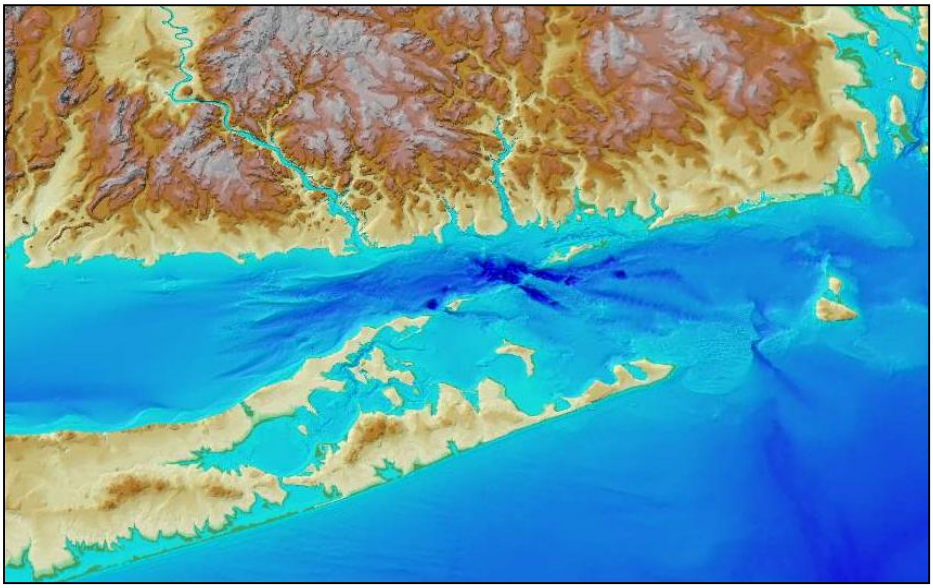
Supplemental Environmental Impact Statement for the Designation of Dredged Material Disposal Site(s) in Eastern Long Island Sound, Connecticut and New York

APPENDIX G

Physical and Chemical Properties of Sediments in Eastern Long Island Sound



Prepared for: **United States Environmental Protection Agency**

Sponsored by: **Connecticut Department of Transportation**

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University of Connecticut

December 2015

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PHYSICAL AND CHEMICAL PROPERTIES OF SEDIMENTS EASTERN LONG ISLAND SOUND

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Table of Contents

page

Executive Summary

1. Introduction 1
   1.1 New London Alternative 1
   1.2 Niantic Bay Alternative 3
   1.3 Cornfield Shoals Alternative 3

2. Methodology 4
   2.1 Sampling Stations 4
   2.2 Sampling Methods 9
   2.3 Sample Handling and Custody Methods 10
   2.4 Sample Analyses 10

3. Quality Control 12
   3.1 Quality Control Measures 12
   3.2 Data Quality Review 12
      3.2.1 Field Work 12
      3.2.2 Data Quality Control 12

4. Results 14
   4.1 Data Tables 14
   4.2 Grain Size and Total Organic Carbon 14
      4.2.1 New London Alternative 24
      4.2.2 Niantic Bay Alternative 24
      4.2.3 Cornfield Shoals Alternative 24
   4.3 Metals 24
      4.3.1 New London Alternative 26
      4.3.2 Niantic Bay Alternative 26
      4.3.3 Cornfield Shoals Alternative 26
   4.4 Polycyclic Aromatic Hydrocarbon (PAHs) 26
   4.5 Pesticides 27
   4.6 Polychlorinated Biphenyls (PCBs) 27

5. Summary 28

References 29

Appendix 1: Field Notes
Appendix 2: Laboratory Report A: Sampling on February 24 and 25
Appendix 3: Laboratory Report B: Sampling on February 27

List of Tables

Table 1 Summary of sediment sampling stations

Table 2 Coordinates of sediment sampling stations

Table 3 Quality control activities and performance criteria

Table 4 Grain size, total organic carbon, and total metals at the New London Alternative

Table 5 Grain size, total organic carbon, and total metals at the Niantic Bay and Cornfield Shoals Alternatives

Table 6 Polycyclic aromatic hydrocarbon (PAHs) at the New London Alternative

Table 7 Polycyclic aromatic hydrocarbon (PAHs) at the Niantic Bay and Cornfield Shoals Alternatives

Table 8 Pesticides at the New London Alternative

Table 9 Pesticides at the Niantic Bay and Cornfield Shoals Alternatives

Table 10 PCBs at the New London Alternative

Table 11 PCBs at the Niantic Bay and Cornfield Shoals Alternatives

Table 12 Statistics of grain size and chemical constituent for subareas for the three Alternatives

List of Figures

Figure 1 Zone of Siting Feasibility and the three alternative sites

Figure 2 Sediment sampling stations for the New London Alternative

Figure 3 Sediment sampling stations for the Niantic Bay Alternative

Figure 4 Sediment sampling stations for the Cornfield Shoals Alternative

Figure 5 Smith-MacIntyre grab sampler on the stern of the *R/V Connecticut* and bottom sediment grab from Station L-55 from the Cornfield Shoals Disposal Site

Figure 6 Sediment sampling stations of the 2015 survey at the New London Disposal Site, superimposed on the bathymetry from July 2007 along with reported August 2000 through July 2007 dredged material disposal locations

Acronyms and Abbreviations

cm	centimeter(s)
COC	Chain of Custody
CO_2	Carbon dioxide
CSDS	Cornfield Shoals Disposal Site
CTD	Conductivity/temperature/depth sensor
CTDEEP	Connecticut Department of Energy and Environmental Protection
CTDOT	Connecticut Department of Transportation
CVAF	Cold Vapor Atomic Fluorescence
cy	cubic yards
DAMOS	Disposal Area Monitoring System
DW	Dry weight
ECD	Electron capture detection
EIS	Environmental Impact Statement
ELIS	Eastern Long Island Sound
ERL	Effects Range Low (NOAA sediment quality guideline value)
ERM	Effect Range Median (NOAA sediment quality guideline value)
GC	Gas chromatography
GC/MS-SIM	Gas chromatography/mass spectroscopy - selective ion monitoring
Hg	mercury
km	kilometer(s)
km^2	square kilometer(s)
LIS	Long Island Sound
m	meter(s)
m^2	square meter(s)
m^3	cubic kilometers
MDL	Method detection limit
NAD83	North Atlantic Datum of 1983

NBDS	Niantic Bay Disposal Site
NEPA	National Environmental Policy Act
NLDS	New London Disposal Site
nm	nanometer(s)
nmi	nautical mile(s)
nmi^2	square nautical mile(s)
NOAA	National Oceanic and Atmospheric Administration
QAPP	Quality Assurance Project Plan
PAH(s)	Polycyclic aromatic hydrocarbon(s)
PCB(s)	Polychlorinated biphenyl(s)
RIM	Regional Implementation Manual
RL	Reporting limit
RFD	Relative percent difference
SEIS	Supplemental Environmental Impact Statement
SOP	Standard Operating Procedure
TOC	Total organic carbon
UCONN	University of Connecticut
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USGS	United Stated Geological Survey
WGS84	World Geodetic System of 1984
ZSF	Zone of siting feasibility (Area established by the USEPA for the potential designation of one or more dredged material disposal sites)

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EXECUTIVE SUMMARY

This report provides an analysis of the physical and chemical characteristics of the sediments at three alternative dredged material disposal sites in eastern Long Island Sound. The assessment is part of the Supplemental Environmental Impact Statement (SEIS) process for the designation of dredged material disposal sites in the eastern Long Island Sound region. The SEIS will supplement the Environmental Impact Statement (EIS) for the designation of dredged material disposal sites in the Western and Central Long Island Sound, completed in 2004. The SEIS is prepared by the U.S. Environmental Protection Agency (USEPA), and supported by the Connecticut Department of Transportation (CTDOT).

Sediment samples were collected within and around three alternative sites that were selected for more detailed analysis in the SEIS. These sites were New London, consisting of the active New London Disposal Site (NLDS) and two areas to the west; Niantic Bay, consisting of the historically used Niantic Bay Disposal Site (NBDS) and an area to the east; and Cornfield Shoals, consisting of the active Cornfield Shoals Disposal Site (CSDS). Sediment samples were collected at a total of 35 stations in February 2015. Samples were analyzed for physical and chemical properties, consisting of grain size, total organic carbon, metals, polycyclic aromatic hydrocarbon (PAHs), pesticides, and polychlorinated biphenyls (PCBs).

The predominant mean grain size throughout all three alternative sites was medium to fine sand. Grain sizes at individual stations were more variable at the NLDS, reflecting the disposal of dredged material from various sources. The TOC content was below 1% in most samples from the three Alternatives, with generally higher concentrations at the NLDS.

Metal concentrations analyzed at the three Alternatives were generally low. None of the metal concentrations at any of the 35 stations exceeded the NOAA "Effects Range Median" (ERM)[1] guideline values for any of the analyzed metals. Samples from two stations slightly exceeded the NOAA "Effects Range Low" (ERL)[2] guideline value for copper; these two stations were located in the NLDS.

Concentrations of organic compounds (PAHs, pesticides, PCBs) were low or often not detected. None of the individual samples were above the ERM values for any organic compound. Two samples located at the NLDS exceeded ERL values for some compounds. One station was above the ERL value for multiple PAHs and the sum of the pesticides DDD+DDE+DDT. Another station was above the ERL value for DDT and total PCBs.

[1] The ERM is indicative of concentrations above which adverse biological effects frequently occur.

[2] The ERL is indicative of concentrations below which adverse biological effects rarely occur.

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1.0 INTRODUCTION

In 2005, the USEPA designated the western and central Long Island Sound dredged material disposal sites, following the preparation of an EIS (USEPA and USACE, 2004a). The two disposal sites in eastern Long Island Sound, Cornfield Shoals and New London, are scheduled to close in December 2016. The USEPA is in the process of preparing a Supplemental EIS (SEIS) for the potential designation of one or more disposal sites needed to serve the eastern Long Island Sound region. The SEIS is being prepared in accordance with Section 102(c) of the Marine Protection Research and Sanctuaries Act (MPRSA; also referred to as Ocean Dumping Act [ODA]) of 1972.

This report describes the physical and chemical properties of surface sediments collected at three alternative sites in eastern Long Island Sound. These three sites (New London, Niantic Bay, and Cornfield Shoals) were identified as part of the screening process during the preparation of the SEIS (see Chapter 3 of the SEIS for details). The three sites are located within a Zone of Siting Feasibility (ZSF) (Figure 1). The ZSF is defined as the area established by the USEPA for the potential designation of one or more dredged material disposal sites. The ZSF includes the following boundaries:

- *West:* Line drawn between Mulberry Point, Connecticut (near Guilford, Connecticut) to Mattituck Point, New York.
- *South:* Line drawn between Montauk, New York, to Block Island, Rhode Island.
- *East:* Line drawn between Block Island to Point Judith, Rhode Island.
- The shorelines of the States of Connecticut, New York, and Rhode Island, connecting the lines listed above.

Each of the three alternative sites is described in more detail below. Sediments at each site were collected for the analysis of grain size and the concentration of total organic carbon, metals, and organic compounds. Organic compounds consisted of polycyclic aromatic hydrocarbons (PAHs), pesticides, and polychlorinated biphenyls (PCBs).

1.1 New London Alternative

The New London Alternative is a rectangular area with the dimensions 2.5 x 1 nautical miles (nmi), or 4.6 x 1.9 kilometer (km) (Figure 3; Table 1). Its boundary encompasses three areas: the active New London dredged material disposal site (NLDS) and two areas adjacent to the NLDS to the west (referred to hereafter as ‘Site NL-Wa’ and ‘Site NL-Wb’).

- ***NLDS:*** The NLDS is located in the eastern part of the New London Alternative along the New York-Connecticut state boundary. It has a area of one square nautical mile (nmi^2), or 3.4 square kilometers (km^2), centered at 41°16.306' N, 72°04.571' W (NAD83). Water depths at the NLDS range from 46 to 79 feet (14 to 24 m); the site is deepest at its southern boundary. Since 1982, approximately 3.5 million cubic yards (cy) (2.6 million m^3) of dredged material have been disposed at the site (USEPA, 2015a). In addition, approximately 5.4 million cy (4.1 million m^3) were disposed at the NLDS between 1955 and 1976 (Oceanic Society, 1982, which cited the CTDEEP and NYSDEC as sources for

the dredged material disposal information). Sediments at the site consists of fine sand and silt and clay (*e.g.*, AECOM, 2009; Tetra Tech 2014). Much of the surface sediment at the site consists of placed dredged material.

- ***Site NL-Wa:*** Site NL-Wa is located in the mid-section of the New London Alternative. This square site has an area of 1 nmi^2 (3.4 km^2). The site consists of mostly sandy areas, but also a shallow area of boulders and rocks in the north (WHG, 2014). Overall, water depths at the site range from approximately 45 feet (14 m) in the boulder area in the north to 100 feet (30 m) in the south.

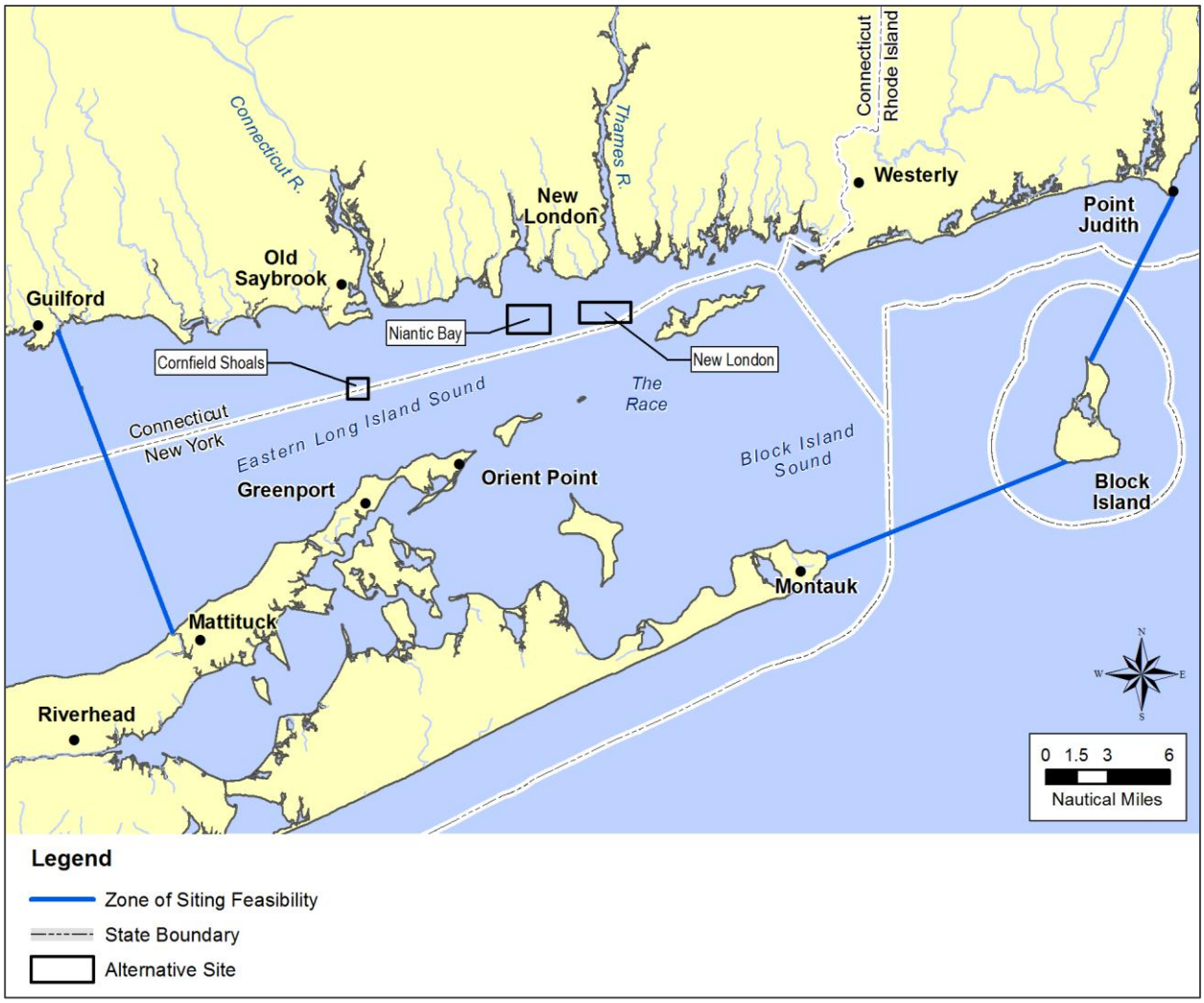

Figure 1. Zone of Siting Feasibility and the three alternative sites.

- ***Site NL-Wb:*** Site NL-Wb is located in the western part of the New London Alternative. It is a rectangular area, 0.5 nmi (0.9 km) wide and 1 nmi (1.8 km) long, or 0.5 nmi^2 (1.7 km^2). The site consists of an extension of the sandy area of Site NL-Wa. The southwestern corner of Site NL-Wb contains an area of bedrock and boulders, as well as some sand waves

(WHG, 2014). Overall, water depths at the entire site range from approximately 59 feet (18 m) in the north to 95 feet (28 m) in the south.

1.2 Niantic Bay Alternative

The Niantic Bay Alternative is located south of Niantic Bay, Connecticut, between the Connecticut and Thames Rivers. The Alternative is a rectangular area with the dimensions 2.1 x 1.33 nmi (3.9 x 2.5 km) (Figure 3; Table 1). The boundary of the Niantic Bay Alternative encompasses two areas, as follows:

- ***NBDS:*** The NBDS is located in the western part of the Niantic Bay Alternative. It has an area of 1.33 x 1.33 nmi (2.5 x 2.5 km), or 1.8 nmi^2 (6.2 km^2). This site was used historically for the disposal of dredged materials between 1969 and 1972 when a total of 176,000 cy (135,000 m^3) of dredged material was disposed at this location (Oceanic Society, 1982), but is not an active disposal site (USACE, 2014). Water depths at the site range from approximately 60 to 130 feet (18 to 40 m). Sediments at the site consist of sand to the north and northwest and mostly gravelly sediment with patches of gravel in the remainder of the area. The dominant size fraction in the sediments at the site is sand (Tetra Tech, 2014). The site contains a boulder area in the north-central part of the site (Poppe et al., 1998) and scour depressions in the south.

- ***Site NB-E:*** Site NB-E is located in the eastern part of the Niantic Bay Alternative. It has a rectangular area of 0.75 x 1.35 nmi, or 1 nmi^2 (3.4 km^2). Water depths at Site NB-E range from 43 feet (13 m) in the north to 230 feet (70 m) in the southeast. Surface sediments at the site are generally similar to sediments at the NBDS. The southwestern corner of Site NB-E contains a bedrock area, which is an extension of an exposed area of bedrock to the south of the site.

1.3 Cornfield Shoal Alternative

The boundary of the Cornfield Shoals Alternative (Figure 4; Table 1) is identical to the active Cornfield Shoals dredged material disposal site (CSDS). The CSDS is located 3.3 nmi (6.1 km) south of Cornfield Point in Old Saybrook, Connecticut. It has a square of 1 nmi^2 (3.4 km^2) and is centered at 41° 12.6858' N, 72° 21.4914' W (NAD83). An estimated 1.2 million cy (0.95 million m^3) were disposed at the site between 1960 and 1976 (Oceanic Society, 1982), and an additional 1.7 million cy (1.3 million m^3) were disposed between 1982 and 2013 (USEPA, 2015a). The site has a water depth of approximately 150 feet (46 m). The predominant topographic features are a sandy bottom and bedforms oriented in an east-west direction (Poppe et al., 2013).

2.0 METHODOLOGY

2.1 Sampling Stations

Sediment samples were collected at a total of 35 stations, following the preparation of a Quality Assurance Project Plan (QAPP) in February 2015. Station locations are summarized in Table 1 and shown in Figures 2 to 4, superimposed on water depth information obtained by the USGS and the National Oceanic and Atmospheric Administration (NOAA) (Poppe et al., 2011). Coordinates and other site information for each station are presented in Table 2. The sampling density was random, consisting of a grid that covered each alternative site; previous disposal of dredged material was not considered in the selection of the sampling stations. In addition, reference stations were added outside of the alternative sites. Reference stations are designed to provide information about the sediments in areas that have not received dredged material, for purposes of comparison with the sediment quality at the adjacent alternative site.

For the New London Alternative, 18 stations were sampled, including three reference stations (Table 2). For the Niantic Bay Alternative, 11 stations were sampled, including three reference stations. For the Cornfield Shoals Alternative, 6 stations were sampled, including one reference station. Several of the reference stations coincide with reference stations used by the USACE's Disposal Area Monitoring System (DAMOS) program.

Sampling was performed by staff from the University of Connecticut (UCONN) over three days (February 24, 25, and 27, 2015). Sampling was not performed on February 26, 2015 due to poor weather conditions. Kay Howard-Strobel was the project manager and was responsible for the sampling effort including coordinating logistics for use of the UCONN research vessel. She served as the Chief Scientist on the UCONN research vessel and ensured quality control in the field for collection of the sediment samples. The 76-foot long vessel (*R/V Connecticut*) used for this sampling was outfitted with sediment coring equipment and a differential GPS navigation system.

Table 1. Summary of Sediment Sampling Stations

Site	Number of Stations	Station ID[1]
NLDS	8	L-13 to L-18
NL-Wa	4	L-19, L-20, L21, L-21, L, 25
NL-Wb	3	L-26 to L-28
Reference stations east of NLDS	3	L-22 to L-24
NBDS	5	L-31 to L-35
NB-E	3	L36 to L-38
Reference far east of NBDS	2	L-39 to L-40
Reference station west of NBDS	1	L-41
CSDS	5	L-51 to L-55
Reference station west of CSDS	1	L-56
Total Stations	**35**	

[1] Coordinates and water depths are listed in Table 2.

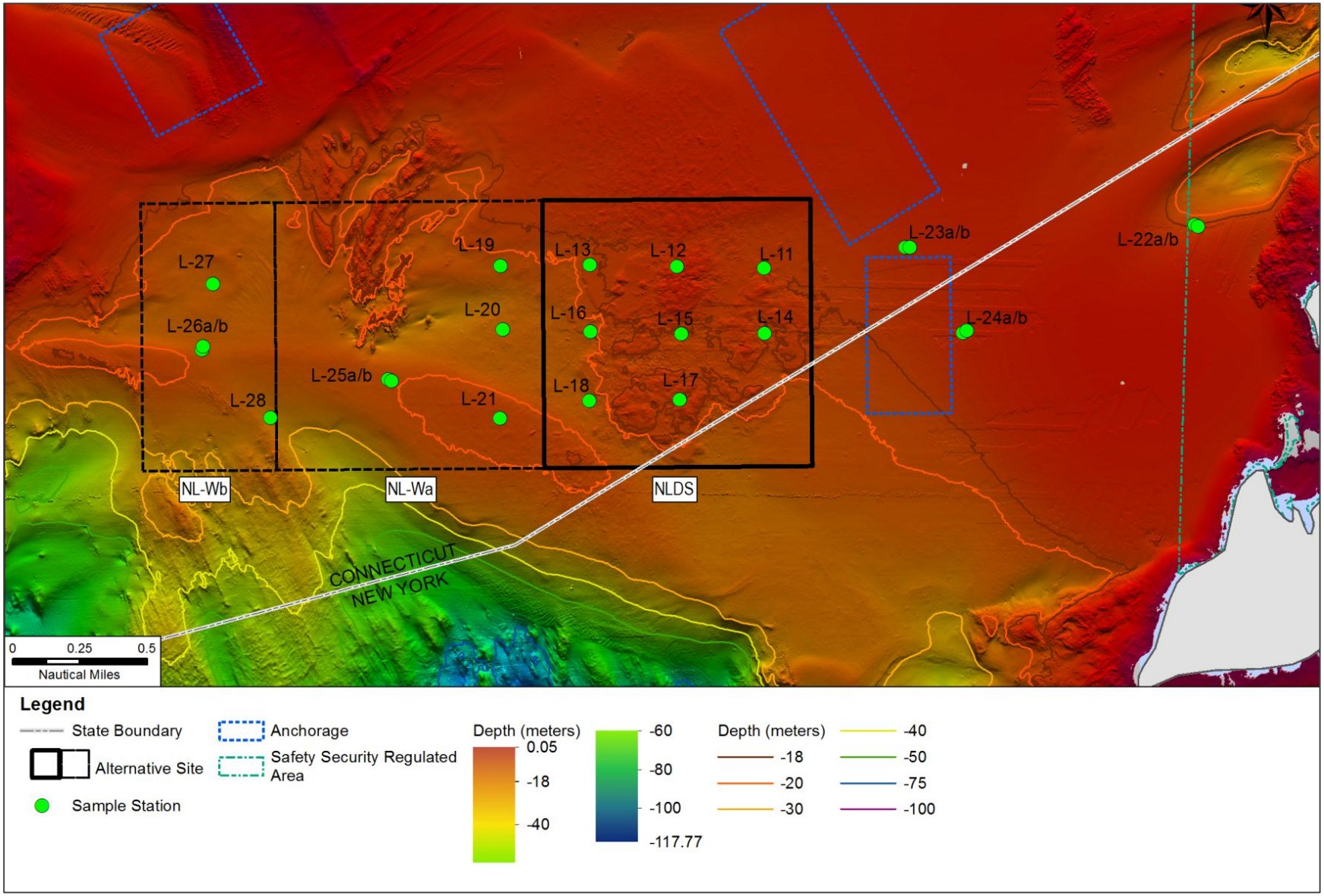

Figure 2. Sediment sampling stations for the New London Alternative. The background represents water depth (Poppe et al., 2011).

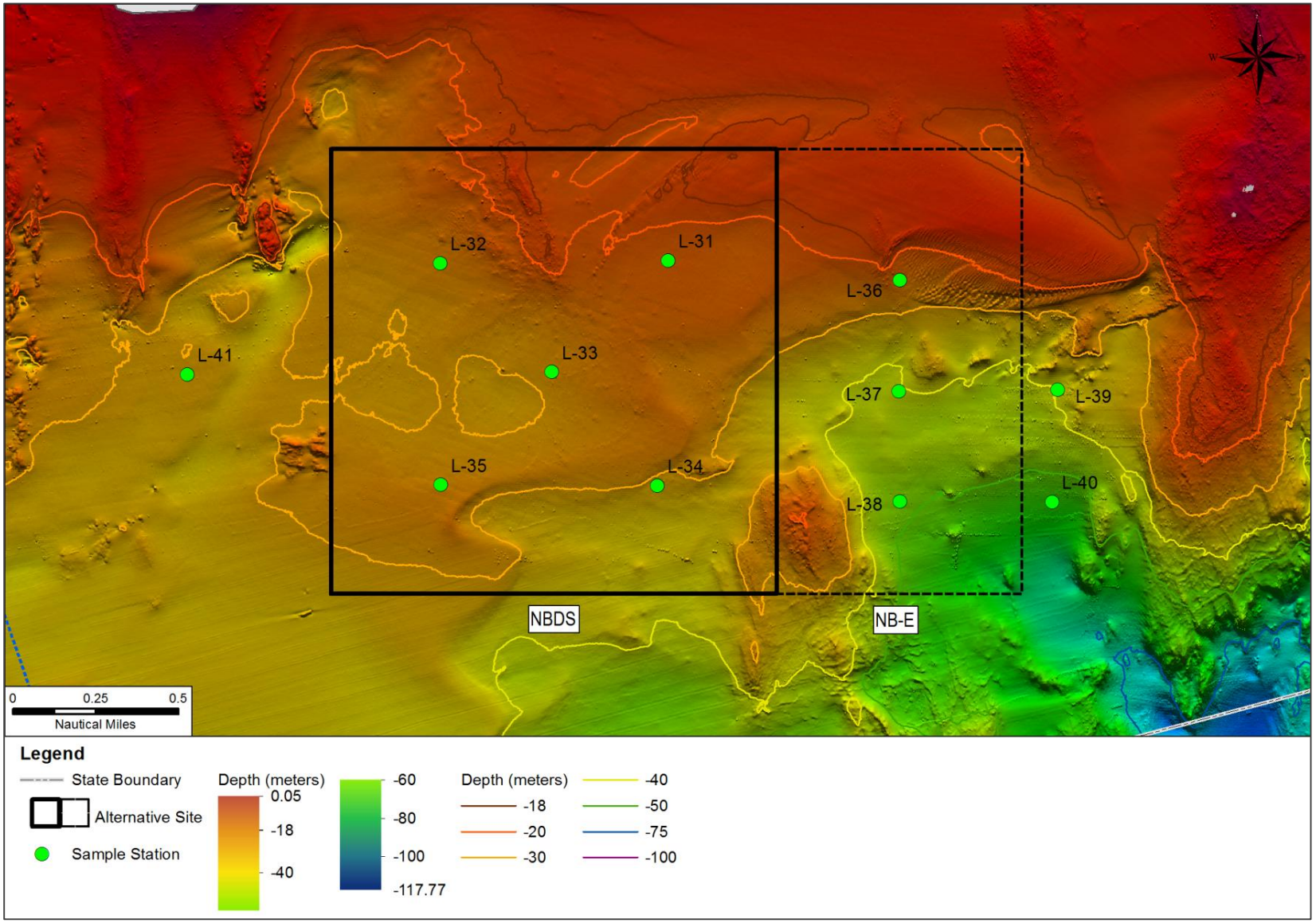

Figure 3. Sediment sampling stations for the Niantic Bay Alternative. The background represents water depth (Poppe et al., 2011).

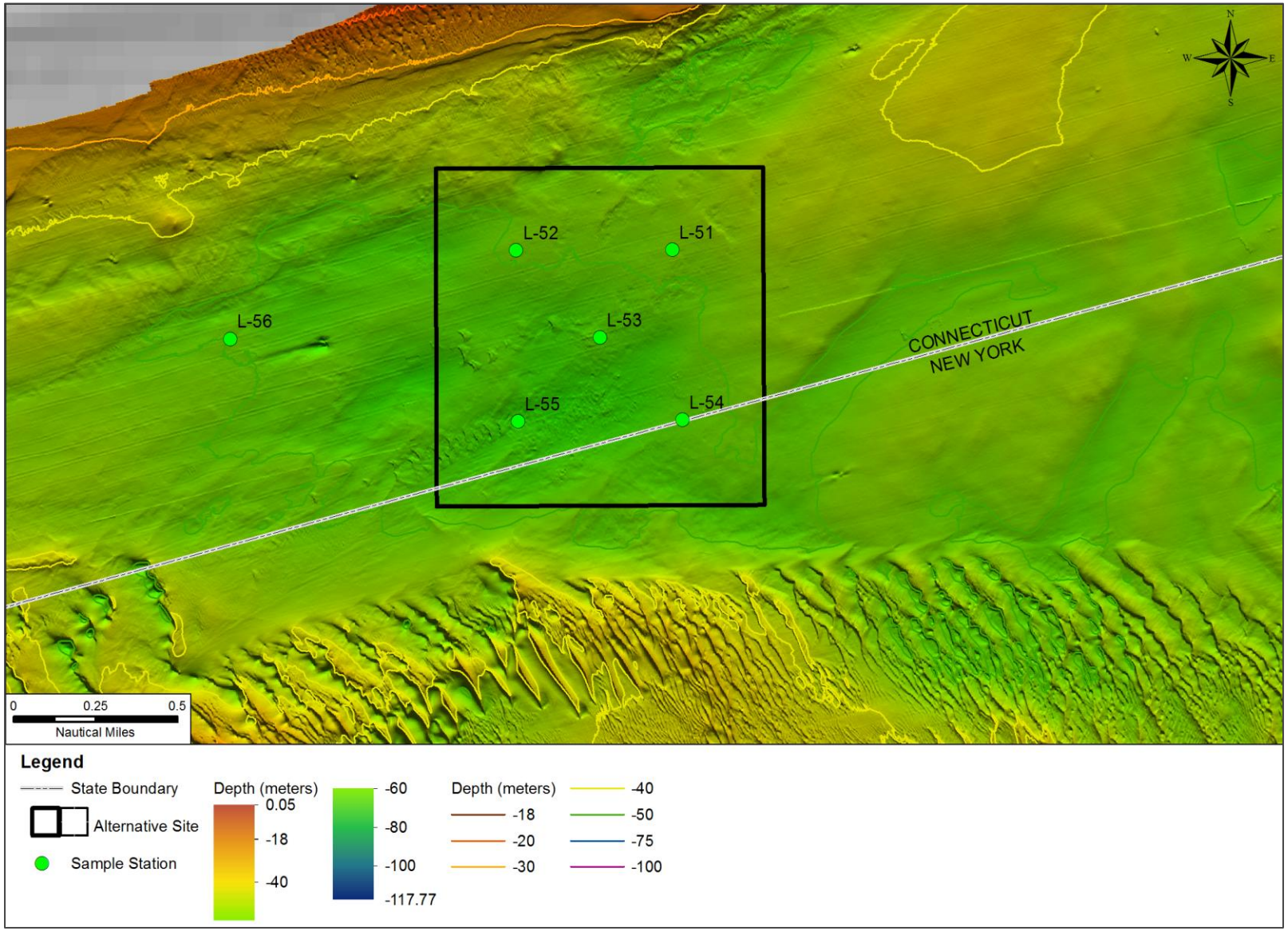

Figure 4. Sediment sampling stations for the Cornfield Shoals Alternative. The background represents water depth (Poppe et al., 2011).

Table 2. Coordinates of sediment sampling stations

Site	Station ID	Latitude	Longitude	Water Depth (m) (relative to Mean Low Low Water)	Grab Attempts [1]
		WGS84/NAD83 datum			
NLDS	L-11	41° 16.5467	-72° 04.1381	17.7	1
	L-12	41° 16.5547	-72° 04.5697	14.2	1
	L-13	41° 16.5632	-72° 05.0014	18.0	1
	L-14	41° 16.3030	-72° 04.1396	18.1	1
	L-15	41° 16.3023	-72° 04.5518	18.0	2
	L-16	41° 16.3149	-72° 05.0021	21.0	1
	L-17	41° 16.0587	-72° 04.5608	17.5	1
	L-18	41° 16.0568	-72° 05.0096	20.3	1
NL-Wa	L-19	41° 16.5626	-72° 5.44446	21.2	1
	L-20	41° 16.3253	-72° 05.4364	23.5	1
	L-21	41° 15.9931	-72° 05.4536	18.5	1
	L-25a	41° 16.1419	-72° 06.0044	20.2	1
	L-25b	41° 16.1358	-72° 05.9884	20.0	1
NL-Wb	L-26a	41° 16.2570	-72° 06.9272	23.1	1
	L-26b	41° 16.2707	-72° 06.9199	23.1	1
	L-27	41° 16.5019	-72° 06.8698	23.5	1
	L-28	41° 16.0010	-72° 06.5972	27.0	1
Reference East of NLDS	L-22a	41° 16.6957	-72° 02.0039	18.1	1
	L-22b	41° 16.6880	-72° 01.9873	18.3	1
	L-23a	41° 16.6204	-72° 03.4375	15.1	1
	L-23b	41° 16.6190	-72° 03.4175	14.4	1
	L-24a	41° 16.2998	-72° 03.1554	14.2	1
	L-24b	41° 16.3078	-72° 03.1363	14.0	1
NBDS	L-31	41° 16.3407	-72° 10.5096	23.3	1
	L-32	41° 16.3372	-72° 11.4243	26.8	1
	L-33	41° 16.0043	-72° 10.9795	29.3	1
	L-34	41° 15.6572	-72° 10.5586	32.4	1
	L-35	41° 15.6641	-72° 11.4278	28.1	1
NL-E	L-36	41° 16.2768	-72° 09.5793	24.0	1
	L-37	41° 15.9380	-72° 09.5855	42.0	1
	L-38	41° 15.6034	-72° 09.5857	49.8	1
Reference far-east of NBDS	L-39	41° 15.9407	-72° 08.9495	41.2	1
	L-40	41° 15.5991	-72° 08.9739	59.7	1
Ref west of NBDS	L-41	41° 16.0043	-72° 12.4435	31.4	1

Table 2. Coordinates of sediment sampling stations

Site	Station ID	Latitude	Longitude	Water Depth (m) (relative to Mean Low Low Water)	Grab Attempts [1]
		WGS84/NAD83 datum			
CSDS	L-51	41° 12.9421	-72° 21.1976	50.3	1
	L-52	41° 12.9424	-72° 21.8286	51.8	1
	L-53	41° 12.6826	-72° 21.4918	54.3	1
	L-54	41° 12.4380	-72° 21.1592	54.3	1
	L-55	41° 12.4355	-72° 21.8247	59.1	1
Ref. west of CSDS	L-56	41° 12.6841	-72° 22.9867	51.8	1

[1] Most samples were collected in one attempt. At one station, a second attempt was required as sediment was lost due to gravel or another obstruction on the seafloor that prevented closure of the sediment sampler.

