09-10 Batch: WG1503534-2 WG1503534-3								
Naphthalene	85		89		50-120	5		30
Acenaphthylene	82		86		50-120	5		30
Acenaphthene	80		83		50-120	4		30
Fluorene	80		84		50-120	5		30
Phenanthrene	79		83		50-120	5		30
Anthracene	85		88		50-120	3		30
Fluoranthene	88		90		50-120	2		30
Pyrene	89		92		50-120	3		30
Benz(a)anthracene	95		97		50-120	2		30
Chrysene	88		88		50-120	0		30
Benzo(b)fluoranthene	108		101		50-120	7		30
Benzo(k)fluoranthene	88		96		50-120	9		30
Benzo(a)pyrene	100		99		50-120	1		30
Indeno(1,2,3-cd)Pyrene	93		96		50-120	3		30
Dibenz(a,h)anthracene	95		95		50-120	0		30
Benzo(ghi)perylene	100		100		50-120	0		30
Cl2-BZ#8	78		82		50-120	5		30
Cl3-BZ#18	75		80		50-120	6		30
Cl3-BZ#28	79		83		50-120	5		30
Cl4-BZ#44	81		84		50-120	4		30
Cl4-BZ#49	80		82		50-120	2		30
Cl4-BZ#52	79		83		50-120	5		30
Cl4-BZ#66	84		87		50-120	4		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 03-06,09-10 Batch: WG1503534-2 WG1503534-3								
Cl5-BZ#87	82		84		50-120	2		30
Cl5-BZ#101	86		88		50-120	2		30
Cl5-BZ#105	87		90		50-120	3		30
Cl5-BZ#118	82		85		50-120	4		30
Cl6-BZ#128	88		90		50-120	2		30
Cl6-BZ#138	88		90		50-120	2		30
Cl6-BZ#153	87		88		50-120	1		30
Cl7-BZ#170	91		92		50-120	1		30
Cl7-BZ#180	83		84		50-120	1		30
Cl7-BZ#183	84		85		50-120	1		30
Cl7-BZ#184	84		87		50-120	4		30
Cl7-BZ#187	88		90		50-120	2		30
Cl8-BZ#195	92		95		50-120	3		30
Cl9-BZ#206	86		92		50-120	7		30
Cl10-BZ#209	79		89		50-120	12		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Methylnaphthalene-d10	88		90		30-150
Pyrene-d10	95		94		30-150
Benzo(b)fluoranthene-d12	100		96		30-150
DBOB	94		96		30-150
BZ 198	94		95		30-150

Lab Control Sample Analysis
Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-02,07 Batch: WG1506802-2 WG1506802-3								
Naphthalene	81		84		50-120	4		30
Acenaphthylene	78		78		50-120	0		30
Acenaphthene	78		77		50-120	1		30
Fluorene	80		78		50-120	3		30
Phenanthrene	79		77		50-120	3		30
Anthracene	85		82		50-120	4		30
Fluoranthene	86		84		50-120	2		30
Pyrene	90		86		50-120	5		30
Benz(a)anthracene	89		86		50-120	3		30
Chrysene	85		82		50-120	4		30
Benzo(b)fluoranthene	92		90		50-120	2		30
Benzo(k)fluoranthene	92		89		50-120	3		30
Benzo(a)pyrene	88		86		50-120	2		30
Indeno(1,2,3-cd)Pyrene	74		73		50-120	1		30
Dibenz(a,h)anthracene	81		80		50-120	1		30
Benzo(ghi)perylene	90		87		50-120	3		30
Cl2-BZ#8	80		80		50-120	0		30
Cl3-BZ#18	78		77		50-120	1		30
Cl3-BZ#28	82		80		50-120	2		30
Cl4-BZ#44	83		82		50-120	1		30
Cl4-BZ#49	82		80		50-120	2		30
Cl4-BZ#52	80		78		50-120	3		30
Cl4-BZ#66	85		84		50-120	1		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-02,07 Batch: WG1506802-2 WG1506802-3								
Cl5-BZ#87	82		80		50-120	2		30
Cl5-BZ#101	86		84		50-120	2		30
Cl5-BZ#105	87		86		50-120	1		30
Cl5-BZ#118	83		82		50-120	1		30
Cl6-BZ#128	88		87		50-120	1		30
Cl6-BZ#138	87		87		50-120	0		30
Cl6-BZ#153	88		87		50-120	1		30
Cl7-BZ#170	89		89		50-120	0		30
Cl7-BZ#180	82		82		50-120	0		30
Cl7-BZ#183	83		82		50-120	1		30
Cl7-BZ#184	84		84		50-120	0		30
Cl7-BZ#187	87		87		50-120	0		30
Cl8-BZ#195	90		89		50-120	1		30
Cl9-BZ#206	87		86		50-120	1		30
Cl10-BZ#209	87		85		50-120	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Methylnaphthalene-d10	86		85		30-150
Pyrene-d10	95		88		30-150
Benzo(b)fluoranthene-d12	96		90		30-150
DBOB	89		89		30-150
BZ 198	89		86		30-150

Lab Control Sample Analysis
Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 08 Batch: WG1509047-2 WG1509047-3								
Naphthalene	80		83		50-120	4		30
Acenaphthylene	72		76		50-120	5		30
Acenaphthene	72		77		50-120	7		30
Fluorene	74		79		50-120	7		30
Phenanthrene	76		82		50-120	8		30
Anthracene	78		84		50-120	7		30
Fluoranthene	84		92		50-120	9		30
Pyrene	84		94		50-120	11		30
Benz(a)anthracene	93		103		50-120	10		30
Chrysene	79		90		50-120	13		30
Benzo(b)fluoranthene	103		105		50-120	2		30
Benzo(k)fluoranthene	80		99		50-120	21		30
Benzo(a)pyrene	86		96		50-120	11		30
Indeno(1,2,3-cd)Pyrene	74		86		50-120	15		30
Dibenz(a,h)anthracene	79		90		50-120	13		30
Benzo(ghi)perylene	88		99		50-120	12		30
Cl2-BZ#8	83		86		50-120	4		30
Cl3-BZ#18	79		83		50-120	5		30
Cl3-BZ#28	84		86		50-120	2		30
Cl4-BZ#44	84		87		50-120	4		30
Cl4-BZ#49	78		82		50-120	5		30
Cl4-BZ#52	83		87		50-120	5		30
Cl4-BZ#66	86		90		50-120	5		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 08 Batch: WG1509047-2 WG1509047-3								
Cl5-BZ#87	84		87		50-120	4		30
Cl5-BZ#101	86		90		50-120	5		30
Cl5-BZ#105	84		88		50-120	5		30
Cl5-BZ#118	83		87		50-120	5		30
Cl6-BZ#128	92		97		50-120	5		30
Cl6-BZ#138	89		95		50-120	7		30
Cl6-BZ#153	90		94		50-120	4		30
Cl7-BZ#170	96		101		50-120	5		30
Cl7-BZ#180	86		91		50-120	6		30
Cl7-BZ#183	82		90		50-120	9		30
Cl7-BZ#184	88		92		50-120	4		30
Cl7-BZ#187	98		103		50-120	5		30
Cl8-BZ#195	97		102		50-120	5		30
Cl9-BZ#206	85		90		50-120	6		30
Cl10-BZ#209	80		82		50-120	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Methylnaphthalene-d10	83		84		30-150
Pyrene-d10	89		96		30-150
Benzo(b)fluoranthene-d12	92		99		30-150
DBOB	93		95		30-150
BZ 198	99		102		30-150

PETROLEUM HYDROCARBONS

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-01
Client ID: B 0-8'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 14:06
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 05/12/21 17:14
Analyst: BAD
Percent Solids: 18%

Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Gasoline Range Organics - Westborough Lab						
Gasoline Range Organics	4300	J	ug/kg	11000	220	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,1,1-Trifluorotoluene	84		70-130
4-Bromofluorobenzene	84		70-130

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-01
Client ID: B 0-8'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 14:06
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 05/13/21 14:30
Analyst: MEO
Percent Solids: 18%

Extraction Method: EPA 3546
Extraction Date: 05/13/21 02:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	108000	J	ug/kg	174000	20000	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	58		40-140

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-02
Client ID: D 0-3.0'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 14:20
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 05/12/21 18:43
Analyst: BAD
Percent Solids: 10%

Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Gasoline Range Organics - Westborough Lab						
Gasoline Range Organics	8000	J	ug/kg	25000	480	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,1,1-Trifluorotoluene	88		70-130
4-Bromofluorobenzene	90		70-130

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-02
Client ID: D 0-3.0'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 14:20
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 05/13/21 14:55
Analyst: MEO
Percent Solids: 10%

Extraction Method: EPA 3546
Extraction Date: 05/13/21 02:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	516000		ug/kg	320000	36900	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	65		40-140

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-03
Client ID: E 3.2-8'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 15:20
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 05/12/21 13:20
Analyst: MEO
Percent Solids: 19%

Extraction Method: EPA 3546
Extraction Date: 05/12/21 00:24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	35800	J	ug/kg	168000	19300	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	90		40-140

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-03
Client ID: E 3.2-8'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 15:20
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 05/12/21 19:12
Analyst: BAD
Percent Solids: 19%

Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Gasoline Range Organics - Westborough Lab						
Gasoline Range Organics	3900	J	ug/kg	12000	240	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,1,1-Trifluorotoluene	88		70-130
4-Bromofluorobenzene	89		70-130

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-04
Client ID: I 0-4.3'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 12:10
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 05/12/21 13:45
Analyst: MEO
Percent Solids: 23%

Extraction Method: EPA 3546
Extraction Date: 05/12/21 00:24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	32400	J	ug/kg	142000	16300	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	88		40-140

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-04
Client ID: I 0-4.3'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 12:10
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 05/12/21 19:42
Analyst: BAD
Percent Solids: 23%

Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Gasoline Range Organics - Westborough Lab						
Gasoline Range Organics	3800	J	ug/kg	10000	190	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,1,1-Trifluorotoluene	88		70-130
4-Bromofluorobenzene	89		70-130

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-05
Client ID: H 0-8'
Sample Location: MASHPEE, MA

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 05/12/21 14:10
Analyst: MEO
Percent Solids: 19%

Date Collected: 04/29/21 12:55
Date Received: 05/07/21
Field Prep: Not Specified

Extraction Method: EPA 3546
Extraction Date: 05/12/21 00:24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	52000	J	ug/kg	170000	19600	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	95		40-140

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-05
Client ID: H 0-8'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 12:55
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 05/12/21 20:12
Analyst: BAD
Percent Solids: 19%

Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Gasoline Range Organics - Westborough Lab						
Gasoline Range Organics	4400	J	ug/kg	12000	230	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,1,1-Trifluorotoluene	88		70-130
4-Bromofluorobenzene	88		70-130

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-06
Client ID: J 0-6.1'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 15:00
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 05/12/21 20:41
Analyst: BAD
Percent Solids: 26%

Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Gasoline Range Organics - Westborough Lab						
Gasoline Range Organics	3000	J	ug/kg	8400	160	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,1,1-Trifluorotoluene	88		70-130
4-Bromofluorobenzene	90		70-130

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-06
Client ID: J 0-6.1'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 15:00
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 05/13/21 15:20
Analyst: MEO
Percent Solids: 26%

Extraction Method: EPA 3546
Extraction Date: 05/13/21 02:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	116000	J	ug/kg	124000	14300	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	68		40-140

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-07
Client ID: L 0-3.6'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 13:25
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 05/12/21 13:20
Analyst: MEO
Percent Solids: 18%

Extraction Method: EPA 3546
Extraction Date: 05/12/21 00:24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	134000	J	ug/kg	180000	20700	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	64		40-140

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-07
Client ID: L 0-3.6'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 13:25
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 05/12/21 21:11
Analyst: BAD
Percent Solids: 18%

Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Gasoline Range Organics - Westborough Lab						
Gasoline Range Organics	4500	J	ug/kg	13000	260	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,1,1-Trifluorotoluene	86		70-130
4-Bromofluorobenzene	87		70-130

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-08
Client ID: N 0-2.6'
Sample Location: MASHPEE, MA

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 05/12/21 13:45
Analyst: MEO
Percent Solids: 21%

Date Collected: 04/29/21 14:35
Date Received: 05/07/21
Field Prep: Not Specified

Extraction Method: EPA 3546
Extraction Date: 05/12/21 00:24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	64300	J	ug/kg	152000	17500	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	68		40-140

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-08
Client ID: N 0-2.6'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 14:35
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 05/12/21 21:40
Analyst: BAD
Percent Solids: 21%

Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Gasoline Range Organics - Westborough Lab						
Gasoline Range Organics	4100	J	ug/kg	11000	220	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,1,1-Trifluorotoluene	87		70-130
4-Bromofluorobenzene	88		70-130

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-09
Client ID: P 0-6.7'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 13:10
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 05/12/21 14:10
Analyst: MEO
Percent Solids: 22%

Extraction Method: EPA 3546
Extraction Date: 05/12/21 00:24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	132000	J	ug/kg	154000	17700	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	69		40-140

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-09
Client ID: P 0-6.7'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 13:10
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 05/12/21 22:10
Analyst: BAD
Percent Solids: 22%

Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Gasoline Range Organics - Westborough Lab						
Gasoline Range Organics	3900	J	ug/kg	10000	200	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,1,1-Trifluorotoluene	88		70-130
4-Bromofluorobenzene	90		70-130

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-10
Client ID: R 0-4.7'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 13:00
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 05/12/21 22:40
Analyst: BAD
Percent Solids: 16%

Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Gasoline Range Organics - Westborough Lab						
Gasoline Range Organics	4200	J	ug/kg	14000	260	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,1,1-Trifluorotoluene	88		70-130
4-Bromofluorobenzene	89		70-130

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-10
Client ID: R 0-4.7'
Sample Location: MASHPEE, MA

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 05/13/21 16:35
Analyst: MEO
Percent Solids: 16%

Date Collected: 04/29/21 13:00
Date Received: 05/07/21
Field Prep: Not Specified

Extraction Method: EPA 3546
Extraction Date: 05/13/21 02:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	95100	J	ug/kg	197000	22600	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	63		40-140

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D(M)
Analytical Date: 05/12/21 08:37
Analyst: MEO

Extraction Method: EPA 3546
Extraction Date: 05/11/21 23:29

Parameter	Result	Qualifier	Units	RL	MDL
Petroleum Hydrocarbon Quantitation - Westborough Lab for sample(s): 03-05,07-09 Batch: WG1497542-1					
TPH (C10-C36)	ND		ug/kg	32800	3780

Surrogate	%Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	85		40-140

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D(M)
Analytical Date: 05/13/21 14:55
Analyst: MEO

Extraction Method: EPA 3546
Extraction Date: 05/13/21 02:21

Parameter	Result	Qualifier	Units	RL	MDL
Petroleum Hydrocarbon Quantitation - Westborough Lab for sample(s): 01-02,06,10 Batch: WG1498162-1					
TPH (C10-C36)	ND		ug/kg	32500	3740

Surrogate	%Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	78		40-140

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D(M)
Analytical Date: 05/12/21 16:44
Analyst: BAD

Parameter	Result	Qualifier	Units	RL	MDL
Gasoline Range Organics - Westborough Lab for sample(s): 01-10 Batch: WG1498886-4					
Gasoline Range Organics	930	J	ug/kg	2500	48.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,1,1-Trifluorotoluene	79		70-130
4-Bromofluorobenzene	83		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: SANTUIT POND

Project Number: Not Specified

Lab Number: L2124064

Report Date: 06/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Petroleum Hydrocarbon Quantitation - Westborough Lab Associated sample(s): 03-05,07-09 Batch: WG1497542-2								
TPH (C10-C36)	96		-		40-140	-		40

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
o-Terphenyl	85				40-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: SANTUIT POND

Project Number: Not Specified

Lab Number: L2124064

Report Date: 06/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Petroleum Hydrocarbon Quantitation - Westborough Lab Associated sample(s): 01-02,06,10 Batch: WG1498162-2								
TPH (C10-C36)	79		-		40-140	-		40

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
o-Terphenyl	82				40-140

Lab Control Sample Analysis
Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Gasoline Range Organics - Westborough Lab	Associated sample(s): 01-10		Batch: WG1498886-2		WG1498886-3			
Gasoline Range Organics	91		92		80-120	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,1,1-Trifluorotoluene	94		94		70-130
4-Bromofluorobenzene	91		91		70-130

Matrix Spike Analysis

Batch Quality Control

Project Name: SANTUIT POND

Project Number: Not Specified

Lab Number: L2124064

Report Date: 06/15/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Gasoline Range Organics - Westborough Lab Associated sample(s): 01-10 QC Batch ID: WG1498886-6 QC Sample: L2124064-01 Client ID: B 0-8'												
Gasoline Range Organics	4300J	91900	80000	88		-	-		80-120	-		20

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,1,1-Trifluorotoluene	84				70-130
4-Bromofluorobenzene	83				70-130

Lab Duplicate Analysis
Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Gasoline Range Organics - Westborough Lab Associated sample(s): 01-10 QC Batch ID: WG1498886-5 QC Sample: L2124064-01 Client ID: B 0-8'						
Gasoline Range Organics	4300J	4000J	ug/kg	NC		20

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
1,1,1-Trifluorotoluene	84		91		70-130
4-Bromofluorobenzene	84		91		70-130

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID:	L2124064-01	Date Collected:	04/29/21 14:06
Client ID:	B 0-8'	Date Received:	05/07/21
Sample Location:	MASHPEE, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Sediment	Extraction Method:	EPA 3546
Analytical Method:	135,EPH-19-2.1	Extraction Date:	05/13/21 03:17
Analytical Date:	05/15/21 13:48	Cleanup Method1:	EPH-19-2.1
Analyst:	SR	Cleanup Date1:	05/14/21
Percent Solids:	18%		

Quality Control Information

Condition of sample received:	Satisfactory
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
C9-C18 Aliphatics	ND		mg/kg	35.5	35.5	1
C19-C36 Aliphatics	ND		mg/kg	35.5	35.5	1
C11-C22 Aromatics	ND		mg/kg	35.5	35.5	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	35.5	35.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	58		40-140
o-Terphenyl	61		40-140
2-Fluorobiphenyl	76		40-140
2-Bromonaphthalene	73		40-140

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID:	L2124064-02	Date Collected:	04/29/21 14:20
Client ID:	D 0-3.0'	Date Received:	05/07/21
Sample Location:	MASHPEE, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Sediment	Extraction Method:	EPA 3546
Analytical Method:	135,EPH-19-2.1	Extraction Date:	05/13/21 03:17
Analytical Date:	05/15/21 13:13	Cleanup Method1:	EPH-19-2.1
Analyst:	SR	Cleanup Date1:	05/14/21
Percent Solids:	10%		

Quality Control Information

Condition of sample received:	Satisfactory
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
C9-C18 Aliphatics	ND		mg/kg	66.4	66.4	1
C19-C36 Aliphatics	ND		mg/kg	66.4	66.4	1
C11-C22 Aromatics	ND		mg/kg	66.4	66.4	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	66.4	66.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	65		40-140
o-Terphenyl	84		40-140
2-Fluorobiphenyl	108		40-140
2-Bromonaphthalene	103		40-140

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID:	L2124064-03	Date Collected:	04/29/21 15:20
Client ID:	E 3.2-8'	Date Received:	05/07/21
Sample Location:	MASHPEE, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Sediment	Extraction Method:	EPA 3546
Analytical Method:	135,EPH-19-2.1	Extraction Date:	05/12/21 01:13
Analytical Date:	05/12/21 19:57	Cleanup Method1:	EPH-19-2.1
Analyst:	MEO	Cleanup Date1:	05/12/21
Percent Solids:	19%		

Quality Control Information

Condition of sample received:	Satisfactory
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
C9-C18 Aliphatics	ND		mg/kg	33.0	33.0	1
C19-C36 Aliphatics	ND		mg/kg	33.0	33.0	1
C11-C22 Aromatics	ND		mg/kg	33.0	33.0	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	33.0	33.0	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	52		40-140
o-Terphenyl	71		40-140
2-Fluorobiphenyl	91		40-140
2-Bromonaphthalene	93		40-140

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID:	L2124064-04	Date Collected:	04/29/21 12:10
Client ID:	I 0-4.3'	Date Received:	05/07/21
Sample Location:	MASHPEE, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Sediment	Extraction Method:	EPA 3546
Analytical Method:	135,EPH-19-2.1	Extraction Date:	05/12/21 01:13
Analytical Date:	05/12/21 19:32	Cleanup Method1:	EPH-19-2.1
Analyst:	MEO	Cleanup Date1:	05/12/21
Percent Solids:	23%		

Quality Control Information

Condition of sample received:	Satisfactory
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
C9-C18 Aliphatics	ND		mg/kg	28.2	28.2	1
C19-C36 Aliphatics	ND		mg/kg	28.2	28.2	1
C11-C22 Aromatics	ND		mg/kg	28.2	28.2	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	28.2	28.2	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	54		40-140
o-Terphenyl	59		40-140
2-Fluorobiphenyl	81		40-140
2-Bromonaphthalene	80		40-140

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID:	L2124064-05	Date Collected:	04/29/21 12:55
Client ID:	H 0-8'	Date Received:	05/07/21
Sample Location:	MASHPEE, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Sediment	Extraction Method:	EPA 3546
Analytical Method:	135,EPH-19-2.1	Extraction Date:	05/12/21 01:13
Analytical Date:	05/12/21 18:44	Cleanup Method1:	EPH-19-2.1
Analyst:	MEO	Cleanup Date1:	05/12/21
Percent Solids:	19%		

Quality Control Information

Condition of sample received:	Satisfactory
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
C9-C18 Aliphatics	ND		mg/kg	34.9	34.9	1
C19-C36 Aliphatics	ND		mg/kg	34.9	34.9	1
C11-C22 Aromatics	ND		mg/kg	34.9	34.9	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	34.9	34.9	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	47		40-140
o-Terphenyl	59		40-140
2-Fluorobiphenyl	85		40-140
2-Bromonaphthalene	83		40-140

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID:	L2124064-06	Date Collected:	04/29/21 15:00
Client ID:	J 0-6.1'	Date Received:	05/07/21
Sample Location:	MASHPEE, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Sediment	Extraction Method:	EPA 3546
Analytical Method:	135,EPH-19-2.1	Extraction Date:	05/13/21 03:17
Analytical Date:	05/15/21 12:38	Cleanup Method1:	EPH-19-2.1
Analyst:	SR	Cleanup Date1:	05/14/21
Percent Solids:	26%		

Quality Control Information

Condition of sample received:	Satisfactory
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
C9-C18 Aliphatics	ND		mg/kg	24.0	24.0	1
C19-C36 Aliphatics	ND		mg/kg	24.0	24.0	1
C11-C22 Aromatics	ND		mg/kg	24.0	24.0	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	24.0	24.0	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	64		40-140
o-Terphenyl	67		40-140
2-Fluorobiphenyl	96		40-140
2-Bromonaphthalene	91		40-140

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID:	L2124064-07	Date Collected:	04/29/21 13:25
Client ID:	L 0-3.6'	Date Received:	05/07/21
Sample Location:	MASHPEE, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Sediment	Extraction Method:	EPA 3546
Analytical Method:	135,EPH-19-2.1	Extraction Date:	05/12/21 01:13
Analytical Date:	05/12/21 19:08	Cleanup Method1:	EPH-19-2.1
Analyst:	MEO	Cleanup Date1:	05/12/21
Percent Solids:	18%		

Quality Control Information

Condition of sample received:	Satisfactory
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
C9-C18 Aliphatics	ND		mg/kg	34.4	34.4	1
C19-C36 Aliphatics	ND		mg/kg	34.4	34.4	1
C11-C22 Aromatics	ND		mg/kg	34.4	34.4	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	34.4	34.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	44		40-140
o-Terphenyl	49		40-140
2-Fluorobiphenyl	84		40-140
2-Bromonaphthalene	82		40-140

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID:	L2124064-08	Date Collected:	04/29/21 14:35
Client ID:	N 0-2.6'	Date Received:	05/07/21
Sample Location:	MASHPEE, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Sediment	Extraction Method:	EPA 3546
Analytical Method:	135,EPH-19-2.1	Extraction Date:	05/12/21 01:13
Analytical Date:	05/12/21 21:34	Cleanup Method1:	EPH-19-2.1
Analyst:	MEO	Cleanup Date1:	05/12/21
Percent Solids:	21%		

Quality Control Information

Condition of sample received:	Satisfactory
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
C9-C18 Aliphatics	ND		mg/kg	30.1	30.1	1
C19-C36 Aliphatics	ND		mg/kg	30.1	30.1	1
C11-C22 Aromatics	ND		mg/kg	30.1	30.1	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	30.1	30.1	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	54		40-140
o-Terphenyl	60		40-140
2-Fluorobiphenyl	78		40-140
2-Bromonaphthalene	77		40-140

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID:	L2124064-09	Date Collected:	04/29/21 13:10
Client ID:	P 0-6.7'	Date Received:	05/07/21
Sample Location:	MASHPEE, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Sediment	Extraction Method:	EPA 3546
Analytical Method:	135,EPH-19-2.1	Extraction Date:	05/12/21 01:13
Analytical Date:	05/12/21 21:58	Cleanup Method1:	EPH-19-2.1
Analyst:	MEO	Cleanup Date1:	05/12/21
Percent Solids:	22%		

Quality Control Information

Condition of sample received:	Satisfactory
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
C9-C18 Aliphatics	ND		mg/kg	29.3	29.3	1
C19-C36 Aliphatics	ND		mg/kg	29.3	29.3	1
C11-C22 Aromatics	35.6		mg/kg	29.3	29.3	1
C11-C22 Aromatics, Adjusted	31.7		mg/kg	29.3	29.3	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	52		40-140
o-Terphenyl	57		40-140
2-Fluorobiphenyl	79		40-140
2-Bromonaphthalene	78		40-140