2.2 Sampling Methods

Sediment samples for chemistry analyses were collected using a stainless steel Smith-MacIntyre grab sampler (Figure 5), a standard bottom grab used on oceanographic research vessels (USEPA, 2001). The grab sampler typically penetrates 15 cm into the bottom sediments, sampling a 0.1 m^2 area with a total volume of approximately16 liters.

Figure 5. (left) Smith-MacIntyre grab sampler on the stern of the *R/V Connecticut*; (right) bottom sediment grab from Station L-55, Cornfield Shoals Disposal Site.

For each station and sample, the Chief Scientist and staff recorded the following information in a field log: date and time, coordinates, sample number, contracted lab label number, observed grain size, depth, sea state, and weather conditions (see Appendix 1). Each sample was inspected for signs of leakage and for overfilling. The jaws of the sampler had to be fully closed and the top of the sediment had to be below the level of the opening doors. The Chief Scientist made the final decision regarding acceptability of all grab samples, and the overall condition of the grab sample.

Each grab sample was emptied into a clean stainless steel container, homogenized with a stainless steel spoon, and then scooped into pre-labeled sample jars with that spoon. Between samples, the grab sampler, spoons, and containers were thoroughly cleaned with high-pressure sea water and a brush, and then rinsed with de-ionized water.

2.3 Sample Handling and Custody

Sample jars for chemical analyses consisted of be pre-cleaned eight ounce (250 ml) amber glass jars with Teflon screwed caps. Sediment containers for grain size and total organic carbon (TOC), and percent moisture consisted of pre-cleaned plastic eight ounce (250 ml) jars with Teflon screw caps.

Bottles were not filled to the top, to allow for expansion when frozen. The bottles and the containers were wiped clean and rinsed with deionized water. All bottles were labeled, secured with tape, individually bagged, and placed immediately in a cooler on ice following procedures in the Regional Implementation Manual (RIM) (USEPA and USACE, 2004b).

At the end of each sampling survey day, samples were relinquished to the contracted laboratory with Chain of Custody (COC) forms in accordance with RIM guidance. The COCs are included within Appendices 2 and 3. The contracted laboratory was Alpha Analytical, located in Mansfield, Massachusetts.

2.4 Sample Analyses

Samples were extracted and analyzed within two weeks, which was well within the holding times for the various analytes. Holding times were specified in the QAPP for this project. Analytical methods and the standard operating procedures (SOPs) that were followed by Alpha Analytical are summarized below.

- ***Metals*** *(Method 6020A; SOP 2137):* Metals were analyzed by Inductively Coupled Plasma – Mass Spectrometry. Based on this method, the sample is first digested in acid, and then nebulized to an aerosol. The resulting aerosol is transported to the plasma torch by argon gas; the ions produced in the plasma are sorted according to their mass-to-charge ratios and quantified with a channel electron multiplier.

- ***Mercury*** *(Method 7474; SOP 2143)**:*** Total mercury was analyzed by Cold Vapor Atomic Fluorescence (CVAF). Based on this method, the sample is digested in an acidic, oxidizing solution to convert all forms of mercury to inorganic Hg (II). CVAF is based on fluorescence of radiation at 253.7 nm by mercury vapor. The oxidized mercury is reduced to insoluble elemental mercury, aerated as a vapor, and detected with an atomic fluorescence

spectrometer. Fluorescence is measured as a function of mercury concentration based on peak height measured.

- ***Polycyclic Aromatic Hydrocarbons (PAHs) and Polychlorinated Biphenyl (PCB) congeners***[3] *(Method 8270D; SOP 2157)**:*** These analytes were extracted using methylene chloride. Based on this method, the extract is cleaned up using silica gel and concentrated, an internal standard is added and then the extract is analyzed by gas chromatograph/mass spectrometer with selective ion monitoring mode (GC/MS-SIM). The target analytes are resolved on GC and detected using a mass selective detector. Concentrations are determined using mean relative response factors from a multi-level calibration curve. Response factors for target analytes and surrogate compounds are determined relative to the internal standards.

- ***Pesticides*** *(Method 8081B; SOP 2158)**:*** Samples analyzed for pesticides were extracted with methylene chloride. Based on this method, the extract is cleaned up using silica gel and concentrated, an internal standard is added and then the extract is copper cleaned to remove sulfur and is then analyzed on a GC which is fitted with two capillary columns for differing polarities each employing separate detectors. The analytes are resolved on each column and detected using an electron capture detector. Concentrations are calculated from the electron capture detection (ECD) response using internal or external standard techniques. Identification of multiple peak components is made by comparison to analytical standards.

- ***Grain size*** *(Method ASTM 422-63; SOP 2183)**:*** Sediment samples were analyzed using the sieve method for the following grain sizes: gravel, coarse sand, medium sand, fine sand, and fines (silt+clay).

- ***Total organic carbon (TOC)*** *(Method 9060A; SOP 2182)**:*** TOC was measured using a carbonaceous analyzer. This instrument converts the organic carbon to carbon dioxide (CO_2) by catalytic combustion. The CO_2 formed is then measured directly by a thermal conductivity detector. The amount of CO_2 in a sample is directly proportional to the concentration of carbonaceous material in the sample.

The data reports from Alpha Analytical are provided in Appendix 2 (for samples collected on February 24 and 25, 2015) and Appendix 3 (for samples collected on February 27, 2015). These data reports include method detection limits (MDLs) and reporting limits (RLs) for the various analyses, as applicable.

[3] A PCB congener is a single, unique well-defined chemical compound in the PCB category. The name of a congener specifies the total number of chlorine substituents and the position of each chlorine.

3.0 QUALITY CONTROL

3.1 Quality Control Measures

As specified in the QAPP from February 2015, quality control measures were taken in the field and in the laboratory.

- ***Field quality control:*** Measures samples that are field duplicates (or split samples) and replicates to evaluate field variability. For the field duplicate, one person filled the second bottle with the same homogenized sample used to fill the first bottle. There were a total of two duplicate samples; these samples were "blind" to the laboratory, meaning that sample containers had different sample numbers. Specifically, sample L-61 was a duplicate of the sample at Station L-15; sample L-62 was a duplicate of the sample at Station L-53 (see Table 2).

- ***Laboratory quality control:*** Laboratory quality control measures followed the laboratory's SOPs. For each batch of up to 20 samples the following was performed: a matrix spike and sample duplicates to evaluate precision; a laboratory control sample, or standard, to evaluate accuracy; a method blank to evaluate contamination in the laboratory; surrogates to evaluate percent recovery; and a matrix spike to evaluate percent recovery. A method detection limit study is performed annually by the laboratory.

Acceptance criteria are listed in Table 3; they reflect the laboratories SOPs for the various analyses (*e.g.*, for percent recoveries of surrogates). Typical surrogate recovery criteria are 30% to 150%.

3.2 Data Quality Review

3.2.1 Field Work

All field stations were sampled as planned; stations shown in Figures 2 to 4 are the actual locations sampled in the field. Only one station required two attempts for a successful grab (*i.e.*, Station L-15 at the NLDS). Date, time, coordinates, sample number, contracted laboratory label number, observed grain size, depth, sea state, and weather conditions were recorded in the field note book (Appendix 1).

3.2.2 Data Quality Control

The USEPA Project Manager reviewed the quality control information from the contracted laboratory (Alpha Analytical) for acceptability with the requirements of the Regional Implementation Manual (USEPA and USACE, 2004b). The data reports from the laboratory provided the quality assurance data and batch information (see Appendices 2 and 3). The Chain-of-Custody forms, sample processing, and sample transport were provided as part of that package. Samples were analyzed according to specified holding times, methods, and detection limits as outlined in the QAPP for the project. Upon completion of the data quality control review, the USEPA Project Manager and QA Manager determined that these data are acceptable for use as supporting information for the Eastern Long Island Sound SEIS.

Table 3. Quality Control Activities and Performance Criteria.

Data Quality Indicators	QC Sample and/or Activity Used to Assess Measurement Performance	Measurement Performance Criteria
Precision-Field	One field duplicate field sample for every 20 samples.	Relative percent difference (RPD) ≤ 100%
Precision-Lab and Field Matrix Spike	Matrix spike duplicates.	RPD ≤ 75%
Accuracy/Bias-Lab	Laboratory control sample. Method blanks. Sample surrogate recovery.	Acceptable percent recovery in SOP less than Reporting Limit. Acceptable percent recovery in SOP.
Comparability	Compare to historical data, to reference site data and to project-specific data, using same methods as specified in RIM (USEPA and USACE, 2004b)	Must use RIM-specified methods. Deviation from SOPs should be communicated and approved.
Limit of Quantitation	Method detection limit study. Five point calibration.	Method detection limit must be three to five times less than reporting (quantitation) limit. Lowest calibration standard should equal reporting limit specified in RIM.
Completeness	Data Completeness Check	>90% of samples analyzed
Representativeness	Compare to tested dredged material and to navigational positioning	Navigational position will be verified to ensure that the sample is within the existing disposal sites in eastern LIS (CSDS, NLDS) and other locations in eastern LIS.

4.0 RESULTS

4.1. Data Tables

Data obtained during this study are provided in Tables 4 to 11; the legend is provided by the box below. These tables list the data contained in the two full data reports from the laboratory (Appendices 2 and 3). Table 12 presents summary statistics for areas with related stations (see Table 1). Mean and maximum values are presented for grain size, TOC, metals, PCBs, and PAHs. Data for pesticides were not summarized as there were only very few samples with any detected pesticide concentrations.

Legend for Tables 4 to 12	
12.1	***Size fractions of sand:*** For grain size analyses of sand, three sand fractions (coarse sand, medium sand, fine sand) are reported, in addition to the sum (*i.e.*, the total sand fraction). Boxes with the three sand fractions are highlighted in this pink color.
--	***No detection of metals and organic compounds:*** Mark within a data box if a chemical analysis resulted in "No detection" for a specific metal or organic compound.
3.3	NOAA guideline value "Effects Range Low" (ERL). Concentrations that exceeded the ERL are also flagged within the data tables.
5.6	NOAA guideline value "Effects Range Medium" (ERM). None of the data exceeded the ERM.

Analytical results for metals and organic compounds can be compared to Effects Range Low (ERL) and Effects Range Median (ERM) values, developed by NOAA as a screening tool to estimate the relative degree of contamination (Long et al., 1995; Buchman, 1999). However, these guideline values should not be used to infer causality because of the inherent variability and uncertainty of the approach. These values are based upon data primarily of marine sediment chemistry paired with sediment toxicity bioassay data (USEPA, 2015b). To calculate an ERL value for a given analyte, concentration data obtained from studies are ranked from lowest to highest concentrations. The ERL value is indicative of concentrations below which adverse biological effects rarely occur. The ERM value is indicative of concentrations above which adverse biological effects frequently occur.

4.2 Grain Size and Total Organic Carbon

Consistent with data from the USGS (Poppe et al., 2000) and also with sediment grain size data obtained by Tetra Tech (2014), the mean grain size throughout all three Alternatives was medium to fine sand, although grain sizes were more variable within the NLDS (Tables 4, 5 and 12). The TOC concentration was below 1% in most samples from the three alternative sites, with generally higher concentrations at the NLDS reflecting the disposed dredged material at this site.

Table 4. Grain Size, Total Organic Carbon, and Total Metals at the New London Alternative

			Grain Size (%)						TOC (%)				Metals (mg/kg/ dry weight)							
Alternative	**Area**	**Station ID**	Gravel	Coarse Sand	Medium Sand	Fine Sand	Sand (sum)	Fines (Silt+clay)	Replicate 1	Replicate 2	Mean	**Total Solids (%)**	Chromium, Total	Copper, Total	Lead, Total	Nickel, Total	Zinc, Total	Arsenic, Total	Cadmium, Total	Mercury, Total
New London	NLDS	L-11	2.8	2.3	11.2	36.1	49.6	47.6	1.3	1.1	1.2	64.0	14.90	8.08	6.56	8.85	32.4	3.72	0.10	0.03
	NLDS	L-12	7.8	5.1	10.0	50.7	65.8	26.4	1.3	1.2	1.3	63.4	17.00	12.00	10.60	8.04	49.8	2.79	0.06	0.03
	NLDS	L-13	0.0	1.0	8.3	42.4	51.7	48.3	1.5	1.9	1.7	52.2	17.40	44.80	20.80	8.81	52.9	3.60	0.26	0.14
	NLDS	L-14	9.0	4.4	12.4	41.9	58.7	32.3	2.8	2.7	2.7	68.7	11.10	19.10	11.30	7.72	37.1	2.69	0.06	0.02
	NLDS	L-15	51.4	3.9	15.2	24.5	43.6	5.0	0.2	0.3	0.3	65.6	6.42	4.50	7.20	4.68	24.1	2.23	0.04	--
	NLDS	L-16	0.9	2.2	12.1	41.6	55.9	43.2	1.7	1.6	1.6	53.9	28.30	40.50	43.30	20.80	150.0	7.72	0.18	0.05
	NLDS	L-17	1.9	6.2	33.9	51.6	91.7	6.4	1.5	1.3	1.4	71.6	6.31	4.79	6.01	4.09	16.2	1.66	0.04	--
	NLDS	L-18	1.2	1.9	4.9	13.8	20.6	78.2	3.6	3.4	3.5	56.0	23.10	12.80	6.64	15.50	44.7	5.68	0.11	--
	NL-Wa	L-19	1.9	1.5	12.9	67.2	81.6	16.5	0.4	0.5	0.5	72.2	7.79	4.68	5.50	4.43	23.1	2.16	0.03	0.02
	NL-Wa	L-20	2.3	1.2	16.8	67.2	85.2	12.5	0.3	0.3	0.3	74.0	6.88	3.83	5.16	4.14	19.3	1.73	0.03	--
	NL-Wa	L-21	4.5	3.7	20.7	55.9	80.3	15.2	0.8	0.9	0.9	70.3	8.22	5.11	7.64	4.91	21.0	2.08	0.04	0.02
	Ref East	L-22A	0.0	0.1	1.1	67.1	68.3	31.7	0.5	0.5	0.5	64.4	10.00	6.04	6.13	5.72	31.2	2.22	0.07	0.02
	Ref East	L-22B	2.6	0.2	1.1	69.8	71.1	26.3	0.5	0.5	0.5	67.4	9.20	5.17	5.41	5.28	26.1	1.89	0.05	0.02
	Ref East	L-23A	0.0	0.2	1.2	62.6	64.0	36.0	0.6	0.5	0.5	67.9	13.80	10.80	10.00	7.80	37.6	3.06	0.09	0.04
	Ref East	L-23B	0.0	0.2	8.7	72.7	81.6	18.4	0.4	0.4	0.4	68.0	12.20	7.88	7.96	6.83	34.0	2.50	0.07	0.02
	Ref East	L-24A	0.0	0.1	0.2	71.5	71.8	28.3	0.4	0.4	0.4	70.2	10.60	6.12	6.84	5.96	29.6	2.03	0.06	0.02
	Ref East	L-24B	0.0	0.1	0.1	74.0	74.2	25.8	0.4	0.4	0.4	68.0	9.78	5.85	6.59	5.62	29.3	2.46	0.08	--
	NL-Wa	L-25A	0.4	2.7	16.9	69.6	89.2	10.4	0.6	0.4	0.5	72.2	6.34	3.30	4.48	3.82	17.2	1.89	0.04	0.02
	NL-Wa	L-25B	2.0	2.9	19.2	67.6	89.7	8.3	0.5	0.4	0.5	72.6	5.88	3.03	4.10	3.70	16.8	2.23	--	--
	NL-Wb	L-26A	1.2	2.9	9.3	63.9	76.1	22.7	1.2	1.0	1.1	65.4	11.00	6.50	7.76	6.64	32.1	2.79	0.05	0.02
	NL-Wb	L-26B	2.5	4.6	10.3	69.2	84.1	13.4	1.7	1.3	1.5	67.0	6.62	3.50	4.69	4.06	21.2	1.98	--	--
	NL-Wb	L-27	2.6	0.8	9.2	72.0	82.0	15.4	0.4	0.5	0.5	71.6	11.00	5.80	7.24	6.84	38.8	3.78	0.07	--
	NL-Wb	L-28	2.4	4.8	17.0	67.4	89.2	8.4	0.8	0.7	0.8	72.6	5.42	2.66	4.38	3.19	18.7	2.32	0.05	--

ERL	81	37	46.7	20.9	150	8.2	1.2	0.15
ERM	370	270	218	51.6	410	70	9.6	0.71

Table 5. Grain Size, Total Organic Carbon, and Total Metals at the Niantic Bay and Cornfield Shoals Alternatives

			Grain Size (%)						TOC (%)				Metals (mg/kg/ dry weight)							
Alternative	**Area**	**Station ID**	Gravel	Coarse Sand	Medium Sand	Fine Sand	Sand (sum)	Fines (Silt+clay)	Replicate 1	Replicate 2	Mean	**Total Solids (%)**	Chromium, Total	Copper, Total	Lead, Total	Nickel, Total	Zinc, Total	Arsenic, Total	Cadmium, Total	Mercury, Total
Niantic Bay	NBDS	L-31	4.4	4.9	20.8	54.7	80.4	15.2	0.6	0.6	0.6	74.0	6.28	3.20	4.28	4.19	20.1	2.35	--	--
	NBDS	L-32	2.3	5.0	34.7	54.1	93.8	3.9	0.3	0.4	0.3	77.6	6.70	2.85	5.07	4.04	26.8	2.71	--	--
	NBDS	L-33	4.5	9.7	24.5	46.4	80.6	14.9	1.0	1.0	1.0	69.6	7.23	4.75	5.44	4.75	21.7	2.22	0.03	--
	NBDS	L-34	23.1	15.8	34.5	22.7	73.0	3.9	1.2	1.3	1.3	77.4	2.71	1.78	2.77	3.04	9.2	2.14	--	--
	NBDS	L-35	11.0	16.4	32.0	34.5	82.9	6.1	1.0	1.1	1.1	73.7	3.49	2.01	2.83	2.97	11.7	2.15	--	--
	NB-E	L-36	4.8	7.3	27.1	49.3	83.7	11.5	0.6	0.6	0.6	75.0	5.27	3.28	3.60	3.36	15.3	2.28	--	--
	NB-E	L-37	8.5	3.9	18.8	54.0	76.7	14.8	1.0	1.2	1.1	71.1	9.67	5.82	6.30	5.97	29.8	3.36	0.05	0.02
	NB-E	L-38	10.8	4.4	18.7	57.1	80.2	9.0	0.6	0.7	0.7	73.0	8.23	3.78	5.69	4.66	27.9	3.07	--	--
	Ref East	L-39	1.9	4.5	18.7	58.5	81.7	16.4	1.2	1.5	1.3	70.8	6.98	3.69	5.08	4.32	21.9	2.17	0.03	--
	Ref East	L-40	9.0	9.0	24.1	43.6	76.7	14.3	1.8	2.0	1.9	65.7	7.66	4.17	5.90	5.48	27.3	3.91	--	--
	Ref West	L-41	7.5	9.2	26.8	46.8	82.8	9.7	0.6	0.6	0.6	75.3	6.10	3.39	4.24	4.08	20.2	3.06	0.03	--
Cornfield Shoals	CSDS	L-51	5.8	12.8	50.5	28.6	91.9	2.3	0.2	0.2	0.2	79.4	3.86	2.02	2.99	5.02	14.0	2.72	--	--
	CSDS	L-52	19.3	12.6	29.1	36.7	78.4	2.3	0.1	0.2	0.2	81.3	4.38	2.50	3.03	5.33	17.9	2.22	--	--
	CSDS	L-53	28.1	9.2	21.7	13.1	44.0	27.9	0.9	1.0	1.0	61.8	15.50	19.10	12.00	8.02	57.4	3.38	0.11	0.06
	CSDS	L-54	6.5	10.2	49.5	27.9	87.6	5.9	0.4	0.4	0.4	78.6	6.58	3.25	4.55	6.61	22.4	2.29	--	--
	CSDS	L-55	13.1	14.7	48.7	20.6	84.0	2.9	0.1	0.2	0.1	80.4	4.56	2.18	2.93	4.54	13.9	2.15	--	--
	Ref West	L-56	13.2	6.3	21.4	23.2	50.9	35.9	0.3	0.3	0.3	69.9	18.40	14.70	8.09	18.60	47.4	5.22	0.06	--
Dupl. of Stn L-15		L-61	27.9	5.3	22.8	36.6	64.7	7.4	0.4	0.3	0.3	71.2	9.14	4.76	5.15	5.02	18.9	2.92	--	--
Dupl. of Stn L-53		L-62	27.0	10.1	25.2	14.3	49.6	23.4	1.4	1.2	1.3	63.3	16.90	20.40	12.10	8.41	69.5	3.41	0.11	0.05
												ERL	81	37	46.7	20.9	150	8.2	1.2	0.15
												ERM	370	270	218	51.6	410	70	9.6	0.71

Table 6. Polycyclic Aromatic Hydrocarbon (PAHs) at the New London Alternative

			PAHs - Low mol. weight (LMW) (µg/kg DW)						**PAHs - High molecular weight (HMW)** (µg/kg dry weight)										**Summary** (µg/kg DW)		
Alternative	**Area**	**Station ID**	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benz(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenz(a,h)anthracene	Benzo(ghi)perylene	**Total LMW PAHs**	**Total HMW PAHs**	**Total PAHs**
New London	NLDS	L-11	12.3	--	--	--	14.2	--	33.1	42	23.3	32	49.9	41	36.5	30	--	30.2	27	318	345
	NLDS	L-12	--	--	--	--	14.2	--	30.6	33.3	19.5	21.9	24.8	23	22.8	16.5	--	17	14	209	224
	NLDS	L-13	87.3	32.5	84.4	174	1,450	288	1,640	1,320	591	586	553	458	571	414	73.1	381	2,116	6,587	8,703
	NLDS	L-14	9.6	10.3	--	--	26.1	9.54	71	78.5	46.3	55	48.8	44	49.5	33	--	31.2	56	457	513
	NLDS	L-15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NLDS	L-16	--	38.6	--	--	25.5	11.9	54.4	84.7	50.5	59.9	75.6	66.3	90.4	60.6	13.7	53.5	76	610	686
	NLDS	L-17	--	--	--	--	--	--	13.6	16.6	--	--	--	--	--	--	--	--	--	30	30
	NLDS	L-18	--	--	--	--	10.2	--	29.8	41.2	19.4	22.2	19.2	16.8	19.2	11.5	--	12.6	10	192	202
	NL-Wa	L-19	--	--	--	--	41.7	16	118	95.7	66.7	67	62	50	57.2	39.7	--	33.8	58	590	648
	NL-Wa	L-20	--	--	--	--	--	--	--	14.9	--	--	--	--	--	--	--	--	--	15	15
	NL-Wa	L-21	--	--	--	--	17.7	--	50.6	61.5	42	43.6	32.5	38.9	42	23.2	--	24.1	18	358	376
	Ref East	L-22A	--	--	--	--	13	--	33.4	34.2	17.6	22.4	22.4	18.5	19.1	14.2	--	15.4	13	197	210
	Ref East	L-22B	--	--	--	--	25	14.8	68.7	92.5	40.5	42.6	25.4	37.4	43.5	24.3	--	24.5	40	399	439
	Ref East	L-23A	--	--	--	--	12.9	--	49.3	77.7	52.2	56.8	45.5	41.1	60.5	35.2	7.75	38.2	13	464	477
	Ref East	L-23B	--	--	--	--	18.3	8.21	39.4	46.8	32.2	35.6	31.3	28.8	35.5	24	--	23.3	27	297	323
	Ref East	L-24A	--	--	--	--	--	--	23.4	25.4	14.4	16.6	18.4	16.8	15.9	--	--	--	--	131	131
	Ref East	L-24B	--	--	7.49	8.41	80.8	15	106	89.6	43.6	46.7	45	37.9	42.8	32.3	--	29.5	112	473	585
	NL-Wa	L-25A	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NL-Wa	L-25B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NL-Wb	L-26A	--	--	--	--	10.2	--	26.5	27.8	15.3	20.6	18.3	21	19.2	15.8	--	15.2	10	180	190
	NL-Wb	L-26B	--	--	--	--	13.2	--	12.9	13.3	--	8.46	8.8	--	7.2	--	--	--	13	51	64
	NL-Wb	L-27	--	--	--	--	--	--	--	15.1	--	--	--	--	--	--	--	--	--	15	15
	NL-Wb	L-28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		ERL	160	44	16	19	240	85.3	600	665	261	384			430		63.4		552	1,700	4,022
		ERM	2,100	640	500	540	1,500	1,100	5,100	2,600	1,600	2,800			1,600		260		3,160	9,600	44,792

Table 7. Polycyclic Aromatic Hydrocarbon (PAHs) at the Niantic Bay and Cornfield Shoals Alternatives

			PAHs - Low mol. weight (LMW) (µg/kg DW)						**PAHs - High molecular weight (HMW)** (µg/kg dry weight)										**Summary** (µg/kg DW)		
Alternative	**Area**	**Station ID**	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benz(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenz(a,h)anthracene	Benzo(ghi)perylene	**Total LMW PAHs**	**Total HMW PAHs**	**Total PAHs**
Niantic Bay	NBDS	L-31	--	--	--	--	--	12.6	--	12.9	--	--	--	--	--	--	--	--	13	13	26
	NBDS	L-32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NBDS	L-33	--	--	--	--	--	--	14.7	16.6	9.76	12.4	12.3	11.7	12.3	10.4	--	9.98	--	110	110
	NBDS	L-34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NBDS	L-35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NB-E	L-36	--	--	--	--	--	--	13.1	15.4	--	--	--	--	--	--	--	--	--	29	29
	NB-E	L-37	--	--	--	--	23.3	44.6	93.1	130	87.8	88.4	44.4	60.6	74.1	35.9	--	33.2	68	648	715
	NB-E	L-38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ref East	L-39	--	--	--	--	--	--	--	15.2	--	--	--	--	--	--	--	--	--	15	15
	Ref East	L-40	--	--	--	--	--	--	8.06	9.45	--	7.92	--	--	--	--	--	--	--	25	25
	Ref West	L-41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cornfield Shoals	CSDS	L-51	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	CSDS	L-52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	CSDS	L-53	--	11.6	--	--	47.6	8.84	115	105	47.1	62.2	64.3	63.2	60	51.4	9.33	48.3	68	626	694
	CSDS	L-54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	CSDS	L-55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ref West	L-56	--	--	--	--	--	--	9.42	9.92	--	--	--	--	--	--	--	--	--	19	19
Dupl. of Stn L-15		L-61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dupl. of Stn L-53		L-62	--	19.6	--	--	72.1	15.1	191	172	93.1	113	131	96.7	110	93.3	18	88.7	107	1,107	1,214
		ERL	160	44	16	19	240	85.3	600	665	261	384			430		63.4		552	1,700	4,022
		ERM	2,100	640	500	540	1,500	1,100	5,100	2,600	1,600	2,800			1,600		260		3,160	9,600	44,792

Table 8. Pesticides at the New London Alternative

			Pesticides (µg/kg dry weight)																		
Alternative	**Area**	**Station ID**	Hexachlorobenzene	Lindane (gamma BHC)	Heptachlor	Aldrin	Oxychlordane	Heptachlor epoxide	trans-Chlordane	cis-Chlordane	Endosulfan I	trans-Nonachlor	4,4-DDE	Dieldrin	Endrin	Endosulfan II	cis-Nonachlor	4,4-DDD	4,4-DDT	Methoxychlor	Toxaphene
New London	NLDS	L-11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NLDS	L-12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NLDS	L-13	--	--	--	--	5.27	--	--	--	--	--	0.561	--	--	--	--	0.607	0.528	--	--
	NLDS	L-14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NLDS	L-15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NLDS	L-16	--	--	--	--	1.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NLDS	L-17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.48	--	--
	NLDS	L-18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.526	--	--	--
	NL-Wa	L-19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NL-Wa	L-20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NL-Wa	L-21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ref East	L-22A	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ref East	L-22B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ref East	L-23A	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ref East	L-23B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ref East	L-24A	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ref East	L-24B	1.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NL-Wa	L-25A	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NL-Wa	L-25B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NL-Wb	L-26A	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NL-Wb	L-26B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NL-Wb	L-27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NL-Wb	L-28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		ERL											2.2	0.02				2	1		
		ERM											27	8				20	7		

Table 9. Pesticides at the Niantic Bay and Cornfield Shoals Alternatives

			Pesticides (µg/kg dry weight)																		
Alternatives	**Area**	**Station ID**	Hexachlorobenzene	Lindane (gamma BHC)	Heptachlor	Aldrin	Oxychlordane	Heptachlor epoxide	trans-Chlordane	cis-Chlordane	Endosulfan I	trans-Nonachlor	4,4-DDE	Dieldrin	Endrin	Endosulfan II	cis-Nonachlor	4,4-DDD	4,4-DDT	Methoxychlor	Toxaphene
Niantic Bay	NBDS	L-31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NBDS	L-32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NBDS	L-33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NBDS	L-34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NBDS	L-35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NB-E	L-36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NB-E	L-37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NB-E	L-38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ref	L-39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ref	L-40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ref	L-41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cornfield Shoals	CSDS	L-51	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	CSDS	L-52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	CSDS	L-53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	CSDS	L-54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	CSDS	L-55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ref	L-56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dupl. of L-15		L-61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dupl. of L-53		L-62	--	--	--	--	0.91	--	--	--	--	--	0.437	--	--	--	--	--	0.454	--	--
		ERL											2.2	0.02				2	1		
		ERM											27	8				20	7		

Table 10. PCBs at the New London Alternative

			PCBs (µg/kg dry weight)																					
Alternative	**Area**	**Station ID**	Cl2-BZ#8	Cl3-BZ#18	Cl3-BZ#28	Cl4-BZ#44	Cl4-BZ#49	Cl4-BZ#52	Cl4-BZ#66	Cl5-BZ#87	Cl5-BZ#101	Cl5-BZ#105	Cl5-BZ#118	Cl6-BZ#128	Cl6-BZ#138	Cl6-BZ#153	Cl7-BZ#170	Cl7-BZ#180	Cl7-BZ#183	Cl7-BZ#184	Cl7-BZ#187	Cl8-BZ#195	Cl9-BZ#206	Cl10-BZ#209	**Total PCBs**
New London	NLDS	L-11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NLDS	L-12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NLDS	L-13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NLDS	L-14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NLDS	L-15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NLDS	L-16	--	--	--	--	--	--	--	--	--	--	--	--	1.00	--	--	--	--	--	--	--	--	--	1.0
	NLDS	L-17	--	--	--	--	--	--	--	--	--	--	--	--	7.45	7.27	9.93	17.8	4.06	--	7.37	2.00	--	--	55.9
	NLDS	L-18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NL-Wa	L-19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NL-Wa	L-20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NL-Wa	L-21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ref East	L-22A	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ref East	L-22B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ref East	L-23A	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ref East	L-23B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ref East	L-24A	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ref East	L-24B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NL-Wa	L-25A	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NL-Wa	L-25B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NL-Wb	L-26A	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NL-Wb	L-26B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NL-Wb	L-27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NL-Wb	L-28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		ERL																							22.7
		ERM																							180.0

Table 11. PCBs at the Niantic Bay and Cornfield Shoals Alternatives

			PCBs (µg/kg dry weight)																						
Alternative	**Area**	**Station ID**	Cl2-BZ#8	Cl3-BZ#18	Cl3-BZ#28	Cl4-BZ#44	Cl4-BZ#49	Cl4-BZ#52	Cl4-BZ#66	Cl5-BZ#87	Cl5-BZ#101	Cl5-BZ#105	Cl5-BZ#118	Cl6-BZ#128	Cl6-BZ#138	Cl6-BZ#153	Cl7-BZ#170	Cl7-BZ#180	Cl7-BZ#183	Cl7-BZ#184	Cl7-BZ#187	Cl8-BZ#195	Cl9-BZ#206	Cl10-BZ#209	**Total PCBs**
Niantic Bay	NBDS	L-31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NBDS	L-32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NBDS	L-33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NBDS	L-34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NBDS	L-35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NB-E	L-36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NB-E	L-37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NB-E	L-38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ref East	L-39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ref East	L-40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ref West	L-41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cornfield Shoals	CSDS	L-51	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	CSDS	L-52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	CSDS	L-53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	CSDS	L-54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	CSDS	L-55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ref West	L-56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dupl. of Stn L-15		L-61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dupl. of Stn L-53		L-62	--	--	--	--	--	--	--	--	--	--	--	--	0.98	--	--	--	--	--	--	--	--	--	1.0
		ERL																							22.7
		ERM																							180.0

Table 12. Statistics of Grain Size and Chemical Constituent for subareas for the three Alternative

Alternatives	Areas	Station IDs	Statistics	Grain Size (%)						TOC (%)	Metals (mg/kg/ dry weight)								PAHs[1] (µg/kg/ dry DW)			Total PCBs (µg/kg dry weight)
				Gravel	Coarse Sand	Medium Sand	Fine Sand	Sand (sum)	Fines (Silt+clay)		Chromium, Total	Copper, Total	Lead, Total	Nickel, Total	Zinc, Total	Arsenic, Total	Cadmium, Total	Mercury, Total	Total LMW PAHs	Total HMW PAHs	Total PAHs	
New London	NLDS	L-11 to L-18	Mean	9.4	3.4	13.5	37.8	54.7	35.9	1.7	15.57	18.32	14.05	9.81	50.9	3.76	0.10	0.04	287	1,050	1,338	--
			Max	51.4	6.2	33.9	51.6	91.7	78.2	3.5	28.30	44.80	43.30	20.80	150.0	7.72	0.26	0.14	2,116	6,587	8,703	55.9
	NLDS - farfield (= NL-Wa [east])	L-19 to L-21	Mean	2.9	2.1	16.8	63.4	82.4	14.7	0.5	7.63	4.54	6.10	4.49	21.1	1.99	0.04	0.02	25	321	346	--
			Max	4.5	3.7	20.7	67.2	85.2	16.5	0.9	8.22	5.11	7.64	4.91	23.1	2.16	0.04	0.02	58	590	648	--
	NLDS - Ref. (East)	L-22 to L-24	Mean	0.4	0.2	2.1	69.6	71.8	27.8	0.4	10.93	6.98	7.16	6.20	31.3	2.36	0.07	0.02	34	327	361	--
			Max	2.6	0.2	8.7	74.0	81.6	36.0	0.5	13.80	10.80	10.00	7.80	37.6	3.06	0.09	0.04	112	473	585	--
	NLDS - Ref. (West)	L-25 to L-28	Mean	1.9	3.1	13.7	68.3	85.1	13.1	0.8	7.71	4.13	5.44	4.71	24.1	2.50	0.04	0.02	4	38	42	--
			Max	2.6	4.8	19.2	72.0	89.7	22.7	1.5	11.00	6.50	7.76	6.84	38.8	3.78	0.07	0.02	13	180	190	--
	NL-Wa	L-19 to L-21, L-25	Mean	2.2	2.4	17.3	65.5	85.2	12.6	0.5	7.02	3.99	5.38	4.20	19.5	2.02	0.03	0.02	19	241	260	--
			Max	4.5	3.7	20.7	69.6	89.7	16.5	0.9	8.22	5.11	7.64	4.91	23.1	2.23	0.04	0.02	58	590	648	--
	NL-Wa (west)	L-25a, L-25b	Mean	1.2	2.8	18.1	68.6	89.5	9.4	0.5	6.11	3.17	4.29	3.76	17.0	2.06	0.03	0.02	--	--	--	--
	NL-Wb	L-26 to L-28	Mean	2.2	3.3	11.5	68.1	82.9	15.0	1.0	8.51	4.62	6.02	5.18	27.7	2.72	0.05	0.02	5	46	51	--
			Max	2.6	4.8	17.0	72.0	89.2	22.7	1.5	11.00	6.50	7.76	6.84	38.8	3.78	0.07	0.02	13	180	190	--
Niantic Bay	NBDS	L-31 to L-35	Mean	9.1	10.4	29.3	42.5	82.1	8.8	0.8	5.28	2.92	4.08	3.80	17.9	2.31	0.03	0.02	3	25	27	--
			Max	23.1	16.4	34.7	54.7	93.8	15.2	1.3	7.23	4.75	5.44	4.75	26.8	2.71	0.03	0.02	13	110	110	--
	NBDS - Ref. (East)	L-36 to L-40	Mean	7.0	5.8	21.5	52.5	79.8	13.2	1.1	7.56	4.15	5.31	4.76	24.4	2.96	0.03	0.02	14	143	157	--
			Max	10.8	9.0	27.1	58.5	83.7	16.4	1.9	9.67	5.82	6.30	5.97	29.8	3.91	0.05	0.02	68	648	715	--
	NB-E	L-36 to L-38	Mean	8.0	5.2	21.5	53.5	80.2	11.8	0.8	7.72	4.29	5.20	4.66	24.3	2.90	0.03	0.02	23	225	248	--
			Max	10.8	7.3	27.1	57.1	83.7	14.8	1.1	9.67	5.82	6.30	5.97	29.8	3.36	0.05	0.02	68	648	715	--
	Ref. - East of NB-E	L39, L-40	Mean	5.5	6.8	21.4	51.1	79.2	15.4	1.6	7.32	3.93	5.49	4.90	24.6	3.04	0.03	0.02	--	20	20	--
	NBDS - Ref. (West)	L-41		7.5	9.2	26.8	46.8	82.8	9.7	0.6	6.10	3.39	4.24	4.08	20.2	3.06	0.03	0.02	--	--	--	--
Cornf. Shoals	CSDS	L-51 to L-55	Mean	14.6	11.9	39.9	25.4	77.2	8.3	0.4	6.98	5.81	5.10	5.90	25.1	2.55	0.04	0.02	14	125	139	--
			Max	28.1	14.7	50.5	36.7	91.9	27.9	1.0	15.50	19.10	12.00	8.02	57.4	3.38	0.11	0.06	68	626	694	--
	CSDS - Ref. (West)	L-56		13.2	6.3	21.4	23.2	50.9	35.9	0.3	18.40	14.70	8.09	18.60	47.4	5.22	0.06	0.02	--	19	19	--
	ERL			81	37	46.7	20.9	150	8.2	1.2	0.15	552	1,700	4,022	22.7							
	ERM			370	270	218	51.6	410	70	9.6	0.71	3,160	9,600	44,792	180							

Ref. = Reference

[1] For individual PAHs without detection, a concentration of zero was assumed for averaging.

4.2.1 New London Alternative

The predominant grain size within the New London Alternative was fine sand. Sediments were on average finer-grained within the NLDS than in areas outside of the NLDS. Specifically, at the NLDS, the mean sand content (all sand fractions) was 55%, while the mean sand content at areas outside the NLDS ranged from 72% to 90% (Table 12). The mean silt and clay content at the NLDS was 36%, which was approximately 2 to 3 times higher than the average silt and clay content in areas west of the NLDS; however, the mean silt and clay content at the NLDS was similar to the reference area to the east of the NLDS. The highest silt and clay content was measured at Station L-18 (78%), which was located in the area of the NLDS that had been receiving most of the dredged material in the previous decade (AECOM, 2009; Figure 6).

The TOC concentrations at stations within and around the New London Alternative were similar to the pattern observed in the grain size data, with higher TOC concentrations in finer-grained sediments. The mean TOC concentrations measured at the NLDS was 1.7%, which was several about 2 to 4 times higher than the mean TOC concentrations at all the other areas. The highest TOC concentration was measured at Station L-18 with 3.5%.

4.2.2 Niantic Bay Alternative

The mean grain size within the NBDS and surrounding sampling locations was sand at approximately 80%, with fine sand being the largest fraction (Table 12). The silt and clay content was low, with a mean ranging between 4% and 15%. None of the individual samples for the Niantic Bay Alternative had a silt and clay content higher than 16%.

The TOC concentrations at stations in the Niantic Bay Alternative were generally below 1%, with the exception of two stations to the east of Site NL-E (Stations L-39 and L-40); the mean TOC concentration at these two stations was 1.5%.

4.2.3 Cornfield Shoals Alternative

The predominant grain size within the CSDS and in the reference area was also sand, with medium sand being the largest fraction. The mean silt and clay content was 8.3% for the five stations within the CSDS, but varied considerably between the stations. At the center of the CSDS, the silt and clay content was 28% (Station L-51), which was significantly higher than the silt and clay content at the other four stations within the CSDS (range of 2 to 6%). The silt and clay content (36%) at the reference station, located 0.6 nmi (1.1 km) to the west of the CSDS, was similar to the silt and clay content at the center of the CSDS.

The TOC concentration in the sample from the center of the CSDS was 1.0%. Sediments at other sampling stations within the CSDS as well as the reference areas contained less than 0.5% TOC.

4.3 Metals

Metal concentrations analyzed at the three alternative sites were low (Tables 4, 5, and 12).

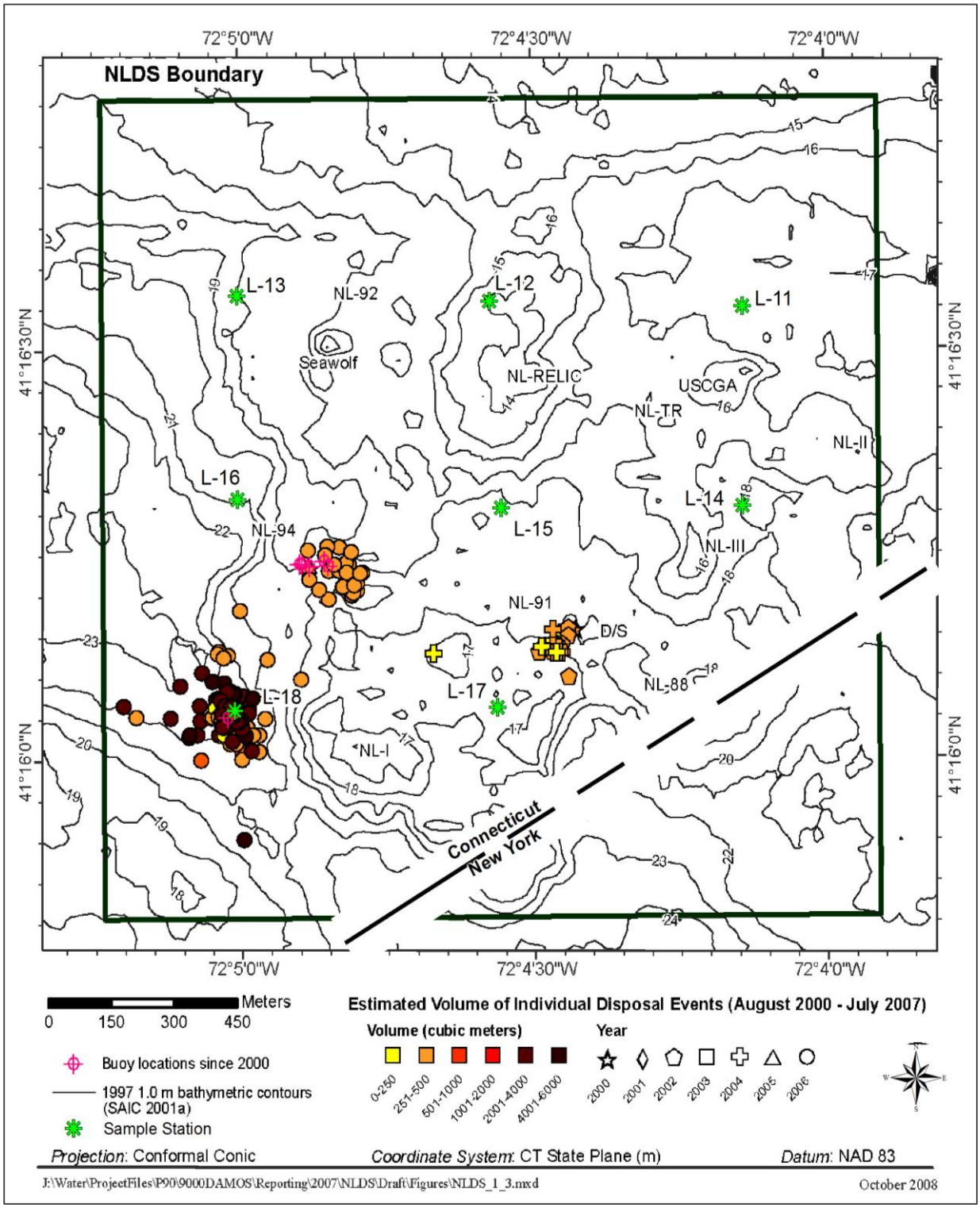

Figure 6. Sediment sampling stations of the 2015 survey at the New London Disposal Site (green asterisks, and station number L-__), superimposed on the bathymetry from July 2007 along with reported August 2000 through July 2007 dredged material disposal locations (from AECOM, 2009; the AECOM report includes details on dredged material volumes and disposal mounds).

4.3.1 New London Alternative

None of the metal concentrations at any of the stations collected for the New London Alternative exceeded the ERM values. Only two individual samples exceeded the ERL values for any analyzed metal. Specifically, the copper concentration at Station L-13 in the northwestern part of the NLDS was 45 mg/kg; the copper concentration in Station L-16 was 41 mg/kg. These concentrations were slightly above the ERL value for copper of 37 mg/kg, but well below the ERM value of 270 mg/kg.

None of the mean metal concentrations exceeded the ERL value at any site within the New London Alternative. Mean concentrations for most metals were roughly 50% lower within Sites NL-Wa/b than within Site NLDS (Table 12), reflecting background conditions since Sites NL-Wa and NL-Wb have not received dredged material. This includes the three stations from the eastern part of Site NL-Wa (Stations L-19 to L-21) located just to the west of the NLDS, which suggests that dredged material is contained within the NLDS.

Metals concentrations in the reference area to the east of the NLDS were slightly higher than at Sites NL-Wa and NL-Wb.

4.3.2 Niantic Bay Alternative

None of the metal concentrations at any of the stations collected for the Niantic Bay Alternative exceeded the ERM or ERL values. Concentrations were consistently low. Mean metal concentrations between the NBDS and areas outside were similar.

4.3.3 Cornfield Shoals Alternative

None of the metal concentrations at any of the stations collected for the Cornfield Shoals Alternative exceeded the ERM or ERL values. Concentrations were consistently low. Metal concentrations at Station L-53 were higher (although still well below the ERL value) than at the four other stations within the CSDS, reflecting disposal activity in the center in the past (ENSR, 2005). This observation is consistent with the higher silt and clay content at Station L-53 (28%), compared to the low silt and clay content at the four other stations (mean of 3.5%).

4.4 Polycyclic Aromatic Hydrocarbons (PAHs)

Sediments were analyzed for 16 PAHs. PAHs were grouped into low molecular weight (LMW) PAHs and high molecular weight (HMW). In general, PAHs were low or often not detected (Tables 6 and 7). For the New London Alternative, the mean Total PAH concentrations were highest at the NLDS. For the Cornfield Shoals Alternative, Total PAH concentrations were higher in the center of the CSDS than at the other stations within the CSDS. There was no specific trend for the Niantic Bay Alternative.

The mean LMW, HMW, or Total PAHs concentrations did not exceed the ERM or ERL values in any of the various areas of the three Alternatives. No individual sample exceeded the ERM value; only one sample (Station L-13 within the NLDS) exceeded the ERL value for multiple compounds

(acenaphthene, fluorine, phenanthrene, anthracene, fluoranthene, pyrene, benza(a)anthracene, chrysene, benzo(a)pyrene, and dibenz(a,h)anthracene), as well as the ERL values for LMW, HMW, and Total PAHs, suggesting evidence of past dredged material disposal. PAHs in recently disposed dredged material (Station L-18; Figure 6) were well below the ERL values.

4.5 Pesticides

The sediment samples collected at the alternative sites were analyzed for 19 pesticides (Tables 8 and 9). Pesticides were only detected above the analytical reporting limit at six stations (4 stations at the NLDS, one station at the off-site area to the east of the New London Alternative, and one station at the CSDS). None of the detected concentrations exceeded the ERM values. Only two NLDS samples slightly exceeded ERL values: in Sample L-13, the concentration for the sum of DDD, DDE, and DDT of 1.70 µg/kg slightly exceeded the ERL value of 1.58 µg/kg; in Sample L-17, the DDT concentration of 1.48 µg/kg slightly exceeded the ERL value of 1 µg/kg.

4.6 Polychlorinated Biphenyls (PCBs)

The surface sediment collected during the 2015 sediment chemistry survey was analyzed for 22 PCB congeners. PCBs were only detected above the analytical reporting limit at three stations (two at the NLDS, and one at the CSDS) (Tables 10 and 11). None of the detected concentrations exceeded the ERM value for total PCBs. Only the total PCB concentration in Sample L-17 (55.9 µg/kg), located at the NLDS, exceeded the ERL value (22.7 µg/kg).

5.0 SUMMARY

Sediment samples were collected within and around the three alternative sites analyzed in the SEIS (New London, Niantic Bay, and Cornfield Shoals). Sediment samples were collected at a total of 35 stations in February 24-27, 2015. Samples were analyzed for physical and chemical properties, which included grain size, TOC, metals, PAHs, pesticides, and PCBs.

Sediments at the New London Alternative consisted primarily of fine sand, consistent with dredged material disposal at the NLDS (which is part of the New London Alternative). TOC and chemical concentrations were higher in the sediment at the NLDS than in other areas of the New London Alternative (*i.e.*, at Sites NL-Wa and NL-Wb) or at the Niantic Bay and Cornfield Shoals Alternatives. Two samples from the NLDS exceeded the ERL for copper, and one sample each exceeded the ERLs for PAHs, pesticides, and PCBs; however, none of the samples exceeded any ERM values.

Sediments at the Niantic Bay and Cornfield Shoals Alternatives were medium to fine grained. None of the metals or organic compound concentrations exceeded the ERL or ERM values.

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Appendix 1

FIELD NOTES

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24 FEB 2015

RV CT

ELLIS SEDIMENT SURVEY

Ray, Alejandro, Dan, Marco, Frantz

EST

0920 u/w for CSDS L56

wx forecast < 5kt N

1 ft seas

tide rising (flood + 1hr)

ADCP started (0906 hrs)

GRAB PINGER = 34kHz

1-1-1-1

24 FEB 2016

TIME: 1122 EST
STATION ID: L56
COORDINATES: 41 12.6041 72 22.9867
SAMPLE ID: L56
ALPHA LAB LABEL: L56
DEPTH: 51.8m, 170'
SEA STATE: FLAT, <1'
WX: SUNNY, COLD
TIDE: FLOODING
GRAB CONDITION: GOOD ON 1st ATTEMPT
OBSERVED GRAIN SIZE:
SEE SAND COARSE, RED MUD W/ DEPTH

SEDIMENT TEXTURE/ODOR:
NO ODOR, SANDY SFC, COBBLE, GRAVEL, COARSE SAND.
FINE COMPACTED MUD BELOW

CTD TIME: 1133, CAST 1, HEX
CTD DEPTH: 51
CTD COORDS: DP-Same
NISKIN TIME: 1140
NISKIN DEPTH: 51
NISKIN COORDS: DP-Same

24 FEB 2016

TIME: 1201 EST
STATION ID: L55
COORDINATES: 41 12.4355, 72 21.8247
SAMPLE ID: L55
ALPHA LAB LABEL: L55
DEPTH: 59.1m, 194'
SEA STATE: FLAT
WX: SUNNY, COLD
TIDE: FLOODING
GRAB CONDITION: GOOD, ON 1st ATTEMPT
OBSERVED GRAIN SIZE: COARSE SAND, WELL MIXED - HOMOGENOUS

SEDIMENT TEXTURE/ODOR:
NO ODOR COARSE SAND THROUGHOUT - SHELL HASH

CTD TIME 1211, CAST 2, HEX
CTD DEPTH 69
CTD COORDS DP-Same
NISKIN TIME: 1217
NISKIN DEPTH: 69
NISKIN COORDS: DP-Same

24 FEB 2015

TIME: 1235 EST
STATION ID: L54
COORDINATES: 41 17.4380, 72 21.1592
SAMPLE ID: L54
ALPHA LAB LABEL: L54
DEPTH: 54.3m, 178'
SEA STATE: FLAT, < 1'
WX: SUNNY, WINDS < 5KTS
TIDE: FLOODING
GRAB CONDITION: GOOD ON 1st ATTEMPT
OBSERVED GRAIN SIZE:
Homogenous medium to course sand
SEDIMENT TEXTURE/ODOR:
no odor - sandy, shell hash throughout, some gravel

CTD TIME: 1240, CAST 3. HEX
CTD DEPTH: 54
CTD COORDS: DP - Same
NISKIN TIME: 1245
NISKIN DEPTH: 54
NISKIN COORDS: DP - Same

24 FEB 2015

TIME: 1301 EST
STATIONS ID: L53 - DUP HERE
COORDINATES: 41 17.6826, 72 21.4918
SAMPLE ID: L53, L62
ALPHA LAB LABEL: L62 b time noted 14:35 for blind dup
DEPTH: 54.3m, 178'
SEA STATE: < 1', flat
WX: SUNNY, WIND < 5 KTS
TIDE: FLOODING
GRAB CONDITION: GOOD ON 1st ATTEMPT
OBSERVED GRAIN SIZE:
Sfc - course sand w/ slipper shells oyster shell, thin sfc - black mud under
SEDIMENT TEXTURE/ODOR:
sfc course sand shell, muddy under layer, slight odor - rotten egg, black mayonnaise...

CTD TIME: 1310, CAST 4. HEX
CTD DEPTH: 54
CTD COORDS: DP - Same
NISKIN TIME: 1316
NISKIN DEPTH: 54
NISKIN COORDS: DP - Same

Rite in the Rain

24 FEB 2014

TIME: 1352 EST
STATION ID: LS2
COORDS: 41 12.9424, 72 21.8286
SAMPLE ID: LS2
ALPHA LAB LABEL:
DEPTH: 51.8m, 170'
SEA STATE: <1', flat
WX: Partly sunny, Light breeze
TIDE: Flooding
GRAB CONDITION: GOOD on 1st try
OBSERVED GRAIN SIZE: MED-COARSE SAND w/ SHELL HASH, some GRAVEL, COBBLES
SEDIMENT TEXTURE/ODOR
NO ODOR, HOMOGENEOUS MED-COARSE SAND

CTD TIME: 1358, CAST6. HEX
CTD DEPTH:
CTD COORDS:
NISKIN TIME: 1406
NISKIN DEPTH:
NISKIN COORDS:

24 FEB 2014

TIME: 1420 EST
STATION ID: LS1
COORDS: 41 12.9421, 72 21.1946
SAMPLE ID: LS1
ALPHA LAB LABEL:
DEPTH: 50.3m, 165'
SEA STATE: <1', flat
WX: Partly sunny, light breeze
TIDE: END OF FLOOD
GRAB CONDITION: GOOD on 1st try
OBS GRAIN SIZE:
MED-COARSE SAND, HOMOGENEOUS, SHELL HASH, PEBBLES, COBBLE, GRAVEL
SEDIMENT TEXTURE/ODOR
NO ODOR, MED-COARSE SAND

CTD TIME: 1426, CAST6. HEX
CTD DEPTH:
CTD COORDS:
NISKIN TIME: 1430
NISKIN DEPTH:
NISKIN COORDS.

24 Feb 2015

1430 Completed last station @ CSDS.

1433 U/W AP.
1610 STOP ADCP.
1615 back @ AP.

Alpha Labs courier is already here.

1633 Relinquish samples to Alpha Labs.

26 Feb 2015

RV CT
Dan, Kay, Marco, Frank

for EPA Sed Survey @ Niantic Bay Disposal Site.

EST

0820 U/W NBDS, station L41

~ 0825 ADCP on

26 FEB 2015

TIME 0933 EST
STATION ID: L41
COORDS: 41 16.0243, 72 12.4835
SAMP ID: L41
ALPHA ID: L41
DEPTH: 31.4 m
SEA STATE: 1-2'
WX: OVERCAST, WIND NE 10-15 KTS
TIDE: EBB
GRAB CONDITION: GOOD ON 1st ATTEMPT
OBSERVED GRAIN SIZE
medium sand - shell hash
some gravel & pebbles
SEDIMENT TEXTURE/ODOR
no odor

CTD TIME 0935, CAST 7.1 TEX
CTD DEPTH 31.4
CTD COORDS DP - SAME
NISKIN TIME 0942
NISKIN DEPTH 31.4
NISKIN COORDS DP - SAME

26 FEB 2015

TIME 1005 EST
STATION ID: L32
COORDS: 41 16.9332 72 11.4234
SAMP ID: L32
ALPHA ID: L32
DEPTH: 26.8 m
SEA STATE: 1-2'
WX: OVERCAST, WIND 10-15 KTS
TIDE: END OF EBB
GRAB CONDITION: GOOD ON 1st ATTEMPT
OBS GRAIN SIZE:
sandy shelly, MED - COARSE
SANDS, gravel
SED TEXTURE/ODOR:
no odor

CTD TIME: NOT TAKEN
CTD DEPTH:
CTD COORDS:
NISKIN TIME: NOT TAKEN
NISKIN DEPTH:
NISKIN COORDS:

26 FEB 2015

TIME: 1019 EST
STATION ID L35
COORDS: 41 15.6641 72 11.4278
SAMPLE ID: L35
ALPHA ID: L35
DEPTH: 28.1 m
SEA STATE: 1-2'
WX: OVERCAST, NE 10-15 KTS
TIDE: END OF EBB
GRAB CONDITION: GOOD on 1st try
OBS GRAIN SIZE:
Med Sand, w/ shell hash

SEDIMENT TEXTURE/ODOR
no odor

CTD TIME NOT TAKEN
CTD DEPTH
CTD COORDS
NISKIN TIME NOT TAKEN
NISKIN DEPTH
NISKIN COORDS

26 FEB 2015

TIME: 1035 EST
STATION ID: L33
COORDS: 41 16.0443 72 10.9795
SAMPLE ID: L33
ALPHA LAB ID: L33
DEPTH: 29.3 m
SEA STATE: 1-2'
WX: OVERCAST, NE 10-15 KTS
TIDE: ALMOST SLACK LOW
GRAB CONDITION: Good on 1st attempt
OBS GRAIN SIZE:
med-coarse Sand, Shell hash, fine mud
SEDIMENT TEXTURE/ODOR
no odor

CTD TIME 1038, CAST 8.1 HEX
CTD DEPTH 29.3 m
CTD COORDS DP - Same
NISKIN TIME 1042
NISKIN DEPTH 29.3 m
NISKIN COORDS DP - Same

26 FEB 2015

TIME 1150 EST
STATION ID: L31
COORDS: 4116.3407 72 10.5096
SAMPLE ID: L31
ALPHA ID: L31
DEPTH: 23.3m
SEA STATE: 1-2'
WX OVERCAST, NE 10-15 KTS
TIDE: START OF FLOOD
GRAB CONDITION: GOOD ON 1st TRY
OBS GRAIN SIZE:
med-fine Sand, shell hash
Some mud
SED TEXTURE/ODOR:
no odor

CTD TIME NOT TAKEN
CTD DEPTH
CTD COORDS
NISKIN TIME NOT TAKEN
NISKIN DEPTH
NISKIN COORDS

26 FEB 2015

TIME: 1119 EST
STATION ID: L34 4115.6572,
SAMPLE ID: L34 72 10.5586
ALPHA LAB ID: L34
DEPTH 32.4m
SEA STATE: 1-2'
WX: OVERCAST, NE 10-15 KTS
TIDE: FLOOD
GRAB CONDITION: GOOD ON 1st ATTEMPT
OBS GRAIN SIZE:
Much coarser sand, large shells: shell hash, pebbles, gravel
SED TEXTURE/ODOR:
no odor

CTD TIME NOT TAKEN
CTD DEPTH
CTD COORDS
NISK TIME NOT TAKEN
NISK DEPTH
NISK COORDS

26 FEB 2015

TIME: 1135 EST
STATION ID: L36
COORDS: 41 16.2768 72 09.5793
SAMPLE ID: L36
ALPHA LAB ID: L36
DEPTH: 24 M
SEA STATE: 1-2'
WX: OVERCAST, NE 10-15 KTS
TIDE: FLOOD
GRAB CONDITION GOOD ON 1ST TRY
OBS GRAIN SIZE:
SHELLY, COARSE - MED SAND
SOME MUD POCKETS
SEDIMENT TEXTURE/ODOR
NO ODOR

CTD TIME: NOT TAKEN
CTD DEPTH:
CTD COORDS:
NISKIN TIME: NOT TAKEN
NISKIN DEPTH:
NISKIN COORDS:

26 FEB 2015

TIME 1236 EST
STATION ID: L37
COORDS: 41 15.9380 72 09.5855
SAMPLE ID: L37
ALPHA LAB ID: L37
DEPTH 42 m
SEA STATE 1-2'
WX OVERCAST, 15 KTS, NE
TIDE: FLOOD
GRAB CONDITION GOOD ON 1ST TRY
OBS GRAIN SIZE:
MED SAND, HOMOGENOUS
SHELL HASH
SEDIMENT TEXTURE/ODOR
NO ODOR

CTD TIME: 1247, CAST 9, HER
CTD DEPTH: 42 m
CTD COORDS: DP - SAME
NISKIN TIME: 1254
NISKIN DEPTH: 42 m
NISKIN COORDS: DP SAME

26 FEB 2015

TIME 1306 EST
STATION ID: L38
COORDS: 41 15.6034 72 09.5857
SAMPLE ID: L38
ALPHA LAB ID: L38
DEPTH 49.8m
SEA STATE 1-2'
WX: OVERCAST, LIGHT SNOW, 15KTS, NE
TIDE: FLOOD
GRAB CONDITION: GOOD ON 1ST TRY
OBS GRAIN SIZE:
MED-COARSE SAND, W MUD
SHELL HASH
SEDIMENT TEXTURE/ODOR:
NO ODOR

CTD TIME: NOT TAKEN
CTD DEPTH:
CTD COORDS:
NISK TIME: NOT TAKEN
NISK DEPTH:
NISK COORDS:

26 FEB 2015

TIME 1330 EST
STATION ID: L40
COORDS: 41 15.5391 72 08.9739
SAMPLE ID: L40
ALPHA LAB ID: L40
DEPTH: 59.7m
SEA STATE: 1-2'
WX: OVERCAST, LIGHT SNOW, NE 15KTS
TIDE: FLOOD
GRAB CONDITION: GOOD ON 1ST ATTEMPT
OBS GRAIN SIZE:
finer sand w/ mud
fine shell hash
SED TEXTURE/ODOR:
NO ODOR

CTD TIME: NOT TAKEN
CTD DEPTH:
CTD COORDS:
NISK TIME: NOT TAKEN
NISK DEPTH:
NISK COORDS:

26 FEB 2015

TIME: 1345 EST
STATION ID: L39
COORDS: 41 15.9407 72 08.9485
SAMPLE ID: L39
ALPHA LAB ID: L39
DEPTH: 41.2m
SEA STATE: 1-2'
WX: OVERCAST, LIGHT SNOW, 10-15 KTS, NE
TIDE: FLOOD
GRAB CONDITION: GOOD ON 1st ATTEMPT
OBS GRAIN SIZE
fine sand w/ mud: fine white shell hash
SEDIMENT TEXTURE/ODOR
NO ODOR

CTD TIME: 1351, CAST ID. HEX
CTD DEPTH. 41.2
CTD COORDS: DP. Same
MISK TIME: 1358
MISK DEPTH. 41.2
MISK COORDS: DP. Same

26 FEB 2014

TIME: 1424 EST
STATION ID: L26A
COORDS: 41 16.2570 72 06.9272
SAMPLE ID: L26A
ALPHA LAB ID: L26A
DEPTH: 23.1m
SEA STATE: 1-2'
WX: OVERCAST, LIGHT SNOW, 10-15 KTS NE
TIDE: FLOOD
GRAB CONDITION: GOOD ON FIRST TRY
OBS GRAIN SIZE:
FINE SAND, LIGHT SPL, ONTOP OF TRACK MUDS
SEDIMENT TEXTURE/ODOR:
No odor

CTD TIME: NOT TAKEN
CTD DEPTH:
CTD COORDS:
MISK TIME: NOT TAKEN
MISK DEPTH:
MISK COORDS:

Return on Run

26 Feb 2015

TIME: 1430 EST
STATION ID: L26B
COORDS: 41 16.2707 72 06.9199
SAMPLE ID: L26B
ALPHA LAB ID: L26B
DEPTH: 23.1 m
SEA STATE: 1-2'
WX: OVERCAST, LIGHT SNOW, 10-15 KTS NE
TIDE: FLOOD
GRAB CONDITION: GOOD ON 1st ATTEMPT
OBS GRAIN SIZE:
FINE SAND, LIGHT COLOR ON SFC
MUD UNDERNEATH, FINE SHELL HASH
SEDIMENT TEXTURE/ODOR
NO ODOR

CTD TIME: NOT TAKEN
CTD DEPTH:
CTD COORDS:
NISK TIME: NOT TAKEN
NISK DEPTH:
NISK COORDS:

26 FEB 2015

1440 U/W Arrey Pt
ADCP off (1532)
1515 back @ AP.

1630 RELINQUISH Samples
to Alpha Labs.

27 FEB 2015

RV CT
MARLO, KAY, ALEJANDRO,
DAN, FRANK

EST

0830 v/w for L27

0834 ADCP on

27 FEB 2015

TIME: 0908 EST
STATION ID: L27
COORDS: 41 16.5019 72 06.8698
SAMPLE ID: L27
ALPHA LAB ID: L27
DEPTH: 23.5 M
SEA STATE: <1'
WX: SUNNY, 10KT N, COLD
DOE: EPOXUNG
GRABS CONDITION: GOOD ON 1ST ATTEMPT
OBS GRAIN SIZE:
FINE SAND & MUD, DARK

SEDIMENT TEXTURE/ODOR:
NO ODOR

CTD TIME: not taken
CTD DEPTH:
CTD COORDS:
NISKIN TIME: not taken
NISKIN DEPTH:
NISKIN COORDS:

Rotin on Rain

27 FEB 2015

TIME: 0921 EST
STATION ID: L28
COORDS: 41 16.0010, 72 06.5972
SAMPLE ID: L28
ALPHA LAB ID: L28
DEPTH: 27 m
SEA STATE: <1'
WX: <10 KTS, N, SUNNY, COLD
TIDE: RISING
GRAB CONDITION: GOOD ON 1ST TRY
OBS GRAIN SIZE:
fine sandy mud, homogeneous
fine shell hash
SED TEXTURE/ODOR:
no odor

CTD TIME: 0927, CAST 11. 1 tex
CTD DEPTH: 27 m
CTD COORDS: DP - same
NISK TIME: 0934
NISK DEPTH: 27 m
NISK COORDS: DP - same

27 FEB 2015

TIME: 0948 EST
STATION ID: L25A
COORDS: 41 16.1419 72 06.0044
SAMPLE ID: L25A
ALPHA LAB ID: L25A
DEPTH: 20.2 m
SEA STATE: <1'
WX: SUNNY
TIDE: EBB
GRAB CONDITION: GOOD ON 1ST TRY
OBS GRAIN SIZE:
fine sandy mud homogeneous,
some shell hash
SED TEXTURE/ODOR:
no odor

CTD TIME: not taken
CTD DEPTH:
CTD COORDS:
NISK TIME: not taken
NISK DEPTH:
NISK COORDS:

Rite in the Rain

27 FEB 2015

TIME: 1000 EST
STATION ID: L25B
COORDS: 42 16.1358 72 05.9884
SAMPLE ID: L25B
ALPHA LAB ID: L25B
DEPTH: 20m
SEA STATE: <1'
WX: SUNNY, COLD
TIDE: EBB
GRAB CONDITION: GOOD ON FIRST TRY
OBS GRAIN SIZE:
MUDDY SAND, HOMOGENOUS
DK GRAY
SED TEXTURE/ODOR:
LITTLE ODOR

CTD TIME not taken
CTD DEPTH:
CTD COORDS:
NISK TIME: not taken
NISK DEPTH:
NISK COORDS:

27 FEB 2015

TIME: 1012 EST
STATION ID: L21
COORDS: 41 15.9931 72 05.4536
SAMPLE ID: L21
ALPHA LAB ID: L21
DEPTH: 18.5m
SEA STATE: <1'
WX: SUNNY, LIGHT BREEZE, COLD
TIDE: EBB
GRAB CONDITION: GOOD, 1st TRY
OBS GRAIN SIZE:
MUDDY SAND, DK GRAY/BLACK
PINCH OF DRUDGE, SHELL HASH
SED TEXTURE/ODOR:
LITTLE ODOR

CTD TIME: not taken
CTD DEPTH:
CTD COORDS:
NISK TIME: not taken
NISK DEPTH:
NISK COORDS:

27 FEB 2015

TIME: 1025 EST
STATION ID: L20
COORDS: 41 16.3253 72 05.4364
SAMPLE ID: L20
ALPHA LAB ID: L20
DEPTH: 23.5m
SEA STATE: <1'
WX: SUNNY, <10KTS
TIDE:
GRAB CONDITION: GOOD, FIRST ATTEMPT
OBS GRAIN SIZE:
very fine sandy mud,
dk gray, some pockets o mud
SED TEXTURE/ODOR:
no odor

CTD TIME: 1027, CAST 12. LTER
CTD DEPTH: 23.5
CTD COORD: DP-same
NISK TIME: 1034
NISK DEPTH: 23.5
NISK COORD: DP-same

27 FEB 2015

TIME: 1043 EST
STATION ID: L19
COORDS: 41 16.5626 72 05.4451
SAMPLE ID: L19
ALPHA LAB ID: L19
DEPTH: 21.2m
SEA STATE: <1'
WX: <10KTS, SUNNY
TIDE:
GRAB CONDITION: GOOD, FIRST ATTEMPT
OBS GRAIN SIZE:
SANDY MUD, FINE GRAINED
DK GRAY
SED TEXTURE/ODOR:
no odor

CTD TIME: not taken
CTD DEPTH:
CTD COORDS:
NISK TIME: not taken
NISK DEPTH:
NISK COORDS:

Rite in the Rain

27 FEB 2015

TIME: 1055 EST
STATION ID: L13
COORDS: 41 16.5632, 7205.0014
SAMPLE ID: L13
ALPHA LAB ID: L13
DEPTH: 18.0 m
SEA STATE: < 1'
WX: < 10 KTS, SUNNY, COLD
TIDE: EBB
GRAB CONDITION: GOOD ON FIRST TRY
OBS GRAIN SIZE:
DK BLACK, MUD, VERY LITTLE SAND,
SED TEXTURE/ODOR:
STRONG ROTTEN EGG ODOR

CTD TIME: not taken
CTD DEPTH:
CTD COORDS:
NISK TIME: not taken
NISK DEPTH:
NISK COORDS:

27 FEB 2015

TIME: 1109 EST
STATION ID: L16
COORDS: 41 16.3149, 7205.0021
SAMPLE ID: L16
ALPHA LAB ID: L16
DEPTH: 21 m
SEA STATE: < 1'
WX: 5-10 KTS, NORTH, SUNNY, COLD
TIDE: EBB
GRAB CONDITION: GOOD ON 1ST TRY
OBS GRAIN SIZE:
MUD, BLACK, STICKY
LOBSTER BAIT
SED TEXTURE/ODOR:
SLIGHT ROTTEN EGG ODOR

CTD TIME: not taken
CTD DEPTH:
CTD COORDS:
NISK TIME: not taken
NISK DEPTH:
NISK COORDS:

Rotten eggs

27 FEB 2015

TIME: 1122 EST
STATION ID: L18
COORDS: 41 16.0568 72,05.0096
SAMPLE ID: L18
ALPHA LAB ID: L18
DEPTH: 20.3M
SEA STATE: <1'
WX: SUNNY, <10KT BREEZE, COLD
TIDE: EBBING
GRAB CONDITION: GOOD ON FIRST TRY
OBS GRAIN SIZE:
MUD, DK BROWN, STICKY
SHELLS, → darker
SED TEXTURE/ODOR:
LIGHT ROTTEN EGG ODOR

CTD TIME: not taken
CTD DEPTH:
CTD COORDS:
NISK TIME: not taken
NISK DEPTH:
NISK COORDS:

27 FEB 2015

TIME: 1139 EST
STATION ID: L17
COORDS: 41 16.0587 72 04.5608
SAMPLE ID: L17
ALPHA LAB ID: L17
DEPTH: 17.5M
SEA STATE: <1'
WX: SUNNY, <10KTS, COLD
TIDE: SLACKING
GRAB CONDITION: GOOD ON 1ST TRY
OBS GRAIN SIZE:
MUDDY SAND, SHELL HASH
MINIMAL, FAIRLY HOMOGENOUS
SED TEXTURE/ODOR:
NO ODOR

CTD TIME: not taken
CTD DEPTH:
CTD COORDS:
NISK TIME: not taken
NISK DEPTH:
NISK COORDS:

Rite in the Rain

27 FEB 2015

TIME: 1153 EST
STATION ID: L15
COORDS: 41 16.3923, 72 04.5518
SAMPLE ID: L15, L61
ALPHA LAB ID: L15, L61 2845 TIME
DEPTH: 18.0 m
SEA STATE: ~1'
WX: SUNNY 10-12 KT, N, COLD
TIDE: SLACK BEFORE FLOOD
GRAB CONDITION: GOOD AFTER 2nd ATTEMPT
OBS GRAIN SIZE:
MUDDY SAND, W/ PEBBLES
COBBLE
SED TEXTURE ODOR:
NO ODOR