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID:	L2124064-10	Date Collected:	04/29/21 13:00
Client ID:	R 0-4.7'	Date Received:	05/07/21
Sample Location:	MASHPEE, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Sediment	Extraction Method:	EPA 3546
Analytical Method:	135,EPH-19-2.1	Extraction Date:	05/13/21 03:17
Analytical Date:	05/15/21 12:03	Cleanup Method1:	EPH-19-2.1
Analyst:	SR	Cleanup Date1:	05/14/21
Percent Solids:	16%		

Quality Control Information

Condition of sample received:	Satisfactory
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
C9-C18 Aliphatics	ND		mg/kg	40.9	40.9	1
C19-C36 Aliphatics	ND		mg/kg	40.9	40.9	1
C11-C22 Aromatics	ND		mg/kg	40.9	40.9	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	40.9	40.9	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	66		40-140
o-Terphenyl	73		40-140
2-Fluorobiphenyl	102		40-140
2-Bromonaphthalene	95		40-140

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 135,EPH-19-2.1
Analytical Date: 05/12/21 16:33
Analyst: SC

Extraction Method: EPA 3546
Extraction Date: 05/11/21 22:41
Cleanup Method: EPH-19-2.1
Cleanup Date: 05/12/21

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 03-05,07-09 Batch: WG1497527-1					
C9-C18 Aliphatics	ND		mg/kg	6.34	6.34
C19-C36 Aliphatics	ND		mg/kg	6.34	6.34
C11-C22 Aromatics	ND		mg/kg	6.34	6.34
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.34	6.34

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	55		40-140
o-Terphenyl	59		40-140
2-Fluorobiphenyl	81		40-140
2-Bromonaphthalene	84		40-140

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 135,EPH-19-2.1
Analytical Date: 05/13/21 13:06
Analyst: MEO

Extraction Method: EPA 3546
Extraction Date: 05/12/21 11:36
Cleanup Method: EPH-19-2.1
Cleanup Date: 05/13/21

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-02,06,10 Batch: WG1497828-1					
C9-C18 Aliphatics	ND		mg/kg	6.48	6.48
C19-C36 Aliphatics	ND		mg/kg	6.48	6.48
C11-C22 Aromatics	ND		mg/kg	6.48	6.48
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.48	6.48

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	57		40-140
o-Terphenyl	66		40-140
2-Fluorobiphenyl	86		40-140
2-Bromonaphthalene	85		40-140

Lab Control Sample Analysis
Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 03-05,07-09 Batch: WG1497527-2 WG1497527-3								
C9-C18 Aliphatics	41		45		40-140	9		25
C19-C36 Aliphatics	68		74		40-140	8		25
C11-C22 Aromatics	67		74		40-140	10		25
Naphthalene	57		54		40-140	5		25
2-Methylnaphthalene	59		56		40-140	5		25
Acenaphthylene	60		58		40-140	3		25
Acenaphthene	63		62		40-140	2		25
Fluorene	64		67		40-140	5		25
Phenanthrene	64		72		40-140	12		25
Anthracene	65		74		40-140	13		25
Fluoranthene	65		74		40-140	13		25
Pyrene	65		74		40-140	13		25
Benzo(a)anthracene	66		76		40-140	14		25
Chrysene	63		74		40-140	16		25
Benzo(b)fluoranthene	62		72		40-140	15		25
Benzo(k)fluoranthene	59		68		40-140	14		25
Benzo(a)pyrene	62		72		40-140	15		25
Indeno(1,2,3-cd)Pyrene	58		67		40-140	14		25
Dibenzo(a,h)anthracene	61		71		40-140	15		25
Benzo(ghi)perylene	55		64		40-140	15		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 03-05,07-09 Batch: WG1497527-2 WG1497527-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Chloro-Octadecane	56		61		40-140
o-Terphenyl	65		71		40-140
2-Fluorobiphenyl	81		85		40-140
2-Bromonaphthalene	81		88		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

Lab Control Sample Analysis
Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-02,06,10 Batch: WG1497828-2 WG1497828-3								
C9-C18 Aliphatics	56		52		40-140	7		25
C19-C36 Aliphatics	73		68		40-140	7		25
C11-C22 Aromatics	69		67		40-140	3		25
Naphthalene	65		64		40-140	2		25
2-Methylnaphthalene	67		65		40-140	3		25
Acenaphthylene	66		63		40-140	5		25
Acenaphthene	70		67		40-140	4		25
Fluorene	68		65		40-140	5		25
Phenanthrene	67		64		40-140	5		25
Anthracene	69		66		40-140	4		25
Fluoranthene	68		65		40-140	5		25
Pyrene	69		66		40-140	4		25
Benzo(a)anthracene	69		66		40-140	4		25
Chrysene	66		65		40-140	2		25
Benzo(b)fluoranthene	67		64		40-140	5		25
Benzo(k)fluoranthene	62		61		40-140	2		25
Benzo(a)pyrene	65		63		40-140	3		25
Indeno(1,2,3-cd)Pyrene	61		60		40-140	2		25
Dibenzo(a,h)anthracene	63		63		40-140	0		25
Benzo(ghi)perylene	58		58		40-140	0		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-02,06,10 Batch: WG1497828-2 WG1497828-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Chloro-Octadecane	65		60		40-140
o-Terphenyl	67		63		40-140
2-Fluorobiphenyl	79		78		40-140
2-Bromonaphthalene	79		78		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

PESTICIDES

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-01
Client ID: B 0-8'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 14:06
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8081B
Analytical Date: 06/11/21 16:35
Analyst: DP
Percent Solids: 18%

Extraction Method: EPA 3570
Extraction Date: 06/02/21 21:47
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Alpha-BHC	ND		ug/kg	0.719	0.109	1	A
Hexachlorobenzene	ND		ug/kg	1.44	0.967	1	A
Beta-BHC	ND		ug/kg	0.719	0.075	1	A
gamma-BHC	ND		ug/kg	0.719	0.162	1	A
Delta-BHC	ND		ug/kg	0.719	0.086	1	A
Heptachlor	ND		ug/kg	0.719	0.112	1	A
Aldrin	ND		ug/kg	0.719	0.180	1	A
Heptachlor epoxide	ND		ug/kg	1.44	0.231	1	B
Oxychlordane	ND		ug/kg	1.44	0.223	1	B
trans-Chlordane	0.956		ug/kg	0.719	0.109	1	B
Endosulfan I	ND		ug/kg	0.719	0.099	1	A
cis-Chlordane	0.934		ug/kg	0.719	0.388	1	B
trans-Nonachlor	ND		ug/kg	0.719	0.048	1	A
4,4'-DDE	1.25		ug/kg	0.719	0.033	1	B
Dieldrin	0.960		ug/kg	0.719	0.108	1	B
Endrin	ND		ug/kg	0.719	0.059	1	A
Endosulfan II	ND		ug/kg	0.719	0.051	1	A
4,4'-DDD	1.06		ug/kg	0.719	0.054	1	B
cis-Nonachlor	ND		ug/kg	0.719	0.052	1	A
Endosulfan sulfate	ND		ug/kg	0.719	0.030	1	A
4,4'-DDT	0.839	IP	ug/kg	0.719	0.071	1	A
Methoxychlor	ND		ug/kg	0.719	0.256	1	A
Toxaphene	ND		ug/kg	36.1	4.67	1	A

Project Name: SANTUIT POND
Lab Number: L2124064
Project Number: Not Specified
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-01
Client ID: B 0-8'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 14:06
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	43		30-150	A
BZ 198	53		30-150	A
DBOB	38		30-150	B
BZ 198	50		30-150	B

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-02
Client ID: D 0-3.0'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 14:20
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8081B
Analytical Date: 06/11/21 17:08
Analyst: DP
Percent Solids: 10%

Extraction Method: EPA 3570
Extraction Date: 06/02/21 21:47
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Alpha-BHC	ND		ug/kg	1.34	0.204	1	A
Hexachlorobenzene	ND		ug/kg	2.69	1.81	1	A
Beta-BHC	ND		ug/kg	1.34	0.140	1	A
gamma-BHC	ND		ug/kg	1.34	0.304	1	A
Delta-BHC	ND		ug/kg	1.34	0.160	1	A
Heptachlor	ND		ug/kg	1.34	0.211	1	A
Aldrin	ND		ug/kg	1.34	0.336	1	A
Heptachlor epoxide	ND		ug/kg	2.69	0.433	1	B
Oxychlordane	ND		ug/kg	2.69	0.417	1	B
trans-Chlordane	0.347	JP	ug/kg	1.34	0.204	1	B
Endosulfan I	ND		ug/kg	1.34	0.185	1	A
cis-Chlordane	1.03	J	ug/kg	1.34	0.727	1	B
trans-Nonachlor	ND		ug/kg	1.34	0.090	1	A
4,4'-DDE	29.3		ug/kg	1.34	0.061	1	B
Dieldrin	0.576	JIP	ug/kg	1.34	0.203	1	A
Endrin	ND		ug/kg	1.34	0.110	1	A
Endosulfan II	ND		ug/kg	1.34	0.096	1	A
4,4'-DDD	2.47		ug/kg	1.34	0.101	1	B
cis-Nonachlor	ND		ug/kg	1.34	0.098	1	A
Endosulfan sulfate	ND		ug/kg	1.34	0.055	1	A
4,4'-DDT	0.756	JIP	ug/kg	1.34	0.133	1	A
Methoxychlor	ND		ug/kg	1.34	0.479	1	A
Toxaphene	ND		ug/kg	67.6	8.75	1	A

Project Name: SANTUIT POND
Lab Number: L2124064
Project Number: Not Specified
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-02
Client ID: D 0-3.0'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 14:20
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	47		30-150	A
BZ 198	48		30-150	A
DBOB	41		30-150	B
BZ 198	41		30-150	B

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-03
Client ID: E 3.2-8'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 15:20
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8081B
Analytical Date: 06/11/21 17:41
Analyst: DP
Percent Solids: 19%

Extraction Method: EPA 3570
Extraction Date: 05/25/21 22:15
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Alpha-BHC	ND		ug/kg	0.656	0.100	1	A
Hexachlorobenzene	ND		ug/kg	1.31	0.883	1	A
Beta-BHC	ND		ug/kg	0.656	0.068	1	A
gamma-BHC	ND		ug/kg	0.656	0.148	1	A
Delta-BHC	ND		ug/kg	0.656	0.078	1	A
Heptachlor	ND		ug/kg	0.656	0.103	1	A
Aldrin	ND		ug/kg	0.656	0.164	1	A
Heptachlor epoxide	ND		ug/kg	1.31	0.211	1	B
Oxychlordane	ND		ug/kg	1.31	0.203	1	B
trans-Chlordane	ND		ug/kg	0.656	0.100	1	A
Endosulfan I	ND		ug/kg	0.656	0.090	1	A
cis-Chlordane	ND		ug/kg	0.656	0.354	1	A
trans-Nonachlor	ND		ug/kg	0.656	0.044	1	A
4,4'-DDE	ND	I	ug/kg	0.656	0.030	1	A
Dieldrin	ND		ug/kg	0.656	0.099	1	A
Endrin	ND		ug/kg	0.656	0.054	1	A
Endosulfan II	ND		ug/kg	0.656	0.047	1	A
4,4'-DDD	ND		ug/kg	0.656	0.049	1	A
cis-Nonachlor	ND		ug/kg	0.656	0.048	1	A
Endosulfan sulfate	ND		ug/kg	0.656	0.027	1	A
4,4'-DDT	ND		ug/kg	0.656	0.065	1	A
Methoxychlor	ND		ug/kg	0.656	0.234	1	A
Toxaphene	ND		ug/kg	32.9	4.26	1	A

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-03
Client ID: E 3.2-8'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 15:20
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	59		30-150	A
BZ 198	52		30-150	A
DBOB	42		30-150	B
BZ 198	46		30-150	B

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-04
Client ID: I 0-4.3'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 12:10
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8081B
Analytical Date: 06/11/21 18:14
Analyst: DP
Percent Solids: 23%

Extraction Method: EPA 3570
Extraction Date: 05/25/21 22:15
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Alpha-BHC	ND		ug/kg	0.565	0.086	1	A
Hexachlorobenzene	ND		ug/kg	1.13	0.761	1	A
Beta-BHC	ND		ug/kg	0.565	0.059	1	A
gamma-BHC	ND		ug/kg	0.565	0.128	1	A
Delta-BHC	ND		ug/kg	0.565	0.067	1	A
Heptachlor	ND		ug/kg	0.565	0.089	1	A
Aldrin	ND		ug/kg	0.565	0.141	1	A
Heptachlor epoxide	ND		ug/kg	1.13	0.182	1	B
Oxychlordane	ND		ug/kg	1.13	0.175	1	B
trans-Chlordane	ND		ug/kg	0.565	0.086	1	A
Endosulfan I	ND		ug/kg	0.565	0.078	1	A
cis-Chlordane	ND		ug/kg	0.565	0.305	1	A
trans-Nonachlor	ND		ug/kg	0.565	0.038	1	A
4,4'-DDE	0.970	IP	ug/kg	0.565	0.026	1	A
Dieldrin	ND		ug/kg	0.565	0.085	1	A
Endrin	ND		ug/kg	0.565	0.046	1	A
Endosulfan II	ND		ug/kg	0.565	0.040	1	A
4,4'-DDD	ND		ug/kg	0.565	0.042	1	A
cis-Nonachlor	ND		ug/kg	0.565	0.041	1	A
Endosulfan sulfate	ND		ug/kg	0.565	0.023	1	A
4,4'-DDT	ND		ug/kg	0.565	0.056	1	A
Methoxychlor	ND		ug/kg	0.565	0.201	1	A
Toxaphene	ND		ug/kg	28.4	3.67	1	A

Project Name: SANTUIT POND
Lab Number: L2124064
Project Number: Not Specified
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-04
Client ID: I 0-4.3'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 12:10
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	54		30-150	A
BZ 198	54		30-150	A
DBOB	32		30-150	B
BZ 198	46		30-150	B

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-05
Client ID: H 0-8'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 12:55
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8081B
Analytical Date: 06/11/21 18:47
Analyst: DP
Percent Solids: 19%

Extraction Method: EPA 3570
Extraction Date: 05/25/21 22:15
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Alpha-BHC	ND		ug/kg	0.710	0.108	1	A
Hexachlorobenzene	ND		ug/kg	1.42	0.956	1	A
Beta-BHC	ND		ug/kg	0.710	0.074	1	A
gamma-BHC	ND		ug/kg	0.710	0.160	1	A
Delta-BHC	ND		ug/kg	0.710	0.085	1	A
Heptachlor	ND		ug/kg	0.710	0.111	1	A
Aldrin	ND		ug/kg	0.710	0.178	1	A
Heptachlor epoxide	ND		ug/kg	1.42	0.229	1	B
Oxychlordane	ND		ug/kg	1.42	0.220	1	B
trans-Chlordane	ND		ug/kg	0.710	0.108	1	A
Endosulfan I	ND		ug/kg	0.710	0.098	1	A
cis-Chlordane	ND		ug/kg	0.710	0.383	1	A
trans-Nonachlor	ND		ug/kg	0.710	0.047	1	A
4,4'-DDE	ND		ug/kg	0.710	0.032	1	A
Dieldrin	ND		ug/kg	0.710	0.107	1	A
Endrin	ND		ug/kg	0.710	0.058	1	A
Endosulfan II	ND		ug/kg	0.710	0.050	1	A
4,4'-DDD	ND		ug/kg	0.710	0.053	1	A
cis-Nonachlor	ND		ug/kg	0.710	0.052	1	A
Endosulfan sulfate	ND		ug/kg	0.710	0.029	1	A
4,4'-DDT	ND		ug/kg	0.710	0.070	1	A
Methoxychlor	ND		ug/kg	0.710	0.253	1	A
Toxaphene	ND		ug/kg	35.6	4.62	1	A

Project Name: SANTUIT POND
Lab Number: L2124064
Project Number: Not Specified
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-05
Client ID: H 0-8'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 12:55
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	61		30-150	A
BZ 198	52		30-150	A
DBOB	35		30-150	B
BZ 198	46		30-150	B

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-06
Client ID: J 0-6.1'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 15:00
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8081B
Analytical Date: 06/11/21 19:20
Analyst: DP
Percent Solids: 26%

Extraction Method: EPA 3570
Extraction Date: 05/25/21 22:15
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Alpha-BHC	ND		ug/kg	0.498	0.076	1	A
Hexachlorobenzene	ND		ug/kg	0.996	0.671	1	A
Beta-BHC	ND		ug/kg	0.498	0.052	1	A
gamma-BHC	ND		ug/kg	0.498	0.113	1	A
Delta-BHC	ND		ug/kg	0.498	0.059	1	A
Heptachlor	ND		ug/kg	0.498	0.078	1	A
Aldrin	ND		ug/kg	0.498	0.124	1	A
Heptachlor epoxide	ND		ug/kg	0.996	0.160	1	B
Oxychlordane	ND		ug/kg	0.996	0.154	1	B
trans-Chlordane	ND		ug/kg	0.498	0.076	1	A
Endosulfan I	ND		ug/kg	0.498	0.069	1	A
cis-Chlordane	ND		ug/kg	0.498	0.269	1	A
trans-Nonachlor	ND		ug/kg	0.498	0.033	1	A
4,4'-DDE	0.716	IP	ug/kg	0.498	0.023	1	A
Dieldrin	ND		ug/kg	0.498	0.075	1	A
Endrin	ND		ug/kg	0.498	0.041	1	A
Endosulfan II	ND		ug/kg	0.498	0.035	1	A
4,4'-DDD	ND		ug/kg	0.498	0.037	1	A
cis-Nonachlor	ND		ug/kg	0.498	0.036	1	A
Endosulfan sulfate	ND		ug/kg	0.498	0.020	1	A
4,4'-DDT	ND		ug/kg	0.498	0.049	1	A
Methoxychlor	ND		ug/kg	0.498	0.177	1	A
Toxaphene	ND		ug/kg	25.0	3.24	1	A

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-06
Client ID: J 0-6.1'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 15:00
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	79		30-150	A
BZ 198	68		30-150	A
DBOB	56		30-150	B
BZ 198	59		30-150	B

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-07
Client ID: L 0-3.6'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 13:25
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8081B
Analytical Date: 06/11/21 19:53
Analyst: DP
Percent Solids: 18%

Extraction Method: EPA 3570
Extraction Date: 06/02/21 21:47
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Alpha-BHC	ND		ug/kg	0.714	0.108	1	A
Hexachlorobenzene	ND		ug/kg	1.43	0.961	1	A
Beta-BHC	ND		ug/kg	0.714	0.074	1	A
gamma-BHC	ND		ug/kg	0.714	0.161	1	A
Delta-BHC	ND		ug/kg	0.714	0.085	1	A
Heptachlor	ND		ug/kg	0.714	0.112	1	A
Aldrin	ND		ug/kg	0.714	0.178	1	A
Heptachlor epoxide	ND		ug/kg	1.43	0.230	1	B
Oxychlordane	ND		ug/kg	1.43	0.221	1	B
trans-Chlordane	ND		ug/kg	0.714	0.108	1	A
Endosulfan I	ND		ug/kg	0.714	0.098	1	A
cis-Chlordane	ND		ug/kg	0.714	0.385	1	A
trans-Nonachlor	ND		ug/kg	0.714	0.048	1	A
4,4'-DDE	6.18	IP	ug/kg	0.714	0.033	1	A
Dieldrin	ND		ug/kg	0.714	0.108	1	A
Endrin	ND		ug/kg	0.714	0.059	1	A
Endosulfan II	ND		ug/kg	0.714	0.051	1	A
4,4'-DDD	ND		ug/kg	0.714	0.054	1	A
cis-Nonachlor	ND		ug/kg	0.714	0.052	1	A
Endosulfan sulfate	ND		ug/kg	0.714	0.029	1	A
4,4'-DDT	ND		ug/kg	0.714	0.070	1	A
Methoxychlor	ND		ug/kg	0.714	0.254	1	A
Toxaphene	ND		ug/kg	35.8	4.64	1	A

Project Name: SANTUIT POND
Lab Number: L2124064
Project Number: Not Specified
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-07
Client ID: L 0-3.6'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 13:25
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	42		30-150	A
BZ 198	53		30-150	A
DBOB	36		30-150	B
BZ 198	47		30-150	B

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-08
Client ID: N 0-2.6'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 14:35
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8081B
Analytical Date: 06/11/21 20:26
Analyst: DP
Percent Solids: 21%

Extraction Method: EPA 3570
Extraction Date: 06/08/21 11:16
Cleanup Method: EPA 3630
Cleanup Date: 06/08/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Alpha-BHC	ND		ug/kg	0.932	0.142	1	A
Hexachlorobenzene	ND		ug/kg	1.86	1.25	1	A
Beta-BHC	ND		ug/kg	0.932	0.097	1	A
gamma-BHC	ND		ug/kg	0.932	0.210	1	A
Delta-BHC	ND		ug/kg	0.932	0.111	1	A
Heptachlor	ND		ug/kg	0.932	0.146	1	A
Aldrin	ND		ug/kg	0.932	0.233	1	A
Heptachlor epoxide	ND		ug/kg	1.86	0.300	1	B
Oxychlordane	ND		ug/kg	1.86	0.289	1	B
trans-Chlordane	ND		ug/kg	0.932	0.142	1	A
Endosulfan I	ND		ug/kg	0.932	0.128	1	A
cis-Chlordane	ND		ug/kg	0.932	0.503	1	A
trans-Nonachlor	ND		ug/kg	0.932	0.062	1	A
4,4'-DDE	ND		ug/kg	0.932	0.043	1	A
Dieldrin	ND		ug/kg	0.932	0.140	1	A
Endrin	ND		ug/kg	0.932	0.076	1	A
Endosulfan II	ND		ug/kg	0.932	0.066	1	A
4,4'-DDD	ND		ug/kg	0.932	0.070	1	A
cis-Nonachlor	ND		ug/kg	0.932	0.068	1	A
Endosulfan sulfate	ND		ug/kg	0.932	0.038	1	A
4,4'-DDT	ND		ug/kg	0.932	0.092	1	A
Methoxychlor	ND		ug/kg	0.932	0.332	1	A
Toxaphene	ND		ug/kg	46.8	6.06	1	A

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-08
Client ID: N 0-2.6'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 14:35
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	61		30-150	A
BZ 198	72		30-150	A
DBOB	50		30-150	B
BZ 198	66		30-150	B

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-09
Client ID: P 0-6.7'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 13:10
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8081B
Analytical Date: 06/11/21 20:59
Analyst: DP
Percent Solids: 22%

Extraction Method: EPA 3570
Extraction Date: 05/25/21 22:15
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Alpha-BHC	ND		ug/kg	0.610	0.093	1	A
Hexachlorobenzene	ND		ug/kg	1.22	0.821	1	A
Beta-BHC	ND		ug/kg	0.610	0.063	1	A
gamma-BHC	ND		ug/kg	0.610	0.138	1	A
Delta-BHC	ND		ug/kg	0.610	0.073	1	A
Heptachlor	ND		ug/kg	0.610	0.096	1	A
Aldrin	ND		ug/kg	0.610	0.152	1	A
Heptachlor epoxide	ND		ug/kg	1.22	0.196	1	B
Oxychlordane	ND		ug/kg	1.22	0.189	1	B
trans-Chlordane	ND		ug/kg	0.610	0.093	1	A
Endosulfan I	ND		ug/kg	0.610	0.084	1	A
cis-Chlordane	ND		ug/kg	0.610	0.329	1	A
trans-Nonachlor	ND		ug/kg	0.610	0.041	1	A
4,4'-DDE	ND		ug/kg	0.610	0.028	1	A
Dieldrin	ND		ug/kg	0.610	0.092	1	A
Endrin	ND		ug/kg	0.610	0.050	1	A
Endosulfan II	ND		ug/kg	0.610	0.043	1	A
4,4'-DDD	ND		ug/kg	0.610	0.046	1	A
cis-Nonachlor	ND		ug/kg	0.610	0.044	1	A
Endosulfan sulfate	ND		ug/kg	0.610	0.025	1	A
4,4'-DDT	ND		ug/kg	0.610	0.060	1	A
Methoxychlor	ND		ug/kg	0.610	0.217	1	A
Toxaphene	ND		ug/kg	30.6	3.96	1	A

Project Name: SANTUIT POND
Lab Number: L2124064
Project Number: Not Specified
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-09
Client ID: P 0-6.7'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 13:10
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	51		30-150	A
BZ 198	43		30-150	A
DBOB	37		30-150	B
BZ 198	37		30-150	B

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-10
Client ID: R 0-4.7'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 13:00
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8081B
Analytical Date: 06/11/21 21:32
Analyst: DP
Percent Solids: 16%

Extraction Method: EPA 3570
Extraction Date: 05/25/21 22:15
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Alpha-BHC	ND		ug/kg	0.829	0.126	1	A
Hexachlorobenzene	ND		ug/kg	1.66	1.12	1	A
Beta-BHC	ND		ug/kg	0.829	0.086	1	A
gamma-BHC	ND		ug/kg	0.829	0.187	1	A
Delta-BHC	ND		ug/kg	0.829	0.099	1	A
Heptachlor	ND		ug/kg	0.829	0.130	1	A
Aldrin	ND		ug/kg	0.829	0.207	1	A
Heptachlor epoxide	ND		ug/kg	1.66	0.267	1	B
Oxychlordane	ND		ug/kg	1.66	0.257	1	B
trans-Chlordane	ND		ug/kg	0.829	0.126	1	A
Endosulfan I	ND		ug/kg	0.829	0.114	1	A
cis-Chlordane	ND		ug/kg	0.829	0.447	1	A
trans-Nonachlor	ND		ug/kg	0.829	0.055	1	A
4,4'-DDE	9.03	P	ug/kg	0.829	0.038	1	B
Dieldrin	ND		ug/kg	0.829	0.125	1	A
Endrin	ND		ug/kg	0.829	0.068	1	A
Endosulfan II	ND		ug/kg	0.829	0.059	1	A
4,4'-DDD	1.73		ug/kg	0.829	0.062	1	B
cis-Nonachlor	ND		ug/kg	0.829	0.060	1	A
Endosulfan sulfate	ND		ug/kg	0.829	0.034	1	A
4,4'-DDT	ND		ug/kg	0.829	0.082	1	A
Methoxychlor	ND		ug/kg	0.829	0.295	1	A
Toxaphene	ND		ug/kg	41.6	5.39	1	A