CTD TIME: 1157, CAST 3.14EX
CTD DEPTH: 18m
CTD COORD: DP - Same
NISK TIME: 1200
NISK DEPTH: 18m
NISK COORD: DP - Same

27 FEB 2015

TIME: 1258 EST
STATION ID: L12
COORDS: 41 16.5547 72 04.5697
SAMPLE ID: L12
ALPHA LAB ID: L12
DEPTH: 14.2m
SEA STATE: 1-2'
WX: 10-12 KT N WIND, COLD
TIDE: FLOODING
GRAB CONDITION: GOOD ON 1st ATTEMPT
OBS GRAIN SIZE:
SANDY MUD, LOTS of
LARGE STONE, DK BLK
SED TEXTURE/ODOR:
NO ODOR

CTD: not taken
CTD:
CTD:
NISK: not taken
NISK:
NISK:

Rite in the Rain

27 FEB 2015

TIME: 1308 EST
STATION ID: L-11
COORDS: 41 16.5467 72 04.1381
SAMPLE ID: L-11
ALPHA LAB ID: L-11
DEPTH: 17.7m
SEASTATE: 1-2'
WX: 10-15 KTS, PARTLY SUNNY, COLD
TIDE: FLOOD
GRAB CONDITION: GOOD ON 1ST ATTEMPT
OBS GRAIN SIZE:
STICKY, BLACK MUD, SAME SAND
SED TEXTURE/ODOR:
NO ODOR

CTD TIME: NOT TAKEN
CTD DEPTH:
CTD COORDS:
NISK TIME: NOT TAKEN
NISK DEPTH:
NISK COORDS:

27 FEB 2015

TIME: 1319 EST
STATION ID: L-14
COORDS: 41 16.3030 72 04.1396
SAMPLE ID: L-14
ALPHA LAB ID: L-14
DEPTH: 19.1 m
SEA STATE: 1-2'
WX: N WIND - 10-15 KTS, COLD, PTLY SUN
TIDE: FLOOD
GRAB CONDITION: GOOD ON 1ST ATTEMPT
OBS GRAIN: VINEGAR OF LIGHT BROWN SAND ON BLACK STICKY MUD
SED TEXTURE/ODOR:
SLIGHT ODOR

CTD TIME: not taken
CTD DEPTH:
CTD COORDS:
NISK TIME: not taken
NISK DEPTH:
NISK COORDS:

27 FEB 2015

TIME: 1335 EST
STATION ID: L23 A
COORDS 41 16.6204 72 03.4375
SAMPLE ID: L23A
ALPHA LAB ID: L23A
DEPTH: 15.1 m
SEA STATE: 1-2'
WX SUNNY, COLD, 10-15 KTS
TIDE: FLOOD
GRAB CONDITION: GOOD ON 1ST ATTEMPT
OBS GRAIN SIZE:
MED SANDY VENEER ON STICKY BLACK MUD
SED TEXTURE/ODOR:
SLIGHT ODOR

CTD TIME: not taken
CTD DEPTH:
CTD COORDS:
NISK TIME: not taken
NISK DEPTH:
NISK COORDS:

27 FEB 2015

TIME: 1345 EST
STATION ID: L23B
COORDS: 41 16.6190 72 03.4175
SAMPLE ID: L23B
ALPHA LAB ID: L23B 30m to E
DEPTH: 14.4 m
SEA STATE: 1-2'
WX: SUNNY, COLD, 10-15 KTS N
TIDE: FLOOD
GRAB CONDITION: GOOD ON 1ST ATTEMPT
OBS GRAIN SIZE: MED-COARSE SAND ON STICKY BLACK MUD

SED TEXTURE/ODOR:
SLIGHT ODOR

CTD TIME: not taken
CTD DEPTH:
CTD COORDS:
NISK TIME: not taken
NISK DEPTH:
NISK COORDS:

Rite in the Rain

27 Feb 2015

TIME: 1358 EST
STATION ID: L24A
COORDS: A1 16.2998 72 03.1554
SAMPLE ID: L24A
ALPHA LAB ID: L24A
DEPTH: 14.2 m
SEA STATE: 1-2'
WX: NORTH WIND, 10-15 KTS, SUNNY
TIDE: FLOOD
GRAB CONDITION: GOOD ON 1st ATTEMPT
OBS GRAIN SIZE:
STICKY BLACK MUD

SED TEXTURE/ODOR:
NO OBVIOUS ODOR
TUBE WORM

CTD TIME: 1400, CAST 14.1 HEX
CTD DEPTH: 14.2'
CTD COORDS: DP - Same
NISK TIME: 1403
NISK DEPTH: 14.2
NISK COORDS: DP - Same

27 Feb 2015

TIME: 1412 EST
STATION ID: L24B
COORDS: A1 16.3078 72 03.1363
SAMPLE ID: L24B
ALPHA LAB ID: L24B
DEPTH: 14.0 m
SEA STATE: 1-2'
WX: 10-15 KTS OUT OF NORTH, SUNNY
TIDE: FLOOD
GRAB CONDITION: GOOD ON 1st ATTEMPT
OBS GRAIN SIZE:
STICKY BLACK MUD - HUGE TUBE WORMS
SED TEXTURE:
NO OBVIOUS ODOR

CTD TIME: not taken
CTD DEPTH:
CTD COORDS:
NISK TIME: not taken
NISK DEPTH:
NISK COORDS:

27 Feb 2015

TIME: 1430 EST
STATION ID: 22A
COORDS: 41 16.0957, 72 02.0039
SAMPLE ID: 22A
ALPHA LAB ID 22A
DEPTH: 18.1m
SEA STATE: 1-2'
WX: 10-15 KTS OUT O NORTH, COLD
TIDE: FLOOD
GRAB CONDITION: GOOD ON 1ST ATTEMPT
OBS GRAIN SIZE:
LOTS OF LARGE SHELL MATERIAL (CREPID?)
ON FINE STICKY MUD, DK GRAY
SED TEXTURE / ODOR:
NO ODOR

CTD TIME: 1433, CAST IS 1HEX
CTD DEPTH: 18.1
CTD COORDS: DP - same
NISK TIME: 1435
NISK DEPTH: 18.1
NISK COORDS: DP - same

27 Feb 2015

TIME: 1443 EST
STATION ID: 22B
COORDS: 41 16.6880, 72 01.9873
SAMPLE ID: 22B
ALPHA LAB ID: 22B
DEPTH: 18.3m
SEA STATE: 1-2'
WX: 10-15 KTS, NORTH WIND, PTLY SUNNY
TIDE: FLOOD
GRAB CONDITION: GOOD ON 1ST ATTEMPT
OBS GRAIN SIZE MOMY
LARGE CREPID: SCALLOP
SHELLS ON FINE STICKY MUD
SED TEXTURE / ODOR
NO ODOR

CTD TIME: not taken
CTD DEPTH:
CTD COORDS:
NISK TIME: not taken
NISK DEPTH:
NISK COORDS:

Rot in the Rain

27 FEB 2015

~1440 v/w for ELIS buoy

1500 @ ELIS buoy - covered in ice
1530 back @ AP.
1600 ADCP off.

1638 relinquish samples to
Alaska Courier

Rite in the Rain

Appendix 2

LABORATORY REPORT A: SAMPLING ON FEBRUARY 24 AND 25

(including Chain of Custody forms)

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ANALYTICAL REPORT

Lab Number:	L1503503
Client:	University of Connecticut 1080 Shennecossett Road Marine Sciences Dept Groton, CT 06340
ATTN:	James O'Donnell
Phone:	(401) 932-5703
Project Name:	LIS-USACOE RIM DREDGE
Project Number:	Not Specified
Report Date:	03/16/15

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: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), ME (MA00030), PA (68-02089), VA (460194), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), USFWS (Permit #LE2069641), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

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

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1503503-01	L-56	SEDIMENT	EASTERN LONG ISLAND SOUND	02/24/15 11:22	02/24/15
L1503503-02	L-55	SEDIMENT	EASTERN LONG ISLAND SOUND	02/24/15 12:01	02/24/15
L1503503-03	L-54	SEDIMENT	EASTERN LONG ISLAND SOUND	02/24/15 12:35	02/24/15
L1503503-04	L-53	SEDIMENT	EASTERN LONG ISLAND SOUND	02/24/15 13:01	02/24/15
L1503503-05	L-52	SEDIMENT	EASTERN LONG ISLAND SOUND	02/24/15 13:52	02/24/15
L1503503-06	L-51	SEDIMENT	EASTERN LONG ISLAND SOUND	02/24/15 14:20	02/24/15
L1503503-07	L-62	SEDIMENT	EASTERN LONG ISLAND SOUND	02/24/15 14:35	02/24/15
L1503503-08	L41	SEDIMENT	EASTERN LONG ISLAND SOUND	02/25/15 09:33	02/26/15
L1503503-09	L32	SEDIMENT	EASTERN LONG ISLAND SOUND	02/25/15 10:05	02/26/15
L1503503-10	L35	SEDIMENT	EASTERN LONG ISLAND SOUND	02/25/15 10:19	02/26/15
L1503503-11	L33	SEDIMENT	EASTERN LONG ISLAND SOUND	02/25/15 10:35	02/26/15
L1503503-12	L31	SEDIMENT	EASTERN LONG ISLAND SOUND	02/25/15 11:00	02/26/15
L1503503-13	L34	SEDIMENT	EASTERN LONG ISLAND SOUND	02/25/15 11:19	02/26/15
L1503503-14	L36	SEDIMENT	EASTERN LONG ISLAND SOUND	02/25/15 11:35	02/26/15
L1503503-15	L37	SEDIMENT	EASTERN LONG ISLAND SOUND	02/25/15 12:36	02/26/15
L1503503-16	L38	SEDIMENT	EASTERN LONG ISLAND SOUND	02/25/15 13:06	02/26/15
L1503503-17	L40	SEDIMENT	EASTERN LONG ISLAND SOUND	02/25/15 13:30	02/26/15
L1503503-18	L39	SEDIMENT	EASTERN LONG ISLAND SOUND	02/25/15 13:45	02/26/15
L1503503-19	L26A	SEDIMENT	EASTERN LONG ISLAND SOUND	02/25/15 14:24	02/26/15
L1503503-20	L26B	SEDIMENT	EASTERN LONG ISLAND SOUND	02/25/15 14:30	02/26/15

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503503
Project Number:	Not Specified	**Report Date:**	03/16/15

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 all of the requirements of NELAC, for all NELAC accredited parameters. 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. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

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

Please contact Client Services at 800-624-9220 with any questions.

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503503
Project Number:	Not Specified	**Report Date:**	03/16/15

Case Narrative (continued)

Report Submission

This report replaces the one issued on March 11, 2015. The report was amended to correct the grain size results.

Semivolatile Organics

PAHs and PCBs by GC/MS-SIM

Sample L1503503-01 was inadvertently spiked with twice the concentration of internal standard for Cl2-BZ#15-C13 and CL17BZ#180-C13. The concentration was adjusted on the quanitiation report in order to perform an accurate calculation of the sample results. This is evident in on the quanitation report in the data deliverable package as well as on Form 8 of the CLP-package.

The WG766025-6 Laboratory Duplicate RPD, performed on L1503503-07, is outside the acceptance criteria for several compounds. The elevated RPDs have been attributed to the non-homogeneous nature of the sample utilized as the sample duplicate.

The standard reference material (SRM) WG766025-7 has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

Pesticides

The Pesticide analysis was performed utilizing dual column confirmation with the higher of the two values reported. If the relative percent difference (RPD) was above the acceptance criteria the compound is reported with a "P" qualifier. Technical judgment was employed in the case of an observed interference. In the case that interference was observed on one column, the lower value is reported and qualified with an "I".

The opening continuing calibration standard WG766870-1, associated with samples L1503503-01 through -06, WG766032-1, -2 and -3, had the response for Hexachlorobenzene (15.2%D-column B) and alpha-Chlordane (19.7%D-column B) outside the individual acceptance criteria but within method allowance, therefore no further action was taken.

Case Narrative (continued)

The continuing calibration standard WG766870-2, which is the closing standard for samples L1503503-01 through -06, WG766032-1, -2 and -3 and the opening standard for samples L1503503-08 through -12, had the response for alpha-Chlordane (18.2%D-column B) outside the individual acceptance criteria but within method allowance, therefore no further action was taken.

The closing continuing calibration standard WG766870-3, associated with samples L1503503-08 through -12, had the response for alpha-Chlordane (18.1%D-column B) outside the individual acceptance criteria but within method allowance, therefore no further action was taken.

The closing continuing calibration standard WG766870-5, associated with samples L1503503-13 through -20, -07, WG766032-5,-6 and -7D, had the response for gamma-BHC (15.1%D-column A), Aldrin (15.3%D-column A) and 4,4'-DDD (16.5%D-column A) outside the individual acceptance criteria but within method allowance, therefore no further action was taken.

The opening continuing calibration standard WG766870-6, associated with sample WG766032-4, had the response for gamma-BHC (15.4%D-column A), Aldrin (15.3%D-column A) and 4,4'-DDD (15.7%D-column A) outside the individual acceptance criteria but within method allowance, therefore no further action was taken.

The closing continuing calibration standard WG766870-7, associated with sample WG766032-4, had the response for gamma-BHC (16.4%D-column A), Aldrin (16.5%D-column A) and Dieldrin (15.1%D-column A) outside the individual acceptance criteria but within method allowance, therefore no further action was taken.

The performance evaluation mixture (PEM) (R7447821-1) was inadvertently analyzed after the continuing calibration standard (WG766870-1) after instrument maintenance was performed. The breakdown was within criteria for the PEM and the all of the monitored compounds were within acceptance criteria for the associated standard WG766870-1, therefore no further action was taken.

The standard reference material (SRM) WG766032-7 had the compound trans-Nonachlor recovered above

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503
Project Number: Not Specified **Report Date:** 03/16/15

Case Narrative (continued)

the acceptance criteria at 316% due to matrix interference. All other monitored compounds were recovered within acceptance criteria. In addition the SRM has elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

Total Organic Carbon

Samples L1503503-02, -05: The Sample Replicate RPD is outside the acceptance criteria of 30%. A double-burn re-analysis was performed with confirming results. The results of the original analysis are reported. The elevated RPD has been attributed to the non-homogeneous nature of the sample.

The WG766621-4/-5 MS/MSD recoveries for Total Organic Carbon (Rep1 - 60%/65%) and (Rep2 - 136%), performed on L1503503-07, are outside the 75-125% acceptance criteria, possibly due to sample matrix. The associated SRM recoveries are within criteria indicating the sample batch was in control, and all sample results were accepted.

Grain Size Analysis

The WG766710-1 Laboratory Duplicate RPD, performed on L1503503-07, is outside the acceptance criteria for Percent Total Gravel (38%) and Percent Total Fines (29%). The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

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: Cynthia McQueen

Title: Technical Director/Representative Date: 03/16/15

ORGANICS

SEMIVOLATILES

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-01	Date Collected:	02/24/15 11:22
Client ID:	L-56	Date Received:	02/24/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/04/15 09:30
Analytical Date:	03/05/15 23:23	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/05/15
Percent Solids:	70%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	6.68	--	1
Acenaphthylene	ND		ug/kg	6.68	--	1
Acenaphthene	ND		ug/kg	6.68	--	1
Fluorene	ND		ug/kg	6.68	--	1
Phenanthrene	ND		ug/kg	6.68	--	1
Anthracene	ND		ug/kg	6.68	--	1
Fluoranthene	9.42		ug/kg	6.68	--	1
Pyrene	9.92		ug/kg	6.68	--	1
Benz(a)anthracene	ND		ug/kg	6.68	--	1
Chrysene	ND		ug/kg	6.68	--	1
Benzo(b)fluoranthene	ND		ug/kg	6.68	--	1
Benzo(k)fluoranthene	ND		ug/kg	6.68	--	1
Benzo(a)pyrene	ND		ug/kg	6.68	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	6.68	--	1
Dibenz(a,h)anthracene	ND		ug/kg	6.68	--	1
Benzo(ghi)perylene	ND		ug/kg	6.68	--	1
Cl2-BZ#8	ND		ug/kg	0.668	--	1
Cl3-BZ#18	ND		ug/kg	0.668	--	1
Cl3-BZ#28	ND		ug/kg	0.668	--	1
Cl4-BZ#44	ND		ug/kg	0.668	--	1
Cl4-BZ#49	ND		ug/kg	0.668	--	1
Cl4-BZ#52	ND		ug/kg	0.668	--	1
Cl4-BZ#66	ND		ug/kg	0.668	--	1
Cl5-BZ#87	ND		ug/kg	0.668	--	1
Cl5-BZ#101	ND		ug/kg	0.668	--	1
Cl5-BZ#105	ND		ug/kg	0.668	--	1
Cl5-BZ#118	ND		ug/kg	0.668	--	1
Cl6-BZ#128	ND		ug/kg	0.668	--	1
Cl6-BZ#138	ND		ug/kg	0.668	--	1
Cl6-BZ#153	ND		ug/kg	0.668	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-01 Date Collected: 02/24/15 11:22

Client ID: L-56 Date Received: 02/24/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	0.668	--	1
Cl7-BZ#180	ND		ug/kg	0.668	--	1
Cl7-BZ#183	ND		ug/kg	0.668	--	1
Cl7-BZ#184	ND		ug/kg	0.668	--	1
Cl7-BZ#187	ND		ug/kg	0.668	--	1
Cl8-BZ#195	ND		ug/kg	0.668	--	1
Cl9-BZ#206	ND		ug/kg	0.668	--	1
Cl10-BZ#209	ND		ug/kg	0.668	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	81		30-150
Pyrene-d10	85		30-150
Benzo(b)fluoranthene-d12	83		30-150
DBOB	84		30-150
BZ 198	77		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-02	Date Collected:	02/24/15 12:01
Client ID:	L-55	Date Received:	02/24/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/04/15 09:30
Analytical Date:	03/05/15 23:55	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/05/15
Percent Solids:	80%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	11.4	--	1
Acenaphthylene	ND		ug/kg	11.4	--	1
Acenaphthene	ND		ug/kg	11.4	--	1
Fluorene	ND		ug/kg	11.4	--	1
Phenanthrene	ND		ug/kg	11.4	--	1
Anthracene	ND		ug/kg	11.4	--	1
Fluoranthene	ND		ug/kg	11.4	--	1
Pyrene	ND		ug/kg	11.4	--	1
Benz(a)anthracene	ND		ug/kg	11.4	--	1
Chrysene	ND		ug/kg	11.4	--	1
Benzo(b)fluoranthene	ND		ug/kg	11.4	--	1
Benzo(k)fluoranthene	ND		ug/kg	11.4	--	1
Benzo(a)pyrene	ND		ug/kg	11.4	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	11.4	--	1
Dibenz(a,h)anthracene	ND		ug/kg	11.4	--	1
Benzo(ghi)perylene	ND		ug/kg	11.4	--	1
Cl2-BZ#8	ND		ug/kg	1.14	--	1
Cl3-BZ#18	ND		ug/kg	1.14	--	1
Cl3-BZ#28	ND		ug/kg	1.14	--	1
Cl4-BZ#44	ND		ug/kg	1.14	--	1
Cl4-BZ#49	ND		ug/kg	1.14	--	1
Cl4-BZ#52	ND		ug/kg	1.14	--	1
Cl4-BZ#66	ND		ug/kg	1.14	--	1
Cl5-BZ#87	ND		ug/kg	1.14	--	1
Cl5-BZ#101	ND		ug/kg	1.14	--	1
Cl5-BZ#105	ND		ug/kg	1.14	--	1
Cl5-BZ#118	ND		ug/kg	1.14	--	1
Cl6-BZ#128	ND		ug/kg	1.14	--	1
Cl6-BZ#138	ND		ug/kg	1.14	--	1
Cl6-BZ#153	ND		ug/kg	1.14	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-02 Date Collected: 02/24/15 12:01

Client ID: L-55 Date Received: 02/24/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	1.14	--	1
Cl7-BZ#180	ND		ug/kg	1.14	--	1
Cl7-BZ#183	ND		ug/kg	1.14	--	1
Cl7-BZ#184	ND		ug/kg	1.14	--	1
Cl7-BZ#187	ND		ug/kg	1.14	--	1
Cl8-BZ#195	ND		ug/kg	1.14	--	1
Cl9-BZ#206	ND		ug/kg	1.14	--	1
Cl10-BZ#209	ND		ug/kg	1.14	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	84		30-150
Pyrene-d10	90		30-150
Benzo(b)fluoranthene-d12	88		30-150
DBOB	87		30-150
BZ 198	83		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-03	Date Collected:	02/24/15 12:35
Client ID:	L-54	Date Received:	02/24/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 00:28	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/05/15
Percent Solids:	79%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	11.9	--	1
Acenaphthylene	ND		ug/kg	11.9	--	1
Acenaphthene	ND		ug/kg	11.9	--	1
Fluorene	ND		ug/kg	11.9	--	1
Phenanthrene	ND		ug/kg	11.9	--	1
Anthracene	ND		ug/kg	11.9	--	1
Fluoranthene	ND		ug/kg	11.9	--	1
Pyrene	ND		ug/kg	11.9	--	1
Benz(a)anthracene	ND		ug/kg	11.9	--	1
Chrysene	ND		ug/kg	11.9	--	1
Benzo(b)fluoranthene	ND		ug/kg	11.9	--	1
Benzo(k)fluoranthene	ND		ug/kg	11.9	--	1
Benzo(a)pyrene	ND		ug/kg	11.9	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	11.9	--	1
Dibenz(a,h)anthracene	ND		ug/kg	11.9	--	1
Benzo(ghi)perylene	ND		ug/kg	11.9	--	1
Cl2-BZ#8	ND		ug/kg	1.19	--	1
Cl3-BZ#18	ND		ug/kg	1.19	--	1
Cl3-BZ#28	ND		ug/kg	1.19	--	1
Cl4-BZ#44	ND		ug/kg	1.19	--	1
Cl4-BZ#49	ND		ug/kg	1.19	--	1
Cl4-BZ#52	ND		ug/kg	1.19	--	1
Cl4-BZ#66	ND		ug/kg	1.19	--	1
Cl5-BZ#87	ND		ug/kg	1.19	--	1
Cl5-BZ#101	ND		ug/kg	1.19	--	1
Cl5-BZ#105	ND		ug/kg	1.19	--	1
Cl5-BZ#118	ND		ug/kg	1.19	--	1
Cl6-BZ#128	ND		ug/kg	1.19	--	1
Cl6-BZ#138	ND		ug/kg	1.19	--	1
Cl6-BZ#153	ND		ug/kg	1.19	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-03 Date Collected: 02/24/15 12:35

Client ID: L-54 Date Received: 02/24/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	1.19	--	1
Cl7-BZ#180	ND		ug/kg	1.19	--	1
Cl7-BZ#183	ND		ug/kg	1.19	--	1
Cl7-BZ#184	ND		ug/kg	1.19	--	1
Cl7-BZ#187	ND		ug/kg	1.19	--	1
Cl8-BZ#195	ND		ug/kg	1.19	--	1
Cl9-BZ#206	ND		ug/kg	1.19	--	1
Cl10-BZ#209	ND		ug/kg	1.19	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	82		30-150
Pyrene-d10	90		30-150
Benzo(b)fluoranthene-d12	88		30-150
DBOB	87		30-150
BZ 198	82		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-04	Date Collected:	02/24/15 13:01
Client ID:	L-53	Date Received:	02/24/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 01:01	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/05/15
Percent Solids:	62%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	7.65	--	1
Acenaphthylene	11.6		ug/kg	7.65	--	1
Acenaphthene	ND		ug/kg	7.65	--	1
Fluorene	ND		ug/kg	7.65	--	1
Phenanthrene	47.6		ug/kg	7.65	--	1
Anthracene	8.84		ug/kg	7.65	--	1
Fluoranthene	115		ug/kg	7.65	--	1
Pyrene	105		ug/kg	7.65	--	1
Benz(a)anthracene	47.1		ug/kg	7.65	--	1
Chrysene	62.2		ug/kg	7.65	--	1
Benzo(b)fluoranthene	64.3		ug/kg	7.65	--	1
Benzo(k)fluoranthene	63.2		ug/kg	7.65	--	1
Benzo(a)pyrene	60.0		ug/kg	7.65	--	1
Indeno(1,2,3-cd)Pyrene	51.4		ug/kg	7.65	--	1
Dibenz(a,h)anthracene	9.33		ug/kg	7.65	--	1
Benzo(ghi)perylene	48.3		ug/kg	7.65	--	1
Cl2-BZ#8	ND		ug/kg	0.765	--	1
Cl3-BZ#18	ND		ug/kg	0.765	--	1
Cl3-BZ#28	ND		ug/kg	0.765	--	1
Cl4-BZ#44	ND		ug/kg	0.765	--	1
Cl4-BZ#49	ND		ug/kg	0.765	--	1
Cl4-BZ#52	ND		ug/kg	0.765	--	1
Cl4-BZ#66	ND		ug/kg	0.765	--	1
Cl5-BZ#87	ND		ug/kg	0.765	--	1
Cl5-BZ#101	ND		ug/kg	0.765	--	1
Cl5-BZ#105	ND		ug/kg	0.765	--	1
Cl5-BZ#118	ND		ug/kg	0.765	--	1
Cl6-BZ#128	ND		ug/kg	0.765	--	1
Cl6-BZ#138	ND		ug/kg	0.765	--	1
Cl6-BZ#153	ND		ug/kg	0.765	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-04 Date Collected: 02/24/15 13:01

Client ID: L-53 Date Received: 02/24/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	0.765	--	1
Cl7-BZ#180	ND		ug/kg	0.765	--	1
Cl7-BZ#183	ND		ug/kg	0.765	--	1
Cl7-BZ#184	ND		ug/kg	0.765	--	1
Cl7-BZ#187	ND		ug/kg	0.765	--	1
Cl8-BZ#195	ND		ug/kg	0.765	--	1
Cl9-BZ#206	ND		ug/kg	0.765	--	1
Cl10-BZ#209	ND		ug/kg	0.765	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	85		30-150
Pyrene-d10	88		30-150
Benzo(b)fluoranthene-d12	87		30-150
DBOB	92		30-150
BZ 198	91		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-05	Date Collected:	02/24/15 13:52
Client ID:	L-52	Date Received:	02/24/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 01:34	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/05/15
Percent Solids:	81%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	10.6	--	1
Acenaphthylene	ND		ug/kg	10.6	--	1
Acenaphthene	ND		ug/kg	10.6	--	1
Fluorene	ND		ug/kg	10.6	--	1
Phenanthrene	ND		ug/kg	10.6	--	1
Anthracene	ND		ug/kg	10.6	--	1
Fluoranthene	ND		ug/kg	10.6	--	1
Pyrene	ND		ug/kg	10.6	--	1
Benz(a)anthracene	ND		ug/kg	10.6	--	1
Chrysene	ND		ug/kg	10.6	--	1
Benzo(b)fluoranthene	ND		ug/kg	10.6	--	1
Benzo(k)fluoranthene	ND		ug/kg	10.6	--	1
Benzo(a)pyrene	ND		ug/kg	10.6	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	10.6	--	1
Dibenz(a,h)anthracene	ND		ug/kg	10.6	--	1
Benzo(ghi)perylene	ND		ug/kg	10.6	--	1
Cl2-BZ#8	ND		ug/kg	1.06	--	1
Cl3-BZ#18	ND		ug/kg	1.06	--	1
Cl3-BZ#28	ND		ug/kg	1.06	--	1
Cl4-BZ#44	ND		ug/kg	1.06	--	1
Cl4-BZ#49	ND		ug/kg	1.06	--	1
Cl4-BZ#52	ND		ug/kg	1.06	--	1
Cl4-BZ#66	ND		ug/kg	1.06	--	1
Cl5-BZ#87	ND		ug/kg	1.06	--	1
Cl5-BZ#101	ND		ug/kg	1.06	--	1
Cl5-BZ#105	ND		ug/kg	1.06	--	1
Cl5-BZ#118	ND		ug/kg	1.06	--	1
Cl6-BZ#128	ND		ug/kg	1.06	--	1
Cl6-BZ#138	ND		ug/kg	1.06	--	1
Cl6-BZ#153	ND		ug/kg	1.06	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-05 Date Collected: 02/24/15 13:52

Client ID: L-52 Date Received: 02/24/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	1.06	--	1
Cl7-BZ#180	ND		ug/kg	1.06	--	1
Cl7-BZ#183	ND		ug/kg	1.06	--	1
Cl7-BZ#184	ND		ug/kg	1.06	--	1
Cl7-BZ#187	ND		ug/kg	1.06	--	1
Cl8-BZ#195	ND		ug/kg	1.06	--	1
Cl9-BZ#206	ND		ug/kg	1.06	--	1
Cl10-BZ#209	ND		ug/kg	1.06	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	85		30-150
Pyrene-d10	90		30-150
Benzo(b)fluoranthene-d12	89		30-150
DBOB	89		30-150
BZ 198	83		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-06	Date Collected:	02/24/15 14:20
Client ID:	L-51	Date Received:	02/24/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 02:07	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/05/15
Percent Solids:	79%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	10.6	--	1
Acenaphthylene	ND		ug/kg	10.6	--	1
Acenaphthene	ND		ug/kg	10.6	--	1
Fluorene	ND		ug/kg	10.6	--	1
Phenanthrene	ND		ug/kg	10.6	--	1
Anthracene	ND		ug/kg	10.6	--	1
Fluoranthene	ND		ug/kg	10.6	--	1
Pyrene	ND		ug/kg	10.6	--	1
Benz(a)anthracene	ND		ug/kg	10.6	--	1
Chrysene	ND		ug/kg	10.6	--	1
Benzo(b)fluoranthene	ND		ug/kg	10.6	--	1
Benzo(k)fluoranthene	ND		ug/kg	10.6	--	1
Benzo(a)pyrene	ND		ug/kg	10.6	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	10.6	--	1
Dibenz(a,h)anthracene	ND		ug/kg	10.6	--	1
Benzo(ghi)perylene	ND		ug/kg	10.6	--	1
Cl2-BZ#8	ND		ug/kg	1.06	--	1
Cl3-BZ#18	ND		ug/kg	1.06	--	1
Cl3-BZ#28	ND		ug/kg	1.06	--	1
Cl4-BZ#44	ND		ug/kg	1.06	--	1
Cl4-BZ#49	ND		ug/kg	1.06	--	1
Cl4-BZ#52	ND		ug/kg	1.06	--	1
Cl4-BZ#66	ND		ug/kg	1.06	--	1
Cl5-BZ#87	ND		ug/kg	1.06	--	1
Cl5-BZ#101	ND		ug/kg	1.06	--	1
Cl5-BZ#105	ND		ug/kg	1.06	--	1
Cl5-BZ#118	ND		ug/kg	1.06	--	1
Cl6-BZ#128	ND		ug/kg	1.06	--	1
Cl6-BZ#138	ND		ug/kg	1.06	--	1
Cl6-BZ#153	ND		ug/kg	1.06	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-06 Date Collected: 02/24/15 14:20

Client ID: L-51 Date Received: 02/24/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	1.06	--	1
Cl7-BZ#180	ND		ug/kg	1.06	--	1
Cl7-BZ#183	ND		ug/kg	1.06	--	1
Cl7-BZ#184	ND		ug/kg	1.06	--	1
Cl7-BZ#187	ND		ug/kg	1.06	--	1
Cl8-BZ#195	ND		ug/kg	1.06	--	1
Cl9-BZ#206	ND		ug/kg	1.06	--	1
Cl10-BZ#209	ND		ug/kg	1.06	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	85		30-150
Pyrene-d10	88		30-150
Benzo(b)fluoranthene-d12	90		30-150
DBOB	94		30-150
BZ 198	86		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-07	Date Collected:	02/24/15 14:35
Client ID:	L-62	Date Received:	02/24/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 03:36	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/05/15
Percent Solids:	63%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	7.86	--	1
Acenaphthylene	19.6		ug/kg	7.86	--	1
Acenaphthene	ND		ug/kg	7.86	--	1
Fluorene	ND		ug/kg	7.86	--	1
Phenanthrene	72.1		ug/kg	7.86	--	1
Anthracene	15.1		ug/kg	7.86	--	1
Fluoranthene	191		ug/kg	7.86	--	1
Pyrene	172		ug/kg	7.86	--	1
Benz(a)anthracene	93.1		ug/kg	7.86	--	1
Chrysene	113		ug/kg	7.86	--	1
Benzo(b)fluoranthene	131		ug/kg	7.86	--	1
Benzo(k)fluoranthene	96.7		ug/kg	7.86	--	1
Benzo(a)pyrene	110		ug/kg	7.86	--	1
Indeno(1,2,3-cd)Pyrene	93.3		ug/kg	7.86	--	1
Dibenz(a,h)anthracene	18.0		ug/kg	7.86	--	1
Benzo(ghi)perylene	88.7		ug/kg	7.86	--	1
Cl2-BZ#8	ND		ug/kg	0.786	--	1
Cl3-BZ#18	ND		ug/kg	0.786	--	1
Cl3-BZ#28	ND		ug/kg	0.786	--	1
Cl4-BZ#44	ND		ug/kg	0.786	--	1
Cl4-BZ#49	ND		ug/kg	0.786	--	1
Cl4-BZ#52	ND		ug/kg	0.786	--	1
Cl4-BZ#66	ND		ug/kg	0.786	--	1
Cl5-BZ#87	ND		ug/kg	0.786	--	1
Cl5-BZ#101	ND		ug/kg	0.786	--	1
Cl5-BZ#105	ND		ug/kg	0.786	--	1
Cl5-BZ#118	ND		ug/kg	0.786	--	1
Cl6-BZ#128	ND		ug/kg	0.786	--	1
Cl6-BZ#138	0.978		ug/kg	0.786	--	1
Cl6-BZ#153	ND		ug/kg	0.786	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-07 Date Collected: 02/24/15 14:35

Client ID: L-62 Date Received: 02/24/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	0.786	--	1
Cl7-BZ#180	ND		ug/kg	0.786	--	1
Cl7-BZ#183	ND		ug/kg	0.786	--	1
Cl7-BZ#184	ND		ug/kg	0.786	--	1
Cl7-BZ#187	ND		ug/kg	0.786	--	1
Cl8-BZ#195	ND		ug/kg	0.786	--	1
Cl9-BZ#206	ND		ug/kg	0.786	--	1
Cl10-BZ#209	ND		ug/kg	0.786	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	84		30-150
Pyrene-d10	87		30-150
Benzo(b)fluoranthene-d12	86		30-150
DBOB	89		30-150
BZ 198	89		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-08	Date Collected:	02/25/15 09:33
Client ID:	L41	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 06:53	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/05/15
Percent Solids:	75%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	13.2	--	1
Acenaphthylene	ND		ug/kg	13.2	--	1
Acenaphthene	ND		ug/kg	13.2	--	1
Fluorene	ND		ug/kg	13.2	--	1
Phenanthrene	ND		ug/kg	13.2	--	1
Anthracene	ND		ug/kg	13.2	--	1
Fluoranthene	ND		ug/kg	13.2	--	1
Pyrene	ND		ug/kg	13.2	--	1
Benz(a)anthracene	ND		ug/kg	13.2	--	1
Chrysene	ND		ug/kg	13.2	--	1
Benzo(b)fluoranthene	ND		ug/kg	13.2	--	1
Benzo(k)fluoranthene	ND		ug/kg	13.2	--	1
Benzo(a)pyrene	ND		ug/kg	13.2	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	13.2	--	1
Dibenz(a,h)anthracene	ND		ug/kg	13.2	--	1
Benzo(ghi)perylene	ND		ug/kg	13.2	--	1
Cl2-BZ#8	ND		ug/kg	1.32	--	1
Cl3-BZ#18	ND		ug/kg	1.32	--	1
Cl3-BZ#28	ND		ug/kg	1.32	--	1
Cl4-BZ#44	ND		ug/kg	1.32	--	1
Cl4-BZ#49	ND		ug/kg	1.32	--	1
Cl4-BZ#52	ND		ug/kg	1.32	--	1
Cl4-BZ#66	ND		ug/kg	1.32	--	1
Cl5-BZ#87	ND		ug/kg	1.32	--	1
Cl5-BZ#101	ND		ug/kg	1.32	--	1
Cl5-BZ#105	ND		ug/kg	1.32	--	1
Cl5-BZ#118	ND		ug/kg	1.32	--	1
Cl6-BZ#128	ND		ug/kg	1.32	--	1
Cl6-BZ#138	ND		ug/kg	1.32	--	1
Cl6-BZ#153	ND		ug/kg	1.32	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-08 Date Collected: 02/25/15 09:33

Client ID: L41 Date Received: 02/26/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	1.32	--	1
Cl7-BZ#180	ND		ug/kg	1.32	--	1
Cl7-BZ#183	ND		ug/kg	1.32	--	1
Cl7-BZ#184	ND		ug/kg	1.32	--	1
Cl7-BZ#187	ND		ug/kg	1.32	--	1
Cl8-BZ#195	ND		ug/kg	1.32	--	1
Cl9-BZ#206	ND		ug/kg	1.32	--	1
Cl10-BZ#209	ND		ug/kg	1.32	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	83		30-150
Pyrene-d10	87		30-150
Benzo(b)fluoranthene-d12	86		30-150
DBOB	90		30-150
BZ 198	87		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-09	Date Collected:	02/25/15 10:05
Client ID:	L32	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 07:26	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/05/15
Percent Solids:	78%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	12.3	--	1
Acenaphthylene	ND		ug/kg	12.3	--	1
Acenaphthene	ND		ug/kg	12.3	--	1
Fluorene	ND		ug/kg	12.3	--	1
Phenanthrene	ND		ug/kg	12.3	--	1
Anthracene	ND		ug/kg	12.3	--	1
Fluoranthene	ND		ug/kg	12.3	--	1
Pyrene	ND		ug/kg	12.3	--	1
Benz(a)anthracene	ND		ug/kg	12.3	--	1
Chrysene	ND		ug/kg	12.3	--	1
Benzo(b)fluoranthene	ND		ug/kg	12.3	--	1
Benzo(k)fluoranthene	ND		ug/kg	12.3	--	1
Benzo(a)pyrene	ND		ug/kg	12.3	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	12.3	--	1
Dibenz(a,h)anthracene	ND		ug/kg	12.3	--	1
Benzo(ghi)perylene	ND		ug/kg	12.3	--	1
Cl2-BZ#8	ND		ug/kg	1.23	--	1
Cl3-BZ#18	ND		ug/kg	1.23	--	1
Cl3-BZ#28	ND		ug/kg	1.23	--	1
Cl4-BZ#44	ND		ug/kg	1.23	--	1
Cl4-BZ#49	ND		ug/kg	1.23	--	1
Cl4-BZ#52	ND		ug/kg	1.23	--	1
Cl4-BZ#66	ND		ug/kg	1.23	--	1
Cl5-BZ#87	ND		ug/kg	1.23	--	1
Cl5-BZ#101	ND		ug/kg	1.23	--	1
Cl5-BZ#105	ND		ug/kg	1.23	--	1
Cl5-BZ#118	ND		ug/kg	1.23	--	1
Cl6-BZ#128	ND		ug/kg	1.23	--	1
Cl6-BZ#138	ND		ug/kg	1.23	--	1
Cl6-BZ#153	ND		ug/kg	1.23	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-09 Date Collected: 02/25/15 10:05

Client ID: L32 Date Received: 02/26/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	1.23	--	1
Cl7-BZ#180	ND		ug/kg	1.23	--	1
Cl7-BZ#183	ND		ug/kg	1.23	--	1
Cl7-BZ#184	ND		ug/kg	1.23	--	1
Cl7-BZ#187	ND		ug/kg	1.23	--	1
Cl8-BZ#195	ND		ug/kg	1.23	--	1
Cl9-BZ#206	ND		ug/kg	1.23	--	1
Cl10-BZ#209	ND		ug/kg	1.23	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	81		30-150
Pyrene-d10	85		30-150
Benzo(b)fluoranthene-d12	86		30-150
DBOB	94		30-150
BZ 198	86		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-10	Date Collected:	02/25/15 10:19
Client ID:	L35	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 07:59	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/05/15
Percent Solids:	74%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	13.0	--	1
Acenaphthylene	ND		ug/kg	13.0	--	1
Acenaphthene	ND		ug/kg	13.0	--	1
Fluorene	ND		ug/kg	13.0	--	1
Phenanthrene	ND		ug/kg	13.0	--	1
Anthracene	ND		ug/kg	13.0	--	1
Fluoranthene	ND		ug/kg	13.0	--	1
Pyrene	ND		ug/kg	13.0	--	1
Benz(a)anthracene	ND		ug/kg	13.0	--	1
Chrysene	ND		ug/kg	13.0	--	1
Benzo(b)fluoranthene	ND		ug/kg	13.0	--	1
Benzo(k)fluoranthene	ND		ug/kg	13.0	--	1
Benzo(a)pyrene	ND		ug/kg	13.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	13.0	--	1
Dibenz(a,h)anthracene	ND		ug/kg	13.0	--	1
Benzo(ghi)perylene	ND		ug/kg	13.0	--	1
Cl2-BZ#8	ND		ug/kg	1.30	--	1
Cl3-BZ#18	ND		ug/kg	1.30	--	1
Cl3-BZ#28	ND		ug/kg	1.30	--	1
Cl4-BZ#44	ND		ug/kg	1.30	--	1
Cl4-BZ#49	ND		ug/kg	1.30	--	1
Cl4-BZ#52	ND		ug/kg	1.30	--	1
Cl4-BZ#66	ND		ug/kg	1.30	--	1
Cl5-BZ#87	ND		ug/kg	1.30	--	1
Cl5-BZ#101	ND		ug/kg	1.30	--	1
Cl5-BZ#105	ND		ug/kg	1.30	--	1
Cl5-BZ#118	ND		ug/kg	1.30	--	1
Cl6-BZ#128	ND		ug/kg	1.30	--	1
Cl6-BZ#138	ND		ug/kg	1.30	--	1
Cl6-BZ#153	ND		ug/kg	1.30	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-10 Date Collected: 02/25/15 10:19

Client ID: L35 Date Received: 02/26/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	1.30	--	1
Cl7-BZ#180	ND		ug/kg	1.30	--	1
Cl7-BZ#183	ND		ug/kg	1.30	--	1
Cl7-BZ#184	ND		ug/kg	1.30	--	1
Cl7-BZ#187	ND		ug/kg	1.30	--	1
Cl8-BZ#195	ND		ug/kg	1.30	--	1
Cl9-BZ#206	ND		ug/kg	1.30	--	1
Cl10-BZ#209	ND		ug/kg	1.30	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	81		30-150
Pyrene-d10	86		30-150
Benzo(b)fluoranthene-d12	86		30-150
DBOB	93		30-150
BZ 198	83		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-11	Date Collected:	02/25/15 10:35
Client ID:	L33	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 08:32	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/05/15
Percent Solids:	70%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	7.00	--	1
Acenaphthylene	ND		ug/kg	7.00	--	1
Acenaphthene	ND		ug/kg	7.00	--	1
Fluorene	ND		ug/kg	7.00	--	1
Phenanthrene	ND		ug/kg	7.00	--	1
Anthracene	ND		ug/kg	7.00	--	1
Fluoranthene	14.7		ug/kg	7.00	--	1
Pyrene	16.6		ug/kg	7.00	--	1
Benz(a)anthracene	9.76		ug/kg	7.00	--	1
Chrysene	12.4		ug/kg	7.00	--	1
Benzo(b)fluoranthene	12.3		ug/kg	7.00	--	1
Benzo(k)fluoranthene	11.7		ug/kg	7.00	--	1
Benzo(a)pyrene	12.3		ug/kg	7.00	--	1
Indeno(1,2,3-cd)Pyrene	10.4		ug/kg	7.00	--	1
Dibenz(a,h)anthracene	ND		ug/kg	7.00	--	1
Benzo(ghi)perylene	9.98		ug/kg	7.00	--	1
Cl2-BZ#8	ND		ug/kg	0.700	--	1
Cl3-BZ#18	ND		ug/kg	0.700	--	1
Cl3-BZ#28	ND		ug/kg	0.700	--	1
Cl4-BZ#44	ND		ug/kg	0.700	--	1
Cl4-BZ#49	ND		ug/kg	0.700	--	1
Cl4-BZ#52	ND		ug/kg	0.700	--	1
Cl4-BZ#66	ND		ug/kg	0.700	--	1
Cl5-BZ#87	ND		ug/kg	0.700	--	1
Cl5-BZ#101	ND		ug/kg	0.700	--	1
Cl5-BZ#105	ND		ug/kg	0.700	--	1
Cl5-BZ#118	ND		ug/kg	0.700	--	1
Cl6-BZ#128	ND		ug/kg	0.700	--	1
Cl6-BZ#138	ND		ug/kg	0.700	--	1
Cl6-BZ#153	ND		ug/kg	0.700	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-11 Date Collected: 02/25/15 10:35

Client ID: L33 Date Received: 02/26/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	0.700	--	1
Cl7-BZ#180	ND		ug/kg	0.700	--	1
Cl7-BZ#183	ND		ug/kg	0.700	--	1
Cl7-BZ#184	ND		ug/kg	0.700	--	1
Cl7-BZ#187	ND		ug/kg	0.700	--	1
Cl8-BZ#195	ND		ug/kg	0.700	--	1
Cl9-BZ#206	ND		ug/kg	0.700	--	1
Cl10-BZ#209	ND		ug/kg	0.700	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	81		30-150
Pyrene-d10	85		30-150
Benzo(b)fluoranthene-d12	84		30-150
DBOB	88		30-150
BZ 198	81		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-12	Date Collected:	02/25/15 11:00
Client ID:	L31	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 09:05	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/05/15
Percent Solids:	74%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	12.6	--	1
Acenaphthylene	ND		ug/kg	12.6	--	1
Acenaphthene	ND		ug/kg	12.6	--	1
Fluorene	ND		ug/kg	12.6	--	1
Phenanthrene	ND		ug/kg	12.6	--	1
Anthracene	ND		ug/kg	12.6	--	1
Fluoranthene	ND		ug/kg	12.6	--	1
Pyrene	12.9		ug/kg	12.6	--	1
Benz(a)anthracene	ND		ug/kg	12.6	--	1
Chrysene	ND		ug/kg	12.6	--	1
Benzo(b)fluoranthene	ND		ug/kg	12.6	--	1
Benzo(k)fluoranthene	ND		ug/kg	12.6	--	1
Benzo(a)pyrene	ND		ug/kg	12.6	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	12.6	--	1
Dibenz(a,h)anthracene	ND		ug/kg	12.6	--	1
Benzo(ghi)perylene	ND		ug/kg	12.6	--	1
Cl2-BZ#8	ND		ug/kg	1.26	--	1
Cl3-BZ#18	ND		ug/kg	1.26	--	1
Cl3-BZ#28	ND		ug/kg	1.26	--	1
Cl4-BZ#44	ND		ug/kg	1.26	--	1
Cl4-BZ#49	ND		ug/kg	1.26	--	1
Cl4-BZ#52	ND		ug/kg	1.26	--	1
Cl4-BZ#66	ND		ug/kg	1.26	--	1
Cl5-BZ#87	ND		ug/kg	1.26	--	1
Cl5-BZ#101	ND		ug/kg	1.26	--	1
Cl5-BZ#105	ND		ug/kg	1.26	--	1
Cl5-BZ#118	ND		ug/kg	1.26	--	1
Cl6-BZ#128	ND		ug/kg	1.26	--	1
Cl6-BZ#138	ND		ug/kg	1.26	--	1
Cl6-BZ#153	ND		ug/kg	1.26	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-12 Date Collected: 02/25/15 11:00

Client ID: L31 Date Received: 02/26/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	1.26	--	1
Cl7-BZ#180	ND		ug/kg	1.26	--	1
Cl7-BZ#183	ND		ug/kg	1.26	--	1
Cl7-BZ#184	ND		ug/kg	1.26	--	1
Cl7-BZ#187	ND		ug/kg	1.26	--	1
Cl8-BZ#195	ND		ug/kg	1.26	--	1
Cl9-BZ#206	ND		ug/kg	1.26	--	1
Cl10-BZ#209	ND		ug/kg	1.26	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	82		30-150
Pyrene-d10	85		30-150
Benzo(b)fluoranthene-d12	85		30-150
DBOB	90		30-150
BZ 198	85		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-13	Date Collected:	02/25/15 11:19
Client ID:	L34	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 09:39	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/09/15
Percent Solids:	77%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	11.2	--	1
Acenaphthylene	ND		ug/kg	11.2	--	1
Acenaphthene	ND		ug/kg	11.2	--	1
Fluorene	ND		ug/kg	11.2	--	1
Phenanthrene	ND		ug/kg	11.2	--	1
Anthracene	ND		ug/kg	11.2	--	1
Fluoranthene	ND		ug/kg	11.2	--	1
Pyrene	ND		ug/kg	11.2	--	1
Benz(a)anthracene	ND		ug/kg	11.2	--	1
Chrysene	ND		ug/kg	11.2	--	1
Benzo(b)fluoranthene	ND		ug/kg	11.2	--	1
Benzo(k)fluoranthene	ND		ug/kg	11.2	--	1
Benzo(a)pyrene	ND		ug/kg	11.2	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	11.2	--	1
Dibenz(a,h)anthracene	ND		ug/kg	11.2	--	1
Benzo(ghi)perylene	ND		ug/kg	11.2	--	1
Cl2-BZ#8	ND		ug/kg	1.12	--	1
Cl3-BZ#18	ND		ug/kg	1.12	--	1
Cl3-BZ#28	ND		ug/kg	1.12	--	1
Cl4-BZ#44	ND		ug/kg	1.12	--	1
Cl4-BZ#49	ND		ug/kg	1.12	--	1
Cl4-BZ#52	ND		ug/kg	1.12	--	1
Cl4-BZ#66	ND		ug/kg	1.12	--	1
Cl5-BZ#87	ND		ug/kg	1.12	--	1
Cl5-BZ#101	ND		ug/kg	1.12	--	1
Cl5-BZ#105	ND		ug/kg	1.12	--	1
Cl5-BZ#118	ND		ug/kg	1.12	--	1
Cl6-BZ#128	ND		ug/kg	1.12	--	1
Cl6-BZ#138	ND		ug/kg	1.12	--	1
Cl6-BZ#153	ND		ug/kg	1.12	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-13 Date Collected: 02/25/15 11:19

Client ID: L34 Date Received: 02/26/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	1.12	--	1
Cl7-BZ#180	ND		ug/kg	1.12	--	1
Cl7-BZ#183	ND		ug/kg	1.12	--	1
Cl7-BZ#184	ND		ug/kg	1.12	--	1
Cl7-BZ#187	ND		ug/kg	1.12	--	1
Cl8-BZ#195	ND		ug/kg	1.12	--	1
Cl9-BZ#206	ND		ug/kg	1.12	--	1
Cl10-BZ#209	ND		ug/kg	1.12	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	84		30-150
Pyrene-d10	87		30-150
Benzo(b)fluoranthene-d12	87		30-150
DBOB	91		30-150
BZ 198	83		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-14	Date Collected:	02/25/15 11:35
Client ID:	L36	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 10:12	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/05/15
Percent Solids:	75%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	13.1	--	1
Acenaphthylene	ND		ug/kg	13.1	--	1
Acenaphthene	ND		ug/kg	13.1	--	1
Fluorene	ND		ug/kg	13.1	--	1
Phenanthrene	ND		ug/kg	13.1	--	1
Anthracene	ND		ug/kg	13.1	--	1
Fluoranthene	13.1		ug/kg	13.1	--	1
Pyrene	15.4		ug/kg	13.1	--	1
Benz(a)anthracene	ND		ug/kg	13.1	--	1
Chrysene	ND		ug/kg	13.1	--	1
Benzo(b)fluoranthene	ND		ug/kg	13.1	--	1
Benzo(k)fluoranthene	ND		ug/kg	13.1	--	1
Benzo(a)pyrene	ND		ug/kg	13.1	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	13.1	--	1
Dibenz(a,h)anthracene	ND		ug/kg	13.1	--	1
Benzo(ghi)perylene	ND		ug/kg	13.1	--	1
Cl2-BZ#8	ND		ug/kg	1.31	--	1
Cl3-BZ#18	ND		ug/kg	1.31	--	1
Cl3-BZ#28	ND		ug/kg	1.31	--	1
Cl4-BZ#44	ND		ug/kg	1.31	--	1
Cl4-BZ#49	ND		ug/kg	1.31	--	1
Cl4-BZ#52	ND		ug/kg	1.31	--	1
Cl4-BZ#66	ND		ug/kg	1.31	--	1
Cl5-BZ#87	ND		ug/kg	1.31	--	1
Cl5-BZ#101	ND		ug/kg	1.31	--	1
Cl5-BZ#105	ND		ug/kg	1.31	--	1
Cl5-BZ#118	ND		ug/kg	1.31	--	1
Cl6-BZ#128	ND		ug/kg	1.31	--	1
Cl6-BZ#138	ND		ug/kg	1.31	--	1
Cl6-BZ#153	ND		ug/kg	1.31	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-14 Date Collected: 02/25/15 11:35

Client ID: L36 Date Received: 02/26/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	1.31	--	1
Cl7-BZ#180	ND		ug/kg	1.31	--	1
Cl7-BZ#183	ND		ug/kg	1.31	--	1
Cl7-BZ#184	ND		ug/kg	1.31	--	1
Cl7-BZ#187	ND		ug/kg	1.31	--	1
Cl8-BZ#195	ND		ug/kg	1.31	--	1
Cl9-BZ#206	ND		ug/kg	1.31	--	1
Cl10-BZ#209	ND		ug/kg	1.31	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	83		30-150
Pyrene-d10	86		30-150
Benzo(b)fluoranthene-d12	86		30-150
DBOB	89		30-150
BZ 198	83		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-15	Date Collected:	02/25/15 12:36
Client ID:	L37	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 10:45	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/05/15
Percent Solids:	71%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	13.5	--	1
Acenaphthylene	ND		ug/kg	13.5	--	1
Acenaphthene	ND		ug/kg	13.5	--	1
Fluorene	ND		ug/kg	13.5	--	1
Phenanthrene	23.3		ug/kg	13.5	--	1
Anthracene	44.6		ug/kg	13.5	--	1
Fluoranthene	93.1		ug/kg	13.5	--	1
Pyrene	130		ug/kg	13.5	--	1
Benz(a)anthracene	87.8		ug/kg	13.5	--	1
Chrysene	88.4		ug/kg	13.5	--	1
Benzo(b)fluoranthene	44.4		ug/kg	13.5	--	1
Benzo(k)fluoranthene	60.6		ug/kg	13.5	--	1
Benzo(a)pyrene	74.1		ug/kg	13.5	--	1
Indeno(1,2,3-cd)Pyrene	35.9		ug/kg	13.5	--	1
Dibenz(a,h)anthracene	ND		ug/kg	13.5	--	1
Benzo(ghi)perylene	33.2		ug/kg	13.5	--	1
Cl2-BZ#8	ND		ug/kg	1.35	--	1
Cl3-BZ#18	ND		ug/kg	1.35	--	1
Cl3-BZ#28	ND		ug/kg	1.35	--	1
Cl4-BZ#44	ND		ug/kg	1.35	--	1
Cl4-BZ#49	ND		ug/kg	1.35	--	1
Cl4-BZ#52	ND		ug/kg	1.35	--	1
Cl4-BZ#66	ND		ug/kg	1.35	--	1
Cl5-BZ#87	ND		ug/kg	1.35	--	1
Cl5-BZ#101	ND		ug/kg	1.35	--	1
Cl5-BZ#105	ND		ug/kg	1.35	--	1
Cl5-BZ#118	ND		ug/kg	1.35	--	1
Cl6-BZ#128	ND		ug/kg	1.35	--	1
Cl6-BZ#138	ND		ug/kg	1.35	--	1
Cl6-BZ#153	ND		ug/kg	1.35	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-15 Date Collected: 02/25/15 12:36

Client ID: L37 Date Received: 02/26/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	1.35	--	1
Cl7-BZ#180	ND		ug/kg	1.35	--	1
Cl7-BZ#183	ND		ug/kg	1.35	--	1
Cl7-BZ#184	ND		ug/kg	1.35	--	1
Cl7-BZ#187	ND		ug/kg	1.35	--	1
Cl8-BZ#195	ND		ug/kg	1.35	--	1
Cl9-BZ#206	ND		ug/kg	1.35	--	1
Cl10-BZ#209	ND		ug/kg	1.35	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	84		30-150
Pyrene-d10	87		30-150
Benzo(b)fluoranthene-d12	87		30-150
DBOB	91		30-150
BZ 198	84		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-16	Date Collected:	02/25/15 13:06
Client ID:	L38	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 11:18	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/05/15
Percent Solids:	73%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	13.4	--	1
Acenaphthylene	ND		ug/kg	13.4	--	1
Acenaphthene	ND		ug/kg	13.4	--	1
Fluorene	ND		ug/kg	13.4	--	1
Phenanthrene	ND		ug/kg	13.4	--	1
Anthracene	ND		ug/kg	13.4	--	1
Fluoranthene	ND		ug/kg	13.4	--	1
Pyrene	ND		ug/kg	13.4	--	1
Benz(a)anthracene	ND		ug/kg	13.4	--	1
Chrysene	ND		ug/kg	13.4	--	1
Benzo(b)fluoranthene	ND		ug/kg	13.4	--	1
Benzo(k)fluoranthene	ND		ug/kg	13.4	--	1
Benzo(a)pyrene	ND		ug/kg	13.4	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	13.4	--	1
Dibenz(a,h)anthracene	ND		ug/kg	13.4	--	1
Benzo(ghi)perylene	ND		ug/kg	13.4	--	1
Cl2-BZ#8	ND		ug/kg	1.34	--	1
Cl3-BZ#18	ND		ug/kg	1.34	--	1
Cl3-BZ#28	ND		ug/kg	1.34	--	1
Cl4-BZ#44	ND		ug/kg	1.34	--	1
Cl4-BZ#49	ND		ug/kg	1.34	--	1
Cl4-BZ#52	ND		ug/kg	1.34	--	1
Cl4-BZ#66	ND		ug/kg	1.34	--	1
Cl5-BZ#87	ND		ug/kg	1.34	--	1
Cl5-BZ#101	ND		ug/kg	1.34	--	1
Cl5-BZ#105	ND		ug/kg	1.34	--	1
Cl5-BZ#118	ND		ug/kg	1.34	--	1
Cl6-BZ#128	ND		ug/kg	1.34	--	1
Cl6-BZ#138	ND		ug/kg	1.34	--	1
Cl6-BZ#153	ND		ug/kg	1.34	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-16 Date Collected: 02/25/15 13:06

Client ID: L38 Date Received: 02/26/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	1.34	--	1
Cl7-BZ#180	ND		ug/kg	1.34	--	1
Cl7-BZ#183	ND		ug/kg	1.34	--	1
Cl7-BZ#184	ND		ug/kg	1.34	--	1
Cl7-BZ#187	ND		ug/kg	1.34	--	1
Cl8-BZ#195	ND		ug/kg	1.34	--	1
Cl9-BZ#206	ND		ug/kg	1.34	--	1
Cl10-BZ#209	ND		ug/kg	1.34	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	75		30-150
Pyrene-d10	80		30-150
Benzo(b)fluoranthene-d12	79		30-150
DBOB	83		30-150
BZ 198	80		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-17	Date Collected:	02/25/15 13:30
Client ID:	L40	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 11:50	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/05/15
Percent Solids:	66%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	7.26	--	1
Acenaphthylene	ND		ug/kg	7.26	--	1
Acenaphthene	ND		ug/kg	7.26	--	1
Fluorene	ND		ug/kg	7.26	--	1
Phenanthrene	ND		ug/kg	7.26	--	1
Anthracene	ND		ug/kg	7.26	--	1
Fluoranthene	8.06		ug/kg	7.26	--	1
Pyrene	9.45		ug/kg	7.26	--	1
Benz(a)anthracene	ND		ug/kg	7.26	--	1
Chrysene	7.92		ug/kg	7.26	--	1
Benzo(b)fluoranthene	ND		ug/kg	7.26	--	1
Benzo(k)fluoranthene	ND		ug/kg	7.26	--	1
Benzo(a)pyrene	ND		ug/kg	7.26	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	7.26	--	1
Dibenz(a,h)anthracene	ND		ug/kg	7.26	--	1
Benzo(ghi)perylene	ND		ug/kg	7.26	--	1
Cl2-BZ#8	ND		ug/kg	0.726	--	1
Cl3-BZ#18	ND		ug/kg	0.726	--	1
Cl3-BZ#28	ND		ug/kg	0.726	--	1
Cl4-BZ#44	ND		ug/kg	0.726	--	1
Cl4-BZ#49	ND		ug/kg	0.726	--	1
Cl4-BZ#52	ND		ug/kg	0.726	--	1
Cl4-BZ#66	ND		ug/kg	0.726	--	1
Cl5-BZ#87	ND		ug/kg	0.726	--	1
Cl5-BZ#101	ND		ug/kg	0.726	--	1
Cl5-BZ#105	ND		ug/kg	0.726	--	1
Cl5-BZ#118	ND		ug/kg	0.726	--	1
Cl6-BZ#128	ND		ug/kg	0.726	--	1
Cl6-BZ#138	ND		ug/kg	0.726	--	1
Cl6-BZ#153	ND		ug/kg	0.726	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-17 Date Collected: 02/25/15 13:30

Client ID: L40 Date Received: 02/26/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	0.726	--	1
Cl7-BZ#180	ND		ug/kg	0.726	--	1
Cl7-BZ#183	ND		ug/kg	0.726	--	1
Cl7-BZ#184	ND		ug/kg	0.726	--	1
Cl7-BZ#187	ND		ug/kg	0.726	--	1
Cl8-BZ#195	ND		ug/kg	0.726	--	1
Cl9-BZ#206	ND		ug/kg	0.726	--	1
Cl10-BZ#209	ND		ug/kg	0.726	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	76		30-150
Pyrene-d10	80		30-150
Benzo(b)fluoranthene-d12	78		30-150
DBOB	85		30-150
BZ 198	76		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-18	Date Collected:	02/25/15 13:45
Client ID:	L39	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 12:23	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/05/15
Percent Solids:	71%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	14.1	--	1
Acenaphthylene	ND		ug/kg	14.1	--	1
Acenaphthene	ND		ug/kg	14.1	--	1
Fluorene	ND		ug/kg	14.1	--	1
Phenanthrene	ND		ug/kg	14.1	--	1
Anthracene	ND		ug/kg	14.1	--	1
Fluoranthene	ND		ug/kg	14.1	--	1
Pyrene	15.2		ug/kg	14.1	--	1
Benz(a)anthracene	ND		ug/kg	14.1	--	1
Chrysene	ND		ug/kg	14.1	--	1
Benzo(b)fluoranthene	ND		ug/kg	14.1	--	1
Benzo(k)fluoranthene	ND		ug/kg	14.1	--	1
Benzo(a)pyrene	ND		ug/kg	14.1	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	14.1	--	1
Dibenz(a,h)anthracene	ND		ug/kg	14.1	--	1
Benzo(ghi)perylene	ND		ug/kg	14.1	--	1
Cl2-BZ#8	ND		ug/kg	1.41	--	1
Cl3-BZ#18	ND		ug/kg	1.41	--	1
Cl3-BZ#28	ND		ug/kg	1.41	--	1
Cl4-BZ#44	ND		ug/kg	1.41	--	1
Cl4-BZ#49	ND		ug/kg	1.41	--	1
Cl4-BZ#52	ND		ug/kg	1.41	--	1
Cl4-BZ#66	ND		ug/kg	1.41	--	1
Cl5-BZ#87	ND		ug/kg	1.41	--	1
Cl5-BZ#101	ND		ug/kg	1.41	--	1
Cl5-BZ#105	ND		ug/kg	1.41	--	1
Cl5-BZ#118	ND		ug/kg	1.41	--	1
Cl6-BZ#128	ND		ug/kg	1.41	--	1
Cl6-BZ#138	ND		ug/kg	1.41	--	1
Cl6-BZ#153	ND		ug/kg	1.41	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-18 Date Collected: 02/25/15 13:45

Client ID: L39 Date Received: 02/26/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	1.41	--	1
Cl7-BZ#180	ND		ug/kg	1.41	--	1
Cl7-BZ#183	ND		ug/kg	1.41	--	1
Cl7-BZ#184	ND		ug/kg	1.41	--	1
Cl7-BZ#187	ND		ug/kg	1.41	--	1
Cl8-BZ#195	ND		ug/kg	1.41	--	1
Cl9-BZ#206	ND		ug/kg	1.41	--	1
Cl10-BZ#209	ND		ug/kg	1.41	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	79		30-150
Pyrene-d10	84		30-150
Benzo(b)fluoranthene-d12	83		30-150
DBOB	87		30-150
BZ 198	83		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-19	Date Collected:	02/25/15 14:24
Client ID:	L26A	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 12:56	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/05/15
Percent Solids:	65%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	7.18	--	1
Acenaphthylene	ND		ug/kg	7.18	--	1
Acenaphthene	ND		ug/kg	7.18	--	1
Fluorene	ND		ug/kg	7.18	--	1
Phenanthrene	10.2		ug/kg	7.18	--	1
Anthracene	ND		ug/kg	7.18	--	1
Fluoranthene	26.5		ug/kg	7.18	--	1
Pyrene	27.8		ug/kg	7.18	--	1
Benz(a)anthracene	15.3		ug/kg	7.18	--	1
Chrysene	20.6		ug/kg	7.18	--	1
Benzo(b)fluoranthene	18.3		ug/kg	7.18	--	1
Benzo(k)fluoranthene	21.0		ug/kg	7.18	--	1
Benzo(a)pyrene	19.2		ug/kg	7.18	--	1
Indeno(1,2,3-cd)Pyrene	15.8		ug/kg	7.18	--	1
Dibenz(a,h)anthracene	ND		ug/kg	7.18	--	1
Benzo(ghi)perylene	15.2		ug/kg	7.18	--	1
Cl2-BZ#8	ND		ug/kg	0.718	--	1
Cl3-BZ#18	ND		ug/kg	0.718	--	1
Cl3-BZ#28	ND		ug/kg	0.718	--	1
Cl4-BZ#44	ND		ug/kg	0.718	--	1
Cl4-BZ#49	ND		ug/kg	0.718	--	1
Cl4-BZ#52	ND		ug/kg	0.718	--	1
Cl4-BZ#66	ND		ug/kg	0.718	--	1
Cl5-BZ#87	ND		ug/kg	0.718	--	1
Cl5-BZ#101	ND		ug/kg	0.718	--	1
Cl5-BZ#105	ND		ug/kg	0.718	--	1
Cl5-BZ#118	ND		ug/kg	0.718	--	1
Cl6-BZ#128	ND		ug/kg	0.718	--	1
Cl6-BZ#138	ND		ug/kg	0.718	--	1
Cl6-BZ#153	ND		ug/kg	0.718	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-19 Date Collected: 02/25/15 14:24

Client ID: L26A Date Received: 02/26/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	0.718	--	1
Cl7-BZ#180	ND		ug/kg	0.718	--	1
Cl7-BZ#183	ND		ug/kg	0.718	--	1
Cl7-BZ#184	ND		ug/kg	0.718	--	1
Cl7-BZ#187	ND		ug/kg	0.718	--	1
Cl8-BZ#195	ND		ug/kg	0.718	--	1
Cl9-BZ#206	ND		ug/kg	0.718	--	1
Cl10-BZ#209	ND		ug/kg	0.718	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	74		30-150
Pyrene-d10	78		30-150
Benzo(b)fluoranthene-d12	78		30-150
DBOB	81		30-150
BZ 198	75		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-20	Date Collected:	02/25/15 14:30
Client ID:	L26B	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 13:29	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/05/15
Percent Solids:	67%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	7.09	--	1
Acenaphthylene	ND		ug/kg	7.09	--	1
Acenaphthene	ND		ug/kg	7.09	--	1
Fluorene	ND		ug/kg	7.09	--	1
Phenanthrene	13.2		ug/kg	7.09	--	1
Anthracene	ND		ug/kg	7.09	--	1
Fluoranthene	12.9		ug/kg	7.09	--	1
Pyrene	13.3		ug/kg	7.09	--	1
Benz(a)anthracene	ND		ug/kg	7.09	--	1
Chrysene	8.46		ug/kg	7.09	--	1
Benzo(b)fluoranthene	8.80		ug/kg	7.09	--	1
Benzo(k)fluoranthene	ND		ug/kg	7.09	--	1
Benzo(a)pyrene	7.20		ug/kg	7.09	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	7.09	--	1
Dibenz(a,h)anthracene	ND		ug/kg	7.09	--	1
Benzo(ghi)perylene	ND		ug/kg	7.09	--	1
Cl2-BZ#8	ND		ug/kg	0.709	--	1
Cl3-BZ#18	ND		ug/kg	0.709	--	1
Cl3-BZ#28	ND		ug/kg	0.709	--	1
Cl4-BZ#44	ND		ug/kg	0.709	--	1
Cl4-BZ#49	ND		ug/kg	0.709	--	1
Cl4-BZ#52	ND		ug/kg	0.709	--	1
Cl4-BZ#66	ND		ug/kg	0.709	--	1
Cl5-BZ#87	ND		ug/kg	0.709	--	1
Cl5-BZ#101	ND		ug/kg	0.709	--	1
Cl5-BZ#105	ND		ug/kg	0.709	--	1
Cl5-BZ#118	ND		ug/kg	0.709	--	1
Cl6-BZ#128	ND		ug/kg	0.709	--	1
Cl6-BZ#138	ND		ug/kg	0.709	--	1
Cl6-BZ#153	ND		ug/kg	0.709	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-20 Date Collected: 02/25/15 14:30

Client ID: L26B Date Received: 02/26/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	0.709	--	1
Cl7-BZ#180	ND		ug/kg	0.709	--	1
Cl7-BZ#183	ND		ug/kg	0.709	--	1
Cl7-BZ#184	ND		ug/kg	0.709	--	1
Cl7-BZ#187	ND		ug/kg	0.709	--	1
Cl8-BZ#195	ND		ug/kg	0.709	--	1
Cl9-BZ#206	ND		ug/kg	0.709	--	1
Cl10-BZ#209	ND		ug/kg	0.709	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	72		30-150
Pyrene-d10	76		30-150
Benzo(b)fluoranthene-d12	76		30-150
DBOB	76		30-150
BZ 198	71		30-150

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 03/05/15 20:38
Analyst: CM

Extraction Method: EPA 3570
Extraction Date: 03/04/15 09:30
Cleanup Method: EPA 3630
Cleanup Date: 03/05/15

Parameter	Result	Qualifier	Units	RL	MDL
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab for sample(s): 01-20 Batch: WG766025-1					
Naphthalene	ND		ug/kg	5.00	--
Acenaphthylene	ND		ug/kg	5.00	--
Acenaphthene	ND		ug/kg	5.00	--
Fluorene	ND		ug/kg	5.00	--
Phenanthrene	ND		ug/kg	5.00	--
Anthracene	ND		ug/kg	5.00	--
Fluoranthene	ND		ug/kg	5.00	--
Pyrene	ND		ug/kg	5.00	--
Benz(a)anthracene	ND		ug/kg	5.00	--
Chrysene	ND		ug/kg	5.00	--
Benzo(b)fluoranthene	ND		ug/kg	5.00	--
Benzo(k)fluoranthene	ND		ug/kg	5.00	--
Benzo(a)pyrene	ND		ug/kg	5.00	--
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	5.00	--
Dibenz(a,h)anthracene	ND		ug/kg	5.00	--
Benzo(ghi)perylene	ND		ug/kg	5.00	--
Cl2-BZ#8	ND		ug/kg	0.500	--
Cl3-BZ#18	ND		ug/kg	0.500	--
Cl3-BZ#28	ND		ug/kg	0.500	--
Cl4-BZ#44	ND		ug/kg	0.500	--
Cl4-BZ#49	ND		ug/kg	0.500	--
Cl4-BZ#52	ND		ug/kg	0.500	--
Cl4-BZ#66	ND		ug/kg	0.500	--
Cl5-BZ#87	ND		ug/kg	0.500	--
Cl5-BZ#101	ND		ug/kg	0.500	--
Cl5-BZ#105	ND		ug/kg	0.500	--
Cl5-BZ#118	ND		ug/kg	0.500	--
Cl6-BZ#128	ND		ug/kg	0.500	--
Cl6-BZ#138	ND		ug/kg	0.500	--

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 03/05/15 20:38
Analyst: CM

Extraction Method: EPA 3570
Extraction Date: 03/04/15 09:30
Cleanup Method: EPA 3630
Cleanup Date: 03/05/15

Parameter	Result	Qualifier	Units	RL	MDL
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab for sample(s): 01-20 Batch: WG766025-1					
Cl6-BZ#153	ND		ug/kg	0.500	--
Cl7-BZ#170	ND		ug/kg	0.500	--
Cl7-BZ#180	ND		ug/kg	0.500	--
Cl7-BZ#183	ND		ug/kg	0.500	--
Cl7-BZ#184	ND		ug/kg	0.500	--
Cl7-BZ#187	ND		ug/kg	0.500	--
Cl8-BZ#195	ND		ug/kg	0.500	--
Cl9-BZ#206	ND		ug/kg	0.500	--
Cl10-BZ#209	ND		ug/kg	0.500	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	84		30-150
Pyrene-d10	90		30-150
Benzo(b)fluoranthene-d12	92		30-150
DBOB	97		30-150
BZ 198	91		30-150

Lab Control Sample Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

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): 01-20 Batch: WG766025-2 WG766025-3								
Naphthalene	88		84		50-120	5		30
Acenaphthylene	87		82		50-120	6		30
Acenaphthene	88		84		50-120	5		30
Fluorene	88		83		50-120	6		30
Phenanthrene	93		91		50-120	2		30
Anthracene	83		76		50-120	9		30
Fluoranthene	90		88		50-120	2		30
Pyrene	86		85		50-120	1		30
Benz(a)anthracene	90		90		50-120	0		30
Chrysene	88		87		50-120	1		30
Benzo(b)fluoranthene	96		97		50-120	1		30
Benzo(k)fluoranthene	97		94		50-120	3		30
Benzo(a)pyrene	86		82		50-120	5		30
Indeno(1,2,3-cd)Pyrene	90		91		50-120	1		30
Dibenz(a,h)anthracene	91		91		50-120	0		30
Benzo(ghi)perylene	89		90		50-120	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE

Project Number: Not Specified

Lab Number: L1503503

Report Date: 03/16/15

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): 01-20 Batch: WG766025-2 WG766025-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Methylnaphthalene-d10	85		82		30-150
Pyrene-d10	88		87		30-150
Benzo(b)fluoranthene-d12	89		90		30-150

Lab Control Sample Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

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): 01-20 Batch: WG766025-8 WG766025-9								
Cl2-BZ#8	89		93		50-120	4		30
Cl3-BZ#18	86		88		50-120	2		30
Cl3-BZ#28	91		95		50-120	4		30
Cl4-BZ#44	91		96		50-120	5		30
Cl4-BZ#49	87		92		50-120	6		30
Cl4-BZ#52	88		92		50-120	4		30
Cl4-BZ#66	90		94		50-120	4		30
Cl5-BZ#87	91		95		50-120	4		30
Cl5-BZ#101	89		93		50-120	4		30
Cl5-BZ#105	89		94		50-120	5		30
Cl5-BZ#118	86		91		50-120	6		30
Cl6-BZ#128	88		92		50-120	4		30
Cl6-BZ#138	91		94		50-120	3		30
Cl6-BZ#153	88		92		50-120	4		30
Cl7-BZ#170	93		96		50-120	3		30
Cl7-BZ#180	87		90		50-120	3		30
Cl7-BZ#183	89		93		50-120	4		30
Cl7-BZ#184	91		95		50-120	4		30
Cl7-BZ#187	90		93		50-120	3		30
Cl8-BZ#195	86		91		50-120	6		30
Cl9-BZ#206	88		90		50-120	2		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE

Project Number: Not Specified

Lab Number: L1503503

Report Date: 03/16/15

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): 01-20 Batch: WG766025-8 WG766025-9								
Cl10-BZ#209	84		88		50-120	5		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	90		96		30-150
BZ 198	85		89		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG766025-10 WG766025-11 QC Sample: L1503503-07 Client ID: L-62												
Cl2-BZ#8	ND	77.7	65.9	85		68.8	88		50-120	4		30
Cl3-BZ#18	ND	77.7	63.0	81		66.0	85		50-120	5		30
Cl3-BZ#28	ND	77.7	67.7	87		70.4	90		50-120	4		30
Cl4-BZ#44	ND	77.7	69.4	89		72.6	93		50-120	5		30
Cl4-BZ#49	ND	77.7	65.8	85		68.9	88		50-120	5		30
Cl4-BZ#52	ND	77.7	67.0	86		69.6	89		50-120	4		30
Cl4-BZ#66	ND	77.7	69.5	90		72.1	93		50-120	4		30
Cl5-BZ#87	ND	77.7	69.9	90		72.5	93		50-120	4		30
Cl5-BZ#101	ND	77.7	68.7	89		71.6	92		50-120	4		30
Cl5-BZ#105	ND	77.7	69.1	89		72.4	93		50-120	5		30
Cl5-BZ#118	ND	77.7	67.7	87		70.8	91		50-120	4		30
Cl6-BZ#128	ND	77.7	68.3	88		71.8	92		50-120	5		30
Cl6-BZ#138	0.978	77.7	69.9	89		73.7	93		50-120	5		30
Cl6-BZ#153	ND	77.7	69.0	89		72.0	92		50-120	4		30
Cl7-BZ#170	ND	77.7	73.5	95		76.4	98		50-120	4		30
Cl7-BZ#180	ND	77.7	67.9	87		70.4	90		50-120	4		30
Cl7-BZ#183	ND	77.7	68.3	88		72.1	93		50-120	5		30
Cl7-BZ#184	ND	77.7	69.6	90		72.7	93		50-120	4		30
Cl7-BZ#187	ND	77.7	69.6	90		72.9	94		50-120	5		30
Cl8-BZ#195	ND	77.7	68.7	89		72.0	92		50-120	5		30
Cl9-BZ#206	ND	77.7	68.8	89		72.3	93		50-120	5		30

Matrix Spike Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified
Lab Number: L1503503
Report Date: 03/16/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG766025-10 WG766025-11 QC Sample: L1503503-07 Client ID: L-62												
Cl10-BZ#209	ND	77.7	66.8	86		70.6	91		50-120	6		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
BZ 198	92		95		30-150
DBOB	92		94		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG766025-4 WG766025-5 QC Sample: L1503503-07 Client ID: L-62												
Naphthalene	ND	384	302	79		321	83		50-120	6		30
Acenaphthylene	19.6	384	297	72		317	77		50-120	7		30
Acenaphthene	ND	384	295	77		316	82		50-120	7		30
Fluorene	ND	384	299	78		321	83		50-120	7		30
Phenanthrene	72.1	384	362	76		384	81		50-120	6		30
Anthracene	15.1	384	298	74		314	77		50-120	5		30
Fluoranthene	191	384	444	66		462	70		50-120	4		30
Pyrene	172	384	420	65		435	68		50-120	4		30
Benz(a)anthracene	93.1	384	368	72		398	79		50-120	8		30
Chrysene	113	384	371	67		398	74		50-120	7		30
Benzo(b)fluoranthene	131	384	417	75		436	79		50-120	4		30
Benzo(k)fluoranthene	96.7	384	359	68		396	77		50-120	10		30
Benzo(a)pyrene	110	384	381	71		411	78		50-120	8		30
Indeno(1,2,3-cd)Pyrene	93.3	384	374	73		395	78		50-120	5		30
Dibenz(a,h)anthracene	18.0	384	322	79		347	85		50-120	7		30
Benzo(ghi)perylene	88.7	384	354	69		379	75		50-120	7		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	76		79		30-150
Benzo(b)fluoranthene-d12	77		81		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified
Lab Number: L1503503
Report Date: 03/16/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG766025-4 WG766025-5 QC Sample: L1503503-07 Client ID: L-62												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
Pyrene-d10	78		83		30-150

Lab Duplicate Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG766025-6 QC Sample: L1503503-07 Client ID: L-62						
Naphthalene	ND	ND	ug/kg	NC		30
Acenaphthylene	19.6	10.8	ug/kg	**58**	Q	30
Acenaphthene	ND	ND	ug/kg	NC		30
Fluorene	ND	ND	ug/kg	NC		30
Phenanthrene	72.1	38.2	ug/kg	**61**	Q	30
Anthracene	15.1	9.64	ug/kg	**44**	Q	30
Fluoranthene	191	104	ug/kg	**59**	Q	30
Pyrene	172	101	ug/kg	**52**	Q	30
Benz(a)anthracene	93.1	47.6	ug/kg	**65**	Q	30
Chrysene	113	67.2	ug/kg	**51**	Q	30
Benzo(b)fluoranthene	131	64.3	ug/kg	**68**	Q	30
Benzo(k)fluoranthene	96.7	63.9	ug/kg	**41**	Q	30
Benzo(a)pyrene	110	60.9	ug/kg	**57**	Q	30
Indeno(1,2,3-cd)Pyrene	93.3	52.8	ug/kg	**55**	Q	30
Dibenz(a,h)anthracene	18.0	9.23	ug/kg	**64**	Q	30
Benzo(ghi)perylene	88.7	48.9	ug/kg	**58**	Q	30
Cl2-BZ#8	ND	ND	ug/kg	NC		30
Cl3-BZ#18	ND	ND	ug/kg	NC		30
Cl3-BZ#28	ND	ND	ug/kg	NC		30

Lab Duplicate Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG766025-6 QC Sample: L1503503-07 Client ID: L-62					
Cl4-BZ#44	ND	ND	ug/kg	NC	30
Cl4-BZ#49	ND	ND	ug/kg	NC	30
Cl4-BZ#52	ND	ND	ug/kg	NC	30
Cl4-BZ#66	ND	ND	ug/kg	NC	30
Cl5-BZ#87	ND	ND	ug/kg	NC	30
Cl5-BZ#101	ND	ND	ug/kg	NC	30
Cl5-BZ#105	ND	ND	ug/kg	NC	30
Cl5-BZ#118	ND	ND	ug/kg	NC	30
Cl6-BZ#128	ND	ND	ug/kg	NC	30
Cl6-BZ#138	0.978	0.825	ug/kg	17	30
Cl6-BZ#153	ND	ND	ug/kg	NC	30
Cl7-BZ#170	ND	ND	ug/kg	NC	30
Cl7-BZ#180	ND	ND	ug/kg	NC	30
Cl7-BZ#183	ND	ND	ug/kg	NC	30
Cl7-BZ#184	ND	ND	ug/kg	NC	30
Cl7-BZ#187	ND	ND	ug/kg	NC	30
Cl8-BZ#195	ND	ND	ug/kg	NC	30
Cl9-BZ#206	ND	ND	ug/kg	NC	30
Cl10-BZ#209	ND	ND	ug/kg	NC	30

Lab Duplicate Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits

RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG766025-6 QC Sample: L1503503-07 Client ID: L-62

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	84		85		30-150
Pyrene-d10	87		88		30-150
Benzo(b)fluoranthene-d12	86		87		30-150
DBOB	89		94		30-150
BZ 198	89		89		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG766025-7

Parameter	% Recovery	Qual	QC Criteria
Phenanthrene	54		40-140
Fluoranthene	56		40-140
Pyrene	47		40-140
Benz(a)anthracene	52		40-140
Chrysene	67		40-140
Benzo(b)fluoranthene	54		40-140
Benzo(k)fluoranthene	103		40-140
Benzo(a)pyrene	45		40-140
Indeno(1,2,3-cd)Pyrene	60		40-140
Dibenz(a,h)anthracene	96		40-140
Benzo(ghi)perylene	56		40-140
Cl2-BZ#8	54		40-140
Cl3-BZ#18	62		40-140
Cl3-BZ#28	42		40-140
Cl4-BZ#44	62		40-140
Cl4-BZ#49	55		40-140
Cl4-BZ#52	58		40-140
Cl4-BZ#66	50		40-140
Cl5-BZ#87	65		40-140
Cl5-BZ#101	62		40-140
Cl5-BZ#105	66		40-140
Cl5-BZ#118	58		40-140
Cl6-BZ#128	104		40-140
Cl6-BZ#138	71		40-140
Cl6-BZ#153	50		40-140
Cl7-BZ#170	63		40-140
Cl7-BZ#180	52		40-140
Cl7-BZ#183	60		40-140
Cl7-BZ#187	58		40-140
Cl9-BZ#206	69		40-140
Cl10-BZ#209	62		40-140
2-Methylnaphthalene-d10 (Surrogate)	64		30-150
Pyrene-d10 (Surrogate)	65		30-150
Benzo(b)fluoranthene-d12 (Surrogate)	63		30-150
DBOB (Surrogate)	60		30-150
BZ 198 (Surrogate)	66		30-150

PESTICIDES

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-01	Date Collected:	02/24/15 11:22
Client ID:	L-56	Date Received:	02/24/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/04/15 09:30
Analytical Date:	03/05/15 23:16	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/05/15
Percent Solids:	70%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.668	--	1	A
gamma-BHC	ND		ug/kg	0.334	--	1	A
Heptachlor	ND		ug/kg	0.334	--	1	A
Aldrin	ND		ug/kg	0.334	--	1	A
Heptachlor epoxide	ND		ug/kg	0.668	--	1	B
Oxychlordane	ND		ug/kg	0.668	--	1	B
trans-Chlordane	ND		ug/kg	0.334	--	1	A
Endosulfan I	ND		ug/kg	0.334	--	1	A
cis-Chlordane	ND		ug/kg	0.334	--	1	A
trans-Nonachlor	ND		ug/kg	0.334	--	1	A
4,4'-DDE	ND		ug/kg	0.334	--	1	A
Dieldrin	ND		ug/kg	0.334	--	1	A
Endrin	ND		ug/kg	0.334	--	1	A
Endosulfan II	ND		ug/kg	0.334	--	1	A
4,4'-DDD	ND		ug/kg	0.334	--	1	A
cis-Nonachlor	ND		ug/kg	0.334	--	1	A
4,4'-DDT	ND		ug/kg	0.334	--	1	A
Methoxychlor	ND		ug/kg	3.34	--	1	A
Toxaphene	ND		ug/kg	16.8	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	68		30-150	A
BZ 198	81		30-150	A
DBOB	65		30-150	B
BZ 198	82		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-02	Date Collected:	02/24/15 12:01
Client ID:	L-55	Date Received:	02/24/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/04/15 09:30
Analytical Date:	03/05/15 23:48	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/05/15
Percent Solids:	80%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.14	--	1	A
gamma-BHC	ND		ug/kg	0.572	--	1	A
Heptachlor	ND		ug/kg	0.572	--	1	A
Aldrin	ND		ug/kg	0.572	--	1	A
Heptachlor epoxide	ND		ug/kg	1.14	--	1	B
Oxychlordane	ND		ug/kg	1.14	--	1	B
trans-Chlordane	ND		ug/kg	0.572	--	1	A
Endosulfan I	ND		ug/kg	0.572	--	1	A
cis-Chlordane	ND		ug/kg	0.572	--	1	A
trans-Nonachlor	ND		ug/kg	0.572	--	1	A
4,4'-DDE	ND		ug/kg	0.572	--	1	A
Dieldrin	ND		ug/kg	0.572	--	1	A
Endrin	ND		ug/kg	0.572	--	1	A
Endosulfan II	ND		ug/kg	0.572	--	1	A
4,4'-DDD	ND		ug/kg	0.572	--	1	A
cis-Nonachlor	ND		ug/kg	0.572	--	1	A
4,4'-DDT	ND		ug/kg	0.572	--	1	A
Methoxychlor	ND		ug/kg	5.72	--	1	A
Toxaphene	ND		ug/kg	28.7	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	64		30-150	A
BZ 198	79		30-150	A
DBOB	62		30-150	B
BZ 198	80		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-03	Date Collected:	02/24/15 12:35
Client ID:	L-54	Date Received:	02/24/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 00:21	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/05/15
Percent Solids:	79%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.19	--	1	A
gamma-BHC	ND		ug/kg	0.596	--	1	A
Heptachlor	ND		ug/kg	0.596	--	1	A
Aldrin	ND		ug/kg	0.596	--	1	A
Heptachlor epoxide	ND		ug/kg	1.19	--	1	B
Oxychlordane	ND		ug/kg	1.19	--	1	B
trans-Chlordane	ND		ug/kg	0.596	--	1	A
Endosulfan I	ND		ug/kg	0.596	--	1	A
cis-Chlordane	ND		ug/kg	0.596	--	1	A
trans-Nonachlor	ND		ug/kg	0.596	--	1	A
4,4'-DDE	ND		ug/kg	0.596	--	1	A
Dieldrin	ND		ug/kg	0.596	--	1	A
Endrin	ND		ug/kg	0.596	--	1	A
Endosulfan II	ND		ug/kg	0.596	--	1	A
4,4'-DDD	ND		ug/kg	0.596	--	1	A
cis-Nonachlor	ND		ug/kg	0.596	--	1	A
4,4'-DDT	ND		ug/kg	0.596	--	1	A
Methoxychlor	ND		ug/kg	5.96	--	1	A
Toxaphene	ND		ug/kg	29.9	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	55		30-150	A
BZ 198	79		30-150	A
DBOB	53		30-150	B
BZ 198	80		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-04	Date Collected:	02/24/15 13:01
Client ID:	L-53	Date Received:	02/24/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 00:53	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/05/15
Percent Solids:	62%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.765	--	1	A
gamma-BHC	ND		ug/kg	0.382	--	1	A
Heptachlor	ND		ug/kg	0.382	--	1	A
Aldrin	ND		ug/kg	0.382	--	1	A
Heptachlor epoxide	ND		ug/kg	0.765	--	1	B
Oxychlordane	ND		ug/kg	0.765	--	1	B
trans-Chlordane	ND		ug/kg	0.382	--	1	A
Endosulfan I	ND		ug/kg	0.382	--	1	A
cis-Chlordane	ND		ug/kg	0.382	--	1	A
trans-Nonachlor	ND		ug/kg	0.382	--	1	A
4,4'-DDE	ND		ug/kg	0.382	--	1	A
Dieldrin	ND		ug/kg	0.382	--	1	A
Endrin	ND		ug/kg	0.382	--	1	A
Endosulfan II	ND		ug/kg	0.382	--	1	A
4,4'-DDD	ND		ug/kg	0.382	--	1	A
cis-Nonachlor	ND		ug/kg	0.382	--	1	A
4,4'-DDT	ND		ug/kg	0.382	--	1	A
Methoxychlor	ND		ug/kg	3.82	--	1	A
Toxaphene	ND		ug/kg	19.2	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	60		30-150	A
BZ 198	81		30-150	A
DBOB	57		30-150	B
BZ 198	83		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-05	Date Collected:	02/24/15 13:52
Client ID:	L-52	Date Received:	02/24/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 01:25	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/05/15
Percent Solids:	81%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.06	--	1	A
gamma-BHC	ND		ug/kg	0.531	--	1	A
Heptachlor	ND		ug/kg	0.531	--	1	A
Aldrin	ND		ug/kg	0.531	--	1	A
Heptachlor epoxide	ND		ug/kg	1.06	--	1	B
Oxychlordane	ND		ug/kg	1.06	--	1	B
trans-Chlordane	ND		ug/kg	0.531	--	1	A
Endosulfan I	ND		ug/kg	0.531	--	1	A
cis-Chlordane	ND		ug/kg	0.531	--	1	A
trans-Nonachlor	ND		ug/kg	0.531	--	1	A
4,4'-DDE	ND		ug/kg	0.531	--	1	A
Dieldrin	ND		ug/kg	0.531	--	1	A
Endrin	ND		ug/kg	0.531	--	1	A
Endosulfan II	ND		ug/kg	0.531	--	1	A
4,4'-DDD	ND		ug/kg	0.531	--	1	A
cis-Nonachlor	ND		ug/kg	0.531	--	1	A
4,4'-DDT	ND		ug/kg	0.531	--	1	A
Methoxychlor	ND		ug/kg	5.31	--	1	A
Toxaphene	ND		ug/kg	26.7	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	59		30-150	A
BZ 198	80		30-150	A
DBOB	55		30-150	B
BZ 198	82		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-06	Date Collected:	02/24/15 14:20
Client ID:	L-51	Date Received:	02/24/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 01:58	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/05/15
Percent Solids:	79%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.06	--	1	A
gamma-BHC	ND		ug/kg	0.530	--	1	A
Heptachlor	ND		ug/kg	0.530	--	1	A
Aldrin	ND		ug/kg	0.530	--	1	A
Heptachlor epoxide	ND		ug/kg	1.06	--	1	B
Oxychlordane	ND		ug/kg	1.06	--	1	B
trans-Chlordane	ND		ug/kg	0.530	--	1	A
Endosulfan I	ND		ug/kg	0.530	--	1	A
cis-Chlordane	ND		ug/kg	0.530	--	1	A
trans-Nonachlor	ND		ug/kg	0.530	--	1	A
4,4'-DDE	ND		ug/kg	0.530	--	1	A
Dieldrin	ND		ug/kg	0.530	--	1	A
Endrin	ND		ug/kg	0.530	--	1	A
Endosulfan II	ND		ug/kg	0.530	--	1	A
4,4'-DDD	ND		ug/kg	0.530	--	1	A
cis-Nonachlor	ND		ug/kg	0.530	--	1	A
4,4'-DDT	ND		ug/kg	0.530	--	1	A
Methoxychlor	ND		ug/kg	5.30	--	1	A
Toxaphene	ND		ug/kg	26.6	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	63		30-150	A
BZ 198	78		30-150	A
DBOB	59		30-150	B
BZ 198	79		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-07	Date Collected:	02/24/15 14:35
Client ID:	L-62	Date Received:	02/24/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/04/15 09:30
Analytical Date:	03/09/15 21:14	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/05/15
Percent Solids:	63%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.786	--	1	A
gamma-BHC	ND		ug/kg	0.393	--	1	A
Heptachlor	ND		ug/kg	0.393	--	1	A
Aldrin	ND		ug/kg	0.393	--	1	A
Heptachlor epoxide	ND		ug/kg	0.786	--	1	B
Oxychlordane	0.908		ug/kg	0.786	--	1	B
trans-Chlordane	ND		ug/kg	0.393	--	1	A
Endosulfan I	ND		ug/kg	0.393	--	1	A
cis-Chlordane	ND		ug/kg	0.393	--	1	A
trans-Nonachlor	ND		ug/kg	0.393	--	1	A
4,4'-DDE	0.437	IP	ug/kg	0.393	--	1	B
Dieldrin	ND		ug/kg	0.393	--	1	A
Endrin	ND		ug/kg	0.393	--	1	A
Endosulfan II	ND		ug/kg	0.393	--	1	A
4,4'-DDD	ND		ug/kg	0.393	--	1	A
cis-Nonachlor	ND		ug/kg	0.393	--	1	A
4,4'-DDT	0.454	IP	ug/kg	0.393	--	1	A
Methoxychlor	ND		ug/kg	3.93	--	1	A
Toxaphene	ND		ug/kg	19.7	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	80		30-150	A
BZ 198	79		30-150	A
DBOB	68		30-150	B
BZ 198	81		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-08	Date Collected:	02/25/15 09:33
Client ID:	L41	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 06:17	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/05/15
Percent Solids:	75%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.32	--	1	A
gamma-BHC	ND		ug/kg	0.659	--	1	A
Heptachlor	ND		ug/kg	0.659	--	1	A
Aldrin	ND		ug/kg	0.659	--	1	A
Heptachlor epoxide	ND		ug/kg	1.32	--	1	B
Oxychlordane	ND		ug/kg	1.32	--	1	B
trans-Chlordane	ND		ug/kg	0.659	--	1	A
Endosulfan I	ND		ug/kg	0.659	--	1	A
cis-Chlordane	ND		ug/kg	0.659	--	1	A
trans-Nonachlor	ND		ug/kg	0.659	--	1	A
4,4'-DDE	ND		ug/kg	0.659	--	1	A
Dieldrin	ND		ug/kg	0.659	--	1	A
Endrin	ND		ug/kg	0.659	--	1	A
Endosulfan II	ND		ug/kg	0.659	--	1	A
4,4'-DDD	ND		ug/kg	0.659	--	1	A
cis-Nonachlor	ND		ug/kg	0.659	--	1	A
4,4'-DDT	ND		ug/kg	0.659	--	1	A
Methoxychlor	ND		ug/kg	6.59	--	1	A
Toxaphene	ND		ug/kg	33.1	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	60		30-150	A
BZ 198	70		30-150	A
DBOB	50		30-150	B
BZ 198	72		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-09	Date Collected:	02/25/15 10:05
Client ID:	L32	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 06:50	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/05/15
Percent Solids:	78%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.23	--	1	A
gamma-BHC	ND		ug/kg	0.614	--	1	A
Heptachlor	ND		ug/kg	0.614	--	1	A
Aldrin	ND		ug/kg	0.614	--	1	A
Heptachlor epoxide	ND		ug/kg	1.23	--	1	B
Oxychlordane	ND		ug/kg	1.23	--	1	B
trans-Chlordane	ND		ug/kg	0.614	--	1	A
Endosulfan I	ND		ug/kg	0.614	--	1	A
cis-Chlordane	ND		ug/kg	0.614	--	1	A
trans-Nonachlor	ND		ug/kg	0.614	--	1	A
4,4'-DDE	ND		ug/kg	0.614	--	1	A
Dieldrin	ND		ug/kg	0.614	--	1	A
Endrin	ND		ug/kg	0.614	--	1	A
Endosulfan II	ND		ug/kg	0.614	--	1	A
4,4'-DDD	ND		ug/kg	0.614	--	1	A
cis-Nonachlor	ND		ug/kg	0.614	--	1	A
4,4'-DDT	ND		ug/kg	0.614	--	1	A
Methoxychlor	ND		ug/kg	6.14	--	1	A
Toxaphene	ND		ug/kg	30.8	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	62		30-150	A
BZ 198	76		30-150	A
DBOB	59		30-150	B
BZ 198	79		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-10	Date Collected:	02/25/15 10:19
Client ID:	L35	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 07:22	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/05/15
Percent Solids:	74%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.30	--	1	A
gamma-BHC	ND		ug/kg	0.650	--	1	A
Heptachlor	ND		ug/kg	0.650	--	1	A
Aldrin	ND		ug/kg	0.650	--	1	A
Heptachlor epoxide	ND		ug/kg	1.30	--	1	B
Oxychlordane	ND		ug/kg	1.30	--	1	B
trans-Chlordane	ND		ug/kg	0.650	--	1	A
Endosulfan I	ND		ug/kg	0.650	--	1	A
cis-Chlordane	ND		ug/kg	0.650	--	1	A
trans-Nonachlor	ND		ug/kg	0.650	--	1	A
4,4'-DDE	ND		ug/kg	0.650	--	1	A
Dieldrin	ND		ug/kg	0.650	--	1	A
Endrin	ND		ug/kg	0.650	--	1	A
Endosulfan II	ND		ug/kg	0.650	--	1	A
4,4'-DDD	ND		ug/kg	0.650	--	1	A
cis-Nonachlor	ND		ug/kg	0.650	--	1	A
4,4'-DDT	ND		ug/kg	0.650	--	1	A
Methoxychlor	ND		ug/kg	6.50	--	1	A
Toxaphene	ND		ug/kg	32.6	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	59		30-150	A
BZ 198	74		30-150	A
DBOB	54		30-150	B
BZ 198	78		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-11	Date Collected:	02/25/15 10:35
Client ID:	L33	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 07:55	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/05/15
Percent Solids:	70%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.700	--	1	A
gamma-BHC	ND		ug/kg	0.350	--	1	A
Heptachlor	ND		ug/kg	0.350	--	1	A
Aldrin	ND		ug/kg	0.350	--	1	A
Heptachlor epoxide	ND		ug/kg	0.700	--	1	B
Oxychlordane	ND		ug/kg	0.700	--	1	B
trans-Chlordane	ND		ug/kg	0.350	--	1	A
Endosulfan I	ND		ug/kg	0.350	--	1	A
cis-Chlordane	ND		ug/kg	0.350	--	1	A
trans-Nonachlor	ND		ug/kg	0.350	--	1	A
4,4'-DDE	ND		ug/kg	0.350	--	1	A
Dieldrin	ND		ug/kg	0.350	--	1	A
Endrin	ND		ug/kg	0.350	--	1	A
Endosulfan II	ND		ug/kg	0.350	--	1	A
4,4'-DDD	ND		ug/kg	0.350	--	1	A
cis-Nonachlor	ND		ug/kg	0.350	--	1	A
4,4'-DDT	ND		ug/kg	0.350	--	1	A
Methoxychlor	ND		ug/kg	3.50	--	1	A
Toxaphene	ND		ug/kg	17.6	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	62		30-150	A
BZ 198	75		30-150	A
DBOB	56		30-150	B
BZ 198	79		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-12	Date Collected:	02/25/15 11:00
Client ID:	L31	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/04/15 09:30
Analytical Date:	03/06/15 08:27	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/05/15
Percent Solids:	74%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.26	--	1	A
gamma-BHC	ND		ug/kg	0.633	--	1	A
Heptachlor	ND		ug/kg	0.633	--	1	A
Aldrin	ND		ug/kg	0.633	--	1	A
Heptachlor epoxide	ND		ug/kg	1.26	--	1	B
Oxychlordane	ND		ug/kg	1.26	--	1	B
trans-Chlordane	ND		ug/kg	0.633	--	1	A
Endosulfan I	ND		ug/kg	0.633	--	1	A
cis-Chlordane	ND		ug/kg	0.633	--	1	A
trans-Nonachlor	ND		ug/kg	0.633	--	1	A
4,4'-DDE	ND		ug/kg	0.633	--	1	A
Dieldrin	ND		ug/kg	0.633	--	1	A
Endrin	ND		ug/kg	0.633	--	1	A
Endosulfan II	ND		ug/kg	0.633	--	1	A
4,4'-DDD	ND		ug/kg	0.633	--	1	A
cis-Nonachlor	ND		ug/kg	0.633	--	1	A
4,4'-DDT	ND		ug/kg	0.633	--	1	A
Methoxychlor	ND		ug/kg	6.33	--	1	A
Toxaphene	ND		ug/kg	31.8	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	61		30-150	A
BZ 198	75		30-150	A
DBOB	55		30-150	B
BZ 198	79		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-13	Date Collected:	02/25/15 11:19
Client ID:	L34	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/04/15 09:30
Analytical Date:	03/09/15 16:55	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/09/15
Percent Solids:	77%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.12	--	1	A
gamma-BHC	ND		ug/kg	0.561	--	1	A
Heptachlor	ND		ug/kg	0.561	--	1	A
Aldrin	ND		ug/kg	0.561	--	1	A
Heptachlor epoxide	ND		ug/kg	1.12	--	1	B
Oxychlordane	ND		ug/kg	1.12	--	1	B
trans-Chlordane	ND		ug/kg	0.561	--	1	A
Endosulfan I	ND		ug/kg	0.561	--	1	A
cis-Chlordane	ND		ug/kg	0.561	--	1	A
trans-Nonachlor	ND		ug/kg	0.561	--	1	A
4,4'-DDE	ND		ug/kg	0.561	--	1	A
Dieldrin	ND		ug/kg	0.561	--	1	A
Endrin	ND		ug/kg	0.561	--	1	A
Endosulfan II	ND		ug/kg	0.561	--	1	A
4,4'-DDD	ND		ug/kg	0.561	--	1	A
cis-Nonachlor	ND		ug/kg	0.561	--	1	A
4,4'-DDT	ND		ug/kg	0.561	--	1	A
Methoxychlor	ND		ug/kg	5.61	--	1	A
Toxaphene	ND		ug/kg	28.2	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	88		30-150	A
BZ 198	87		30-150	A
DBOB	85		30-150	B
BZ 198	84		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-14	Date Collected:	02/25/15 11:35
Client ID:	L36	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/04/15 09:30
Analytical Date:	03/09/15 17:27	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/05/15
Percent Solids:	75%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.31	--	1	A
gamma-BHC	ND		ug/kg	0.657	--	1	A
Heptachlor	ND		ug/kg	0.657	--	1	A
Aldrin	ND		ug/kg	0.657	--	1	A
Heptachlor epoxide	ND		ug/kg	1.31	--	1	B
Oxychlordane	ND		ug/kg	1.31	--	1	B
trans-Chlordane	ND		ug/kg	0.657	--	1	A
Endosulfan I	ND		ug/kg	0.657	--	1	A
cis-Chlordane	ND		ug/kg	0.657	--	1	A
trans-Nonachlor	ND		ug/kg	0.657	--	1	A
4,4'-DDE	ND		ug/kg	0.657	--	1	A
Dieldrin	ND		ug/kg	0.657	--	1	A
Endrin	ND		ug/kg	0.657	--	1	A
Endosulfan II	ND		ug/kg	0.657	--	1	A
4,4'-DDD	ND		ug/kg	0.657	--	1	A
cis-Nonachlor	ND		ug/kg	0.657	--	1	A
4,4'-DDT	ND		ug/kg	0.657	--	1	A
Methoxychlor	ND		ug/kg	6.57	--	1	A
Toxaphene	ND		ug/kg	33.0	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	65		30-150	A
BZ 198	78		30-150	A
DBOB	60		30-150	B
BZ 198	82		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-15	Date Collected:	02/25/15 12:36
Client ID:	L37	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/04/15 09:30
Analytical Date:	03/09/15 18:00	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/05/15
Percent Solids:	71%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.35	--	1	A
gamma-BHC	ND		ug/kg	0.674	--	1	A
Heptachlor	ND		ug/kg	0.674	--	1	A
Aldrin	ND		ug/kg	0.674	--	1	A
Heptachlor epoxide	ND		ug/kg	1.35	--	1	B
Oxychlordane	ND		ug/kg	1.35	--	1	B
trans-Chlordane	ND		ug/kg	0.674	--	1	A
Endosulfan I	ND		ug/kg	0.674	--	1	A
cis-Chlordane	ND		ug/kg	0.674	--	1	A
trans-Nonachlor	ND		ug/kg	0.674	--	1	A
4,4'-DDE	ND		ug/kg	0.674	--	1	A
Dieldrin	ND		ug/kg	0.674	--	1	A
Endrin	ND		ug/kg	0.674	--	1	A
Endosulfan II	ND		ug/kg	0.674	--	1	A
4,4'-DDD	ND		ug/kg	0.674	--	1	A
cis-Nonachlor	ND		ug/kg	0.674	--	1	A
4,4'-DDT	ND		ug/kg	0.674	--	1	A
Methoxychlor	ND		ug/kg	6.74	--	1	A
Toxaphene	ND		ug/kg	33.8	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	71		30-150	A
BZ 198	85		30-150	A
DBOB	66		30-150	B
BZ 198	87		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-16	Date Collected:	02/25/15 13:06
Client ID:	L38	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/04/15 09:30
Analytical Date:	03/09/15 18:32	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/05/15
Percent Solids:	73%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.34	--	1	A
gamma-BHC	ND		ug/kg	0.669	--	1	A
Heptachlor	ND		ug/kg	0.669	--	1	A
Aldrin	ND		ug/kg	0.669	--	1	A
Heptachlor epoxide	ND		ug/kg	1.34	--	1	B
Oxychlordane	ND		ug/kg	1.34	--	1	B
trans-Chlordane	ND		ug/kg	0.669	--	1	A
Endosulfan I	ND		ug/kg	0.669	--	1	A
cis-Chlordane	ND		ug/kg	0.669	--	1	A
trans-Nonachlor	ND		ug/kg	0.669	--	1	A
4,4'-DDE	ND		ug/kg	0.669	--	1	A
Dieldrin	ND		ug/kg	0.669	--	1	A
Endrin	ND		ug/kg	0.669	--	1	A
Endosulfan II	ND		ug/kg	0.669	--	1	A
4,4'-DDD	ND		ug/kg	0.669	--	1	A
cis-Nonachlor	ND		ug/kg	0.669	--	1	A
4,4'-DDT	ND		ug/kg	0.669	--	1	A
Methoxychlor	ND		ug/kg	6.69	--	1	A
Toxaphene	ND		ug/kg	33.6	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	79		30-150	A
BZ 198	79		30-150	A
DBOB	75		30-150	B
BZ 198	82		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-17	Date Collected:	02/25/15 13:30
Client ID:	L40	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/04/15 09:30
Analytical Date:	03/09/15 19:05	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/05/15
Percent Solids:	66%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.726	--	1	A
gamma-BHC	ND		ug/kg	0.363	--	1	A
Heptachlor	ND		ug/kg	0.363	--	1	A
Aldrin	ND		ug/kg	0.363	--	1	A
Heptachlor epoxide	ND		ug/kg	0.726	--	1	B
Oxychlordane	ND		ug/kg	0.726	--	1	B
trans-Chlordane	ND		ug/kg	0.363	--	1	A
Endosulfan I	ND		ug/kg	0.363	--	1	A
cis-Chlordane	ND		ug/kg	0.363	--	1	A
trans-Nonachlor	ND		ug/kg	0.363	--	1	A
4,4'-DDE	ND		ug/kg	0.363	--	1	A
Dieldrin	ND		ug/kg	0.363	--	1	A
Endrin	ND		ug/kg	0.363	--	1	A
Endosulfan II	ND		ug/kg	0.363	--	1	A
4,4'-DDD	ND		ug/kg	0.363	--	1	A
cis-Nonachlor	ND		ug/kg	0.363	--	1	A
4,4'-DDT	ND		ug/kg	0.363	--	1	A
Methoxychlor	ND		ug/kg	3.63	--	1	A
Toxaphene	ND		ug/kg	18.2	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	68		30-150	A
BZ 198	70		30-150	A
DBOB	63		30-150	B
BZ 198	73		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-18	Date Collected:	02/25/15 13:45
Client ID:	L39	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/04/15 09:30
Analytical Date:	03/09/15 19:37	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/05/15
Percent Solids:	71%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.41	--	1	A
gamma-BHC	ND		ug/kg	0.703	--	1	A
Heptachlor	ND		ug/kg	0.703	--	1	A
Aldrin	ND		ug/kg	0.703	--	1	A
Heptachlor epoxide	ND		ug/kg	1.41	--	1	B
Oxychlordane	ND		ug/kg	1.41	--	1	B
trans-Chlordane	ND		ug/kg	0.703	--	1	A
Endosulfan I	ND		ug/kg	0.703	--	1	A
cis-Chlordane	ND		ug/kg	0.703	--	1	A
trans-Nonachlor	ND		ug/kg	0.703	--	1	A
4,4'-DDE	ND		ug/kg	0.703	--	1	A
Dieldrin	ND		ug/kg	0.703	--	1	A
Endrin	ND		ug/kg	0.703	--	1	A
Endosulfan II	ND		ug/kg	0.703	--	1	A
4,4'-DDD	ND		ug/kg	0.703	--	1	A
cis-Nonachlor	ND		ug/kg	0.703	--	1	A
4,4'-DDT	ND		ug/kg	0.703	--	1	A
Methoxychlor	ND		ug/kg	7.03	--	1	A
Toxaphene	ND		ug/kg	35.3	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	68		30-150	A
BZ 198	78		30-150	A
DBOB	67		30-150	B
BZ 198	78		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-19	Date Collected:	02/25/15 14:24
Client ID:	L26A	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/04/15 09:30
Analytical Date:	03/09/15 20:09	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/05/15
Percent Solids:	65%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.718	--	1	A
gamma-BHC	ND		ug/kg	0.359	--	1	A
Heptachlor	ND		ug/kg	0.359	--	1	A
Aldrin	ND		ug/kg	0.359	--	1	A
Heptachlor epoxide	ND		ug/kg	0.718	--	1	B
Oxychlordane	ND		ug/kg	0.718	--	1	B
trans-Chlordane	ND		ug/kg	0.359	--	1	A
Endosulfan I	ND		ug/kg	0.359	--	1	A
cis-Chlordane	ND		ug/kg	0.359	--	1	A
trans-Nonachlor	ND		ug/kg	0.359	--	1	A
4,4'-DDE	ND		ug/kg	0.359	--	1	A
Dieldrin	ND		ug/kg	0.359	--	1	A
Endrin	ND		ug/kg	0.359	--	1	A
Endosulfan II	ND		ug/kg	0.359	--	1	A
4,4'-DDD	ND		ug/kg	0.359	--	1	A
cis-Nonachlor	ND		ug/kg	0.359	--	1	A
4,4'-DDT	ND		ug/kg	0.359	--	1	A
Methoxychlor	ND		ug/kg	3.59	--	1	A
Toxaphene	ND		ug/kg	18.0	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	55		30-150	A
BZ 198	63		30-150	A
DBOB	53		30-150	B
BZ 198	63		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-20	Date Collected:	02/25/15 14:30
Client ID:	L26B	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/04/15 09:30
Analytical Date:	03/09/15 20:42	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/05/15
Percent Solids:	67%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	1.48		ug/kg	0.709	--	1	B
gamma-BHC	ND		ug/kg	0.355	--	1	A
Heptachlor	ND		ug/kg	0.355	--	1	A
Aldrin	ND		ug/kg	0.355	--	1	A
Heptachlor epoxide	ND		ug/kg	0.709	--	1	B
Oxychlordane	ND		ug/kg	0.709	--	1	B
trans-Chlordane	ND		ug/kg	0.355	--	1	A
Endosulfan I	ND		ug/kg	0.355	--	1	A
cis-Chlordane	ND		ug/kg	0.355	--	1	A
trans-Nonachlor	ND		ug/kg	0.355	--	1	A
4,4'-DDE	ND		ug/kg	0.355	--	1	A
Dieldrin	ND		ug/kg	0.355	--	1	A
Endrin	ND		ug/kg	0.355	--	1	A
Endosulfan II	ND		ug/kg	0.355	--	1	A
4,4'-DDD	ND		ug/kg	0.355	--	1	A
cis-Nonachlor	ND		ug/kg	0.355	--	1	A
4,4'-DDT	ND		ug/kg	0.355	--	1	A
Methoxychlor	ND		ug/kg	3.55	--	1	A
Toxaphene	ND		ug/kg	17.8	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	77		30-150	A
BZ 198	75		30-150	A
DBOB	74		30-150	B
BZ 198	76		30-150	B