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-10
Client ID: R 0-4.7'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 13:00
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	68		30-150	A
BZ 198	47		30-150	A
DBOB	123		30-150	B
BZ 198	111		30-150	B

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 06/10/21 21:56
Analyst: DP

Extraction Method: EPA 3570
Extraction Date: 05/25/21 22:15
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL	Column
RIM Organochlorine Pesticides - Mansfield Lab for sample(s): 03-06,09-10 Batch: WG1503533-1						
Alpha-BHC	ND		ug/kg	0.133	0.020	A
Hexachlorobenzene	ND		ug/kg	0.267	0.179	A
Beta-BHC	ND		ug/kg	0.133	0.014	A
gamma-BHC	ND		ug/kg	0.133	0.030	A
Delta-BHC	ND		ug/kg	0.133	0.016	A
Heptachlor	ND		ug/kg	0.133	0.021	A
Aldrin	ND		ug/kg	0.133	0.033	A
trans-Chlordane	ND		ug/kg	0.133	0.020	A
Endosulfan I	ND		ug/kg	0.133	0.018	A
cis-Chlordane	ND		ug/kg	0.133	0.072	A
trans-Nonachlor	ND		ug/kg	0.133	0.009	A
4,4'-DDE	ND		ug/kg	0.133	0.006	A
Dieldrin	ND		ug/kg	0.133	0.020	A
Endrin	ND		ug/kg	0.133	0.011	A
Endosulfan II	ND		ug/kg	0.133	0.009	A
4,4'-DDD	ND		ug/kg	0.133	0.010	A
cis-Nonachlor	ND		ug/kg	0.133	0.010	A
Endosulfan sulfate	ND		ug/kg	0.133	0.005	A
4,4'-DDT	ND		ug/kg	0.133	0.013	A
Methoxychlor	ND		ug/kg	0.133	0.048	A
Toxaphene	ND		ug/kg	6.69	0.867	A
Heptachlor epoxide	ND		ug/kg	0.267	0.043	B
Oxychlordane	ND		ug/kg	0.267	0.041	B

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 06/10/21 21:56
Analyst: DP

Extraction Method: EPA 3570
Extraction Date: 05/25/21 22:15
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL	Column
RIM Organochlorine Pesticides - Mansfield Lab for sample(s): 03-06,09-10 Batch: WG1503533-1						

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DBOB	39		30-150	A
BZ 198	57		30-150	A
DBOB	46		30-150	B
BZ 198	55		30-150	B

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 06/10/21 23:34
Analyst: DP

Extraction Method: EPA 3570
Extraction Date: 06/02/21 21:47
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL	Column
RIM Organochlorine Pesticides - Mansfield Lab for sample(s): 01-02,07 Batch: WG1506803-1						
Alpha-BHC	ND		ug/kg	0.133	0.020	A
Hexachlorobenzene	ND		ug/kg	0.267	0.179	A
Beta-BHC	ND		ug/kg	0.133	0.014	A
gamma-BHC	ND		ug/kg	0.133	0.030	A
Delta-BHC	ND		ug/kg	0.133	0.016	A
Heptachlor	ND		ug/kg	0.133	0.021	A
Aldrin	ND		ug/kg	0.133	0.033	A
trans-Chlordane	ND		ug/kg	0.133	0.020	A
Endosulfan I	ND		ug/kg	0.133	0.018	A
cis-Chlordane	ND		ug/kg	0.133	0.072	A
trans-Nonachlor	ND		ug/kg	0.133	0.009	A
4,4'-DDE	ND		ug/kg	0.133	0.006	A
Dieldrin	ND		ug/kg	0.133	0.020	A
Endrin	ND		ug/kg	0.133	0.011	A
Endosulfan II	ND		ug/kg	0.133	0.009	A
4,4'-DDD	ND		ug/kg	0.133	0.010	A
cis-Nonachlor	ND		ug/kg	0.133	0.010	A
Endosulfan sulfate	ND		ug/kg	0.133	0.005	A
4,4'-DDT	ND		ug/kg	0.133	0.013	A
Methoxychlor	ND		ug/kg	0.133	0.048	A
Toxaphene	ND		ug/kg	6.69	0.867	A
Heptachlor epoxide	ND		ug/kg	0.267	0.043	B
Oxychlordane	ND		ug/kg	0.267	0.041	B

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 06/10/21 23:34
Analyst: DP

Extraction Method: EPA 3570
Extraction Date: 06/02/21 21:47
Cleanup Method: EPA 3630
Cleanup Date: 06/05/21

Parameter	Result	Qualifier	Units	RL	MDL	Column
RIM Organochlorine Pesticides - Mansfield Lab for sample(s): 01-02,07 Batch: WG1506803-1						

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DBOB	51		30-150	A
BZ 198	69		30-150	A
DBOB	66		30-150	B
BZ 198	66		30-150	B

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 06/11/21 02:19
Analyst: DP

Extraction Method: EPA 3570
Extraction Date: 06/08/21 11:16
Cleanup Method: EPA 3630
Cleanup Date: 06/08/21

Parameter	Result	Qualifier	Units	RL	MDL	Column
RIM Organochlorine Pesticides - Mansfield Lab for sample(s): 08 Batch: WG1509046-1						
Alpha-BHC	ND		ug/kg	0.200	0.030	A
Hexachlorobenzene	ND		ug/kg	0.400	0.269	A
Beta-BHC	ND		ug/kg	0.200	0.021	A
gamma-BHC	ND		ug/kg	0.200	0.045	A
Delta-BHC	ND		ug/kg	0.200	0.024	A
Heptachlor	ND		ug/kg	0.200	0.031	A
Aldrin	ND		ug/kg	0.200	0.050	A
trans-Chlordane	ND		ug/kg	0.200	0.030	A
Endosulfan I	ND		ug/kg	0.200	0.028	A
cis-Chlordane	ND		ug/kg	0.200	0.108	A
trans-Nonachlor	ND		ug/kg	0.200	0.013	A
4,4'-DDE	ND		ug/kg	0.200	0.009	A
Dieldrin	ND		ug/kg	0.200	0.030	A
Endrin	ND		ug/kg	0.200	0.016	A
Endosulfan II	ND		ug/kg	0.200	0.014	A
4,4'-DDD	ND		ug/kg	0.200	0.015	A
cis-Nonachlor	ND		ug/kg	0.200	0.015	A
Endosulfan sulfate	ND		ug/kg	0.200	0.008	A
4,4'-DDT	ND		ug/kg	0.200	0.020	A
Methoxychlor	ND		ug/kg	0.200	0.071	A
Toxaphene	ND		ug/kg	10.0	1.30	A
Heptachlor epoxide	ND		ug/kg	0.400	0.064	B
Oxychlordane	ND		ug/kg	0.400	0.062	B

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 06/11/21 02:19
Analyst: DP

Extraction Method: EPA 3570
Extraction Date: 06/08/21 11:16
Cleanup Method: EPA 3630
Cleanup Date: 06/08/21

Parameter	Result	Qualifier	Units	RL	MDL	Column
RIM Organochlorine Pesticides - Mansfield Lab for sample(s): 08 Batch: WG1509046-1						

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DBOB	43		30-150	A
BZ 198	71		30-150	A
DBOB	56		30-150	B
BZ 198	67		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 03-06,09-10 Batch: WG1503533-2 WG1503533-3									
Alpha-BHC	71		66		50-120	7		30	A
Hexachlorobenzene	63		58		50-120	8		30	A
Beta-BHC	64		62		50-120	3		30	A
gamma-BHC	61		58		50-120	5		30	A
Delta-BHC	61		61		50-120	0		30	A
Heptachlor	66		65		50-120	2		30	A
Aldrin	67		62		50-120	8		30	A
trans-Chlordane	71		70		50-120	1		30	A
Endosulfan I	69		68		50-120	1		30	A
cis-Chlordane	68		66		50-120	3		30	A
trans-Nonachlor	73		70		50-120	4		30	A
4,4'-DDE	77		80		50-120	4		30	A
Dieldrin	75		75		50-120	0		30	A
Endrin	64		62		50-120	3		30	A
4,4'-DDD	73		79		50-120	8		30	A
cis-Nonachlor	68		70		50-120	3		30	A
Endosulfan sulfate	75		80		50-120	6		30	A
4,4'-DDT	82		88		50-120	7		30	A
Methoxychlor	73		80		50-120	9		30	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 03-06,09-10 Batch: WG1503533-2 WG1503533-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DBOB	61		58		30-150	A
BZ 198	84		86		30-150	A
DBOB	72		64		30-150	B
BZ 198	81		93		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 03-06,09-10 Batch: WG1503533-2 WG1503533-3									
Heptachlor epoxide	77		81		50-120	5		30	B
Oxychlordane	82		80		50-120	2		30	B
Endosulfan II	78		79		50-120	1		30	B

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DBOB	61		58		30-150	A
BZ 198	84		86		30-150	A
DBOB	72		64		30-150	B
BZ 198	81		93		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-02,07 Batch: WG1506803-2 WG1506803-3									
Alpha-BHC	56		56		50-120	0		30	A
Hexachlorobenzene	**48**	Q	**48**	Q	50-120	0		30	A
Beta-BHC	53		**48**	Q	50-120	10		30	A
gamma-BHC	**48**	Q	**47**	Q	50-120	2		30	A
Delta-BHC	**48**	Q	**43**	Q	50-120	11		30	A
Heptachlor	54		51		50-120	6		30	A
Aldrin	54		66		50-120	20		30	A
trans-Chlordane	63		54		50-120	15		30	A
Endosulfan I	61		53		50-120	14		30	A
cis-Chlordane	58		52		50-120	11		30	A
trans-Nonachlor	63		56		50-120	12		30	A
4,4'-DDE	74		62		50-120	18		30	A
Dieldrin	68		58		50-120	16		30	A
Endrin	57		**48**	Q	50-120	17		30	A
4,4'-DDD	73		54		50-120	30		30	A
cis-Nonachlor	63		52		50-120	19		30	A
Endosulfan sulfate	76		58		50-120	27		30	A
4,4'-DDT	81		60		50-120	30		30	A
Methoxychlor	77		55		50-120	**33**	Q	30	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-02,07 Batch: WG1506803-2 WG1506803-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DBOB	49		46		30-150	A
BZ 198	81		61		30-150	A
DBOB	54		52		30-150	B
BZ 198	73		59		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: SANTUIT POND

Project Number: Not Specified

Lab Number: L2124064

Report Date: 06/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-02,07 Batch: WG1506803-2 WG1506803-3									
Heptachlor epoxide	68		58		50-120	16		30	B
Oxychlordane	68		67		50-120	1		30	B
Endosulfan II	73		63		50-120	15		30	B

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DBOB	49		46		30-150	A
BZ 198	81		61		30-150	A
DBOB	54		52		30-150	B
BZ 198	73		59		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 08 Batch: WG1509046-2 WG1509046-3									
Alpha-BHC	53		59		50-120	11		30	A
Hexachlorobenzene	**47**	Q	54		50-120	14		30	A
Beta-BHC	51		58		50-120	13		30	A
gamma-BHC	**48**	Q	56		50-120	15		30	A
Delta-BHC	53		60		50-120	12		30	A
Heptachlor	52		61		50-120	16		30	A
Aldrin	52		62		50-120	18		30	A
trans-Chlordane	61		71		50-120	15		30	A
Endosulfan I	60		69		50-120	14		30	A
cis-Chlordane	58		67		50-120	14		30	A
trans-Nonachlor	62		71		50-120	14		30	A
4,4'-DDE	73		81		50-120	10		30	A
Dieldrin	67		75		50-120	11		30	A
Endrin	55		63		50-120	14		30	A
4,4'-DDD	67		75		50-120	11		30	A
cis-Nonachlor	60		68		50-120	13		30	A
Endosulfan sulfate	70		77		50-120	10		30	A
4,4'-DDT	78		87		50-120	11		30	A
Methoxychlor	70		80		50-120	13		30	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: SANTUIT POND

Project Number: Not Specified

Lab Number: L2124064

Report Date: 06/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 08 Batch: WG1509046-2 WG1509046-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DBOB	50		57		30-150	A
BZ 198	79		89		30-150	A
DBOB	52		43		30-150	B
BZ 198	74		52		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 08 Batch: WG1509046-2 WG1509046-3									
Heptachlor epoxide	69		**49**	Q	50-120	**34**	Q	30	B
Oxychlordane	69		50		50-120	**32**	Q	30	B
Endosulfan II	72		51		50-120	**34**	Q	30	B

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DBOB	50		57		30-150	A
BZ 198	79		89		30-150	A
DBOB	52		43		30-150	B
BZ 198	74		52		30-150	B

METALS

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-01
Client ID: B 0-8'
Sample Location: MASHPEE, MA
Sample Depth:
Matrix: Sediment
Percent Solids: 18%

Date Collected: 04/29/21 14:06
Date Received: 05/07/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	141		mg/kg	0.521	0.069	2	05/28/21 12:52	06/07/21 17:59	EPA 3050B	1,6020B	CD
Cadmium, Total	10.7		mg/kg	0.208	0.028	2	05/28/21 12:52	06/07/21 17:59	EPA 3050B	1,6020B	CD
Chromium, Total	43.0		mg/kg	2.08	0.487	2	05/28/21 12:52	06/07/21 17:59	EPA 3050B	1,6020B	CD
Copper, Total	219		mg/kg	2.08	0.202	2	05/28/21 12:52	06/07/21 17:59	EPA 3050B	1,6020B	CD
Iron, Total	27900		mg/kg	208	21.4	2	05/28/21 12:52	06/07/21 17:59	EPA 3050B	1,6020B	CD
Lead, Total	41.8		mg/kg	0.625	0.152	2	05/28/21 12:52	06/07/21 17:59	EPA 3050B	1,6020B	CD
Mercury, Total	0.105		mg/kg	0.059	0.008	5	05/28/21 13:00	06/01/21 15:02	EPA 7474	1,7474	CD
Nickel, Total	88.4		mg/kg	1.04	0.278	2	05/28/21 12:52	06/07/21 17:59	EPA 3050B	1,6020B	CD
Zinc, Total	369		mg/kg	10.4	2.71	2	05/28/21 12:52	06/07/21 17:59	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-02
Client ID: D 0-3.0'
Sample Location: MASHPEE, MA
Sample Depth:
Matrix: Sediment
Percent Solids: 10%

Date Collected: 04/29/21 14:20
Date Received: 05/07/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	16.8		mg/kg	0.996	0.132	2	05/28/21 12:52	06/07/21 18:04	EPA 3050B	1,6020B	CD
Cadmium, Total	0.978		mg/kg	0.398	0.053	2	05/28/21 12:52	06/07/21 18:04	EPA 3050B	1,6020B	CD
Chromium, Total	6.47		mg/kg	3.98	0.932	2	05/28/21 12:52	06/07/21 18:04	EPA 3050B	1,6020B	CD
Copper, Total	5.94		mg/kg	3.98	0.386	2	05/28/21 12:52	06/07/21 18:04	EPA 3050B	1,6020B	CD
Iron, Total	7670		mg/kg	398	41.0	2	05/28/21 12:52	06/07/21 18:04	EPA 3050B	1,6020B	CD
Lead, Total	32.5		mg/kg	1.20	0.291	2	05/28/21 12:52	06/07/21 18:04	EPA 3050B	1,6020B	CD
Mercury, Total	0.130		mg/kg	0.116	0.015	5	05/28/21 13:00	06/01/21 15:05	EPA 7474	1,7474	CD
Nickel, Total	5.72		mg/kg	1.99	0.532	2	05/28/21 12:52	06/07/21 18:04	EPA 3050B	1,6020B	CD
Zinc, Total	47.0		mg/kg	19.9	5.18	2	05/28/21 12:52	06/07/21 18:04	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Lab Number: L2124064
Project Number: Not Specified
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-03
Client ID: E 3.2-8'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 15:20
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 19%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	26.4		mg/kg	0.495	0.065	2	05/28/21 12:52	06/07/21 19:08	EPA 3050B	1,6020B	CD
Cadmium, Total	0.434		mg/kg	0.198	0.026	2	05/28/21 12:52	06/07/21 19:08	EPA 3050B	1,6020B	CD
Chromium, Total	17.1		mg/kg	1.98	0.463	2	05/28/21 12:52	06/07/21 19:08	EPA 3050B	1,6020B	CD
Copper, Total	4.39		mg/kg	1.98	0.192	2	05/28/21 12:52	06/07/21 19:08	EPA 3050B	1,6020B	CD
Iron, Total	14100		mg/kg	198	20.4	2	05/28/21 12:52	06/07/21 19:08	EPA 3050B	1,6020B	CD
Lead, Total	4.20		mg/kg	0.594	0.144	2	05/28/21 12:52	06/07/21 19:08	EPA 3050B	1,6020B	CD
Mercury, Total	0.034	J	mg/kg	0.059	0.008	5	05/28/21 13:00	06/01/21 15:07	EPA 7474	1,7474	CD
Nickel, Total	7.42		mg/kg	0.989	0.264	2	05/28/21 12:52	06/07/21 19:08	EPA 3050B	1,6020B	CD
Zinc, Total	15.8		mg/kg	9.89	2.57	2	05/28/21 12:52	06/07/21 19:08	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Lab Number: L2124064
Project Number: Not Specified
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-04
Client ID: I 0-4.3'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 12:10
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 23%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	32.0		mg/kg	0.422	0.056	2	05/28/21 12:52	06/07/21 19:13	EPA 3050B	1,6020B	CD
Cadmium, Total	0.463		mg/kg	0.169	0.022	2	05/28/21 12:52	06/07/21 19:13	EPA 3050B	1,6020B	CD
Chromium, Total	16.2		mg/kg	1.69	0.395	2	05/28/21 12:52	06/07/21 19:13	EPA 3050B	1,6020B	CD
Copper, Total	4.07		mg/kg	1.69	0.164	2	05/28/21 12:52	06/07/21 19:13	EPA 3050B	1,6020B	CD
Iron, Total	13100		mg/kg	169	17.4	2	05/28/21 12:52	06/07/21 19:13	EPA 3050B	1,6020B	CD
Lead, Total	7.26		mg/kg	0.506	0.123	2	05/28/21 12:52	06/07/21 19:13	EPA 3050B	1,6020B	CD
Mercury, Total	0.039	J	mg/kg	0.064	0.008	5	05/28/21 13:00	06/01/21 15:09	EPA 7474	1,7474	CD
Nickel, Total	6.16		mg/kg	0.843	0.225	2	05/28/21 12:52	06/07/21 19:13	EPA 3050B	1,6020B	CD
Zinc, Total	18.4		mg/kg	8.43	2.19	2	05/28/21 12:52	06/07/21 19:13	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-05
Client ID: H 0-8'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 12:55
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 19%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	20.6		mg/kg	0.525	0.069	2	05/28/21 12:52	06/07/21 19:18	EPA 3050B	1,6020B	CD
Cadmium, Total	0.407		mg/kg	0.210	0.028	2	05/28/21 12:52	06/07/21 19:18	EPA 3050B	1,6020B	CD
Chromium, Total	19.5		mg/kg	2.10	0.491	2	05/28/21 12:52	06/07/21 19:18	EPA 3050B	1,6020B	CD
Copper, Total	4.13		mg/kg	2.10	0.204	2	05/28/21 12:52	06/07/21 19:18	EPA 3050B	1,6020B	CD
Iron, Total	10500		mg/kg	210	21.6	2	05/28/21 12:52	06/07/21 19:18	EPA 3050B	1,6020B	CD
Lead, Total	2.71		mg/kg	0.630	0.153	2	05/28/21 12:52	06/07/21 19:18	EPA 3050B	1,6020B	CD
Mercury, Total	0.039	J	mg/kg	0.079	0.010	5	05/28/21 13:00	06/01/21 15:12	EPA 7474	1,7474	CD
Nickel, Total	7.47		mg/kg	1.05	0.280	2	05/28/21 12:52	06/07/21 19:18	EPA 3050B	1,6020B	CD
Zinc, Total	14.2		mg/kg	10.5	2.73	2	05/28/21 12:52	06/07/21 19:18	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-06
Client ID: J 0-6.1'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 15:00
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 26%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	29.3		mg/kg	0.364	0.048	2	05/28/21 12:52	06/07/21 19:23	EPA 3050B	1,6020B	CD
Cadmium, Total	0.304		mg/kg	0.146	0.019	2	05/28/21 12:52	06/07/21 19:23	EPA 3050B	1,6020B	CD
Chromium, Total	18.2		mg/kg	1.46	0.341	2	05/28/21 12:52	06/07/21 19:23	EPA 3050B	1,6020B	CD
Copper, Total	3.10		mg/kg	1.46	0.141	2	05/28/21 12:52	06/07/21 19:23	EPA 3050B	1,6020B	CD
Iron, Total	9420		mg/kg	146	15.0	2	05/28/21 12:52	06/07/21 19:23	EPA 3050B	1,6020B	CD
Lead, Total	3.92		mg/kg	0.437	0.106	2	05/28/21 12:52	06/07/21 19:23	EPA 3050B	1,6020B	CD
Mercury, Total	0.028	J	mg/kg	0.052	0.007	5	05/28/21 13:00	06/01/21 15:14	EPA 7474	1,7474	CD
Nickel, Total	5.29		mg/kg	0.728	0.194	2	05/28/21 12:52	06/07/21 19:23	EPA 3050B	1,6020B	CD
Zinc, Total	11.4		mg/kg	7.28	1.89	2	05/28/21 12:52	06/07/21 19:23	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-07
Client ID: L 0-3.6'
Sample Location: MASHPEE, MA
Sample Depth:
Matrix: Sediment
Percent Solids: 18%

Date Collected: 04/29/21 13:25
Date Received: 05/07/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	28.0		mg/kg	0.527	0.070	2	05/28/21 12:52	06/07/21 19:28	EPA 3050B	1,6020B	CD
Cadmium, Total	0.726		mg/kg	0.211	0.028	2	05/28/21 12:52	06/07/21 19:28	EPA 3050B	1,6020B	CD
Chromium, Total	8.83		mg/kg	2.11	0.493	2	05/28/21 12:52	06/07/21 19:28	EPA 3050B	1,6020B	CD
Copper, Total	6.49		mg/kg	2.11	0.204	2	05/28/21 12:52	06/07/21 19:28	EPA 3050B	1,6020B	CD
Iron, Total	11300		mg/kg	211	21.7	2	05/28/21 12:52	06/07/21 19:28	EPA 3050B	1,6020B	CD
Lead, Total	40.2		mg/kg	0.632	0.154	2	05/28/21 12:52	06/07/21 19:28	EPA 3050B	1,6020B	CD
Mercury, Total	0.083		mg/kg	0.080	0.010	5	05/28/21 13:00	06/01/21 15:17	EPA 7474	1,7474	CD
Nickel, Total	7.33		mg/kg	1.05	0.281	2	05/28/21 12:52	06/07/21 19:28	EPA 3050B	1,6020B	CD
Zinc, Total	46.1		mg/kg	10.5	2.74	2	05/28/21 12:52	06/07/21 19:28	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-08
Client ID: N 0-2.6'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 14:35
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 21%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	38.5		mg/kg	0.457	0.060	2	05/28/21 12:52	06/07/21 19:32	EPA 3050B	1,6020B	CD
Cadmium, Total	0.411		mg/kg	0.183	0.024	2	05/28/21 12:52	06/07/21 19:32	EPA 3050B	1,6020B	CD
Chromium, Total	17.1		mg/kg	1.83	0.428	2	05/28/21 12:52	06/07/21 19:32	EPA 3050B	1,6020B	CD
Copper, Total	4.12		mg/kg	1.83	0.177	2	05/28/21 12:52	06/07/21 19:32	EPA 3050B	1,6020B	CD
Iron, Total	14400		mg/kg	183	18.8	2	05/28/21 12:52	06/07/21 19:32	EPA 3050B	1,6020B	CD
Lead, Total	3.77		mg/kg	0.548	0.133	2	05/28/21 12:52	06/07/21 19:32	EPA 3050B	1,6020B	CD
Mercury, Total	0.031	J	mg/kg	0.058	0.007	5	05/28/21 13:00	06/08/21 09:25	EPA 7474	1,7474	CD
Nickel, Total	7.45		mg/kg	0.914	0.244	2	05/28/21 12:52	06/07/21 19:32	EPA 3050B	1,6020B	CD
Zinc, Total	17.6		mg/kg	9.14	2.38	2	05/28/21 12:52	06/07/21 19:32	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Lab Number: L2124064
Project Number: Not Specified
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-09
Client ID: P 0-6.7'
Sample Location: MASHPEE, MA
Date Collected: 04/29/21 13:10
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 22%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	34.2		mg/kg	0.448	0.059	2	05/28/21 12:52	06/07/21 19:37	EPA 3050B	1,6020B	CD
Cadmium, Total	0.430		mg/kg	0.179	0.024	2	05/28/21 12:52	06/07/21 19:37	EPA 3050B	1,6020B	CD
Chromium, Total	17.4		mg/kg	1.79	0.419	2	05/28/21 12:52	06/07/21 19:37	EPA 3050B	1,6020B	CD
Copper, Total	7.62		mg/kg	1.79	0.174	2	05/28/21 12:52	06/07/21 19:37	EPA 3050B	1,6020B	CD
Iron, Total	12200		mg/kg	179	18.4	2	05/28/21 12:52	06/07/21 19:37	EPA 3050B	1,6020B	CD
Lead, Total	3.37		mg/kg	0.537	0.131	2	05/28/21 12:52	06/07/21 19:37	EPA 3050B	1,6020B	CD
Mercury, Total	0.031	J	mg/kg	0.066	0.008	5	05/28/21 13:00	06/01/21 15:24	EPA 7474	1,7474	CD
Nickel, Total	9.65		mg/kg	0.895	0.239	2	05/28/21 12:52	06/07/21 19:37	EPA 3050B	1,6020B	CD
Zinc, Total	17.8		mg/kg	8.95	2.33	2	05/28/21 12:52	06/07/21 19:37	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-10
Client ID: R 0-4.7'
Sample Location: MASHPEE, MA
Sample Depth:
Matrix: Sediment
Percent Solids: 16%

Date Collected: 04/29/21 13:00
Date Received: 05/07/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	31.2		mg/kg	0.602	0.080	2	05/28/21 12:52	06/07/21 19:42	EPA 3050B	1,6020B	CD
Cadmium, Total	0.490		mg/kg	0.241	0.032	2	05/28/21 12:52	06/07/21 19:42	EPA 3050B	1,6020B	CD
Chromium, Total	17.9		mg/kg	2.41	0.564	2	05/28/21 12:52	06/07/21 19:42	EPA 3050B	1,6020B	CD
Copper, Total	5.37		mg/kg	2.41	0.234	2	05/28/21 12:52	06/07/21 19:42	EPA 3050B	1,6020B	CD
Iron, Total	9500		mg/kg	241	24.8	2	05/28/21 12:52	06/07/21 19:42	EPA 3050B	1,6020B	CD
Lead, Total	13.6		mg/kg	0.723	0.176	2	05/28/21 12:52	06/07/21 19:42	EPA 3050B	1,6020B	CD
Mercury, Total	0.048	J	mg/kg	0.074	0.009	5	05/28/21 13:00	06/01/21 15:27	EPA 7474	1,7474	CD
Nickel, Total	8.00		mg/kg	1.20	0.322	2	05/28/21 12:52	06/07/21 19:42	EPA 3050B	1,6020B	CD
Zinc, Total	23.2		mg/kg	12.0	3.13	2	05/28/21 12:52	06/07/21 19:42	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

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): 01-10 Batch: WG1504417-1										
Arsenic, Total	ND		mg/kg	0.050	0.007	1	05/28/21 12:52	06/07/21 14:43	1,6020B	CD
Cadmium, Total	ND		mg/kg	0.020	0.003	1	05/28/21 12:52	06/07/21 14:43	1,6020B	CD
Chromium, Total	ND		mg/kg	0.200	0.047	1	05/28/21 12:52	06/07/21 14:43	1,6020B	CD
Copper, Total	ND		mg/kg	0.200	0.019	1	05/28/21 12:52	06/07/21 14:43	1,6020B	CD
Iron, Total	ND		mg/kg	20.0	2.06	1	05/28/21 12:52	06/07/21 14:43	1,6020B	CD
Lead, Total	ND		mg/kg	0.060	0.015	1	05/28/21 12:52	06/07/21 14:43	1,6020B	CD
Nickel, Total	ND		mg/kg	0.100	0.027	1	05/28/21 12:52	06/07/21 14:43	1,6020B	CD
Zinc, Total	ND		mg/kg	1.00	0.260	1	05/28/21 12:52	06/07/21 14:43	1,6020B	CD

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): 01-10 Batch: WG1504421-1										
Mercury, Total	0.006	J	mg/kg	0.013	0.002	5	05/28/21 13:00	06/01/21 14:03	1,7474	CD

Prep Information

Digestion Method: EPA 7474

Lab Control Sample Analysis

Batch Quality Control

Project Name: SANTUIT POND

Project Number: Not Specified

Lab Number: L2124064

Report Date: 06/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-10 Batch: WG1504417-2 SRM Lot Number: D109-540								
Arsenic, Total	103		-		70-130	-		20
Cadmium, Total	116		-		75-125	-		20
Chromium, Total	104		-		70-130	-		20
Copper, Total	100		-		75-125	-		20
Iron, Total	104		-		35-165	-		20
Lead, Total	111		-		72-128	-		20
Nickel, Total	110		-		70-130	-		20
Zinc, Total	102		-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-10 Batch: WG1504421-2 SRM Lot Number: D109-540								
Mercury, Total	116		-		60-140	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

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): 01-10 QC Batch ID: WG1504417-3 QC Sample: L2124063-01 Client ID: MS Sample												
Arsenic, Total	13.9	20.1	32.1	90		-	-		75-125	-		20
Cadmium, Total	1.10	8.55	9.15	94		-	-		75-125	-		20
Chromium, Total	95.1	33.5	134	116		-	-		75-125	-		20
Copper, Total	117	41.9	167	119		-	-		75-125	-		20
Iron, Total	19800	168	18800	**0**	Q	-	-		75-125	-		20
Lead, Total	93.1	85.5	186	109		-	-		75-125	-		20
Nickel, Total	13.0	83.8	83.6	84		-	-		75-125	-		20
Zinc, Total	84.6	83.8	178	111		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1504421-3 QC Sample: L2124063-01 Client ID: MS Sample												
Mercury, Total	0.792	1.54	2.47	109		-	-		80-120	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1504417-4 QC Sample: L2124063-01 Client ID: DUP Sample						
Arsenic, Total	13.9	23.3	mg/kg	**51**	Q	20
Cadmium, Total	1.10	0.844	mg/kg	**26**	Q	20
Chromium, Total	95.1	98.7	mg/kg	4		20
Copper, Total	117	120	mg/kg	3		20
Lead, Total	93.1	94.0	mg/kg	1		20
Nickel, Total	13.0	14.1	mg/kg	8		20
Zinc, Total	84.6	85.8	mg/kg	1		20
Total Metals - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1504421-4 QC Sample: L2124063-01 Client ID: DUP Sample						
Mercury, Total	0.792	0.642	mg/kg	**21**	Q	20

INORGANICS
&
MISCELLANEOUS

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-01
Client ID: B 0-8'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 14:06
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	15.5		%	0.010	0.010	1	-	06/09/21 10:20	1,9060A	SP
Total Organic Carbon (Rep2)	19.0		%	0.010	0.010	1	-	06/09/21 10:20	1,9060A	SP
Total Organic Carbon (Average)	17.3		%	0.010	0.010	1	-	06/09/21 10:20	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	320		mg/kg	60	20.	2.2	-	05/18/21 09:40	121,4500P-E	SD
General Chemistry - Mansfield Lab										
Solids, Total	18.2		%	0.100	0.100	1	-	05/26/21 14:36	121,2540G	MC
Moisture	81.8		%	0.100	0.100	1	-	05/26/21 14:36	121,2540G	MC
WATER CONTENT	400		%	0.10	NA	1	-	06/14/21 09:20	12,D2216-98	SM
Specific Gravity	3.47		-	-	NA	1	-	06/11/21 14:40	12,D854	SM
Density of Soil - Mansfield Lab										
Bulk Density	66.01		lbs/ft3	0.0100	NA	1	-	06/14/21 09:20	12,D7263	SM
Moisture Content	395.0		%	0.0100	NA	1	-	06/14/21 09:20	12,D7263	SM
Dry Density	13.33		lbs/ft3	0.0100	NA	1	-	06/14/21 09:20	12,D7263	SM
Atterberg Limits - Mansfield Lab										
Liquid Limit	380		-	-	NA	1	-	06/09/21 13:46	12,D4318	SM
Plastic Limit	260		-	-	NA	1	-	06/09/21 13:46	12,D4318	SM
Plasticity Index	120		-	-	NA	1	-	06/09/21 13:46	12,D4318	SM

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-02
Client ID: D 0-3.0'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 14:20
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	13.9		%	0.010	0.010	1	-	06/09/21 11:03	1,9060A	SP
Total Organic Carbon (Rep2)	14.2		%	0.010	0.010	1	-	06/09/21 11:03	1,9060A	SP
Total Organic Carbon (Average)	14.1		%	0.010	0.010	1	-	06/09/21 11:03	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	900		mg/kg	100	34.	2	-	05/18/21 09:40	121,4500P-E	SD
General Chemistry - Mansfield Lab										
Solids, Total	9.81		%	0.100	0.100	1	-	05/26/21 10:52	121,2540G	NG
Moisture	90.2		%	0.100	0.100	1	-	05/26/21 10:52	121,2540G	NG
WATER CONTENT	430		%	0.10	NA	1	-	06/14/21 09:20	12,D2216-98	SM

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-03
Client ID: E 3.2-8'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 15:20
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	11.9		%	0.010	0.010	1	-	06/09/21 11:12	1,9060A	SP
Total Organic Carbon (Rep2)	11.6		%	0.010	0.010	1	-	06/09/21 11:12	1,9060A	SP
Total Organic Carbon (Average)	11.8		%	0.010	0.010	1	-	06/09/21 11:12	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	930		mg/kg	120	39.	4.5	-	05/18/21 09:40	121,4500P-E	SD
General Chemistry - Mansfield Lab										
Solids, Total	19.2		%	0.100	0.100	1	-	05/26/21 14:36	121,2540G	MC
Moisture	80.8		%	0.100	0.100	1	-	05/26/21 14:36	121,2540G	MC
WATER CONTENT	400		%	0.10	NA	1	-	06/14/21 09:20	12,D2216-98	SM
Specific Gravity	2.69		-	-	NA	1	-	06/11/21 14:40	12,D854	SM
Density of Soil - Mansfield Lab										
Bulk Density	66.43		lbs/ft3	0.0100	NA	1	-	06/14/21 09:20	12,D7263	SM
Moisture Content	400.0		%	0.0100	NA	1	-	06/14/21 09:20	12,D7263	SM
Dry Density	13.30		lbs/ft3	0.0100	NA	1	-	06/14/21 09:20	12,D7263	SM
Atterberg Limits - Mansfield Lab										
Liquid Limit	390		-	-	NA	1	-	06/09/21 13:46	12,D4318	SM
Plastic Limit	220		-	-	NA	1	-	06/09/21 13:46	12,D4318	SM
Plasticity Index	170		-	-	NA	1	-	06/09/21 13:46	12,D4318	SM

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-04
Client ID: I 0-4.3'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 12:10
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	10.8		%	0.010	0.010	1	-	06/09/21 11:55	1,9060A	SP
Total Organic Carbon (Rep2)	13.1		%	0.010	0.010	1	-	06/09/21 11:55	1,9060A	SP
Total Organic Carbon (Average)	12.0		%	0.010	0.010	1	-	06/09/21 11:55	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	350		mg/kg	39	13.	1.8	-	05/18/21 09:40	121,4500P-E	SD
General Chemistry - Mansfield Lab										
Solids, Total	22.8		%	0.100	0.100	1	-	05/26/21 14:36	121,2540G	MC
Moisture	77.2		%	0.100	0.100	1	-	05/26/21 14:36	121,2540G	MC
WATER CONTENT	270		%	0.10	NA	1	-	06/14/21 09:20	12,D2216-98	SM
Specific Gravity	2.89		-	-	NA	1	-	06/11/21 14:40	12,D854	SM
Density of Soil - Mansfield Lab										
Bulk Density	69.36		lbs/ft3	0.0100	NA	1	-	06/14/21 09:20	12,D7263	SM
Moisture Content	266.0		%	0.0100	NA	1	-	06/14/21 09:20	12,D7263	SM
Dry Density	18.92		lbs/ft3	0.0100	NA	1	-	06/14/21 09:20	12,D7263	SM
Atterberg Limits - Mansfield Lab										
Liquid Limit	360		-	-	NA	1	-	06/09/21 13:46	12,D4318	SM
Plastic Limit	200		-	-	NA	1	-	06/09/21 13:46	12,D4318	SM
Plasticity Index	160		-	-	NA	1	-	06/09/21 13:46	12,D4318	SM

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-05
Client ID: H 0-8'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 12:55
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	13.4		%	0.010	0.010	1	-	06/09/21 12:05	1,9060A	SP
Total Organic Carbon (Rep2)	13.4		%	0.010	0.010	1	-	06/09/21 12:05	1,9060A	SP
Total Organic Carbon (Average)	13.4		%	0.010	0.010	1	-	06/09/21 12:05	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	360		mg/kg	53	18.	2	-	05/18/21 09:40	121,4500P-E	SD
General Chemistry - Mansfield Lab										
Solids, Total	18.7		%	0.100	0.100	1	-	05/26/21 14:36	121,2540G	MC
Moisture	81.3		%	0.100	0.100	1	-	05/26/21 14:36	121,2540G	MC
WATER CONTENT	410		%	0.10	NA	1	-	06/14/21 09:20	12,D2216-98	SM
Specific Gravity	2.45		-	-	NA	1	-	06/11/21 14:40	12,D854	SM
Density of Soil - Mansfield Lab										
Bulk Density	66.97		lbs/ft3	0.0100	NA	1	-	06/14/21 09:20	12,D7263	SM
Moisture Content	412.0		%	0.0100	NA	1	-	06/14/21 09:20	12,D7263	SM
Dry Density	13.09		lbs/ft3	0.0100	NA	1	-	06/14/21 09:20	12,D7263	SM
Atterberg Limits - Mansfield Lab										
Liquid Limit	420		-	-	NA	1	-	06/09/21 13:46	12,D4318	SM
Plastic Limit	200		-	-	NA	1	-	06/09/21 13:46	12,D4318	SM
Plasticity Index	220		-	-	NA	1	-	06/09/21 13:46	12,D4318	SM

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-06
Client ID: J 0-6.1'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 15:00
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	7.86		%	0.010	0.010	1	-	06/09/21 12:25	1,9060A	SP
Total Organic Carbon (Rep2)	9.32		%	0.010	0.010	1	-	06/09/21 12:25	1,9060A	SP
Total Organic Carbon (Average)	8.59		%	0.010	0.010	1	-	06/09/21 12:25	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	660		mg/kg	99	33.	5.2	-	05/18/21 09:40	121,4500P-E	SD
General Chemistry - Mansfield Lab										
Solids, Total	26.2		%	0.100	0.100	1	-	05/26/21 14:36	121,2540G	MC
Moisture	73.8		%	0.100	0.100	1	-	05/26/21 14:36	121,2540G	MC
WATER CONTENT	260		%	0.10	NA	1	-	06/14/21 09:20	12,D2216-98	SM
Specific Gravity	2.76		-	-	NA	1	-	06/11/21 14:40	12,D854	SM
Density of Soil - Mansfield Lab										
Bulk Density	72.13		lbs/ft3	0.0100	NA	1	-	06/14/21 09:20	12,D7263	SM
Moisture Content	261.0		%	0.0100	NA	1	-	06/14/21 09:20	12,D7263	SM
Dry Density	19.99		lbs/ft3	0.0100	NA	1	-	06/14/21 09:20	12,D7263	SM
Atterberg Limits - Mansfield Lab										
Liquid Limit	300		-	-	NA	1	-	06/09/21 13:46	12,D4318	SM
Plastic Limit	190		-	-	NA	1	-	06/09/21 13:46	12,D4318	SM
Plasticity Index	110		-	-	NA	1	-	06/09/21 13:46	12,D4318	SM

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-07
Client ID: L 0-3.6'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 13:25
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	12.4		%	0.010	0.010	1	-	06/09/21 13:00	1,9060A	SP
Total Organic Carbon (Rep2)	17.0		%	0.010	0.010	1	-	06/09/21 13:00	1,9060A	SP
Total Organic Carbon (Average)	14.7		%	0.010	0.010	1	-	06/09/21 13:00	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	730		mg/kg	120	39.	4.3	-	05/18/21 09:40	121,4500P-E	SD
General Chemistry - Mansfield Lab										
Solids, Total	18.3		%	0.100	0.100	1	-	05/26/21 10:52	121,2540G	NG
Moisture	81.7		%	0.100	0.100	1	-	05/26/21 10:52	121,2540G	NG
WATER CONTENT	620		%	0.10	NA	1	-	06/14/21 09:20	12,D2216-98	SM

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-08
Client ID: N 0-2.6'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 14:35
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	13.7		%	0.010	0.010	1	-	06/09/21 13:16	1,9060A	SP
Total Organic Carbon (Rep2)	14.9		%	0.010	0.010	1	-	06/09/21 13:16	1,9060A	SP
Total Organic Carbon (Average)	14.3		%	0.010	0.010	1	-	06/09/21 13:16	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	300		mg/kg	42	14.	1.8	-	05/18/21 09:40	121,4500P-E	SD
General Chemistry - Mansfield Lab										
Solids, Total	21.4		%	0.100	0.100	1	-	05/26/21 14:36	121,2540G	MC
Moisture	78.6		%	0.100	0.100	1	-	05/26/21 14:36	121,2540G	MC
WATER CONTENT	330		%	0.10	NA	1	-	06/14/21 09:20	12,D2216-98	SM
Specific Gravity	2.65		-	-	NA	1	-	06/11/21 14:40	12,D854	SM
Density of Soil - Mansfield Lab										
Bulk Density	67.74		lbs/ft3	0.0100	NA	1	-	06/14/21 09:20	12,D7263	SM
Moisture Content	334.0		%	0.0100	NA	1	-	06/14/21 09:20	12,D7263	SM
Dry Density	15.60		lbs/ft3	0.0100	NA	1	-	06/14/21 09:20	12,D7263	SM
Atterberg Limits - Mansfield Lab										
Liquid Limit	390		-	-	NA	1	-	06/09/21 13:46	12,D4318	SM
Plastic Limit	240		-	-	NA	1	-	06/09/21 13:46	12,D4318	SM
Plasticity Index	150		-	-	NA	1	-	06/09/21 13:46	12,D4318	SM

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-09
Client ID: P 0-6.7'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 13:10
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	13.3		%	0.010	0.010	1	-	06/09/21 13:28	1,9060A	SP
Total Organic Carbon (Rep2)	13.3		%	0.010	0.010	1	-	06/09/21 13:28	1,9060A	SP
Total Organic Carbon (Average)	13.3		%	0.010	0.010	1	-	06/09/21 13:28	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	310		mg/kg	40	13.	1.7	-	05/18/21 09:40	121,4500P-E	SD
General Chemistry - Mansfield Lab										
Solids, Total	21.5		%	0.100	0.100	1	-	05/26/21 14:36	121,2540G	MC
Moisture	78.5		%	0.100	0.100	1	-	05/26/21 14:36	121,2540G	MC
WATER CONTENT	460		%	0.10	NA	1	-	06/14/21 09:20	12,D2216-98	SM

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

SAMPLE RESULTS

Lab ID: L2124064-10
Client ID: R 0-4.7'
Sample Location: MASHPEE, MA

Date Collected: 04/29/21 13:00
Date Received: 05/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	11.2		%	0.010	0.010	1	-	06/09/21 13:50	1,9060A	SP
Total Organic Carbon (Rep2)	10.2		%	0.010	0.010	1	-	06/09/21 13:50	1,9060A	SP
Total Organic Carbon (Average)	10.7		%	0.010	0.010	1	-	06/09/21 13:50	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	470		mg/kg	63	21.	2	-	05/18/21 09:40	121,4500P-E	SD
General Chemistry - Mansfield Lab										
Solids, Total	15.9		%	0.100	0.100	1	-	05/26/21 14:36	121,2540G	MC
Moisture	84.1		%	0.100	0.100	1	-	05/26/21 14:36	121,2540G	MC
WATER CONTENT	480		%	0.10	NA	1	-	06/14/21 09:20	12,D2216-98	SM
Specific Gravity	3.14		-	-	NA	1	-	06/11/21 14:40	12,D854	SM
Density of Soil - Mansfield Lab										
Bulk Density	70.51		lbs/ft3	0.0100	NA	1	-	06/14/21 09:20	12,D7263	SM
Moisture Content	482.0		%	0.0100	NA	1	-	06/14/21 09:20	12,D7263	SM
Dry Density	12.11		lbs/ft3	0.0100	NA	1	-	06/14/21 09:20	12,D7263	SM
Atterberg Limits - Mansfield Lab										
Liquid Limit	390		-	-	NA	1	-	06/09/21 13:46	12,D4318	SM
Plastic Limit	200		-	-	NA	1	-	06/09/21 13:46	12,D4318	SM
Plasticity Index	190		-	-	NA	1	-	06/09/21 13:46	12,D4318	SM

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

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): 01-10 Batch: WG1500219-1										
Phosphorus, Total	2.1	J	mg/kg	4.0	1.3	.8	-	05/18/21 09:40	121,4500P-E	SD
General Chemistry - Mansfield Lab for sample(s): 01-10 Batch: WG1509849-1										
WATER CONTENT	ND		%	0.10	NA	1	-	06/14/21 09:20	12,D2216-98	SM
Total Organic Carbon - Mansfield Lab for sample(s): 01-10 Batch: WG1509884-1										
Total Organic Carbon (Rep1)	ND		%	0.010	0.010	1	-	06/09/21 09:53	1,9060A	SP
Total Organic Carbon (Rep2)	ND		%	0.010	0.010	1	-	06/09/21 09:53	1,9060A	SP
Total Organic Carbon (Average)	ND		%	0.010	0.010	1	-	06/09/21 09:53	1,9060A	SP

Lab Control Sample Analysis

Batch Quality Control

Project Name: SANTUIT POND

Project Number: Not Specified

Lab Number: L2124064

Report Date: 06/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-10 Batch: WG1500219-2								
Phosphorus, Total	105		-		52-148	-		20
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-10 Batch: WG1509884-2								
Total Organic Carbon (Rep1)	100		-		75-125	-		25
Total Organic Carbon (Rep2)	101		-		75-125	-		25
Total Organic Carbon (Average)	101		-		75-125	-		25

Matrix Spike Analysis
Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-10 QC Batch ID: WG1500219-3 QC Sample: L2124064-04 Client ID: I 0-4.3'												
Phosphorus, Total	350	1020	1400	100		-	-		75-125	-		20
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1509884-4 WG1509884-5 QC Sample: L2124064-01 Client ID: B 0-8'												
Total Organic Carbon (Rep1)	15.5	1.93	21.7	**320**	Q	16.6	**68**	Q	75-125	**27**	Q	25
Total Organic Carbon (Rep2)	19.0	1.89	20.0	**53**	Q	22.5	**175**	Q	75-125	12		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-10 QC Batch ID: WG1500219-4 QC Sample: L2124064-04 Client ID: I 0-4.3'						
Phosphorus, Total	350	330	mg/kg	6		20
General Chemistry - Mansfield Lab Associated sample(s): 02,07 QC Batch ID: WG1503847-1 QC Sample: L2124248-01 Client ID: DUP Sample						
Solids, Total	42.7	39.4	%	8		10
General Chemistry - Mansfield Lab Associated sample(s): 01,03-06,08-10 QC Batch ID: WG1504020-1 QC Sample: L2124063-01 Client ID: DUP Sample						
Solids, Total	46.9	50.5	%	7		10
Atterberg Limits - Mansfield Lab Associated sample(s): 01,03-06,08,10 QC Batch ID: WG1509782-1 QC Sample: L2124064-04 Client ID: I 0-4.3'						
Liquid Limit	360	360	-	0		20
Plastic Limit	200	220	-	10		20
Plasticity Index	160	140	-	13		20
Density of Soil - Mansfield Lab Associated sample(s): 01,03-06,08,10 QC Batch ID: WG1509830-1 QC Sample: L2124064-01 Client ID: B 0-8'						
Bulk Density	66.01	64.33	lbs/ft3	3		20
Moisture Content	395.0	387.0	%	2		20
Dry Density	13.33	13.20	lbs/ft3	1		20
General Chemistry - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1509849-2 QC Sample: L2124064-01 Client ID: B 0-8'						
WATER CONTENT	400	390	%	2		10

Lab Duplicate Analysis
Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Parameter	Native Sample	Duplicate Sample	Units	RPD		RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1509884-3 QC Sample: L2124064-01 Client ID: B 0-8'						
Total Organic Carbon (Rep1)	15.5	21.2	%	**31**	Q	25
Total Organic Carbon (Rep2)	19.0	20.2	%	6		25
Total Organic Carbon (Average)	17.3	20.7	%	18		25
General Chemistry - Mansfield Lab Associated sample(s): 01,03-06,08,10 QC Batch ID: WG1510891-1 QC Sample: L2124064-04 Client ID: I 0-4.3'						
Specific Gravity	2.89	2.55	-	13		20

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

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(*)
L2124064-01A	Glass 250ml/8oz unpreserved	A	NA		3.5	Y	Absent		A2-FE-6020T(180),A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-ZN-6020T(180),A2-WATERCONT-D2216(28),A2-NI-6020T(180),A2-MOISTURE-2540(7),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-TOC-9060-2REPS(28),A2-PREP-3050:2T(180),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L2124064-01B	Glass 250ml/8oz unpreserved	A	NA		3.5	Y	Absent		EPH-20(14),TPHOS-4500(28),TPH-DRO-D(14)
L2124064-01C	Bag	A	NA		3.5	Y	Absent		A2-DENSITY-SOIL(),A2-ATTERBERG(),A2-SPECGRAV()
L2124064-01X	Vial MeOH preserved split	A	NA		3.5	Y	Absent		TPH-GRO(14)
L2124064-02A	Glass 250ml/8oz unpreserved	A	NA		3.5	Y	Absent		A2-PB-6020T(180),A2-FE-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-ZN-6020T(180),A2-MOISTURE-2540(7),A2-WATERCONT-D2216(28),A2-NI-6020T(180),A2-HG-7474T(28),A2-TS(7),A2-CR-6020T(180),A2-AS-6020T(180),A2-HGPREP-AF(28),A2-CD-6020T(180),A2-TOC-9060-2REPS(28),A2-PREP-3050:2T(180),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L2124064-02B	Glass 250ml/8oz unpreserved	A	NA		3.5	Y	Absent		EPH-20(14),TPHOS-4500(28),TPH-DRO-D(14)
L2124064-02B1	Glass 250ml unpreserved split	A	NA		3.5	Y	Absent		EPH-20(14),TPHOS-4500(28),TPH-DRO-D(14)
L2124064-02X	Vial MeOH preserved split	A	NA		3.5	Y	Absent		TPH-GRO(14)
L2124064-03A	Glass 250ml/8oz unpreserved	A	NA		3.5	Y	Absent		A2-FE-6020T(180),A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-NI-6020T(180),A2-WATERCONT-D2216(28),A2-MOISTURE-2540(7),A2-ZN-6020T(180),A2-HG-7474T(28),A2-TS(7),A2-CR-6020T(180),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L2124064-03B	Glass 250ml/8oz unpreserved	A	NA		3.5	Y	Absent		EPH-20(14),TPHOS-4500(28),TPH-DRO-D(14)