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 03/05/15 21:39
Analyst: SF

Extraction Method: EPA 3570
Extraction Date: 03/04/15 09:30
Cleanup Method: EPA 3630
Cleanup Date: 03/05/15

Parameter	Result	Qualifier	Units	RL	MDL	Column
RIM Organochlorine Pesticides - Mansfield Lab for sample(s): 01-20 Batch: WG766032-1						
Hexachlorobenzene	ND		ug/kg	1.00	--	A
gamma-BHC	ND		ug/kg	0.500	--	A
Heptachlor	ND		ug/kg	0.500	--	A
Aldrin	ND		ug/kg	0.500	--	A
trans-Chlordane	ND		ug/kg	0.500	--	A
Endosulfan I	ND		ug/kg	0.500	--	A
cis-Chlordane	ND		ug/kg	0.500	--	A
trans-Nonachlor	ND		ug/kg	0.500	--	A
4,4'-DDE	ND		ug/kg	0.500	--	A
Dieldrin	ND		ug/kg	0.500	--	A
Endrin	ND		ug/kg	0.500	--	A
Endosulfan II	ND		ug/kg	0.500	--	A
4,4'-DDD	ND		ug/kg	0.500	--	A
cis-Nonachlor	ND		ug/kg	0.500	--	A
4,4'-DDT	ND		ug/kg	0.500	--	A
Methoxychlor	ND		ug/kg	5.00	--	A
Toxaphene	ND		ug/kg	25.1	--	A
Heptachlor epoxide	ND		ug/kg	1.00	--	B
Oxychlordane	ND		ug/kg	1.00	--	B

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DBOB	64		30-150	A
BZ 198	82		30-150	A
DBOB	59		30-150	B
BZ 198	84		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-20 Batch: WG766032-2 WG766032-3									
Hexachlorobenzene	57		61		50-120	7		30	A
gamma-BHC	71		74		50-120	4		30	A
Heptachlor	68		71		50-120	4		30	A
Aldrin	68		71		50-120	4		30	A
trans-Chlordane	73		77		50-120	5		30	A
Endosulfan I	71		76		50-120	7		30	A
cis-Chlordane	72		75		50-120	4		30	A
trans-Nonachlor	75		78		50-120	4		30	A
4,4'-DDE	83		89		50-120	7		30	A
Dieldrin	72		79		50-120	9		30	A
Endrin	71		75		50-120	5		30	A
4,4'-DDD	82		85		50-120	4		30	A
cis-Nonachlor	72		76		50-120	5		30	A
4,4'-DDT	70		78		50-120	11		30	A
Methoxychlor	68		76		50-120	11		30	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE

Project Number: Not Specified

Lab Number: L1503503

Report Date: 03/16/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-20 Batch: WG766032-2 WG766032-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DBOB	59		60		30-150	A
BZ 198	81		85		30-150	A
DBOB	52		56		30-150	B
BZ 198	82		84		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-20 Batch: WG766032-2 WG766032-3									
Heptachlor epoxide	65		69		50-120	6		30	B
Oxychlordane	67		70		50-120	4		30	B
Endosulfan II	66		71		50-120	7		30	B

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DBOB	59		60		30-150	A
BZ 198	81		85		30-150	A
DBOB	52		56		30-150	B
BZ 198	82		84		30-150	B

Matrix Spike Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits	Column
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG766032-4 WG766032-5 QC Sample: L1503503-07 Client ID: L-62													
Hexachlorobenzene	ND	77.7	71.0	91		70.3	90		50-120	1		30	A
gamma-BHC	ND	77.7	76.2	98		82.1	105		50-120	7		30	A
Heptachlor	ND	77.7	71.5	92		73.0	94		50-120	2		30	A
Aldrin	ND	77.7	75.9	98		79.9	102		50-120	5		30	A
Heptachlor epoxide	ND	77.7	68.6	88		74.9	96		50-120	9		30	B
Oxychlordane	0.908	77.7	71.1	90		76.0	96		50-120	7		30	B
trans-Chlordane	ND	77.7	76.8	99		81.2	104		50-120	6		30	A
Endosulfan I	ND	77.7	74.9	96		78.4	101		50-120	5		30	A
cis-Chlordane	ND	77.7	76.4	98		79.9	102		50-120	4		30	A
trans-Nonachlor	ND	77.7	77.2	99		80.8	104		50-120	5		30	A
4,4'-DDE	0.437	77.7	75.9	97		83.2	106		50-120	9		30	B
Dieldrin	ND	77.7	76.6	99		78.7	101		50-120	3		30	A
Endrin	ND	77.7	73.9	95		77.1	99		50-120	4		30	A
Endosulfan II	ND	77.7	63.9	82		67.4	86		50-120	5		30	B
4,4'-DDD	ND	77.7	81.2	105		89.9	115		50-120	10		30	A
cis-Nonachlor	ND	77.7	71.4	92		75.3	97		50-120	5		30	A
4,4'-DDT	0.454	77.7	64.4	82		70.7	90		50-120	9		30	A
Methoxychlor	ND	77.7	65.2	84		68.8	88		50-120	5		30	A

Matrix Spike Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG766032-4 WG766032-5 QC Sample: L1503503-07 Client ID: L-62												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria	Column
BZ 198	90		94		30-150	A
DBOB	90		94		30-150	A
BZ 198	84		91		30-150	B
DBOB	84		89		30-150	B

Lab Duplicate Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits	
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG766032-6 QC Sample: L1503503-07 Client ID: L-62							
Hexachlorobenzene	ND	ND	ug/kg	NC		30	A
gamma-BHC	ND	ND	ug/kg	NC		30	A
Heptachlor	ND	ND	ug/kg	NC		30	A
Aldrin	ND	ND	ug/kg	NC		30	A
Heptachlor epoxide	ND	ND	ug/kg	NC		30	B
Oxychlordane	0.908	ND	ug/kg	NC		30	B
trans-Chlordane	ND	ND	ug/kg	NC		30	A
Endosulfan I	ND	ND	ug/kg	NC		30	A
cis-Chlordane	ND	ND	ug/kg	NC		30	A
trans-Nonachlor	ND	ND	ug/kg	NC		30	A
4,4'-DDE	0.437	ND	ug/kg	NC		30	B
Dieldrin	ND	ND	ug/kg	NC		30	A
Endrin	ND	ND	ug/kg	NC		30	A
Endosulfan II	ND	ND	ug/kg	NC		30	A
4,4'-DDD	ND	ND	ug/kg	NC		30	A
cis-Nonachlor	ND	ND	ug/kg	NC		30	A
4,4'-DDT	0.454	ND	ug/kg	NC		30	A
Methoxychlor	ND	ND	ug/kg	NC		30	A
Toxaphene	ND	ND	ug/kg	NC		30	A

Lab Duplicate Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits

RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG766032-6 QC Sample: L1503503-07 Client ID: L-62

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria	Column
DBOB	80		85		30-150	A
BZ 198	79		80		30-150	A
DBOB	68		73		30-150	B
BZ 198	81		81		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG766032-7

Parameter	% Recovery	Qual	QC Criteria
Hexachlorobenzene	56		40-140
cis-Chlordane	78		40-140
trans-Nonachlor	316	Q	40-140
DBOB (Surrogate)	47		30-150
DBOB (Surrogate)	49		30-150
BZ 198 (Surrogate)	60		30-150
BZ 198 (Surrogate)	134		30-150

METALS

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503503
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-01	Date Collected:	02/24/15 11:22
Client ID:	L-56	Date Received:	02/24/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	70%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	5.22		mg/kg	0.069	--	2	03/03/15 11:34	03/04/15 15:10	EPA 3050B	1,6020A	PD
Cadmium, Total	0.062		mg/kg	0.028	--	2	03/03/15 11:34	03/04/15 15:10	EPA 3050B	1,6020A	PD
Chromium, Total	18.4		mg/kg	0.278	--	2	03/03/15 11:34	03/04/15 15:10	EPA 3050B	1,6020A	PD
Copper, Total	14.7		mg/kg	0.278	--	2	03/03/15 11:34	03/04/15 15:10	EPA 3050B	1,6020A	PD
Lead, Total	8.09		mg/kg	0.083	--	2	03/03/15 11:34	03/04/15 15:10	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.017	--	5	03/03/15 11:33	03/06/15 11:14	EPA 7474	1,7474	PD
Nickel, Total	18.6		mg/kg	0.139	--	2	03/03/15 11:34	03/04/15 15:10	EPA 3050B	1,6020A	PD
Zinc, Total	47.4		mg/kg	1.39	--	2	03/03/15 11:34	03/04/15 15:10	EPA 3050B	1,6020A	PD

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-02 Date Collected: 02/24/15 12:01

Client ID: L-55 Date Received: 02/24/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Matrix: Sediment

Percent Solids: 80%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.15		mg/kg	0.057	--	2	03/03/15 11:34	03/04/15 15:12	EPA 3050B	1,6020A	PD
Cadmium, Total	ND		mg/kg	0.023	--	2	03/03/15 11:34	03/04/15 15:12	EPA 3050B	1,6020A	PD
Chromium, Total	4.56		mg/kg	0.228	--	2	03/03/15 11:34	03/04/15 15:12	EPA 3050B	1,6020A	PD
Copper, Total	2.18		mg/kg	0.228	--	2	03/03/15 11:34	03/04/15 15:12	EPA 3050B	1,6020A	PD
Lead, Total	2.93		mg/kg	0.069	--	2	03/03/15 11:34	03/04/15 15:12	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.015	--	5	03/03/15 11:33	03/06/15 11:17	EPA 7474	1,7474	PD
Nickel, Total	4.54		mg/kg	0.114	--	2	03/03/15 11:34	03/04/15 15:12	EPA 3050B	1,6020A	PD
Zinc, Total	13.9		mg/kg	1.14	--	2	03/03/15 11:34	03/04/15 15:12	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503503
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-03	Date Collected:	02/24/15 12:35
Client ID:	L-54	Date Received:	02/24/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	79%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.29		mg/kg	0.055	--	2	03/03/15 11:34	03/04/15 15:13	EPA 3050B	1,6020A	PD
Cadmium, Total	ND		mg/kg	0.022	--	2	03/03/15 11:34	03/04/15 15:13	EPA 3050B	1,6020A	PD
Chromium, Total	6.58		mg/kg	0.221	--	2	03/03/15 11:34	03/04/15 15:13	EPA 3050B	1,6020A	PD
Copper, Total	3.25		mg/kg	0.221	--	2	03/03/15 11:34	03/04/15 15:13	EPA 3050B	1,6020A	PD
Lead, Total	4.55		mg/kg	0.066	--	2	03/03/15 11:34	03/04/15 15:13	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.015	--	5	03/03/15 11:33	03/06/15 11:19	EPA 7474	1,7474	PD
Nickel, Total	6.61		mg/kg	0.111	--	2	03/03/15 11:34	03/04/15 15:13	EPA 3050B	1,6020A	PD
Zinc, Total	22.4		mg/kg	1.11	--	2	03/03/15 11:34	03/04/15 15:13	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503503
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-04	Date Collected:	02/24/15 13:01
Client ID:	L-53	Date Received:	02/24/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	62%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	3.38		mg/kg	0.075	--	2	03/03/15 11:34	03/04/15 15:17	EPA 3050B	1,6020A	PD
Cadmium, Total	0.109		mg/kg	0.030	--	2	03/03/15 11:34	03/04/15 15:17	EPA 3050B	1,6020A	PD
Chromium, Total	15.5		mg/kg	0.300	--	2	03/03/15 11:34	03/04/15 15:17	EPA 3050B	1,6020A	PD
Copper, Total	19.1		mg/kg	0.300	--	2	03/03/15 11:34	03/04/15 15:17	EPA 3050B	1,6020A	PD
Lead, Total	12.0		mg/kg	0.090	--	2	03/03/15 11:34	03/04/15 15:17	EPA 3050B	1,6020A	PD
Mercury, Total	0.062		mg/kg	0.018	--	5	03/03/15 11:33	03/06/15 11:22	EPA 7474	1,7474	PD
Nickel, Total	8.02		mg/kg	0.150	--	2	03/03/15 11:34	03/04/15 15:17	EPA 3050B	1,6020A	PD
Zinc, Total	57.4		mg/kg	1.50	--	2	03/03/15 11:34	03/04/15 15:17	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503503
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-05	Date Collected:	02/24/15 13:52
Client ID:	L-52	Date Received:	02/24/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	81%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.22		mg/kg	0.059	--	2	03/03/15 11:34	03/04/15 15:18	EPA 3050B	1,6020A	PD
Cadmium, Total	ND		mg/kg	0.024	--	2	03/03/15 11:34	03/04/15 15:18	EPA 3050B	1,6020A	PD
Chromium, Total	4.38		mg/kg	0.236	--	2	03/03/15 11:34	03/04/15 15:18	EPA 3050B	1,6020A	PD
Copper, Total	2.50		mg/kg	0.236	--	2	03/03/15 11:34	03/04/15 15:18	EPA 3050B	1,6020A	PD
Lead, Total	3.03		mg/kg	0.071	--	2	03/03/15 11:34	03/04/15 15:18	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.015	--	5	03/03/15 11:33	03/06/15 11:24	EPA 7474	1,7474	PD
Nickel, Total	5.33		mg/kg	0.118	--	2	03/03/15 11:34	03/04/15 15:18	EPA 3050B	1,6020A	PD
Zinc, Total	17.9		mg/kg	1.18	--	2	03/03/15 11:34	03/04/15 15:18	EPA 3050B	1,6020A	PD

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-06 Date Collected: 02/24/15 14:20

Client ID: L-51 Date Received: 02/24/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Matrix: Sediment

Percent Solids: 79%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.72		mg/kg	0.056	--	2	03/03/15 11:34	03/04/15 15:19	EPA 3050B	1,6020A	PD
Cadmium, Total	ND		mg/kg	0.023	--	2	03/03/15 11:34	03/04/15 15:19	EPA 3050B	1,6020A	PD
Chromium, Total	3.86		mg/kg	0.225	--	2	03/03/15 11:34	03/04/15 15:19	EPA 3050B	1,6020A	PD
Copper, Total	2.02		mg/kg	0.225	--	2	03/03/15 11:34	03/04/15 15:19	EPA 3050B	1,6020A	PD
Lead, Total	2.99		mg/kg	0.068	--	2	03/03/15 11:34	03/04/15 15:19	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.015	--	5	03/03/15 11:33	03/06/15 11:27	EPA 7474	1,7474	PD
Nickel, Total	5.02		mg/kg	0.112	--	2	03/03/15 11:34	03/04/15 15:19	EPA 3050B	1,6020A	PD
Zinc, Total	14.0		mg/kg	1.12	--	2	03/03/15 11:34	03/04/15 15:19	EPA 3050B	1,6020A	PD

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-07 Date Collected: 02/24/15 14:35

Client ID: L-62 Date Received: 02/24/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Matrix: Sediment

Percent Solids: 63%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	3.41		mg/kg	0.072	--	2	03/03/15 11:34	03/04/15 15:21	EPA 3050B	1,6020A	PD
Cadmium, Total	0.110		mg/kg	0.029	--	2	03/03/15 11:34	03/04/15 15:21	EPA 3050B	1,6020A	PD
Chromium, Total	16.9		mg/kg	0.287	--	2	03/03/15 11:34	03/04/15 15:21	EPA 3050B	1,6020A	PD
Copper, Total	20.4		mg/kg	0.287	--	2	03/03/15 11:34	03/04/15 15:21	EPA 3050B	1,6020A	PD
Lead, Total	12.1		mg/kg	0.086	--	2	03/03/15 11:34	03/04/15 15:21	EPA 3050B	1,6020A	PD
Mercury, Total	0.054		mg/kg	0.019	--	5	03/03/15 11:33	03/06/15 11:29	EPA 7474	1,7474	PD
Nickel, Total	8.41		mg/kg	0.144	--	2	03/03/15 11:34	03/04/15 15:21	EPA 3050B	1,6020A	PD
Zinc, Total	69.5		mg/kg	1.44	--	2	03/03/15 11:34	03/04/15 15:21	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503503
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-08	Date Collected:	02/25/15 09:33
Client ID:	L41	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	75%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	3.06		mg/kg	0.058	--	2	03/03/15 11:34	03/04/15 15:27	EPA 3050B	1,6020A	PD
Cadmium, Total	0.033		mg/kg	0.023	--	2	03/03/15 11:34	03/04/15 15:27	EPA 3050B	1,6020A	PD
Chromium, Total	6.10		mg/kg	0.233	--	2	03/03/15 11:34	03/04/15 15:27	EPA 3050B	1,6020A	PD
Copper, Total	3.39		mg/kg	0.233	--	2	03/03/15 11:34	03/04/15 15:27	EPA 3050B	1,6020A	PD
Lead, Total	4.24		mg/kg	0.070	--	2	03/03/15 11:34	03/04/15 15:27	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.015	--	5	03/03/15 11:33	03/06/15 11:44	EPA 7474	1,7474	PD
Nickel, Total	4.08		mg/kg	0.116	--	2	03/03/15 11:34	03/04/15 15:27	EPA 3050B	1,6020A	PD
Zinc, Total	20.2		mg/kg	1.16	--	2	03/03/15 11:34	03/04/15 15:27	EPA 3050B	1,6020A	PD

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-09 Date Collected: 02/25/15 10:05

Client ID: L32 Date Received: 02/26/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Matrix: Sediment

Percent Solids: 78%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.71		mg/kg	0.061	--	2	03/03/15 11:34	03/04/15 15:28	EPA 3050B	1,6020A	PD
Cadmium, Total	ND		mg/kg	0.024	--	2	03/03/15 11:34	03/04/15 15:28	EPA 3050B	1,6020A	PD
Chromium, Total	6.70		mg/kg	0.243	--	2	03/03/15 11:34	03/04/15 15:28	EPA 3050B	1,6020A	PD
Copper, Total	2.85		mg/kg	0.243	--	2	03/03/15 11:34	03/04/15 15:28	EPA 3050B	1,6020A	PD
Lead, Total	5.07		mg/kg	0.073	--	2	03/03/15 11:34	03/04/15 15:28	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.015	--	5	03/03/15 11:33	03/06/15 11:47	EPA 7474	1,7474	PD
Nickel, Total	4.04		mg/kg	0.122	--	2	03/03/15 11:34	03/04/15 15:28	EPA 3050B	1,6020A	PD
Zinc, Total	26.8		mg/kg	1.22	--	2	03/03/15 11:34	03/04/15 15:28	EPA 3050B	1,6020A	PD

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-10 Date Collected: 02/25/15 10:19

Client ID: L35 Date Received: 02/26/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Matrix: Sediment

Percent Solids: 74%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.15		mg/kg	0.065	--	2	03/03/15 11:34	03/04/15 15:32	EPA 3050B	1,6020A	PD
Cadmium, Total	ND		mg/kg	0.026	--	2	03/03/15 11:34	03/04/15 15:32	EPA 3050B	1,6020A	PD
Chromium, Total	3.49		mg/kg	0.258	--	2	03/03/15 11:34	03/04/15 15:32	EPA 3050B	1,6020A	PD
Copper, Total	2.01		mg/kg	0.258	--	2	03/03/15 11:34	03/04/15 15:32	EPA 3050B	1,6020A	PD
Lead, Total	2.83		mg/kg	0.078	--	2	03/03/15 11:34	03/04/15 15:32	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.015	--	5	03/03/15 11:33	03/06/15 11:49	EPA 7474	1,7474	PD
Nickel, Total	2.97		mg/kg	0.129	--	2	03/03/15 11:34	03/04/15 15:32	EPA 3050B	1,6020A	PD
Zinc, Total	11.7		mg/kg	1.29	--	2	03/03/15 11:34	03/04/15 15:32	EPA 3050B	1,6020A	PD

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-11 Date Collected: 02/25/15 10:35

Client ID: L33 Date Received: 02/26/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Matrix: Sediment

Percent Solids: 70%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.22		mg/kg	0.064	--	2	03/03/15 11:34	03/04/15 15:33	EPA 3050B	1,6020A	PD
Cadmium, Total	0.031		mg/kg	0.026	--	2	03/03/15 11:34	03/04/15 15:33	EPA 3050B	1,6020A	PD
Chromium, Total	7.23		mg/kg	0.256	--	2	03/03/15 11:34	03/04/15 15:33	EPA 3050B	1,6020A	PD
Copper, Total	4.75		mg/kg	0.256	--	2	03/03/15 11:34	03/04/15 15:33	EPA 3050B	1,6020A	PD
Lead, Total	5.44		mg/kg	0.077	--	2	03/03/15 11:34	03/04/15 15:33	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.016	--	5	03/03/15 11:33	03/06/15 11:51	EPA 7474	1,7474	PD
Nickel, Total	4.75		mg/kg	0.128	--	2	03/03/15 11:34	03/04/15 15:33	EPA 3050B	1,6020A	PD
Zinc, Total	21.7		mg/kg	1.28	--	2	03/03/15 11:34	03/04/15 15:33	EPA 3050B	1,6020A	PD

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-12 Date Collected: 02/25/15 11:00

Client ID: L31 Date Received: 02/26/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Matrix: Sediment

Percent Solids: 74%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.35		mg/kg	0.064	--	2	03/03/15 11:34	03/04/15 15:35	EPA 3050B	1,6020A	PD
Cadmium, Total	ND		mg/kg	0.026	--	2	03/03/15 11:34	03/04/15 15:35	EPA 3050B	1,6020A	PD
Chromium, Total	6.28		mg/kg	0.255	--	2	03/03/15 11:34	03/04/15 15:35	EPA 3050B	1,6020A	PD
Copper, Total	3.20		mg/kg	0.255	--	2	03/03/15 11:34	03/04/15 15:35	EPA 3050B	1,6020A	PD
Lead, Total	4.28		mg/kg	0.077	--	2	03/03/15 11:34	03/04/15 15:35	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.016	--	5	03/03/15 11:33	03/06/15 11:54	EPA 7474	1,7474	PD
Nickel, Total	4.19		mg/kg	0.127	--	2	03/03/15 11:34	03/04/15 15:35	EPA 3050B	1,6020A	PD
Zinc, Total	20.1		mg/kg	1.27	--	2	03/03/15 11:34	03/04/15 15:35	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503503
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-13	Date Collected:	02/25/15 11:19
Client ID:	L34	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	77%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.14		mg/kg	0.057	--	2	03/03/15 11:34	03/04/15 15:36	EPA 3050B	1,6020A	PD
Cadmium, Total	ND		mg/kg	0.023	--	2	03/03/15 11:34	03/04/15 15:36	EPA 3050B	1,6020A	PD
Chromium, Total	2.71		mg/kg	0.229	--	2	03/03/15 11:34	03/04/15 15:36	EPA 3050B	1,6020A	PD
Copper, Total	1.78		mg/kg	0.229	--	2	03/03/15 11:34	03/04/15 15:36	EPA 3050B	1,6020A	PD
Lead, Total	2.77		mg/kg	0.069	--	2	03/03/15 11:34	03/04/15 15:36	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.015	--	5	03/03/15 11:33	03/06/15 11:56	EPA 7474	1,7474	PD
Nickel, Total	3.04		mg/kg	0.114	--	2	03/03/15 11:34	03/04/15 15:36	EPA 3050B	1,6020A	PD
Zinc, Total	9.16		mg/kg	1.14	--	2	03/03/15 11:34	03/04/15 15:36	EPA 3050B	1,6020A	PD

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-14 Date Collected: 02/25/15 11:35

Client ID: L36 Date Received: 02/26/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Matrix: Sediment

Percent Solids: 75%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.28		mg/kg	0.061	--	2	03/03/15 11:34	03/04/15 15:37	EPA 3050B	1,6020A	PD
Cadmium, Total	ND		mg/kg	0.024	--	2	03/03/15 11:34	03/04/15 15:37	EPA 3050B	1,6020A	PD
Chromium, Total	5.27		mg/kg	0.242	--	2	03/03/15 11:34	03/04/15 15:37	EPA 3050B	1,6020A	PD
Copper, Total	3.28		mg/kg	0.242	--	2	03/03/15 11:34	03/04/15 15:37	EPA 3050B	1,6020A	PD
Lead, Total	3.60		mg/kg	0.073	--	2	03/03/15 11:34	03/04/15 15:37	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.016	--	5	03/03/15 11:33	03/06/15 11:59	EPA 7474	1,7474	PD
Nickel, Total	3.36		mg/kg	0.121	--	2	03/03/15 11:34	03/04/15 15:37	EPA 3050B	1,6020A	PD
Zinc, Total	15.3		mg/kg	1.21	--	2	03/03/15 11:34	03/04/15 15:37	EPA 3050B	1,6020A	PD

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-15 Date Collected: 02/25/15 12:36

Client ID: L37 Date Received: 02/26/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Matrix: Sediment

Percent Solids: 71%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	3.36		mg/kg	0.068	--	2	03/03/15 11:34	03/04/15 15:38	EPA 3050B	1,6020A	PD
Cadmium, Total	0.051		mg/kg	0.027	--	2	03/03/15 11:34	03/04/15 15:38	EPA 3050B	1,6020A	PD
Chromium, Total	9.67		mg/kg	0.270	--	2	03/03/15 11:34	03/04/15 15:38	EPA 3050B	1,6020A	PD
Copper, Total	5.82		mg/kg	0.270	--	2	03/03/15 11:34	03/04/15 15:38	EPA 3050B	1,6020A	PD
Lead, Total	6.30		mg/kg	0.081	--	2	03/03/15 11:34	03/04/15 15:38	EPA 3050B	1,6020A	PD
Mercury, Total	0.019		mg/kg	0.017	--	5	03/03/15 11:33	03/06/15 12:01	EPA 7474	1,7474	PD
Nickel, Total	5.97		mg/kg	0.135	--	2	03/03/15 11:34	03/04/15 15:38	EPA 3050B	1,6020A	PD
Zinc, Total	29.8		mg/kg	1.35	--	2	03/03/15 11:34	03/04/15 15:38	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503503
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-16	Date Collected:	02/25/15 13:06
Client ID:	L38	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	73%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	3.07		mg/kg	0.064	--	2	03/03/15 11:34	03/04/15 15:40	EPA 3050B	1,6020A	PD
Cadmium, Total	ND		mg/kg	0.026	--	2	03/03/15 11:34	03/04/15 15:40	EPA 3050B	1,6020A	PD
Chromium, Total	8.23		mg/kg	0.256	--	2	03/03/15 11:34	03/04/15 15:40	EPA 3050B	1,6020A	PD
Copper, Total	3.78		mg/kg	0.256	--	2	03/03/15 11:34	03/04/15 15:40	EPA 3050B	1,6020A	PD
Lead, Total	5.69		mg/kg	0.077	--	2	03/03/15 11:34	03/04/15 15:40	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.017	--	5	03/03/15 11:33	03/06/15 12:09	EPA 7474	1,7474	PD
Nickel, Total	4.66		mg/kg	0.128	--	2	03/03/15 11:34	03/04/15 15:40	EPA 3050B	1,6020A	PD
Zinc, Total	27.9		mg/kg	1.28	--	2	03/03/15 11:34	03/04/15 15:40	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503503
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-17	Date Collected:	02/25/15 13:30
Client ID:	L40	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	66%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	3.91		mg/kg	0.066	--	2	03/03/15 11:34	03/04/15 15:41	EPA 3050B	1,6020A	PD
Cadmium, Total	ND		mg/kg	0.027	--	2	03/03/15 11:34	03/04/15 15:41	EPA 3050B	1,6020A	PD
Chromium, Total	7.66		mg/kg	0.265	--	2	03/03/15 11:34	03/04/15 15:41	EPA 3050B	1,6020A	PD
Copper, Total	4.17		mg/kg	0.265	--	2	03/03/15 11:34	03/04/15 15:41	EPA 3050B	1,6020A	PD
Lead, Total	5.90		mg/kg	0.079	--	2	03/03/15 11:34	03/04/15 15:41	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.017	--	5	03/03/15 11:33	03/06/15 12:11	EPA 7474	1,7474	PD
Nickel, Total	5.48		mg/kg	0.132	--	2	03/03/15 11:34	03/04/15 15:41	EPA 3050B	1,6020A	PD
Zinc, Total	27.3		mg/kg	1.32	--	2	03/03/15 11:34	03/04/15 15:41	EPA 3050B	1,6020A	PD

Project Name: LIS-USACOE RIM DREDGE
Lab Number: L1503503
Project Number: Not Specified
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-18
Date Collected: 02/25/15 13:45
Client ID: L39
Date Received: 02/26/15
Sample Location: EASTERN LONG ISLAND SOUND
Field Prep: Not Specified
Matrix: Sediment
Percent Solids: 71%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.17		mg/kg	0.070	--	2	03/03/15 11:34	03/04/15 15:42	EPA 3050B	1,6020A	PD
Cadmium, Total	0.033		mg/kg	0.028	--	2	03/03/15 11:34	03/04/15 15:42	EPA 3050B	1,6020A	PD
Chromium, Total	6.98		mg/kg	0.280	--	2	03/03/15 11:34	03/04/15 15:42	EPA 3050B	1,6020A	PD
Copper, Total	3.69		mg/kg	0.280	--	2	03/03/15 11:34	03/04/15 15:42	EPA 3050B	1,6020A	PD
Lead, Total	5.08		mg/kg	0.084	--	2	03/03/15 11:34	03/04/15 15:42	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.016	--	5	03/03/15 11:33	03/06/15 12:14	EPA 7474	1,7474	PD
Nickel, Total	4.32		mg/kg	0.140	--	2	03/03/15 11:34	03/04/15 15:42	EPA 3050B	1,6020A	PD
Zinc, Total	21.9		mg/kg	1.40	--	2	03/03/15 11:34	03/04/15 15:42	EPA 3050B	1,6020A	PD

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-19 Date Collected: 02/25/15 14:24

Client ID: L26A Date Received: 02/26/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Matrix: Sediment

Percent Solids: 65%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.79		mg/kg	0.072	--	2	03/03/15 11:34	03/04/15 15:43	EPA 3050B	1,6020A	PD
Cadmium, Total	0.053		mg/kg	0.029	--	2	03/03/15 11:34	03/04/15 15:43	EPA 3050B	1,6020A	PD
Chromium, Total	11.0		mg/kg	0.288	--	2	03/03/15 11:34	03/04/15 15:43	EPA 3050B	1,6020A	PD
Copper, Total	6.50		mg/kg	0.288	--	2	03/03/15 11:34	03/04/15 15:43	EPA 3050B	1,6020A	PD
Lead, Total	7.76		mg/kg	0.087	--	2	03/03/15 11:34	03/04/15 15:43	EPA 3050B	1,6020A	PD
Mercury, Total	0.024		mg/kg	0.018	--	5	03/03/15 11:33	03/06/15 12:16	EPA 7474	1,7474	PD
Nickel, Total	6.64		mg/kg	0.144	--	2	03/03/15 11:34	03/04/15 15:43	EPA 3050B	1,6020A	PD
Zinc, Total	32.1		mg/kg	1.44	--	2	03/03/15 11:34	03/04/15 15:43	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503503
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503503-20	Date Collected:	02/25/15 14:30
Client ID:	L26B	Date Received:	02/26/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	67%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	1.98		mg/kg	0.067	--	2	03/03/15 11:34	03/04/15 15:47	EPA 3050B	1,6020A	PD
Cadmium, Total	ND		mg/kg	0.027	--	2	03/03/15 11:34	03/04/15 15:47	EPA 3050B	1,6020A	PD
Chromium, Total	6.62		mg/kg	0.266	--	2	03/03/15 11:34	03/04/15 15:47	EPA 3050B	1,6020A	PD
Copper, Total	3.50		mg/kg	0.266	--	2	03/03/15 11:34	03/04/15 15:47	EPA 3050B	1,6020A	PD
Lead, Total	4.69		mg/kg	0.080	--	2	03/03/15 11:34	03/04/15 15:47	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.017	--	5	03/03/15 11:33	03/06/15 12:19	EPA 7474	1,7474	PD
Nickel, Total	4.06		mg/kg	0.133	--	2	03/03/15 11:34	03/04/15 15:47	EPA 3050B	1,6020A	PD
Zinc, Total	21.2		mg/kg	1.33	--	2	03/03/15 11:34	03/04/15 15:47	EPA 3050B	1,6020A	PD

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

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): 01-20 Batch: WG765760-1										
Arsenic, Total	ND		mg/kg	0.050	--	2	03/03/15 11:34	03/04/15 15:08	1,6020A	PD
Cadmium, Total	ND		mg/kg	0.020	--	2	03/03/15 11:34	03/04/15 15:08	1,6020A	PD
Chromium, Total	ND		mg/kg	0.200	--	2	03/03/15 11:34	03/04/15 15:08	1,6020A	PD
Copper, Total	ND		mg/kg	0.200	--	2	03/03/15 11:34	03/04/15 15:08	1,6020A	PD
Lead, Total	ND		mg/kg	0.060	--	2	03/03/15 11:34	03/04/15 15:08	1,6020A	PD
Nickel, Total	ND		mg/kg	0.100	--	2	03/03/15 11:34	03/04/15 15:08	1,6020A	PD
Zinc, Total	ND		mg/kg	1.00	--	2	03/03/15 11:34	03/04/15 15:08	1,6020A	PD

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): 01-20 Batch: WG765768-1										
Mercury, Total	ND		mg/kg	0.013	--	5	03/03/15 11:33	03/06/15 11:09	1,7474	PD