*Values in parentheses indicate holding time in days

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2124064-03C	Bag	A	NA		3.5	Y	Absent		A2-DENSITY-SOIL(),A2-ATTERBERG(),A2-SPECGRAV()
L2124064-03X	Vial MeOH preserved split	A	NA		3.5	Y	Absent		TPH-GRO(14)
L2124064-04A	Glass 250ml/8oz unpreserved	A	NA		3.5	Y	Absent		A2-RIM-PAH/PCBCONG(14),A2-PB-6020T(180),A2-FE-6020T(180),A2-MOISTURE-2540(7),A2-NI-6020T(180),A2-WATERCONT-D2216(28),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-TOC-9060-2REPS(28),A2-PREP-3050:2T(180),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L2124064-04B	Glass 250ml/8oz unpreserved	A	NA		3.5	Y	Absent		EPH-20(14),TPHOS-4500(28),TPH-DRO-D(14)
L2124064-04C	Bag	A	NA		3.5	Y	Absent		A2-DENSITY-SOIL(),A2-SPECGRAV(),A2-ATTERBERG()
L2124064-04X	Vial MeOH preserved split	A	NA		3.5	Y	Absent		TPH-GRO(14)
L2124064-05A	Glass 250ml/8oz unpreserved	A	NA		3.5	Y	Absent		A2-RIM-PAH/PCBCONG(14),A2-FE-6020T(180),A2-PB-6020T(180),A2-MOISTURE-2540(7),A2-WATERCONT-D2216(28),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-TS(7),A2-CR-6020T(180),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-RIM-PEST-8081(14),A2-CU-6020T(180)
L2124064-05B	Glass 250ml/8oz unpreserved	A	NA		3.5	Y	Absent		EPH-20(14),TPHOS-4500(28),TPH-DRO-D(14)
L2124064-05C	Bag	A	NA		3.5	Y	Absent		A2-DENSITY-SOIL(),A2-ATTERBERG(),A2-SPECGRAV()
L2124064-05X	Vial MeOH preserved split	A	NA		3.5	Y	Absent		TPH-GRO(14)
L2124064-06A	Glass 250ml/8oz unpreserved	A	NA		3.5	Y	Absent		A2-FE-6020T(180),A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-NI-6020T(180),A2-MOISTURE-2540(7),A2-ZN-6020T(180),A2-WATERCONT-D2216(28),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-HGPREP-AF(28),A2-CD-6020T(180),A2-TOC-9060-2REPS(28),A2-PREP-3050:2T(180),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L2124064-06B	Glass 250ml/8oz unpreserved	A	NA		3.5	Y	Absent		EPH-20(14),TPHOS-4500(28),TPH-DRO-D(14)
L2124064-06B1	Glass 250ml unpreserved split	A	NA		3.5	Y	Absent		EPH-20(14),TPHOS-4500(28),TPH-DRO-D(14)
L2124064-06C	Bag	A	NA		3.5	Y	Absent		A2-DENSITY-SOIL(),A2-SPECGRAV(),A2-ATTERBERG()
L2124064-06X	Vial MeOH preserved split	A	NA		3.5	Y	Absent		TPH-GRO(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2124064-07A	Glass 250ml/8oz unpreserved	A	NA		3.5	Y	Absent		A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-FE-6020T(180),A2-NI-6020T(180),A2-WATERCONT-D2216(28),A2-MOISTURE-2540(7),A2-ZN-6020T(180),A2-HG-7474T(28),A2-TS(7),A2-CR-6020T(180),A2-AS-6020T(180),A2-HGPREP-AF(28),A2-CD-6020T(180),A2-TOC-9060-2REPS(28),A2-PREP-3050:2T(180),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L2124064-07B	Glass 250ml/8oz unpreserved	A	NA		3.5	Y	Absent		EPH-20(14),TPHOS-4500(28),TPH-DRO-D(14)
L2124064-07X	Vial MeOH preserved split	A	NA		3.5	Y	Absent		TPH-GRO(14)
L2124064-08A	Glass 250ml/8oz unpreserved	A	NA		3.5	Y	Absent		A2-FE-6020T(180),A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-NI-6020T(180),A2-ZN-6020T(180),A2-MOISTURE-2540(7),A2-WATERCONT-D2216(28),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-HGPREP-AF(28),A2-CD-6020T(180),A2-TOC-9060-2REPS(28),A2-PREP-3050:2T(180),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L2124064-08B	Glass 250ml/8oz unpreserved	A	NA		3.5	Y	Absent		EPH-20(14),TPHOS-4500(28),TPH-DRO-D(14)
L2124064-08C	Bag	A	NA		3.5	Y	Absent		A2-DENSITY-SOIL(),A2-SPECGRAV(),A2-ATTERBERG()
L2124064-08X	Vial MeOH preserved split	A	NA		3.5	Y	Absent		TPH-GRO(14)
L2124064-09A	Glass 250ml/8oz unpreserved	A	NA		3.5	Y	Absent		A2-RIM-PAH/PCBCONG(14),A2-FE-6020T(180),A2-PB-6020T(180),A2-MOISTURE-2540(7),A2-NI-6020T(180),A2-ZN-6020T(180),A2-WATERCONT-D2216(28),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-HGPREP-AF(28),A2-CD-6020T(180),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-RIM-PEST-8081(14),A2-CU-6020T(180)
L2124064-09B	Glass 250ml/8oz unpreserved	A	NA		3.5	Y	Absent		EPH-20(14),TPHOS-4500(28),TPH-DRO-D(14)
L2124064-09C	Bag	A	NA		3.5	Y	Absent		A2-MOISTURE-2540(7),A2-WATERCONT-D2216(28),A2-TS(7)
L2124064-09X	Vial MeOH preserved split	A	NA		3.5	Y	Absent		TPH-GRO(14)
L2124064-10A	Glass 250ml/8oz unpreserved	A	NA		3.5	Y	Absent		A2-FE-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-PB-6020T(180),A2-WATERCONT-D2216(28),A2-MOISTURE-2540(7),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-TS(7),A2-CR-6020T(180),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)

*Values in parentheses indicate holding time in days

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2124064
Report Date: 06/15/21

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2124064-10B	Glass 250ml/8oz unpreserved	A	NA		3.5	Y	Absent		EPH-20(14),TPHOS-4500(28),TPH-DRO-D(14)
L2124064-10C	Bag	A	NA		3.5	Y	Absent		A2-DENSITY-SOIL(),A2-SPECGRAV(),A2-ATTERBERG()
L2124064-10X	Vial MeOH preserved split	A	NA		3.5	Y	Absent		TPH-GRO(14)
L2124064-10Z	Glass 500ml unpreserved split	A	NA		3.5	Y	Absent		EPH-20(14),TPHOS-4500(28),TPH-DRO-D(14)

Container Comments

L2124064-02A

*Values in parentheses indicate holding time in days

Project Name:	SANTUIT POND	**Lab Number:**	L2124064
Project Number:	Not Specified	**Report Date:**	06/15/21

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	SANTUIT POND	**Lab Number:**	L2124064
Project Number:	Not Specified	**Report Date:**	06/15/21

Footnotes

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

Terms

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

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

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

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

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

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

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

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

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

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

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

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	SANTUIT POND	**Lab Number:**	L2124064
Project Number:	Not Specified	**Report Date:**	06/15/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2124064
Report Date: 06/15/21

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

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

105 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997 in conjunction with NOAA Technical Memorandum NMFS-NWFSC-59: Extraction, Cleanup and GC/MS Analysis of Sediments and Tissues for Organic Contaminants, March 2004 and the Determination of Pesticides and PCBs in Water and Oil/Sediment by GC/MS: Method 680, EPA 01A0005295, November 1985.

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

135 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, December 2019, Revision 2.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, March 1, 2020.

LIMITATION OF LIABILITIES

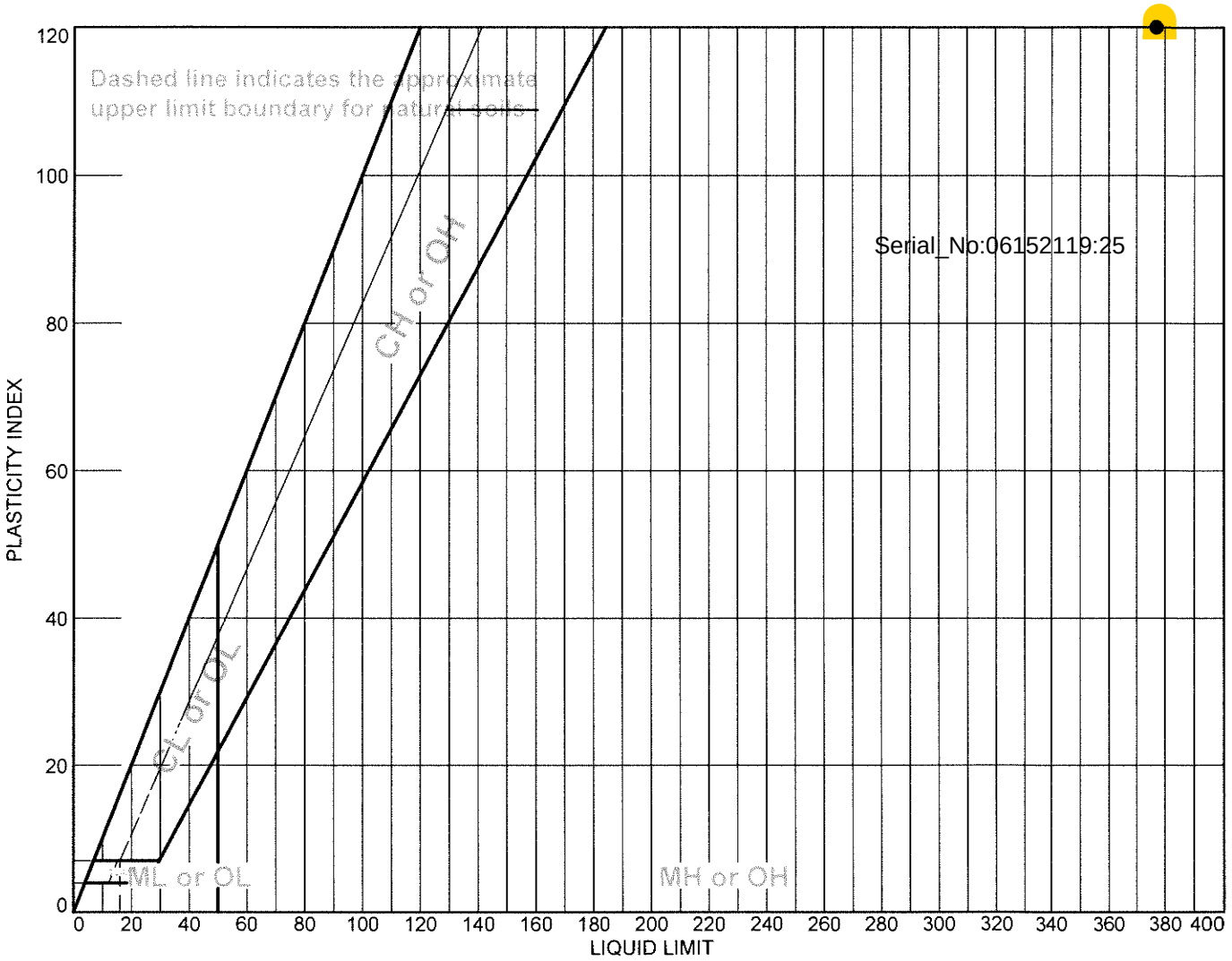
Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held 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 D4318-10

Liquid Limit, Plastic Limit and Plasticity Index of Soils

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●		377	257	120			

Project No. **Client:**

Project:

● **Source of Sample:** B 0-8' **Sample Number:** L2124064-01

Alpha Analytical

Mansfield, MA

Remarks:

Figure

LIQUID AND PLASTIC LIMIT TEST DATA

6/14/2021

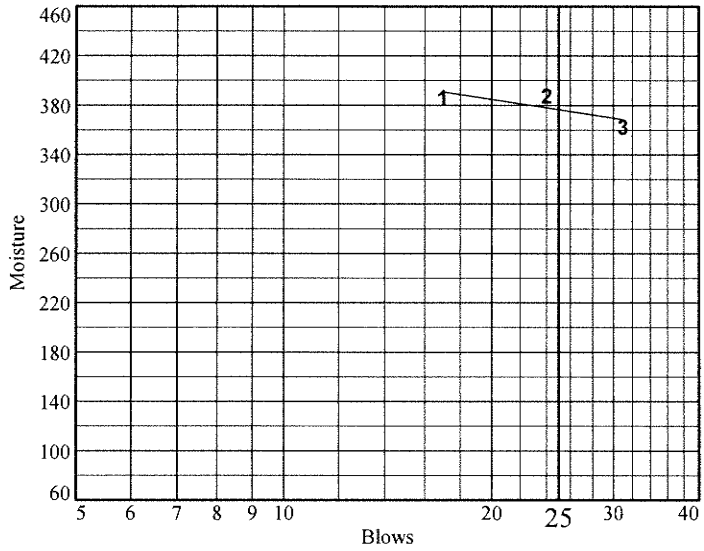
Location: B 0-8'

Sample Number: L2124064-01

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	8.74	9.29	9.11			
Dry+Tare	2.71	2.81	2.87			
Tare	1.15	1.14	1.15			
# Blows	17	24	31			
Moisture	386.5	388.0	362.8			

Serial_No:06152119.25



Liquid Limit= 377

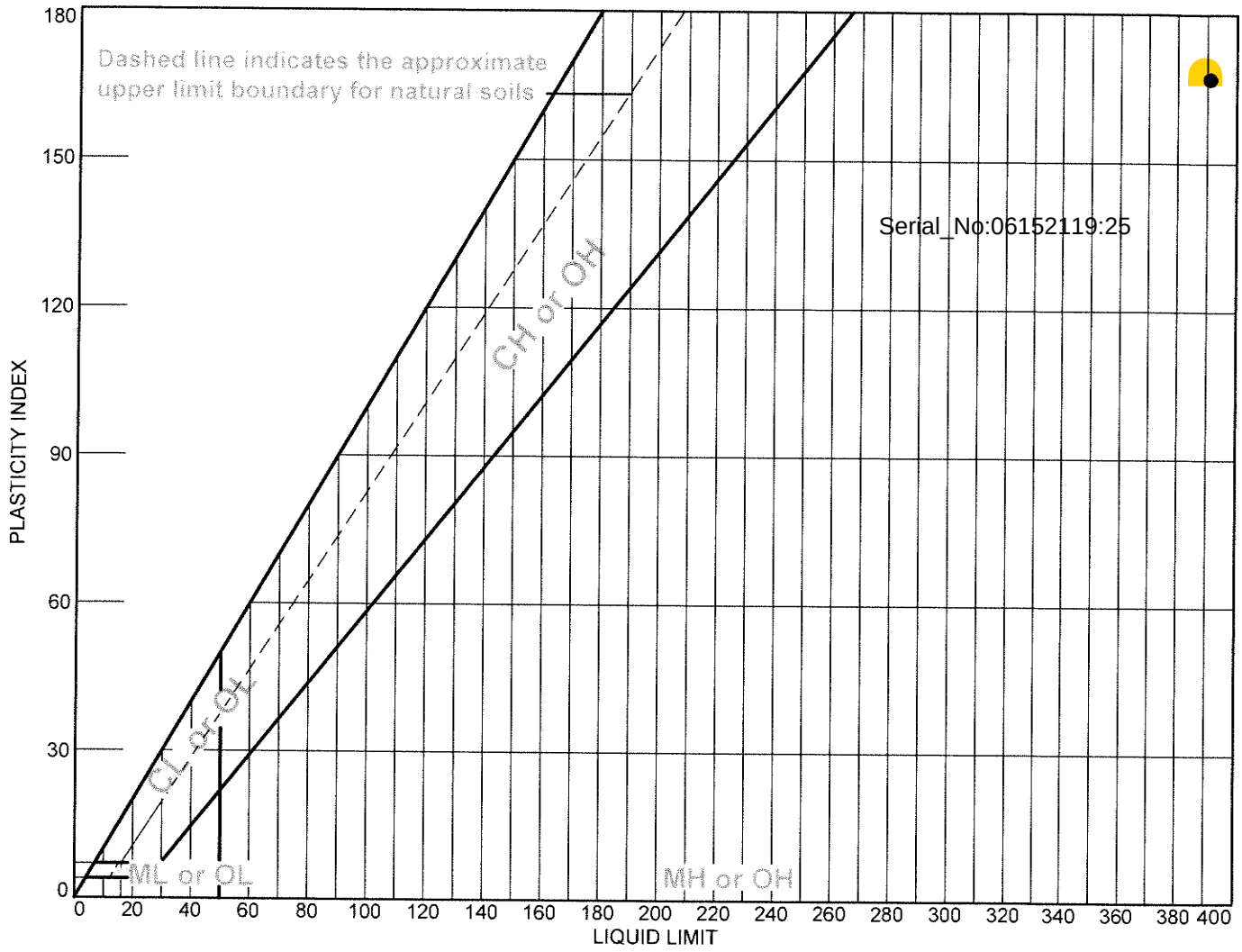
Plastic Limit= 257

Plasticity Index= 120

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	2.89	2.52			
Dry+Tare	1.65	1.51			
Tare	1.15	1.13			
Moisture	248.0	265.8			

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●		391	224	167			

Project No. **Client:**

Project:

● **Source of Sample:** E 3.2-8' **Sample Number:** L2124064-03

Remarks:

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Figure

LIQUID AND PLASTIC LIMIT TEST DATA

6/14/2021

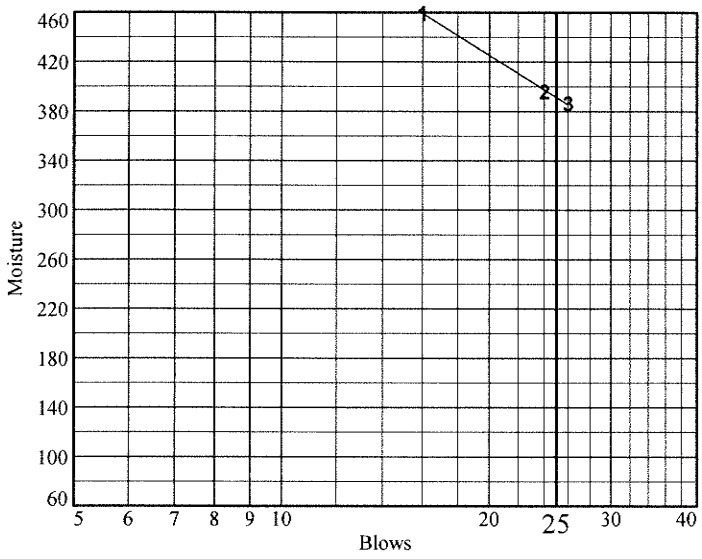
Location: E 3.2-8'

Sample Number: L2124064-03

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	8.58	7.69	9.06			
Dry+Tare	2.47	2.46	2.76			
Tare	1.14	1.14	1.13			
# Blows	16	24	26			
Moisture	459.4	396.2	386.5			

Serial_No:06152119:25



Liquid Limit= 391

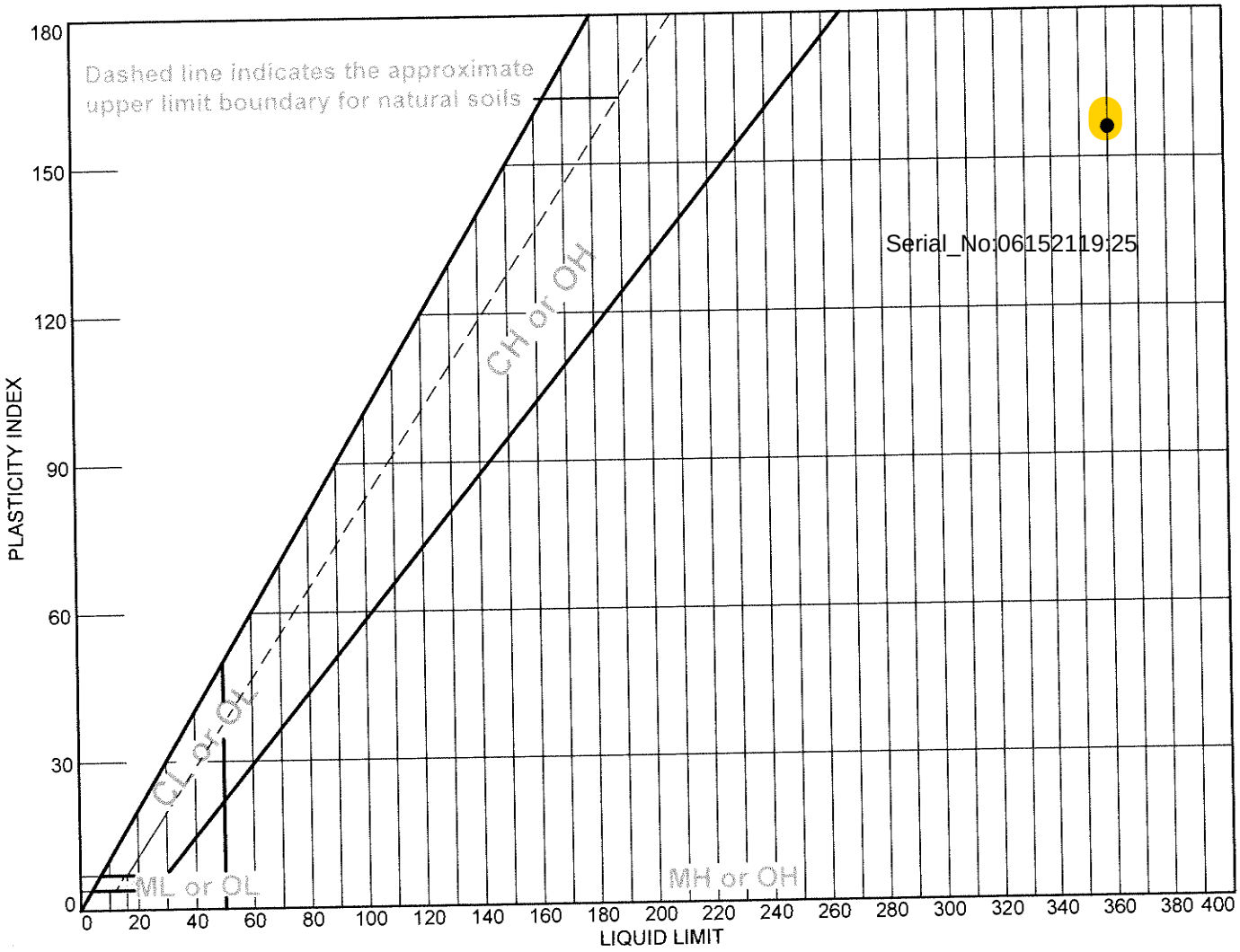
Plastic Limit= 224

Plasticity Index= 167

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	2.42	2.79			
Dry+Tare	1.55	1.61			
Tare	1.12	1.13			
Moisture	202.3	245.8			

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●		360	204	156			

Project No. **Client:**

Project:

● **Source of Sample:** I 0-4.3' **Sample Number:** L2124064-04

Remarks:

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Figure

LIQUID AND PLASTIC LIMIT TEST DATA

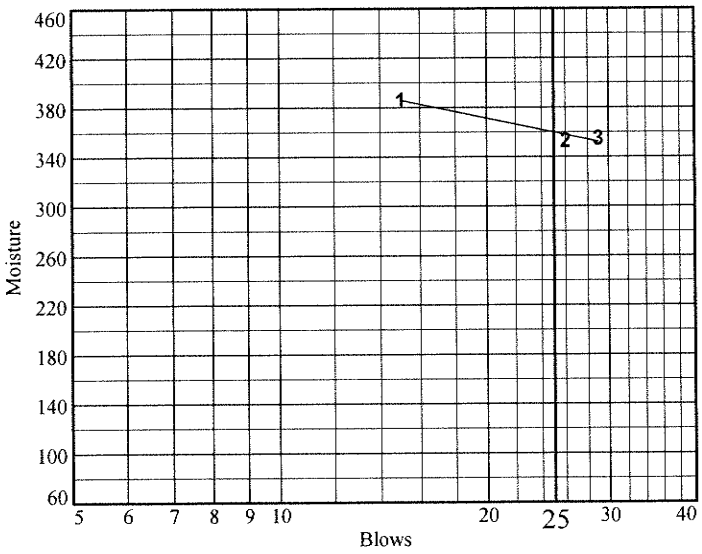
6/14/2021

Location: I 0-4.3'

Sample Number: L2124064-04

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	8.67	7.13	8.29			
Dry+Tare	2.68	2.46	2.71			
Tare	1.13	1.14	1.14		Serial_No:06152119:25	
# Blows	15	26	29			
Moisture	386.5	353.8	355.4			



Liquid Limit= 360

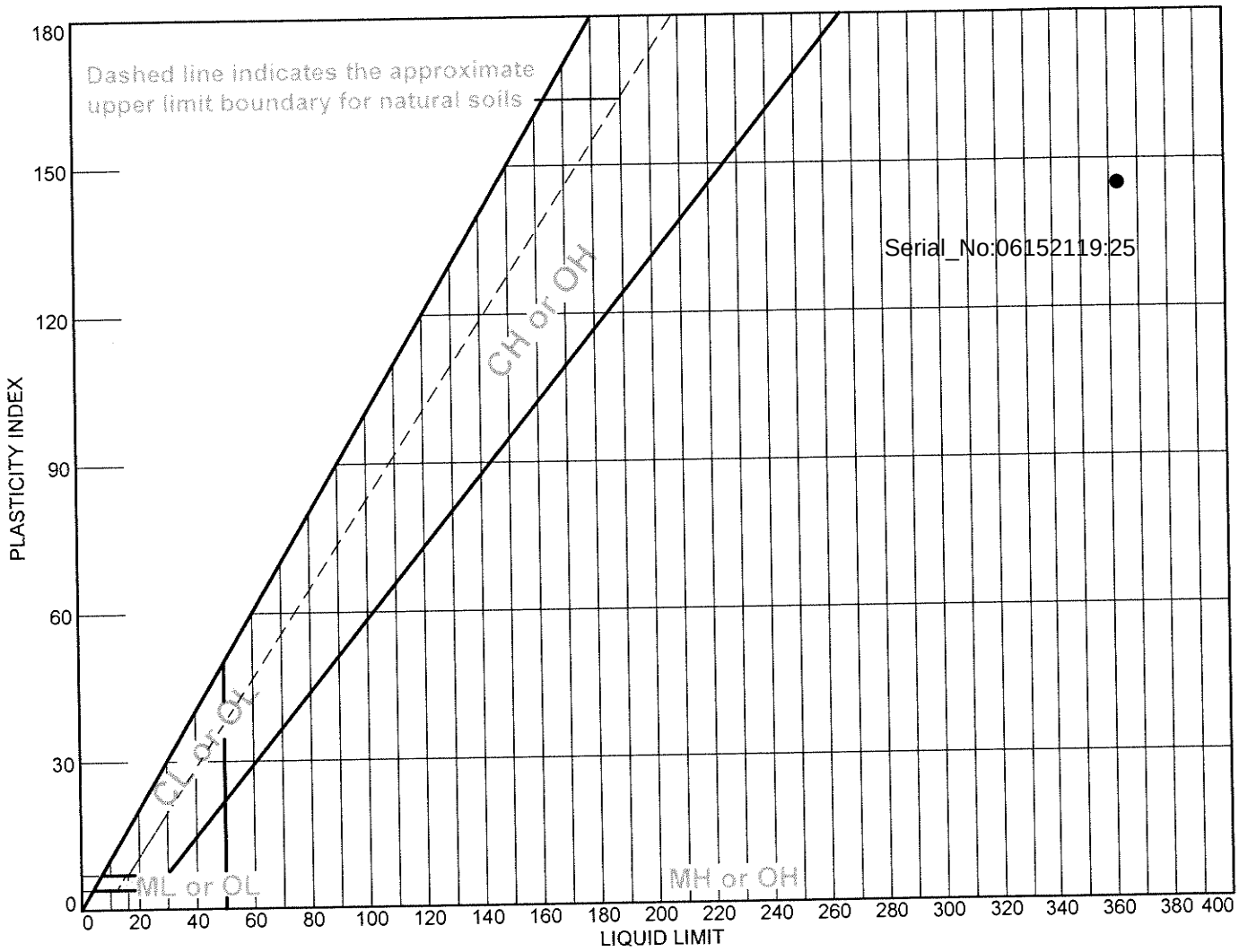
Plastic Limit= 204

Plasticity Index= 156

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	2.44	2.58			
Dry+Tare	1.55	1.63			
Tare	1.14	1.13			
Moisture	217.1	190.0			

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●		363	218	145			

Project No. **Client:**

Project:

● **Source of Sample:** I 0-4.3' **Sample Number:** WG1509782-1

Remarks:

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Figure

LIQUID AND PLASTIC LIMIT TEST DATA

6/14/2021

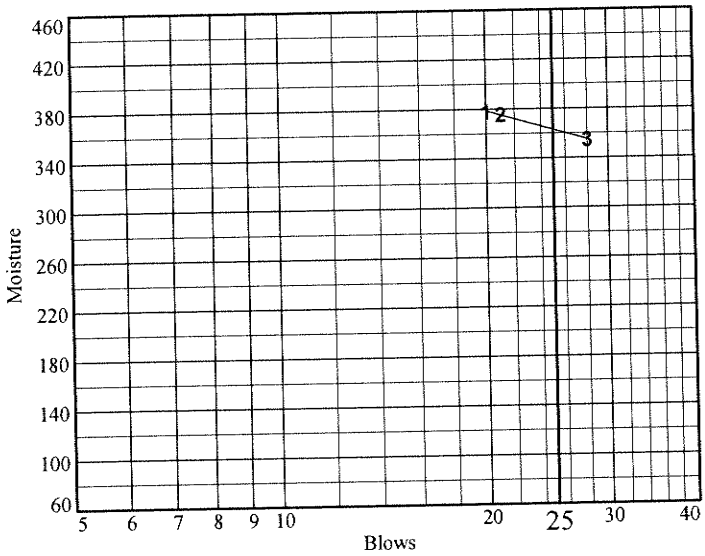
Location: I 0-4.3'

Sample Number: WG1509782-1

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	9.11	10.00	9.01			
Dry+Tare	2.8	3.01	2.87			
Tare	1.13	1.15	1.14			
# Blows	20	21	28			
Moisture	377.8	375.8	354.9			

Serial_No:06152119:25



Liquid Limit= 363

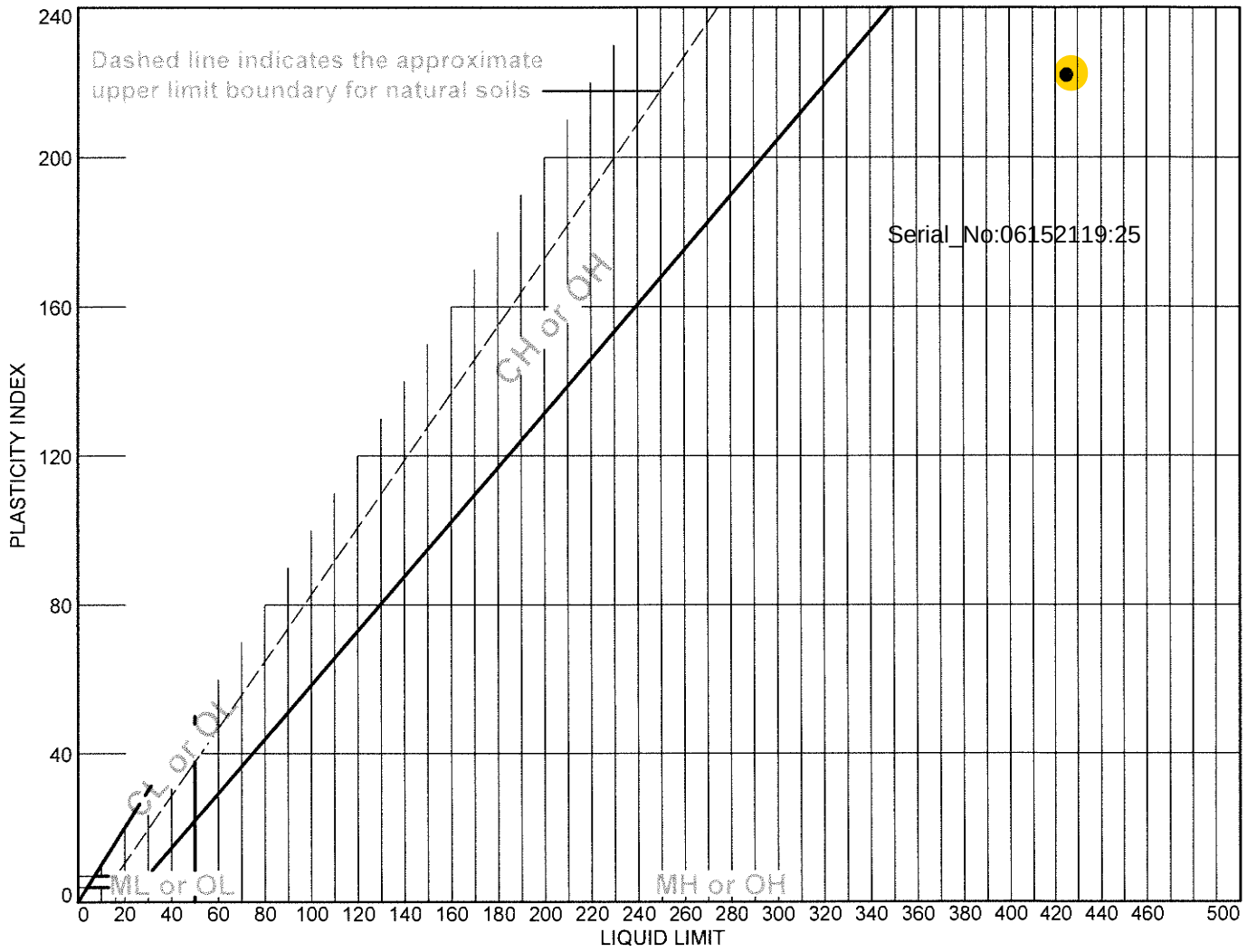
Plastic Limit= 218

Plasticity Index= 145

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	2.45	2.22			
Dry+Tare	1.54	1.49			
Tare	1.13	1.15			
Moisture	222.0	214.7			

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●		425	203	222			

Project No. **Client:**

Project:

● **Source of Sample:** H 0-8' **Sample Number:** L2124064-05

Remarks:

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Figure

LIQUID AND PLASTIC LIMIT TEST DATA

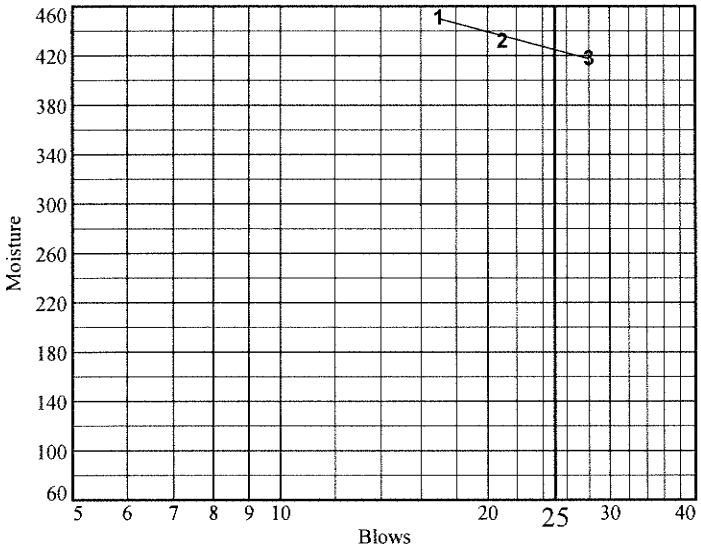
6/14/2021

Location: H 0-8'

Sample Number: L2124064-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	7.65	8.81	7.76			
Dry+Tare	2.32	2.58	2.4			
Tare	1.14	1.14	1.12		Serial_No:06152119:25	
# Blows	17	21	28			
Moisture	451.7	432.6	418.8			



Liquid Limit= 425

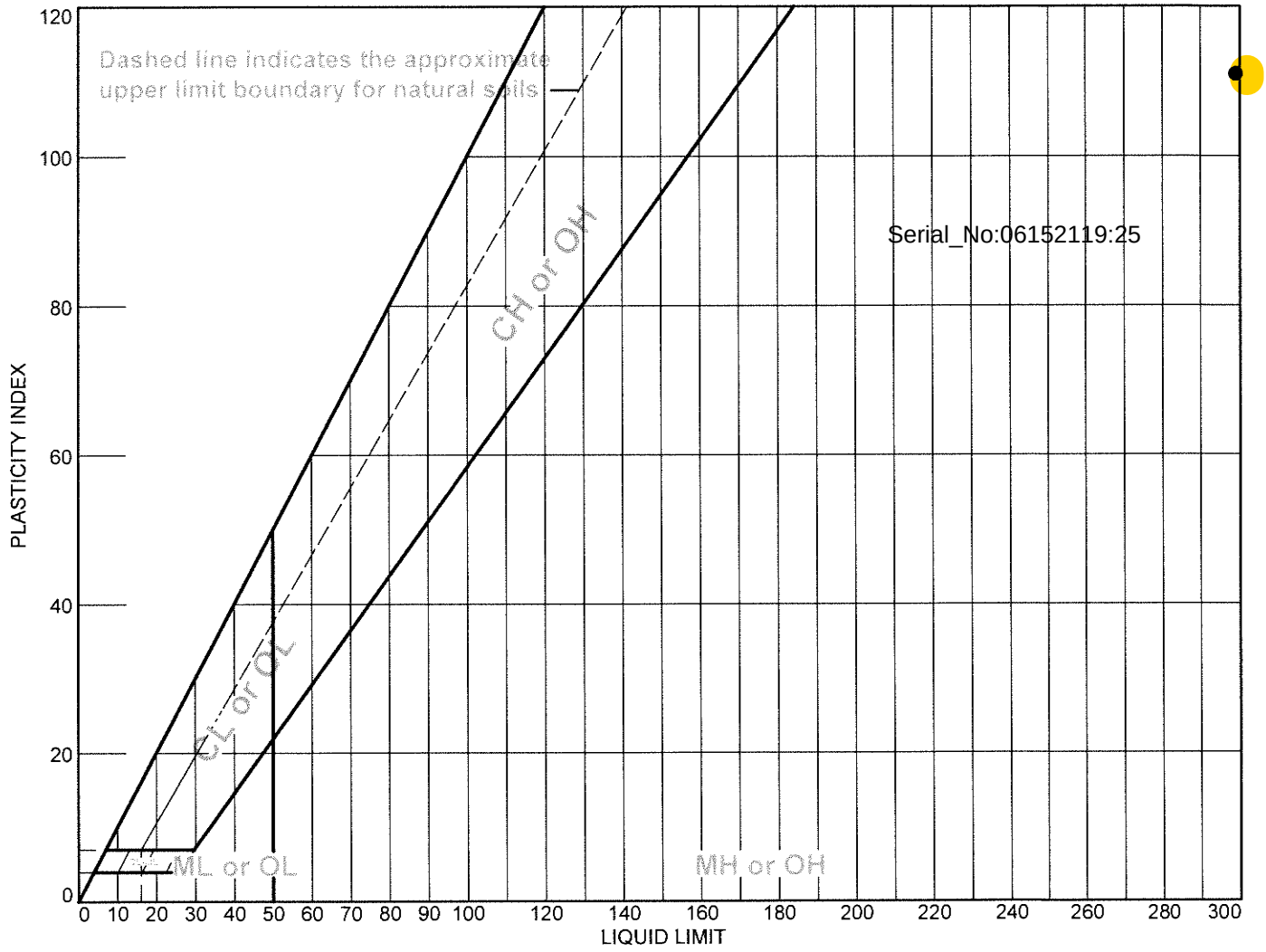
Plastic Limit= 203

Plasticity Index= 222

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	2.15	2.08			
Dry+Tare	1.45	1.46			
Tare	1.13	1.13			
Moisture	218.7	187.9			

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●		299	188	111			

Project No. **Client:**

Project:

● **Source of Sample:** J 0-6.1' **Sample Number:** L2124064-06

Remarks:

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Figure

LIQUID AND PLASTIC LIMIT TEST DATA

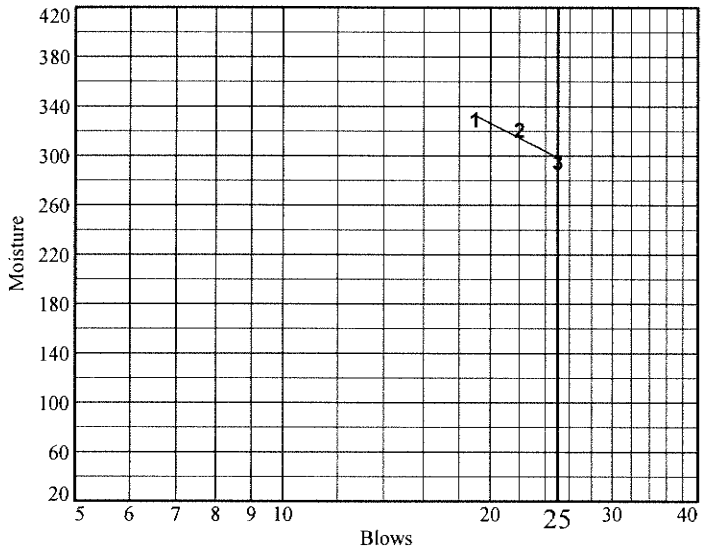
6/14/2021

Location: J 0-6.1'

Sample Number: L2124064-06

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	7.4	7.49	9.40			
Dry+Tare	2.59	2.64	3.23			
Tare	1.13	1.13	1.14		Serial_No:06152119:25	
# Blows	19	22	25			
Moisture	329.5	321.2	295.2			



Liquid Limit= 299

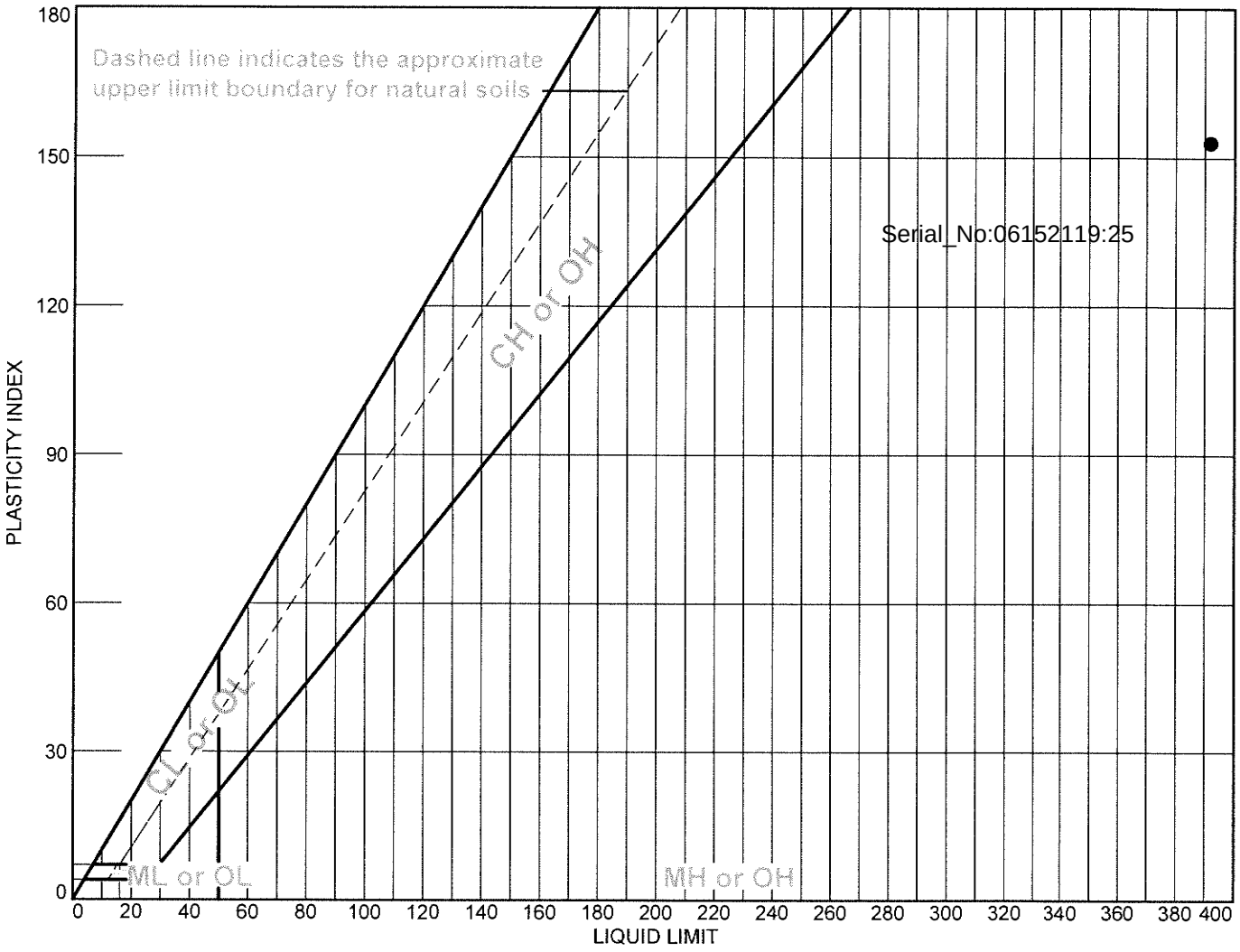
Plastic Limit= 188

Plasticity Index= 111

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	2.35	2.6			
Dry+Tare	1.56	1.64			
Tare	1.13	1.14			
Moisture	183.7	192.0			

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●		392	239	153			

Project No. **Client:**

Project:

● **Source of Sample:** N 0-2.6' **Sample Number:** L2124064-08

Remarks:

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Figure

LIQUID AND PLASTIC LIMIT TEST DATA

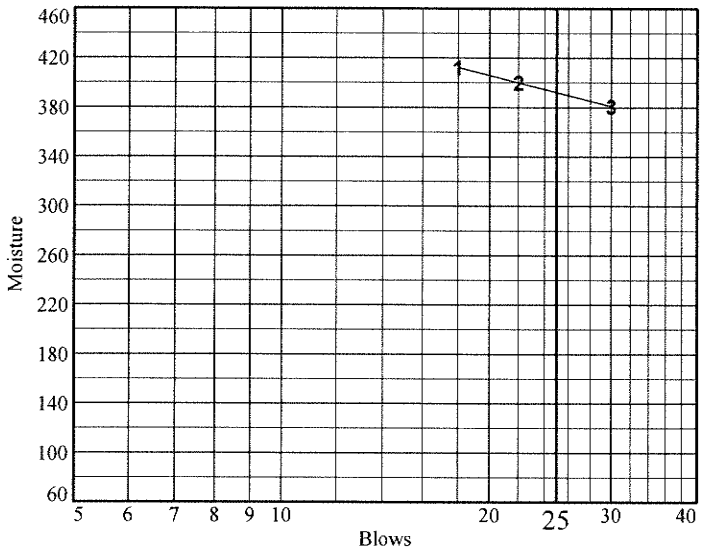
6/14/2021

Location: N 0-2.6'

Sample Number: L2124064-08

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	10.41	7.87	9.25			
Dry+Tare	2.95	2.47	2.85			
Tare	1.14	1.12	1.17		Serial_No:06152119:25	
# Blows	18	22	30			
Moisture	412.2	400.0	381.0			



Liquid Limit= 392

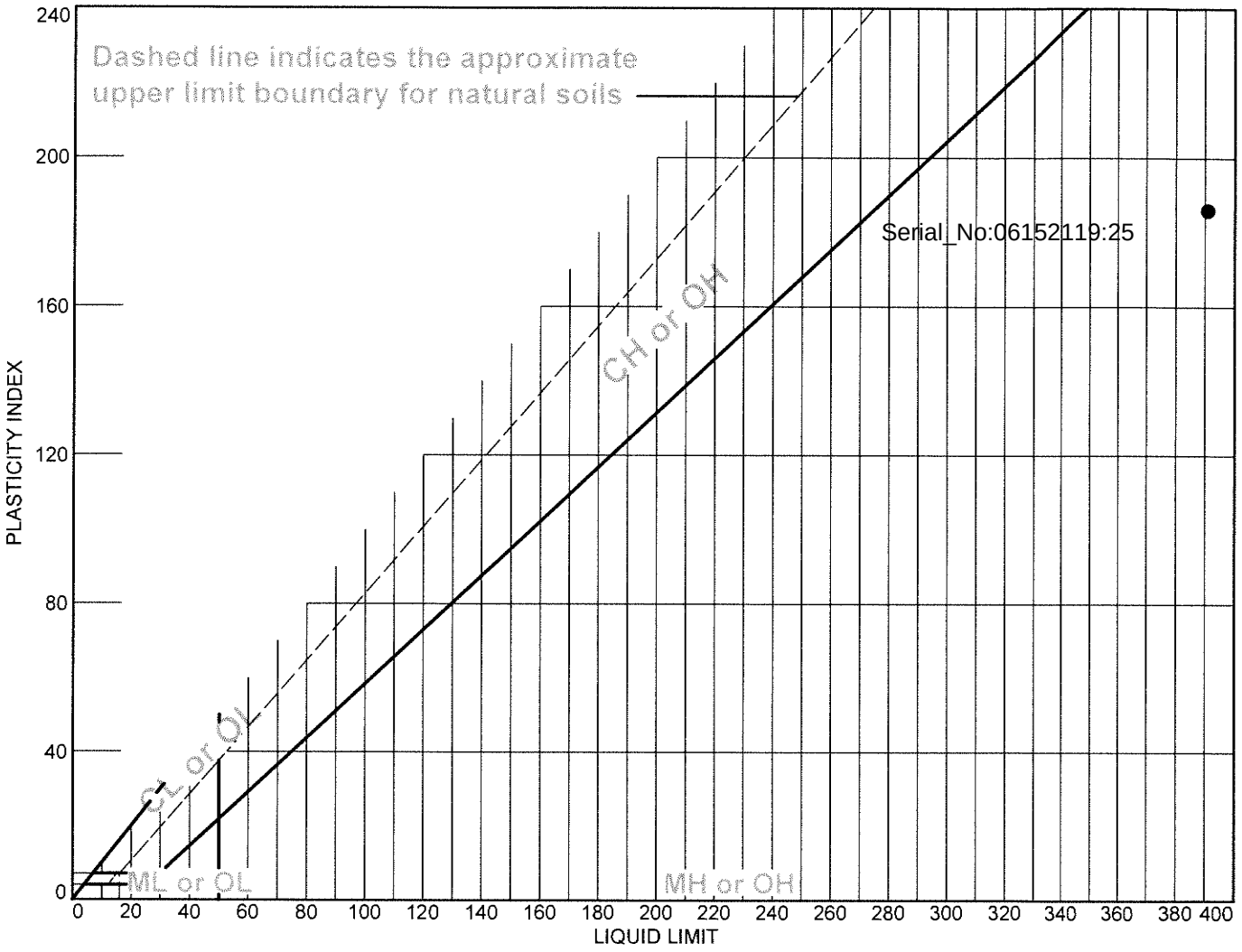
Plastic Limit= 239

Plasticity Index= 153

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	2.44	2.26			
Dry+Tare	1.52	1.48			
Tare	1.14	1.15			
Moisture	242.1	236.4			

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●		391	205	186			

Project No. **Client:**

Project:

● **Source of Sample:** R 0-4.7' **Sample Number:** L2124064-10

Remarks:

Alpha Analytical

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Figure

LIQUID AND PLASTIC LIMIT TEST DATA

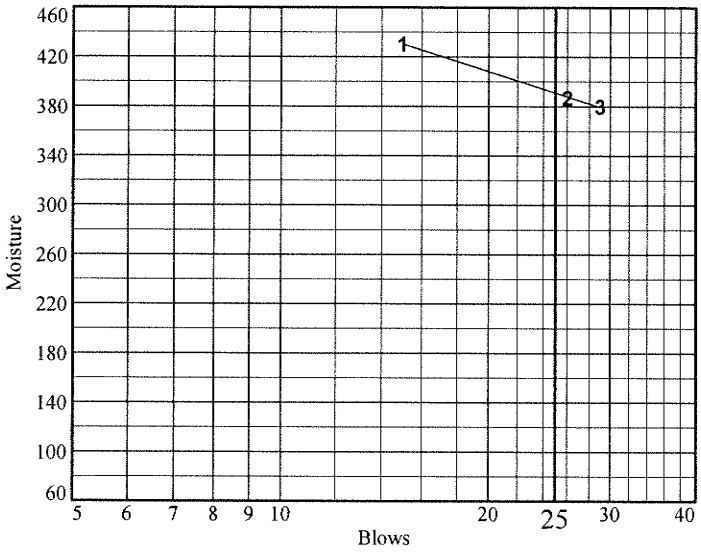
6/14/2021

Location: R 0-4.7'

Sample Number: L2124064-10

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	9.62	8.63	6.45			
Dry+Tare	2.73	2.67	2.23			
Tare	1.13	1.13	1.12		Serial_No:06152119:25	
# Blows	15	26	29			
Moisture	430.6	387.0	380.2			



Liquid Limit= 391

Plastic Limit= 205

Plasticity Index= 186

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	2	2.18			
Dry+Tare	1.422	1.481			
Tare	1.14	1.14			
Moisture	205.0	205.0			

Certification Information

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

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

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

Table II-1: Completeness Checklist

Quality Assurance/Quality Control Questions	Yes/No? Comments?
1. Was the report signed by the responsible applicant approved representative?	Yes
2. Were the methods for sampling, chemical and biological testing described in the Sampling and Analysis Plan (SAP) and the Laboratory QA Plan (LQAP) followed?	Yes
3. If not, were deviations documented?	N/A
4. Was the SAP approved by the New England District?	
5. Did the applicant use a laboratory with a LQAP on file at the New England District?	
6. Did the samples adequately represent the physical/chemical variability in the dredging area?	
7. Were the correct stations sampled (include the precision of the navigation method used)?	
8. Were the preservation and storage requirements in Chapter 8 of the EPA/Corps QA/QC Manual (EPA/USACE 1995) and EPA (2001d) followed?	No, GRO was not collected in a septa cap, zero-headspace container. Mass was taken from the EPH container for GRO.
9. Were the samples properly labeled?	Yes
10. Were all the requested data included?	Yes
11. Were the reporting limits met?	No, Metals, PAH, PCB, Pesticides due to low Total Solids of 10% to 26%
12. Were the chain-of-custody forms properly processed?	Yes
13. Were the method blanks run and were the concentration below the acceptance criteria?	Yes
14. Was the MDL study performed on each matrix (with this data submission) or within the last 12 months?	Yes
15. Were the SRM/CRM analyses within acceptance criteria?	N/A
16. Were the matrix spike/matrix spike duplicates run at the required frequency and was the percent recovery/RPD within the acceptance criteria?	N/A
17. Were the duplicate samples analyzed and were the RPDs within the required acceptance criteria?	N/A
18. For each analytical fraction of organic compounds, were recoveries for the internal standard within the acceptance criteria?	Yes
19. Were surrogate recoveries within the required acceptance criteria?	Yes

Table II-1 (*Continued*): Completeness Checklist

Quality Assurance/Quality Control Questions	Yes/No? Comments?
20. Were corrective action forms provided for all non-conforming data?	N/A
21. Were all the species-specific test conditions in Appendix V met?	
22. Were the test-specific age requirements met for each test species?	
23. Was the bulk physical/chemical testing performed on the sediments/composites that were biologically tested?	
24. Were the mortality acceptance criteria met for the water column and sediment toxicity tests?	
25. Were the test performance requirements in Table 11.3 of EPA (1994a) met?	

Table II-2: Quality Control Summary for Analyses of Polyaromatic Hydrocarbons (PAHs) and other base-neutrals in Sediment and Tissue Matrices

Method Reference Number: 8270D

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Initial Calibration	Must be performed prior to the analysis of any QC sample or field sample (<20 % RSD for each compound)	Yes		Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)	Yes		Retained at Lab and On file at USACoE-NED
Calibration Verification (Second Source)	Once, after initial calibration (80 to 120% recovery of each compound)	Yes		Retained at Lab
Continuing Calibration	At the beginning of every 12 hour shift (± 15 % D)	No, meets Lab SOP criteria	CCV associated with L2124064-03, 04, 05, 06, 09, 10: Indeno[1,2,3-cd]pyrene @ 17%	Retained at Lab
Standard Reference Materials	Within the limits provided by vendor	NA		In Data Package
Method Blank	No target analytes > RL	Yes		In Data Package
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One set (MS/MSD) per group of field samples. Must contain all target analytes. (Recovery Limits 50 to 120%; RPD <30%)	NA		In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)	NA		In Data Package
Surrogate Recoveries	Calculate % recovery (30 to 150% recovery)	Yes		In Data Package
Internal Standard Areas	Within 50 to 200% of internal standards in continuing calibration check	Yes		Retained at Lab

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-3: Quality Control Summary for the Analyses of Pesticides in Sediment, Tissue, and Water Matrices

Method Reference Number: 8081B

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Initial Calibration	Must be performed prior to the analysis of any QC sample or field sample (<20 % RSD for each compound)	Yes		Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)	Yes		Retained at Lab and On file at USACoE-NED
Calibration Verification (Second Source)	Once, after initial calibration (80 to 120% recovery of each compound)	Yes		Retained at Lab
Continuing Calibration	Every 20 injections (± 15 % D)	No, meets lab SOP criteria	CCV associated with L2124064-01 through -10: Column A: hexachlorobenzene @ 18%, beta-BHC @ 16% Column B: cis-Nonachlor @ 17%	Retained at Lab
Standard Reference Materials	Within the limits provided by vendor	NA		In Data Package
Method Blank	No target analytes > RL	Yes		In Data Package
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One set (MS/MSD) per group of field samples. Must contain all target analytes. (Recovery Limits 50 to 120%; RPD <30%)	NA		In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)	NA		In Data Package
Surrogate Recoveries	Calculate % recovery (30 to 150% recovery)	Yes		In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-4: Quality Control Summary for Analyses of Polychlorinated Biphenyls (PCB Congeners) in Sediment, Tissue, and Water Matrices

Method Reference Number: 8270D

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Initial Calibration	Must be performed prior to the analysis of any QC sample or field sample (<20 % RSD for each compound)	Yes		Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)	Yes		Retained at Lab and On file at USACoE-NED
Calibration Verification (Second Source)	Once, after initial calibration (80 to 120% recovery of each compound)	Yes		Retained at Lab
Continuing Calibration	Every 20 injections (± 15 % D)	No, meets lab SOP criteria	CCV associated with L2124064-03, 04, 05, Cl10-BZ#209 @ 17%	Retained at Lab
Standard Reference Materials	Within the limits provided by vendor	NA		In Data Package
Method Blank	No target analytes > RL	Yes		In Data Package
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One set (MS/MSD) per group of field samples. Must contain all target analytes. (Recovery Limits 50 to 120%; RPD <30%)	NA		In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)	NA		In Data Package
Surrogate Recoveries	Calculate % recovery (30 to 150% recovery)	Yes		In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-5: Quality Control Summary for Analyses of Metals in Sediments, Tissue, and Water Matrices

Method Reference Numbers: Various Reference Numbers

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Linear Range Determination for ICP	Performed Quarterly	Yes	Annual	Retained at Lab
Initial Calibration for AA, Hg	Performed Daily (Correlation Coefficient ≥0.995)	Yes		Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)	Yes		Retained at Lab and On file at USACoE-NED
Initial Calibration Verification/ Continuing Calibration Verification	Hg: 80 to 120% recovery Other metals: 90 to 110% recovery	Yes		Retained at Lab
Initial Calibration Blank/ Continuing Calibration Blank	No target analytes > Instrument Detection Limit (IDL)	No	Results >3x IDL noted, on file at lab	Retained at Lab
Standard Reference Materials	Within the limits provided by vendor	Yes = LCS		In Data Package
Method Blank	No target analytes > RL	Yes		In Data Package
Sample Spike/ Sample Duplicate	One set per group of field samples. Must contain all target analytes. Recovery Limits (75 to 125%; RPD < 20% or < 35%)	N/A		In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)	N/A		In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-6: Quality Control Summary for Analyses of other Organic Chemicals not listed in Sediment, Tissue, and Water Matrices

Method Reference Numbers:

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Initial Calibration	Must be performed prior to the analysis of any QC sample or field sample (<20 % RSD for each compound)			Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)			In Data Package
Calibration Verification (Second Source)	Once, after initial calibration (80 to 120% recovery of each compound)			Retained at Lab
Continuing Calibration	At the beginning of every 12 hour shift (± 15 % D)			Retained at Lab
Standard Reference Materials	Within the limits provided by vendor			In Data Package
Method Blank	No target analytes > RL			In Data Package
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One set (MS/MSD) per group of field samples. Must contain all target analytes. (Recovery Limits 50 to 120%; RPD <30%)			In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)			In Data Package
Surrogate Recoveries	Calculate % recovery (30 to 150% recovery)			In Data Package
Internal Standard Areas (if applicable)	Within 50 to 200% of internal standards in continuing calibration check			In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-7: Quality Control Summary for Analyses of Sediment Grain Size and Total Organic Carbon

Method Reference Numbers:

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Grain Size: Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 25%)	NA		In Data Package
Total Organic Carbon: Standard Reference Materials	Within the limits provided by vendor	Yes		In Data Package
Total Organic Carbon: Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD <30%)	No	L2124064-01DUP: (Rep1 = 31%)	In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-8: Quality Control Summary for Biological Toxicity Testing only

Method Reference Numbers:

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Test condition requirements for each species: Temperature, Salinity, pH, D.O., Ammonia (Total, Un-ionized)	Test conditions within the requirements specified for each species			In Data Package
Test species age	Age/health within guidelines for each species (Appendix V)			In Data Package
Bulk physical/chemical analyses (If required by the Sampling plan)	Required? If so, performed? Yes or No			In Data Package
Water column toxicity test: Control mortality Control abnormality	 < 10% mean < 30% mussel/oyster; < 40% clam larvae, < 30% sea urchin larvae			In Data Package
Sediment toxicity test: Control mortality Compliance with applicable test acceptability requirements in Table 11.3 (EPA 1994a)	 < 10% mean (no chamber >20%) See EPA (1994a) Section 9; Table 11.3			In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Reference:

Regional Implementation Manual for the Evaluation of Dredged Material Proposed for Disposal in New England Waters, U.S. EPA and U.S. Army Corps of Engineers, New England District, April 2004.

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 5-7-21

ALPHA Job #: L2124064

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

Client Information

Client: ARMY CORPS OF ENGINEERS

Address: 696 VIRGINIA RD
CONCORD, MA

Phone: 617 697 6873

Email: RICHARD.B.LOYD@USACE.ARMY.MIL

Additional Project Information:
CHEM SAMPLES STORED IN FREEZER AFTER COLLECTION

Project Information

Project Name: SANTUIT POND

Project Location: MASHPEE, MA

Project #:

Project Manager: RICHARD LOYD

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 _____

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	TPH: ☐ Quant Only ☐ Fingerprint	TOTAL METALS 3 FE	TPH DRO 5 GRO	EPH	TOC	TOTAL PHOSPHORUS 5G/BUCK D./ATTERBERG	Sample Comments	TOTAL # BOTTLES
24064-01	B 0-8'	4/29	14:06	SE	HAJ							✓		✓	✓	✓	✓	✓		3
02	D 0-3.0'	4/29	14:20	SE	HAJ							✓		✓	✓	✓	✓			2
03	E 3.2-8'	4/29	15:20	SE	HAJ							✓		✓	✓	✓	✓	✓		3
04	I 0-4.3'	4/29	12:10	SE	HAJ							✓		✓	✓	✓	✓	✓		3
05	H 0-8'	4/29	12:55	SE	HAJ							✓		✓	✓	✓	✓	✓		3
06	J 0-6.1'	4/29	15:00	SE	HAJ							✓		✓	✓	✓	✓	✓		3
07	L 0-3.6'	4/29	13:25	SE	HAJ							✓		✓	✓	✓	✓			2
08	N 0-2.6'	4/29	14:35	SE	HAJ							✓		✓	✓	✓	✓	✓		3
09	P 0-6.7'	4/29	13:10	SE	HAJ							✓		✓	✓	✓	✓			3
10	R 0-4.7'	4/29	13:00	SE	HAJ							✓		✓	✓	✓	✓	✓		3

ANALYTICAL REPORT

Lab Number:	L2128785
Client:	U.S. Army Corps of Engineers 696 Virginia Road Concord, MA 01742-2751
ATTN:	Richard Loyd
Phone:	(978) 318-8048
Project Name:	SANTUIT POND
Project Number:	Not Specified
Report Date:	07/08/21

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

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

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

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2128785
Report Date: 07/08/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2128785-01	E 0-4.0'	SEDIMENT	MASHPEE, MA	05/24/21 09:00	05/28/21
L2128785-02	E 4.0-6.0'	SEDIMENT	MASHPEE, MA	05/24/21 09:00	05/28/21
L2128785-03	E 6.0-8.0'	SEDIMENT	MASHPEE, MA	05/24/21 09:00	05/28/21
L2128785-04	G 0-3.0'	SEDIMENT	MASHPEE, MA	05/24/21 09:20	05/28/21
L2128785-05	G3.0 0-5.0'	SEDIMENT	MASHPEE, MA	05/24/21 09:20	05/28/21
L2128785-06	M 0-2.0'	SEDIMENT	MASHPEE, MA	05/24/21 09:40	05/28/21
L2128785-07	M 2.0-4.0'	SEDIMENT	MASHPEE, MA	05/24/21 09:40	05/28/21
L2128785-08	M 4.0-6.0'	SEDIMENT	MASHPEE, MA	05/24/21 09:40	05/28/21
L2128785-09	M 6.0-8.0'	SEDIMENT	MASHPEE, MA	05/24/21 09:40	05/28/21
L2128785-10	O 0-2.0'	SEDIMENT	MASHPEE, MA	05/24/21 10:00	05/28/21
L2128785-11	O 2.0-4.0'	SEDIMENT	MASHPEE, MA	05/24/21 10:00	05/28/21
L2128785-12	O 4.0-6.0'	SEDIMENT	MASHPEE, MA	05/24/21 10:00	05/28/21
L2128785-13	O 6.0-8.0'	SEDIMENT	MASHPEE, MA	05/24/21 10:00	05/28/21
L2128785-14	S 0-2.0'	SEDIMENT	MASHPEE, MA	05/24/21 10:30	05/28/21
L2128785-15	S 2.0-4.0'	SEDIMENT	MASHPEE, MA	05/24/21 10:30	05/28/21
L2128785-16	S 4.0-6.0'	SEDIMENT	MASHPEE, MA	05/24/21 10:30	05/28/21
L2128785-17	S 6.0-8.0'	SEDIMENT	MASHPEE, MA	05/24/21 10:30	05/28/21
L2128785-18	G 5.0-6.8'	SEDIMENT	MASHPEE, MA	05/24/21 09:20	05/28/21

Project Name:	SANTUIT POND	**Lab Number:**	L2128785
Project Number:	Not Specified	**Report Date:**	07/08/21

Case Narrative

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

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

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

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

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

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

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2128785
Report Date: 07/08/21

Case Narrative (continued)

Report Submission

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

Total Metals

The WG1514074-3 MS recovery for iron (0%), performed on L2128785-01, does not apply because the sample concentration is greater than four times the spike amount added.

Total Organic Carbon

L2128785: Samples were frozen upon receipt in order to arrest the holding time.

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2128785
Report Date: 07/08/21

Case Narrative (continued)

The WG1515454-4 MS recovery (Rep1 - 62%) performed on L2128785-01, does not apply because the sample concentrations are greater than four times the spike amounts added.

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: Elizabeth Porta

Title: Technical Director/Representative Date: 07/08/21

METALS

Project Name: SANTUIT POND
Lab Number: L2128785
Project Number: Not Specified
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-01
Client ID: E 0-4.0'
Sample Location: MASHPEE, MA
Date Collected: 05/24/21 09:00
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 7%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Iron, Total	32700		mg/kg	2760	284.	10	06/19/21 10:00	07/07/21 21:18	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Lab Number: L2128785
Project Number: Not Specified
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-02
Client ID: E 4.0-6.0'
Sample Location: MASHPEE, MA
Date Collected: 05/24/21 09:00
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 8%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Iron, Total	28000		mg/kg	2280	235.	10	06/19/21 10:00	07/07/21 21:22	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Lab Number: L2128785
Project Number: Not Specified
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-03
Client ID: E 6.0-8.0'
Sample Location: MASHPEE, MA
Date Collected: 05/24/21 09:00
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 12%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Iron, Total	21100		mg/kg	1670	172.	10	06/19/21 10:00	07/07/21 21:27	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Lab Number: L2128785
Project Number: Not Specified
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-04
Client ID: G 0-3.0'
Sample Location: MASHPEE, MA
Date Collected: 05/24/21 09:20
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 7%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Iron, Total	57200		mg/kg	2940	303.	10	06/19/21 10:00	07/07/21 21:32	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2128785
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-05
Client ID: G3.0 0-5.0'
Sample Location: MASHPEE, MA
Sample Depth:
Matrix: Sediment
Percent Solids: 18%

Date Collected: 05/24/21 09:20
Date Received: 05/28/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Iron, Total	36200		mg/kg	1100	113.	10	06/19/21 10:00	07/07/21 21:37	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2128785
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-06
Client ID: M 0-2.0'
Sample Location: MASHPEE, MA
Sample Depth:
Matrix: Sediment
Percent Solids: 12%

Date Collected: 05/24/21 09:40
Date Received: 05/28/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Iron, Total	27500		mg/kg	1650	170.	10	06/19/21 10:00	07/07/21 21:42	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Lab Number: L2128785
Project Number: Not Specified
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-07
Client ID: M 2.0-4.0'
Sample Location: MASHPEE, MA
Date Collected: 05/24/21 09:40
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 15%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Iron, Total	16600		mg/kg	1300	134.	10	06/19/21 10:00	07/07/21 21:47	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Lab Number: L2128785
Project Number: Not Specified
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-08
Client ID: M 4.0-6.0'
Sample Location: MASHPEE, MA
Date Collected: 05/24/21 09:40
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 13%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Iron, Total	15800		mg/kg	1480	152.	10	06/19/21 10:00	07/07/21 21:51	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2128785
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-09
Client ID: M 6.0-8.0'
Sample Location: MASHPEE, MA
Sample Depth:
Matrix: Sediment
Percent Solids: 19%

Date Collected: 05/24/21 09:40
Date Received: 05/28/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Iron, Total	16700		mg/kg	1050	108.	10	06/19/21 10:00	07/07/21 21:56	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Lab Number: L2128785
Project Number: Not Specified
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-10
Client ID: O 0-2.0'
Sample Location: MASHPEE, MA
Date Collected: 05/24/21 10:00
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 7%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Iron, Total	24400		mg/kg	2620	270.	10	06/19/21 10:00	07/07/21 22:01	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2128785
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-11
Client ID: O 2.0-4.0'
Sample Location: MASHPEE, MA
Sample Depth:
Matrix: Sediment
Percent Solids: 12%

Date Collected: 05/24/21 10:00
Date Received: 05/28/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Iron, Total	16600		mg/kg	1630	168.	10	06/19/21 10:00	07/07/21 22:25	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2128785
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-12
Client ID: O 4.0-6.0'
Sample Location: MASHPEE, MA
Sample Depth:
Matrix: Sediment
Percent Solids: 12%

Date Collected: 05/24/21 10:00
Date Received: 05/28/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Iron, Total	15800		mg/kg	1590	164.	10	06/19/21 10:00	07/07/21 22:30	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Lab Number: L2128785
Project Number: Not Specified
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-13
Client ID: O 6.0-8.0'
Sample Location: MASHPEE, MA
Date Collected: 05/24/21 10:00
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 15%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Iron, Total	16200		mg/kg	1270	131.	10	06/19/21 10:00	07/07/21 22:35	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Lab Number: L2128785
Project Number: Not Specified
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-14
Client ID: S 0-2.0'
Sample Location: MASHPEE, MA
Date Collected: 05/24/21 10:30
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 8%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Iron, Total	18700		mg/kg	2540	261.	10	06/19/21 10:00	07/07/21 22:40	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Lab Number: L2128785
Project Number: Not Specified
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-15
Client ID: S 2.0-4.0'
Sample Location: MASHPEE, MA
Date Collected: 05/24/21 10:30
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 19%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Iron, Total	12200		mg/kg	1000	103.	10	06/19/21 10:00	07/07/21 22:44	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2128785
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-16
Client ID: S 4.0-6.0'
Sample Location: MASHPEE, MA
Sample Depth:
Matrix: Sediment
Percent Solids: 17%

Date Collected: 05/24/21 10:30
Date Received: 05/28/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Iron, Total	11200		mg/kg	1110	114.	10	06/19/21 10:00	07/07/21 22:49	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Lab Number: L2128785
Project Number: Not Specified
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-17
Client ID: S 6.0-8.0'
Sample Location: MASHPEE, MA
Date Collected: 05/24/21 10:30
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 16%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Iron, Total	12000		mg/kg	1230	126.	10	06/19/21 10:00	07/07/21 22:54	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Lab Number: L2128785
Project Number: Not Specified
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-18
Client ID: G 5.0-6.8'
Sample Location: MASHPEE, MA
Date Collected: 05/24/21 09:20
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 16%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Iron, Total	15200		mg/kg	1200	123.	10	06/19/21 10:00	07/07/21 22:59	EPA 3050B	1,6020B	CD

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2128785
Report Date: 07/08/21

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): 01-18 Batch: WG1514074-1										
Iron, Total	ND		mg/kg	200	20.6	10	06/19/21 10:00	07/07/21 20:20	1,6020B	CD

Prep Information

Digestion Method: EPA 3050B

Lab Control Sample Analysis

Batch Quality Control

Project Name: SANTUIT POND

Project Number: Not Specified

Lab Number: L2128785

Report Date: 07/08/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-18 Batch: WG1514074-2 SRM Lot Number: D109-540								
Iron, Total	82		-		35-165	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2128785
Report Date: 07/08/21

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): 01-18 QC Batch ID: WG1514074-3 QC Sample: L2128785-01 Client ID: E 0-4.0'												
Iron, Total	32700	1110	32700	**0**	Q	-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: SANTUIT POND

Project Number: Not Specified

Lab Number: L2128785

Report Date: 07/08/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-18 QC Batch ID: WG1514074-4 QC Sample: L2128785-01 Client ID: E 0-4.0'						
Iron, Total	32700	30900	mg/kg	6		20

INORGANICS
&
MISCELLANEOUS

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2128785
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-01
Client ID: E 0-4.0'
Sample Location: MASHPEE, MA

Date Collected: 05/24/21 09:00
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	16.8		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Rep2)	17.0		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Average)	16.9		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	580		mg/kg	65	22.	.9	-	06/10/21 08:00	121,4500P-E	MC
General Chemistry - Mansfield Lab										
Solids, Total	6.92		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG
Moisture	93.1		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2128785
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-02
Client ID: E 4.0-6.0'
Sample Location: MASHPEE, MA

Date Collected: 05/24/21 09:00
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	13.2		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Rep2)	14.2		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Average)	13.7		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	1600		mg/kg	160	52.	2.6	-	06/10/21 08:00	121,4500P-E	MC
General Chemistry - Mansfield Lab										
Solids, Total	8.27		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG
Moisture	91.7		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2128785
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-03
Client ID: E 6.0-8.0'
Sample Location: MASHPEE, MA

Date Collected: 05/24/21 09:00
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	12.5		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Rep2)	12.8		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Average)	12.7		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	500		mg/kg	91	30.	2.1	-	06/10/21 08:00	121,4500P-E	MC
General Chemistry - Mansfield Lab										
Solids, Total	11.5		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG
Moisture	88.5		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2128785
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-04
Client ID: G 0-3.0'
Sample Location: MASHPEE, MA

Date Collected: 05/24/21 09:20
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	18.0		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Rep2)	16.2		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Average)	17.1		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	2100		mg/kg	170	56.	2.2	-	06/10/21 08:00	121,4500P-E	MC
General Chemistry - Mansfield Lab										
Solids, Total	6.54		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG
Moisture	93.5		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2128785
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-05
Client ID: G3.0 0-5.0'
Sample Location: MASHPEE, MA

Date Collected: 05/24/21 09:20
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	10.4		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Rep2)	10.9		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Average)	10.6		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	1600		mg/kg	68	23.	2.4	-	06/10/21 08:00	121,4500P-E	MC
General Chemistry - Mansfield Lab										
Solids, Total	17.5		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG
Moisture	82.5		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2128785
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-06
Client ID: M 0-2.0'
Sample Location: MASHPEE, MA

Date Collected: 05/24/21 09:40
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	14.4		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Rep2)	14.9		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Average)	14.7		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	620		mg/kg	38	13.	.9	-	06/10/21 08:00	121,4500P-E	MC
General Chemistry - Mansfield Lab										
Solids, Total	11.9		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG
Moisture	88.1		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2128785
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-07
Client ID: M 2.0-4.0'
Sample Location: MASHPEE, MA

Date Collected: 05/24/21 09:40
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	10.3		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Rep2)	10.1		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Average)	10.2		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	280		mg/kg	30	10.	.9	-	06/10/21 08:00	121,4500P-E	MC
General Chemistry - Mansfield Lab										
Solids, Total	15.0		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG
Moisture	85.0		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2128785
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-08
Client ID: M 4.0-6.0'
Sample Location: MASHPEE, MA

Date Collected: 05/24/21 09:40
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	10.7		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Rep2)	10.2		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Average)	10.4		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	1000		mg/kg	35	12.	.9	-	06/10/21 08:00	121,4500P-E	MC
General Chemistry - Mansfield Lab										
Solids, Total	12.8		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG
Moisture	87.2		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2128785
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-09
Client ID: M 6.0-8.0'
Sample Location: MASHPEE, MA

Date Collected: 05/24/21 09:40
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	10.4		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Rep2)	10.2		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Average)	10.3		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	420		mg/kg	24	8.0	.9	-	06/10/21 08:00	121,4500P-E	MC
General Chemistry - Mansfield Lab										
Solids, Total	18.7		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG
Moisture	81.3		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2128785
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-10
Client ID: O 0-2.0'
Sample Location: MASHPEE, MA

Date Collected: 05/24/21 10:00
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	15.3		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Rep2)	15.2		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Average)	15.2		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	220		mg/kg	67	22.	1	-	06/10/21 08:00	121,4500P-E	MC
General Chemistry - Mansfield Lab										
Solids, Total	7.43		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG
Moisture	92.6		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2128785
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-11
Client ID: O 2.0-4.0'
Sample Location: MASHPEE, MA

Date Collected: 05/24/21 10:00
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	10.8		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Rep2)	12.0		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Average)	11.4		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	1500		mg/kg	39	13.	.9	-	06/10/21 08:00	121,4500P-E	MC
General Chemistry - Mansfield Lab										
Solids, Total	11.5		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG
Moisture	88.5		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2128785
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-12
Client ID: O 4.0-6.0'
Sample Location: MASHPEE, MA

Date Collected: 05/24/21 10:00
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	11.4		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Rep2)	11.1		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Average)	11.2		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	260		mg/kg	38	13.	.9	-	06/10/21 08:00	121,4500P-E	MC
General Chemistry - Mansfield Lab										
Solids, Total	11.8		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG
Moisture	88.2		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2128785
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-13
Client ID: O 6.0-8.0'
Sample Location: MASHPEE, MA

Date Collected: 05/24/21 10:00
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	13.3		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Rep2)	13.5		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Average)	13.4		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	1200		mg/kg	81	27.	2.5	-	06/10/21 08:00	121,4500P-E	MC
General Chemistry - Mansfield Lab										
Solids, Total	15.4		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG
Moisture	84.6		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2128785
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-14
Client ID: S 0-2.0'
Sample Location: MASHPEE, MA

Date Collected: 05/24/21 10:30
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	15.9		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Rep2)	16.4		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Average)	16.2		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	210		mg/kg	65	22.	1	-	06/10/21 08:00	121,4500P-E	MC
General Chemistry - Mansfield Lab										
Solids, Total	7.68		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG
Moisture	92.3		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2128785
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-15
Client ID: S 2.0-4.0'
Sample Location: MASHPEE, MA

Date Collected: 05/24/21 10:30
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	10.4		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Rep2)	11.2		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Average)	10.8		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	290		mg/kg	24	8.0	.9	-	06/10/21 08:00	121,4500P-E	MC
General Chemistry - Mansfield Lab										
Solids, Total	18.9		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG
Moisture	81.1		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2128785
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-16
Client ID: S 4.0-6.0'
Sample Location: MASHPEE, MA

Date Collected: 05/24/21 10:30
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	10.3		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Rep2)	9.96		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Average)	10.1		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	740		mg/kg	29	9.6	1	-	06/10/21 08:00	121,4500P-E	MC
General Chemistry - Mansfield Lab										
Solids, Total	17.4		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG
Moisture	82.6		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2128785
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-17
Client ID: S 6.0-8.0'
Sample Location: MASHPEE, MA

Date Collected: 05/24/21 10:30
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	12.0		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Rep2)	12.2		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Average)	12.1		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	810		mg/kg	31	10.	1	-	06/10/21 08:00	121,4500P-E	MC
General Chemistry - Mansfield Lab										
Solids, Total	16.0		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG
Moisture	84.0		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2128785
Report Date: 07/08/21

SAMPLE RESULTS

Lab ID: L2128785-18
Client ID: G 5.0-6.8'
Sample Location: MASHPEE, MA

Date Collected: 05/24/21 09:20
Date Received: 05/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	11.5		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Rep2)	11.3		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Average)	11.4		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
General Chemistry - Westborough Lab										
Phosphorus, Total	320		mg/kg	28	9.4	.9	-	06/10/21 08:00	121,4500P-E	MC
General Chemistry - Mansfield Lab										
Solids, Total	16.0		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG
Moisture	84.0		%	0.100	0.100	1	-	06/14/21 12:35	121,2540G	NG

Project Name: SANTUIT POND
Project Number: Not Specified
Lab Number: L2128785
Report Date: 07/08/21

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): 01-18 Batch: WG1510168-1										
Phosphorus, Total	ND		mg/kg	5.0	1.7	1	-	06/10/21 08:00	121,4500P-E	MC
Total Organic Carbon - Mansfield Lab for sample(s): 01-18 Batch: WG1515454-1										
Total Organic Carbon (Rep1)	ND		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Rep2)	ND		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP
Total Organic Carbon (Average)	ND		%	0.010	0.010	1	-	06/29/21 11:43	1,9060A	SP

Lab Control Sample Analysis

Batch Quality Control

Project Name: SANTUIT POND

Project Number: Not Specified

Lab Number: L2128785

Report Date: 07/08/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-18 Batch: WG1510168-2								
Phosphorus, Total	71		-		52-148	-		20
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-18 Batch: WG1515454-2								
Total Organic Carbon (Rep1)	103		-		75-125	-		25
Total Organic Carbon (Rep2)	91		-		75-125	-		25
Total Organic Carbon (Average)	97		-		75-125	-		25

Matrix Spike Analysis
Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2128785
Report Date: 07/08/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-18 QC Batch ID: WG1510168-4 QC Sample: L2128007-01 Client ID: MS Sample												
Phosphorus, Total	20000	1510	23000	**200**	Q	-	-		75-125	-		20
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-18 QC Batch ID: WG1515454-4 WG1515454-5 QC Sample: L2128785-01 Client ID: E 0-4.0'												
Total Organic Carbon (Rep1)	16.8	1.77	17.9	**62**	Q	18.4	124		75-125	3		25
Total Organic Carbon (Rep2)	17.0	1.59	18.6	100		18.4	82		75-125	1		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2128785
Report Date: 07/08/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-18 QC Batch ID: WG1510168-3 QC Sample: L2128007-01 Client ID: DUP Sample						
Phosphorus, Total	20000	13000	mg/kg	**42**	Q	20
General Chemistry - Mansfield Lab Associated sample(s): 01-18 QC Batch ID: WG1511801-1 QC Sample: L2128785-01 Client ID: E 0-4.0'						
Solids, Total	6.92	6.88	%	1		10
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-18 QC Batch ID: WG1515454-3 QC Sample: L2128785-01 Client ID: E 0-4.0'						
Total Organic Carbon (Rep1)	16.8	16.6	%	1		25
Total Organic Carbon (Rep2)	17.0	16.7	%	2		25
Total Organic Carbon (Average)	16.9	16.7	%	1		25

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2128785
Report Date: 07/08/21

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(*)
L2128785-01A	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		TPHOS-4500(28)
L2128785-01B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		A2-FE-6020T(180),A2-MOISTURE-2540(7),A2-TS(7),A2-PREP-3050(180),A2-TOC-9060-2REPS(28)
L2128785-02A	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		TPHOS-4500(28)
L2128785-02B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		A2-FE-6020T(180),A2-MOISTURE-2540(7),A2-TS(7),A2-PREP-3050(180),A2-TOC-9060-2REPS(28)
L2128785-03A	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		TPHOS-4500(28)
L2128785-03B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		A2-FE-6020T(180),A2-MOISTURE-2540(7),A2-TS(7),A2-PREP-3050(180),A2-TOC-9060-2REPS(28)
L2128785-04A	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		TPHOS-4500(28)
L2128785-04B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		A2-FE-6020T(180),A2-MOISTURE-2540(7),A2-TS(7),A2-PREP-3050(180),A2-TOC-9060-2REPS(28)
L2128785-05A	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		TPHOS-4500(28)
L2128785-05B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		A2-FE-6020T(180),A2-MOISTURE-2540(7),A2-TS(7),A2-TOC-9060-2REPS(28),A2-PREP-3050(180)
L2128785-06A	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		TPHOS-4500(28)
L2128785-06B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		A2-FE-6020T(180),A2-MOISTURE-2540(7),A2-TS(7),A2-PREP-3050(180),A2-TOC-9060-2REPS(28)
L2128785-07A	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		TPHOS-4500(28)
L2128785-07B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		A2-FE-6020T(180),A2-MOISTURE-2540(7),A2-TS(7),A2-TOC-9060-2REPS(28),A2-PREP-3050(180)
L2128785-08A	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		TPHOS-4500(28)
L2128785-08B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		A2-FE-6020T(180),A2-MOISTURE-2540(7),A2-TS(7),A2-TOC-9060-2REPS(28),A2-PREP-3050(180)

*Values in parentheses indicate holding time in days

Project Name: SANTUIT POND
Project Number: Not Specified

Lab Number: L2128785
Report Date: 07/08/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2128785-09A	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		TPHOS-4500(28)
L2128785-09B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		A2-FE-6020T(180),A2-MOISTURE-2540(7),A2-TS(7),A2-TOC-9060-2REPS(28),A2-PREP-3050(180)
L2128785-10A	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		TPHOS-4500(28)
L2128785-10B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		A2-FE-6020T(180),A2-MOISTURE-2540(7),A2-TS(7),A2-PREP-3050(180),A2-TOC-9060-2REPS(28)
L2128785-11A	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		TPHOS-4500(28)
L2128785-11B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		A2-FE-6020T(180),A2-MOISTURE-2540(7),A2-TS(7),A2-PREP-3050(180),A2-TOC-9060-2REPS(28)
L2128785-12A	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		TPHOS-4500(28)
L2128785-12B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		A2-FE-6020T(180),A2-MOISTURE-2540(7),A2-TS(7),A2-TOC-9060-2REPS(28),A2-PREP-3050(180)
L2128785-13A	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		TPHOS-4500(28)
L2128785-13B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		A2-FE-6020T(180),A2-MOISTURE-2540(7),A2-TS(7),A2-PREP-3050(180),A2-TOC-9060-2REPS(28)
L2128785-14A	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		TPHOS-4500(28)
L2128785-14B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		A2-FE-6020T(180),A2-MOISTURE-2540(7),A2-TS(7),A2-TOC-9060-2REPS(28),A2-PREP-3050(180)
L2128785-15A	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		TPHOS-4500(28)
L2128785-15B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		A2-FE-6020T(180),A2-MOISTURE-2540(7),A2-TS(7),A2-PREP-3050(180),A2-TOC-9060-2REPS(28)
L2128785-16A	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		TPHOS-4500(28)
L2128785-16B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		A2-FE-6020T(180),A2-MOISTURE-2540(7),A2-TS(7),A2-PREP-3050(180),A2-TOC-9060-2REPS(28)
L2128785-17A	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		TPHOS-4500(28)
L2128785-17B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		A2-FE-6020T(180),A2-MOISTURE-2540(7),A2-TS(7),A2-PREP-3050(180),A2-TOC-9060-2REPS(28)
L2128785-18A	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		TPHOS-4500(28)
L2128785-18B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		A2-FE-6020T(180),A2-MOISTURE-2540(7),A2-TS(7),A2-PREP-3050(180),A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Project Name: SANTUIT POND
Project Number: Not Specified

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Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)

*Values in parentheses indicate holding time in days

Project Name:	SANTUIT POND	**Lab Number:**	L2128785
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GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

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Footnotes

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

Terms

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

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

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

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

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

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

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

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

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

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

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

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	SANTUIT POND	**Lab Number:**	L2128785
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Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Project Name:	SANTUIT POND	**Lab Number:**	L2128785
Project Number:	Not Specified	**Report Date:**	07/08/21

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

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

Table II-1: Completeness Checklist

Quality Assurance/Quality Control Questions	Yes/No? Comments?
1. Was the report signed by the responsible applicant approved representative?	Yes
2. Were the methods for sampling, chemical and biological testing described in the Sampling and Analysis Plan (SAP) and the Laboratory QA Plan (LQAP) followed?	Yes
3. If not, were deviations documented?	N/A
4. Was the SAP approved by the New England District?	
5. Did the applicant use a laboratory with a LQAP on file at the New England District?	
6. Did the samples adequately represent the physical/chemical variability in the dredging area?	
7. Were the correct stations sampled (include the precision of the navigation method used)?	
8. Were the preservation and storage requirements in Chapter 8 of the EPA/Corps QA/QC Manual (EPA/USACE 1995) and EPA (2001d) followed?	Yes
9. Were the samples properly labeled?	Yes
10. Were all the requested data included?	Yes
11. Were the reporting limits met?	Yes
12. Were the chain-of-custody forms properly processed?	Yes
13. Were the method blanks run and were the concentration below the acceptance criteria?	Yes
14. Was the MDL study performed on each matrix (with this data submission) or within the last 12 months?	Yes
15. Were the SRM/CRM analyses within acceptance criteria?	N/A
16. Were the matrix spike/matrix spike duplicates run at the required frequency and was the percent recovery/RPD within the acceptance criteria?	N/A
17. Were the duplicate samples analyzed and were the RPDs within the required acceptance criteria?	N/A
18. For each analytical fraction of organic compounds, were recoveries for the internal standard within the acceptance criteria?	N/A
19. Were surrogate recoveries within the required acceptance criteria?	N/A

Table II-1 (*Continued*): Completeness Checklist

Quality Assurance/Quality Control Questions	Yes/No? Comments?
20. Were corrective action forms provided for all non-conforming data?	N/A
21. Were all the species-specific test conditions in Appendix V met?	
22. Were the test-specific age requirements met for each test species?	
23. Was the bulk physical/chemical testing performed on the sediments/composites that were biologically tested?	
24. Were the mortality acceptance criteria met for the water column and sediment toxicity tests?	
25. Were the test performance requirements in Table 11.3 of EPA (1994a) met?	

Table II-2: Quality Control Summary for Analyses of Polyaromatic Hydrocarbons (PAHs) and other base-neutrals in Sediment and Tissue Matrices

Method Reference Number: 8270D

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Initial Calibration	Must be performed prior to the analysis of any QC sample or field sample (<20 % RSD for each compound)			Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)			Retained at Lab and On file at USACoE-NED
Calibration Verification (Second Source)	Once, after initial calibration (80 to 120% recovery of each compound)			Retained at Lab
Continuing Calibration	At the beginning of every 12 hour shift (± 15 % D)			Retained at Lab
Standard Reference Materials	Within the limits provided by vendor			In Data Package
Method Blank	No target analytes > RL			In Data Package
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One set (MS/MSD) per group of field samples. Must contain all target analytes. (Recovery Limits 50 to 120%; RPD <30%)			In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)			In Data Package
Surrogate Recoveries	Calculate % recovery (30 to 150% recovery)			In Data Package
Internal Standard Areas	Within 50 to 200% of internal standards in continuing calibration check			Retained at Lab

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-3: Quality Control Summary for the Analyses of Pesticides in Sediment, Tissue, and Water Matrices

Method Reference Number: 8081B

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Initial Calibration	Must be performed prior to the analysis of any QC sample or field sample (<20 % RSD for each compound)			Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)			Retained at Lab and On file at USACoE-NED
Calibration Verification (Second Source)	Once, after initial calibration (80 to 120% recovery of each compound)			Retained at Lab
Continuing Calibration	Every 20 injections (± 15 % D)			Retained at Lab
Standard Reference Materials	Within the limits provided by vendor			In Data Package
Method Blank	No target analytes > RL			In Data Package
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One set (MS/MSD) per group of field samples. Must contain all target analytes. (Recovery Limits 50 to 120%; RPD <30%)			In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)			In Data Package
Surrogate Recoveries	Calculate % recovery (30 to 150% recovery)			In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-4: Quality Control Summary for Analyses of Polychlorinated Biphenyls (PCB Congeners) in Sediment, Tissue, and Water Matrices

Method Reference Number: 8270D

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Initial Calibration	Must be performed prior to the analysis of any QC sample or field sample (<20 % RSD for each compound)			Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)			Retained at Lab and On file at USACoE-NED
Calibration Verification (Second Source)	Once, after initial calibration (80 to 120% recovery of each compound)			Retained at Lab
Continuing Calibration	Every 20 injections (± 15 % D)			Retained at Lab
Standard Reference Materials	Within the limits provided by vendor			In Data Package
Method Blank	No target analytes > RL			In Data Package
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One set (MS/MSD) per group of field samples. Must contain all target analytes. (Recovery Limits 50 to 120%; RPD <30%)			In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)			In Data Package
Surrogate Recoveries	Calculate % recovery (30 to 150% recovery)			In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-5: Quality Control Summary for Analyses of Metals in Sediments, Tissue, and Water Matrices

Method Reference Numbers: Various Reference Numbers

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Linear Range Determination for ICP	Performed Quarterly	Yes	Annual	Retained at Lab
Initial Calibration for AA, Hg	Performed Daily (Correlation Coefficient ≥0.995)	Yes		Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)	Yes		Retained at Lab and On file at USACoE-NED
Initial Calibration Verification/ Continuing Calibration Verification	Hg: 80 to 120% recovery Other metals: 90 to 110% recovery	Yes		Retained at Lab
Initial Calibration Blank/ Continuing Calibration Blank	No target analytes > Instrument Detection Limit (IDL)	No	Results >3x IDL noted, on file at lab	Retained at Lab
Standard Reference Materials	Within the limits provided by vendor	Yes = LCS		In Data Package
Method Blank	No target analytes > RL	Yes		In Data Package
Sample Spike/ Sample Duplicate	One set per group of field samples. Must contain all target analytes. Recovery Limits (75 to 125%; RPD < 20% or < 35%)	N/A		In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)	N/A		In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-6: Quality Control Summary for Analyses of other Organic Chemicals not listed in Sediment, Tissue, and Water Matrices

Method Reference Numbers:

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Initial Calibration	Must be performed prior to the analysis of any QC sample or field sample (<20 % RSD for each compound)			Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)			In Data Package
Calibration Verification (Second Source)	Once, after initial calibration (80 to 120% recovery of each compound)			Retained at Lab
Continuing Calibration	At the beginning of every 12 hour shift (± 15 % D)			Retained at Lab
Standard Reference Materials	Within the limits provided by vendor			In Data Package
Method Blank	No target analytes > RL			In Data Package
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One set (MS/MSD) per group of field samples. Must contain all target analytes. (Recovery Limits 50 to 120%; RPD <30%)			In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)			In Data Package
Surrogate Recoveries	Calculate % recovery (30 to 150% recovery)			In Data Package
Internal Standard Areas (if applicable)	Within 50 to 200% of internal standards in continuing calibration check			In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-7: Quality Control Summary for Analyses of Sediment Grain Size and Total Organic Carbon

Method Reference Numbers:

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Grain Size: Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 25%)	NA		In Data Package
Total Organic Carbon: Standard Reference Materials	Within the limits provided by vendor	Yes		In Data Package
Total Organic Carbon: Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD <30%)	Yes		In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-8: Quality Control Summary for Biological Toxicity Testing only

Method Reference Numbers:

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Test condition requirements for each species: Temperature, Salinity, pH, D.O., Ammonia (Total, Un-ionized)	Test conditions within the requirements specified for each species			In Data Package
Test species age	Age/health within guidelines for each species (Appendix V)			In Data Package
Bulk physical/chemical analyses (If required by the Sampling plan)	Required? If so, performed? Yes or No			In Data Package
Water column toxicity test: Control mortality Control abnormality	 < 10% mean < 30% mussel/oyster; < 40% clam larvae, < 30% sea urchin larvae			In Data Package
Sediment toxicity test: Control mortality Compliance with applicable test acceptability requirements in Table 11.3 (EPA 1994a)	 < 10% mean (no chamber >20%) See EPA (1994a) Section 9; Table 11.3			In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Reference:

Regional Implementation Manual for the Evaluation of Dredged Material Proposed for Disposal in New England Waters, U.S. EPA and U.S. Army Corps of Engineers, New England District, April 2004.

CHAIN OF CUSTODY

PAGE 1 OF 2

Date Rec'd in Lab: 5/28/21

ALPHA Job #: L2128785

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: US ARMY CORPS OF ENG.
Address: 696 VIRGINIA RD
CONCORD, MA 01742
Phone: 617 697 0573
Email: RICHARD.B.LOYD@USACE.ARMY.MIL

Additional Project Information:

Project Information

Project Name: SANTUIT POND
Project Location: MASHPEE, MA
Project #:
Project Manager: RICHARD LOYD
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
TOC
TOTAL PHOSPHORUS
IRON
% MOISTURE

SAMPLE INFO
Filtration
☐ Field
☐ Lab to do
Preservation
☐ Lab to do

Sample Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	TOC	TOTAL PHOSPHORUS	IRON	% MOISTURE	TOTAL # BOTTLES
28765-01	E 0-4.0'	5/24	0900	SE	RBL	✓	✓	✓	✓	2
-02	E 4.0-6.0'	5/24	0900			✓	✓	✓	✓	2
-03	E 6.0-8.0'	5/24	0900			✓	✓	✓	✓	2
-04	G 0-3.0'	5/24	0920			✓	✓	✓	✓	2
-05	G 3.0-5.0'	5/24	0920			✓	✓	✓	✓	2
-06	M 0-2.0'	5/24	0940			✓	✓	✓	✓	2
-07	M 2.0-4.0'	5/24	0940			✓	✓	✓	✓	2
-08	M 4.0-6.0'	5/24	0940			✓	✓	✓	✓	2
-09	M 6.0-8.0'	5/24	0940			✓	✓	✓	✓	2
-10	G 0-2.0'	5/24	1000			✓	✓	✓	✓	2
	Container Type					A	A	A	A	
	Preservative					A	A	A	A	

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
[illegible]	5/28 1530	[illegible]	5/28/21 1530
[illegible]	5/28/21 1725	[illegible]	5/28/21 1625
[illegible]	5/28/21 1644	[illegible]	5/28/21 1644
[illegible]	5/28/21 1750	[illegible]	5/28/21 1750

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: 5/28/21

ALPHA Job #: L2128785

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

Project Information

Project Name: SAUTUIT POND
Project Location: MASAPEE, MA
Project #:
Project Manager: RICHARD LOYD
ALPHA Quote #:

Report Information - Data Deliverables

☑ ADEx ☑ EMAIL

Billing Information

☑ Same as Client info PO #:

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Client: US ARMY CORPS OF ENG.
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☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Turn-Around Time

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

Additional Project Information:

SAMPLES STORED IN FREEZER AFTER COLLECTION

ANALYSIS

VOC: ☐ 8260 ☐ 624 ☐ 524.2
SVOC: ☐ ABN ☐ PAH
METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15
METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13
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VPH: ☐ Ranges & Targets ☐ Ranges Only
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TOC
TOTAL PHOSPHORUS
IRON
% MOISTURE

SAMPLE INFO
Filtration
☐ Field
☐ Lab to do
Preservation
☐ Lab to do

Sample Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	TOC	TOTAL PHOSPHORUS	IRON	% MOISTURE	TOTAL # BOTTLES
28785-11	O 2.0-4.0'	5/24	1000	SE	RBL	/	/	/	/	2
-12	O 4.0-6.0'	5/24	1000			/	/	/	/	2
-13	O 6.0-8.0'	5/24	1000			/	/	/	/	2
-14	S 0-2.0'	5/24	1030			/	/	/	/	2
-15	S 2.0-4.0'	5/24	1030			/	/	/	/	2
-16	S 4.0-6.0'	5/24	1030			/	/	/	/	2
-17	S 6.0-8.0'	5/24	1030			/	/	/	/	2
-18	G 5.0-6.8'	5/24	0920			/	/	/	/	2

Container Type										
Preservative										
Container Type	A	A	A	A						
Preservative	A	A	A	A						

Container Type
P= Plastic
A= Amber glass
V= Vial
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Preservative
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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
	5/28 1530	MCM MCM AA	5/28/21 1537
	5/28/21 1625		5/28/21 1625
MCM	5/28/21 1750		5/28/21 1750

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