Prep Information

Digestion Method: EPA 7474

Lab Control Sample Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-20 Batch: WG765760-2 SRM Lot Number: A2METSPIKE								
Arsenic, Total	92		-		75-125	-		20
Cadmium, Total	97		-		75-125	-		20
Chromium, Total	103		-		75-125	-		20
Copper, Total	100		-		75-125	-		20
Lead, Total	104		-		75-125	-		20
Nickel, Total	101		-		75-125	-		20
Zinc, Total	91		-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-20 Batch: WG765768-2 SRM Lot Number: HPHGAF								
Mercury, Total	90		-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

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): 01-20 QC Batch ID: WG765760-4 WG765760-5 QC Sample: L1503503-07 Client ID: L-62												
Arsenic, Total	3.41	295	284	95		277	92		75-125	2		20
Cadmium, Total	0.110	148	140	95		133	89		75-125	5		20
Chromium, Total	16.9	295	328	105		325	103		75-125	1		20
Copper, Total	20.4	295	316	100		310	97		75-125	2		20
Lead, Total	12.1	295	291	94		294	94		75-125	1		20
Nickel, Total	8.41	295	270	88		305	100		75-125	12		20
Zinc, Total	69.5	295	328	88		340	91		75-125	4		20
Total Metals - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG765768-4 WG765768-5 QC Sample: L1503503-07 Client ID: L-62												
Mercury, Total	0.054	0.914	0.845	86		0.871	89		80-120	3		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG765760-3 QC Sample: L1503503-07 Client ID: L-62						
Arsenic, Total	3.41	3.67	mg/kg	7		20
Cadmium, Total	0.110	0.120	mg/kg	9		20
Chromium, Total	16.9	17.8	mg/kg	5		20
Copper, Total	20.4	22.0	mg/kg	8		20
Lead, Total	12.1	13.2	mg/kg	9		20
Nickel, Total	8.41	8.83	mg/kg	5		20
Zinc, Total	69.5	78.1	mg/kg	12		20
Total Metals - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG765768-3 QC Sample: L1503503-07 Client ID: L-62						
Mercury, Total	0.054	0.056	mg/kg	3		20

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG765760-6

Parameter	% Recovery	Qual	QC Criteria
Arsenic, Total	101		81-120
Cadmium, Total	105		82-118
Chromium, Total	102		79-120
Copper, Total	105		81-119
Lead, Total	105		81-118
Nickel, Total	107		82-118
Zinc, Total	105		80-120

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG765768-6

Parameter	% Recovery	Qual	QC Criteria
Mercury, Total	90		71-129

INORGANICS
&
MISCELLANEOUS

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-01
Client ID: L-56
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/24/15 11:22
Date Received: 02/24/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.324		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Total Organic Carbon (Rep2)	0.299		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	13.2		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Coarse Sand	6.30		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Medium Sand	21.4		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Fine Sand	23.2		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Total Fines	35.9		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	69.9		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC
Moisture	30.1		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-02
Client ID: L-55
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/24/15 12:01
Date Received: 02/24/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.109		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Total Organic Carbon (Rep2)	0.165		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	13.1		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Coarse Sand	14.7		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Medium Sand	48.7		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Fine Sand	20.6		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Total Fines	2.90		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	80.4		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC
Moisture	19.6		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-03
Client ID: L-54
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/24/15 12:35
Date Received: 02/24/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.378		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Total Organic Carbon (Rep2)	0.449		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	6.50		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Coarse Sand	10.2		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Medium Sand	49.5		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Fine Sand	27.9		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Total Fines	5.90		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	78.6		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC
Moisture	21.4		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-04
Client ID: L-53
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/24/15 13:01
Date Received: 02/24/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.935		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Total Organic Carbon (Rep2)	0.980		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	28.1		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Coarse Sand	9.20		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Medium Sand	21.7		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Fine Sand	13.1		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Total Fines	27.9		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	61.8		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC
Moisture	38.2		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-05
Client ID: L-52
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/24/15 13:52
Date Received: 02/24/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.129		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Total Organic Carbon (Rep2)	0.220		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	19.3		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Coarse Sand	12.6		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Medium Sand	29.1		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Fine Sand	36.7		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Total Fines	2.30		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	81.3		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC
Moisture	18.7		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-06
Client ID: L-51
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/24/15 14:20
Date Received: 02/24/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.224		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Total Organic Carbon (Rep2)	0.214		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	5.80		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Coarse Sand	12.8		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Medium Sand	50.5		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Fine Sand	28.6		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Total Fines	2.30		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	79.4		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC
Moisture	20.6		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-07
Client ID: L-62
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/24/15 14:35
Date Received: 02/24/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.41		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Total Organic Carbon (Rep2)	1.17		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	27.0		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Coarse Sand	10.1		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Medium Sand	25.2		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Fine Sand	14.3		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Total Fines	23.4		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	63.3		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC
Moisture	36.7		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-08
Client ID: L41
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/25/15 09:33
Date Received: 02/26/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.593		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Total Organic Carbon (Rep2)	0.583		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	7.50		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Coarse Sand	9.20		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Medium Sand	26.8		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Fine Sand	46.8		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Total Fines	9.70		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	75.3		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC
Moisture	24.7		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-09
Client ID: L32
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/25/15 10:05
Date Received: 02/26/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.300		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Total Organic Carbon (Rep2)	0.355		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	2.30		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Coarse Sand	5.00		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Medium Sand	34.7		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Fine Sand	54.1		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Total Fines	3.90		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	77.6		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC
Moisture	22.4		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-10
Client ID: L35
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/25/15 10:19
Date Received: 02/26/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.02		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Total Organic Carbon (Rep2)	1.14		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	11.0		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Coarse Sand	16.4		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Medium Sand	32.0		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Fine Sand	34.5		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Total Fines	6.10		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	73.7		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC
Moisture	26.3		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-11
Client ID: L33
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/25/15 10:35
Date Received: 02/26/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.993		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Total Organic Carbon (Rep2)	0.969		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	4.50		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Coarse Sand	9.70		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Medium Sand	24.5		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Fine Sand	46.4		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Total Fines	14.9		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	69.6		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC
Moisture	30.4		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-12
Client ID: L31
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/25/15 11:00
Date Received: 02/26/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.563		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Total Organic Carbon (Rep2)	0.602		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	4.40		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Coarse Sand	4.90		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Medium Sand	20.8		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Fine Sand	54.7		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Total Fines	15.2		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	74.0		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC
Moisture	26.0		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-13
Client ID: L34
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/25/15 11:19
Date Received: 02/26/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.21		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Total Organic Carbon (Rep2)	1.32		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	23.1		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Coarse Sand	15.8		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Medium Sand	34.5		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Fine Sand	22.7		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Total Fines	3.90		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	77.4		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC
Moisture	22.6		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-14
Client ID: L36
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/25/15 11:35
Date Received: 02/26/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.552		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Total Organic Carbon (Rep2)	0.583		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	4.80		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Coarse Sand	7.30		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Medium Sand	27.1		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Fine Sand	49.3		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Total Fines	11.5		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	75.0		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC
Moisture	25.0		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-15
Client ID: L37
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/25/15 12:36
Date Received: 02/26/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.00		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Total Organic Carbon (Rep2)	1.16		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	8.50		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Coarse Sand	3.90		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Medium Sand	18.8		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Fine Sand	54.0		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Total Fines	14.8		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	71.1		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC
Moisture	28.9		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-16
Client ID: L38
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/25/15 13:06
Date Received: 02/26/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.597		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Total Organic Carbon (Rep2)	0.731		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	10.8		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Coarse Sand	4.40		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Medium Sand	18.7		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Fine Sand	57.1		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Total Fines	9.00		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	73.0		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC
Moisture	27.0		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-17
Client ID: L40
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/25/15 13:30
Date Received: 02/26/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.81		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Total Organic Carbon (Rep2)	2.00		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	9.00		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Coarse Sand	9.00		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Medium Sand	24.1		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Fine Sand	43.6		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Total Fines	14.3		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	65.7		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC
Moisture	34.3		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-18
Client ID: L39
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/25/15 13:45
Date Received: 02/26/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.15		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Total Organic Carbon (Rep2)	1.48		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	1.90		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Coarse Sand	4.50		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Medium Sand	18.7		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Fine Sand	58.5		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Total Fines	16.4		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	70.8		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC
Moisture	29.2		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-19
Client ID: L26A
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/25/15 14:24
Date Received: 02/26/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.23		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Total Organic Carbon (Rep2)	0.985		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	1.20		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Coarse Sand	2.90		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Medium Sand	9.30		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Fine Sand	63.9		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Total Fines	22.7		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	65.4		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC
Moisture	34.6		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503503-20
Client ID: L26B
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/25/15 14:30
Date Received: 02/26/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.67		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Total Organic Carbon (Rep2)	1.30		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	2.50		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Coarse Sand	4.60		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Medium Sand	10.3		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Fine Sand	69.2		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
% Total Fines	13.4		%	0.100	NA	1	-	03/06/15 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	67.0		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC
Moisture	33.0		%	0.100	--	1	-	03/03/15 12:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 01-20 Batch: WG766621-1										
Total Organic Carbon (Rep1)	ND		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM
Total Organic Carbon (Rep2)	ND		%	0.010	--	1	-	03/05/15 10:37	1,9060	CM

Matrix Spike Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG766621-4 WG766621-5 QC Sample: L1503503-07 Client ID: L-62												
Total Organic Carbon (Rep1)	1.41	1.28	2.18	**60**	Q	2.06	**65**	Q	75-125	6		25
Total Organic Carbon (Rep2)	1.17	1.24	2.23	86		2.48	**136**	Q	75-125	11		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG765813-1 QC Sample: L1503503-20 Client ID: L26B						
Solids, Total	67.0	67.6	%	1		10
Moisture	33	32.4	%	2		10
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG766621-3 QC Sample: L1503503-07 Client ID: L-62						
Total Organic Carbon (Rep1)	1.41	1.12	%	23		25
Total Organic Carbon (Rep2)	1.17	1.07	%	9		25
Grain Size Analysis - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG766710-1 QC Sample: L1503503-07 Client ID: L-62						
% Total Gravel	27.0	39.6	%	**38**	Q	20
% Coarse Sand	10.1	9.00	%	12		20
% Medium Sand	25.2	21.3	%	17		20
% Fine Sand	14.3	12.6	%	13		20
% Total Fines	23.4	17.5	%	**29**	Q	20

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503503

Project Number: Not Specified **Report Date:** 03/16/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG766621-2

Parameter	% Recovery	Qual	QC Criteria
Total Organic Carbon (Rep1)	111		75-125
Total Organic Carbon (Rep2)	118		75-125

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1503503-01A	Glass 250ml/8oz unpreserved	A	N/A	2.8	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503503-01B	Plastic 8oz unpreserved for Grai	A	N/A	2.8	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503503-02A	Glass 250ml/8oz unpreserved	A	N/A	2.8	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503503-02B	Plastic 8oz unpreserved for Grai	A	N/A	2.8	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()

*Values in parentheses indicate holding time in days

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1503503-03A	Glass 250ml/8oz unpreserved	A	N/A	2.8	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503503-03B	Plastic 8oz unpreserved for Grai	A	N/A	2.8	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503503-04A	Glass 250ml/8oz unpreserved	A	N/A	2.8	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503503-04B	Plastic 8oz unpreserved for Grai	A	N/A	2.8	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503503-05A	Glass 250ml/8oz unpreserved	A	N/A	2.8	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503503-05B	Plastic 8oz unpreserved for Grai	A	N/A	2.8	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()

*Values in parentheses indicate holding time in days

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1503503-06A	Glass 250ml/8oz unpreserved	A	N/A	2.8	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503503-06B	Plastic 8oz unpreserved for Grai	A	N/A	2.8	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503503-07A	Glass 250ml/8oz unpreserved	A	N/A	2.8	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503503-07B	Plastic 8oz unpreserved for Grai	A	N/A	2.8	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503503-08A	Glass 250ml/8oz unpreserved	B	N/A	3.9	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503503-08B	Plastic 8oz unpreserved for Grai	B	N/A	3.9	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()

*Values in parentheses indicate holding time in days

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1503503-09A	Glass 250ml/8oz unpreserved	B	N/A	3.9	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503503-09B	Plastic 8oz unpreserved for Grai	B	N/A	3.9	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503503-10A	Glass 250ml/8oz unpreserved	B	N/A	3.9	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503503-10B	Plastic 8oz unpreserved for Grai	B	N/A	3.9	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503503-11A	Glass 250ml/8oz unpreserved	B	N/A	3.9	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503503-11B	Plastic 8oz unpreserved for Grai	B	N/A	3.9	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()

*Values in parentheses indicate holding time in days

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1503503-12A	Glass 250ml/8oz unpreserved	B	N/A	3.9	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503503-12B	Plastic 8oz unpreserved for Grai	B	N/A	3.9	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503503-13A	Glass 250ml/8oz unpreserved	B	N/A	3.9	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503503-13B	Plastic 8oz unpreserved for Grai	B	N/A	3.9	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503503-14A	Glass 250ml/8oz unpreserved	B	N/A	3.9	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503503-14B	Plastic 8oz unpreserved for Grai	B	N/A	3.9	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()

*Values in parentheses indicate holding time in days

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1503503-15A	Glass 250ml/8oz unpreserved	B	N/A	3.9	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503503-15B	Plastic 8oz unpreserved for Grai	B	N/A	3.9	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503503-16A	Glass 250ml/8oz unpreserved	B	N/A	3.9	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503503-16B	Plastic 8oz unpreserved for Grai	B	N/A	3.9	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503503-17A	Glass 250ml/8oz unpreserved	B	N/A	3.9	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503503-17B	Plastic 8oz unpreserved for Grai	B	N/A	3.9	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()

*Values in parentheses indicate holding time in days

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503503
Report Date: 03/16/15

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1503503-18A	Glass 250ml/8oz unpreserved	B	N/A	3.9	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503503-18B	Plastic 8oz unpreserved for Grai	B	N/A	3.9	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503503-19A	Glass 250ml/8oz unpreserved	B	N/A	3.9	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503503-19B	Plastic 8oz unpreserved for Grai	B	N/A	3.9	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503503-20A	Glass 250ml/8oz unpreserved	B	N/A	3.9	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503503-20B	Plastic 8oz unpreserved for Grai	B	N/A	3.9	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()

*Values in parentheses indicate holding time in days

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503503
Project Number:	Not Specified	**Report Date:**	03/16/15

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

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.

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

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.

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.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

Report Format: Data Usability Report

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503503
Project Number:	Not Specified	**Report Date:**	03/16/15

Data Qualifiers

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

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

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

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

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

Report Format: Data Usability Report

REFERENCES

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

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

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

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.

LIMITATION OF LIABILITIES

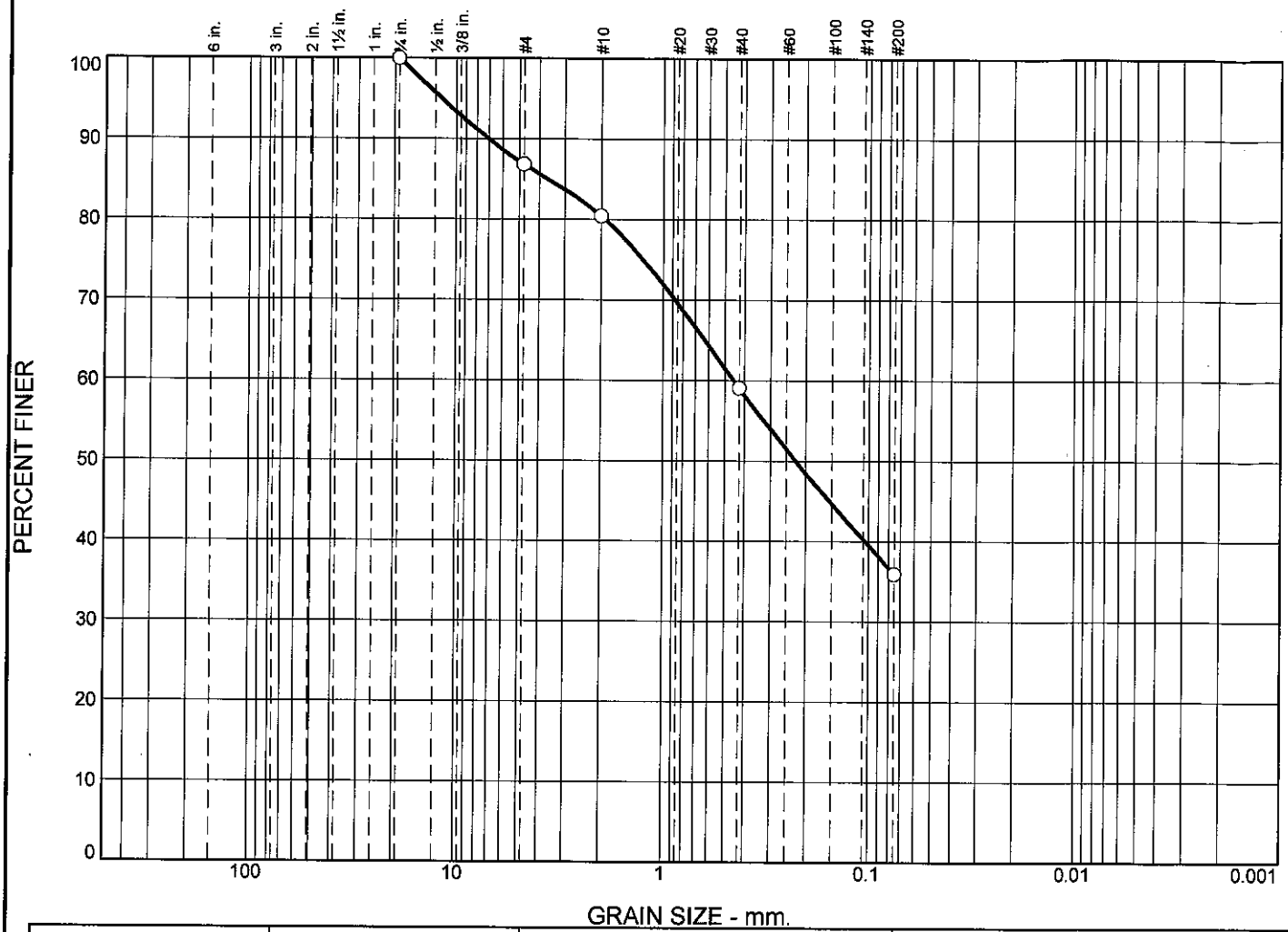
Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held 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 D422-63

GRAIN SIZE ANALYSIS

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	13.2	6.3	21.4	23.2	35.9	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			3.6361	0.4519	0.2238					

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source of Sample:** L-56 **Sample Number:** L1503503-01

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L-56

Sample Number: L1503503-01

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 113.56
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
113.56	0.00	0.75	0.00	0.00	100.0
		#4	14.94	0.00	86.8
		#10	7.25	0.00	80.5
		#40	24.28	0.00	59.1
		#200	26.30	0.00	35.9

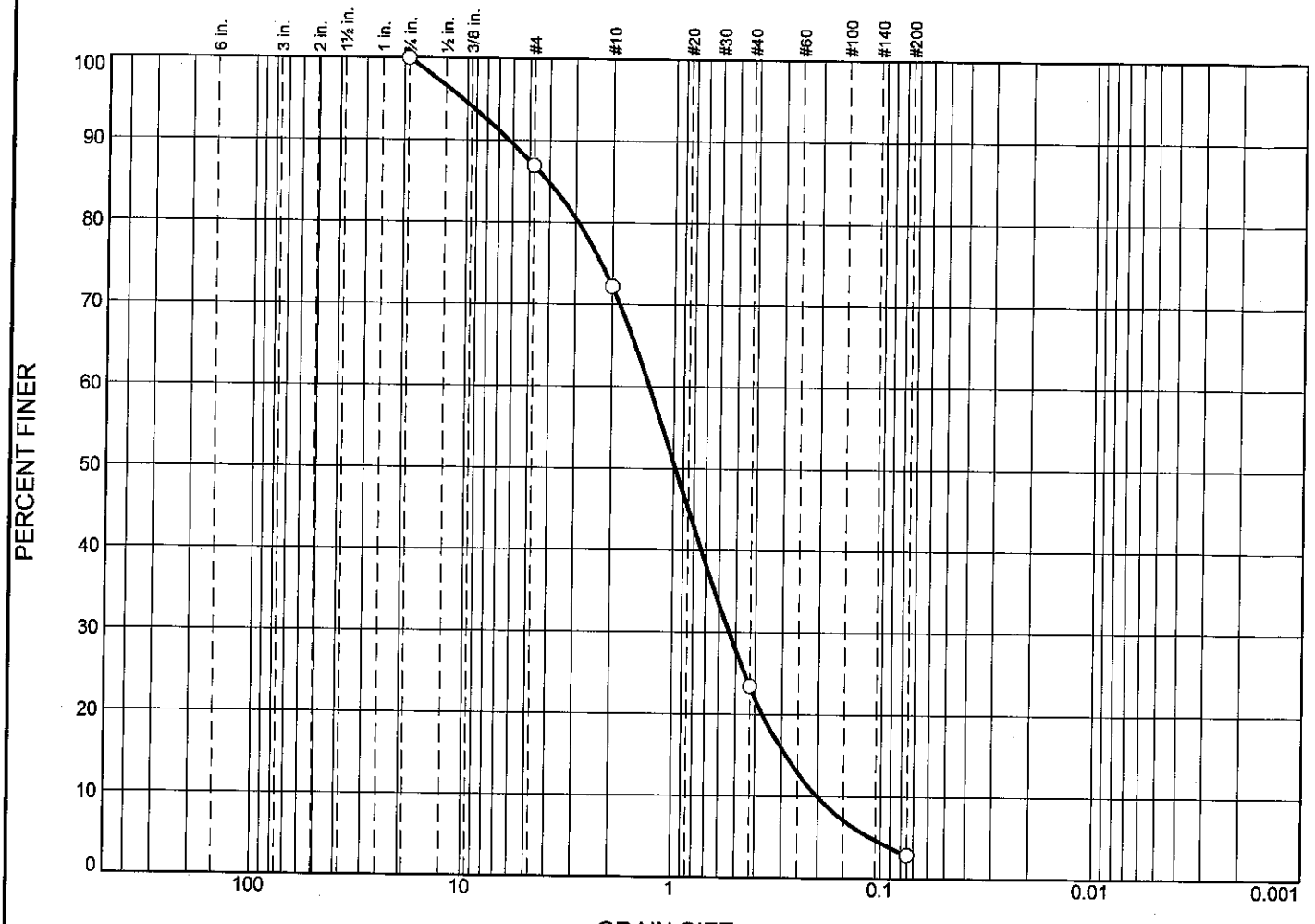
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	13.2	13.2	6.3	21.4	23.2	50.9			35.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.2238	0.4519	1.9077	3.6361	6.9999	11.7887

Fineness Modulus
2.01

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	13.1	14.7	48.7	20.6	2.9	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			4.0647	1.3147	0.9774	0.5365	0.2854	0.2013	1.09	6.53

	Material Description	USCS	AASHTO
○		SW	

Project No. **Client:**
Project:

○ **Source of Sample:** L-55 **Sample Number:** L1503503-02

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L-55
Sample Number: L1503503-02
USCS Classification: SW

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 132.93
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
132.93	0.00	0.75	0.00	0.00	100.0
		#4	17.37	0.00	86.9
		#10	19.55	0.00	72.2
		#40	64.83	0.00	23.5
		#200	27.38	0.00	2.9

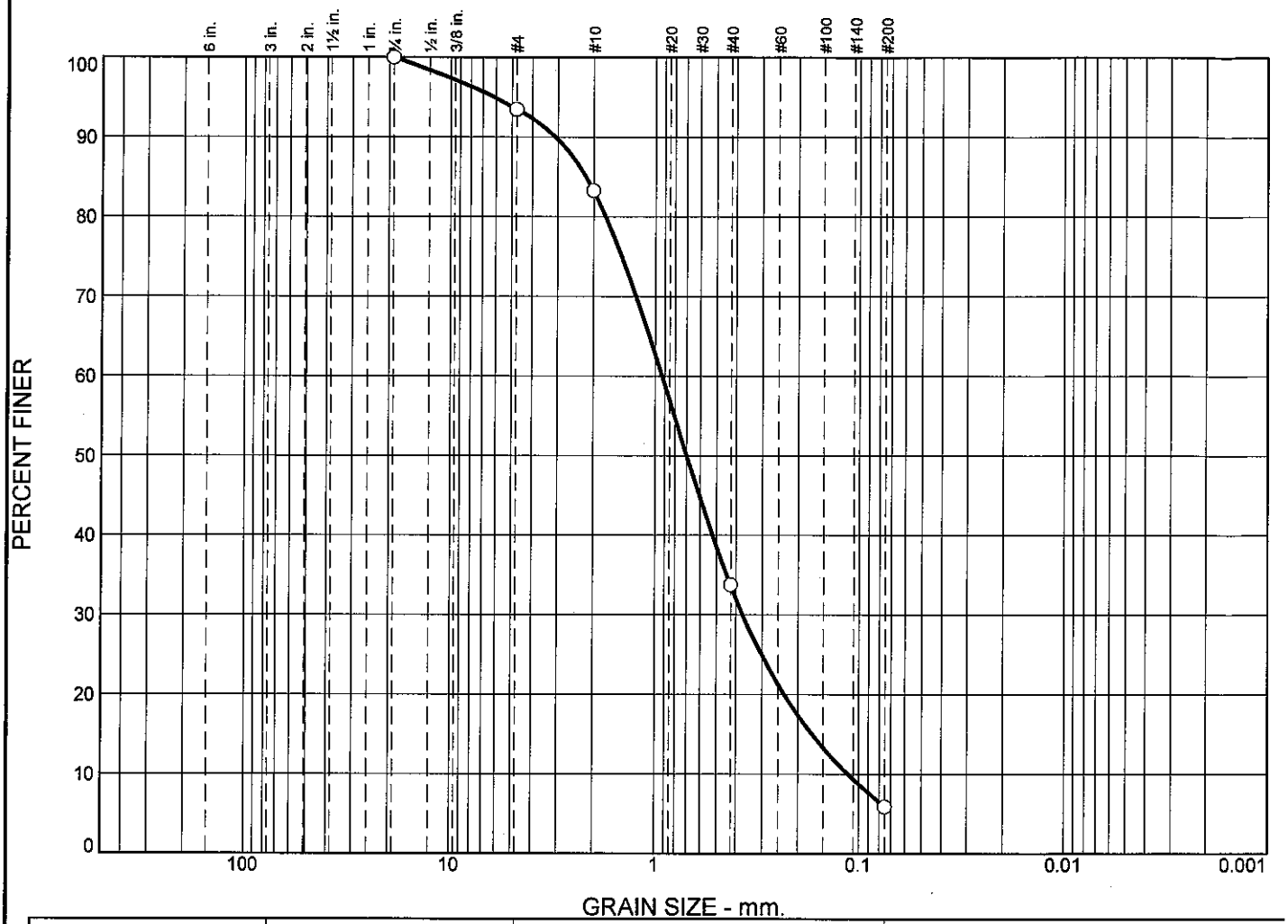
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	13.1	13.1	14.7	48.7	20.6	84.0			2.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.2013	0.2854	0.3679	0.5365	0.9774	1.3147	2.9065	4.0647	6.2447	10.4991

Fineness Modulus	C_u	C_c
3.30	6.53	1.09

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	6.5	10.2	49.5	27.9	5.9	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			2.1799	0.9231	0.6971	0.3700	0.1698	0.1127	1.32	8.19

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source of Sample:** L-54 **Sample Number:** L1503503-03

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L-54

Sample Number: L1503503-03

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 122.67
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
122.67	0.00	0.75	0.00	0.00	100.0
		#4	7.99	0.00	93.5
		#10	12.53	0.00	83.3
		#40	60.71	0.00	33.8
		#200	34.21	0.00	5.9

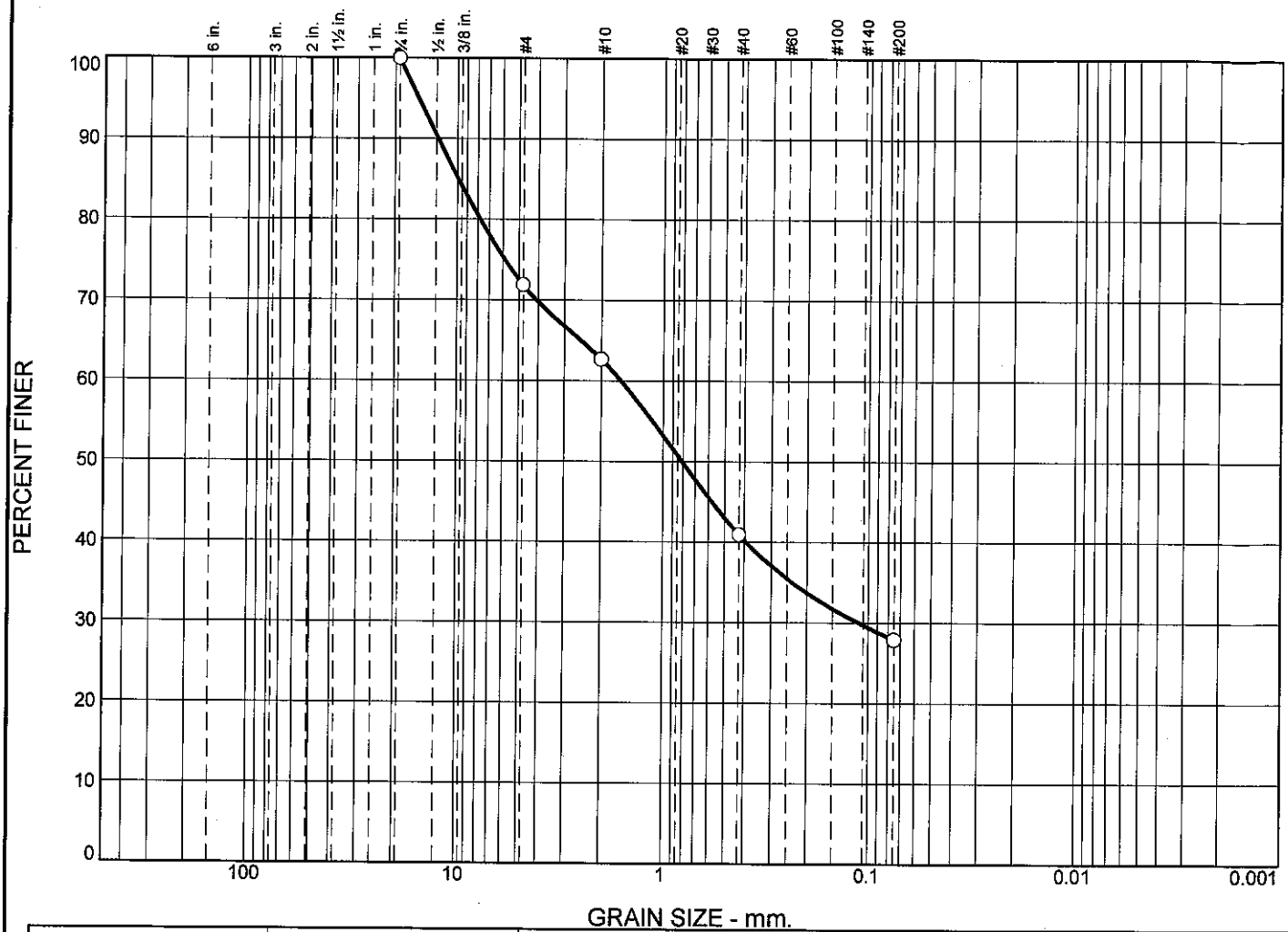
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	6.5	6.5	10.2	49.5	27.9	87.6			5.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.1127	0.1698	0.2330	0.3700	0.6971	0.9231	1.7396	2.1799	3.0790	6.1482

Fineness Modulus	C_u	C_c
2.71	8.19	1.32

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	28.1	9.2	21.7	13.1	27.9	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			9.8846	1.6048	0.8072	0.1113				

Material Description	USCS	AASHTO
○		

Project No. **Client:**
Project:

○ **Source of Sample:** L-53 **Sample Number:** L1503503-04

Remarks:

Alpha Analytical

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Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L-53

Sample Number: L1503503-04

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 121.38
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
121.38	0.00	0.75	0.00	0.00	100.0
		#4	34.12	0.00	71.9
		#10	11.17	0.00	62.7
		#40	26.37	0.00	41.0
		#200	15.84	0.00	27.9

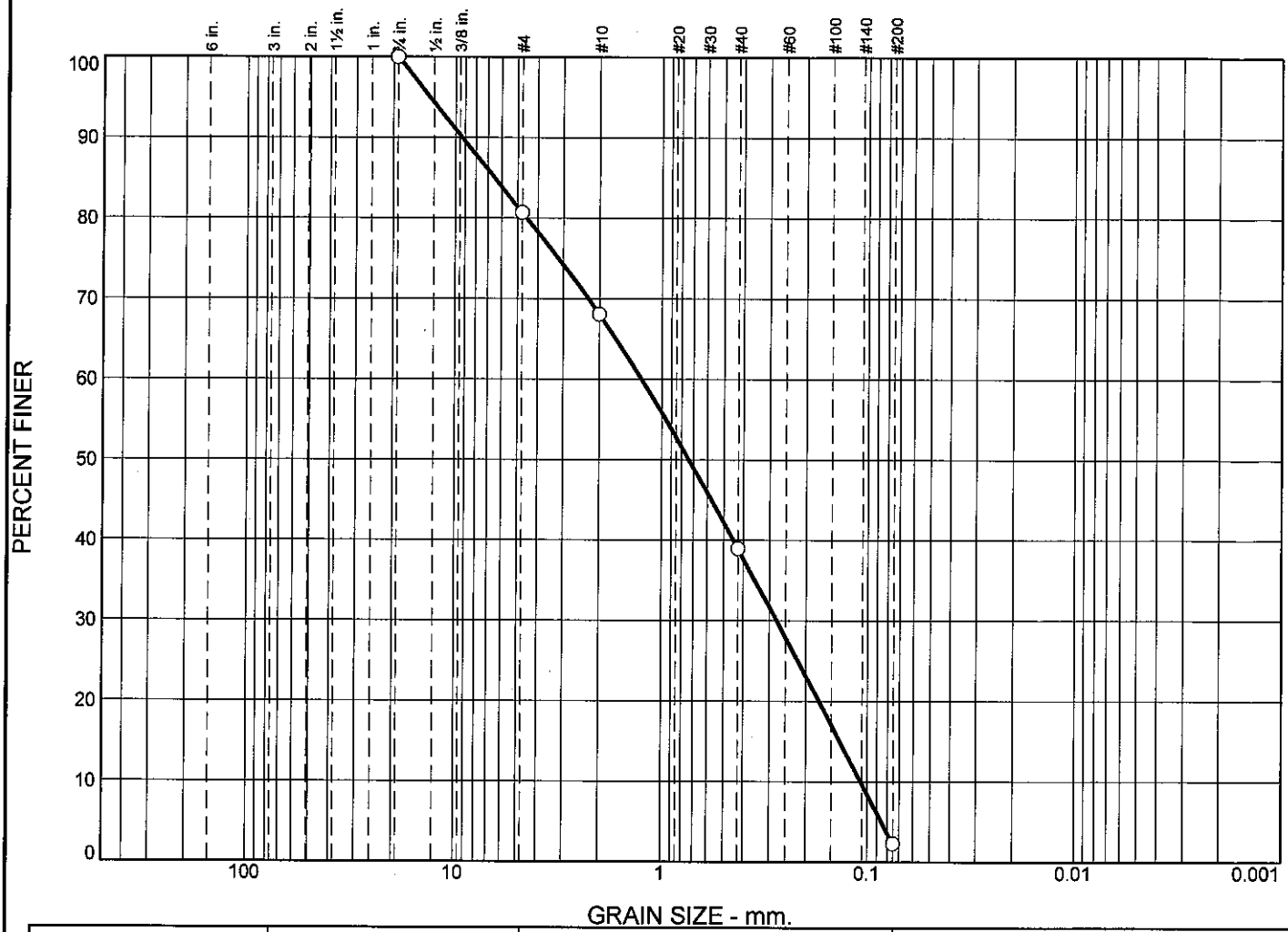
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	28.1	28.1	9.2	21.7	13.1	44.0			27.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.1113	0.8072	1.6048	7.7365	9.8846	12.4008	15.4042

Fineness Modulus
3.09

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	19.3	12.6	29.1	36.7	2.3	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			6.4732	1.2456	0.7342	0.2760	0.1358	0.1074	0.57	11.59

	Material Description	USCS	AASHTO
○		SP	

Project No. **Client:**
Project:

○ **Source of Sample:** L-52 **Sample Number:** L1503503-05

Remarks:

Alpha Analytical

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Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L-52
Sample Number: L1503503-05
USCS Classification: SP

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 129.60
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
129.60	0.00	0.75	0.00	0.00	100.0
		#4	25.01	0.00	80.7
		#10	16.35	0.00	68.1
		#40	37.74	0.00	39.0
		#200	47.51	0.00	2.3

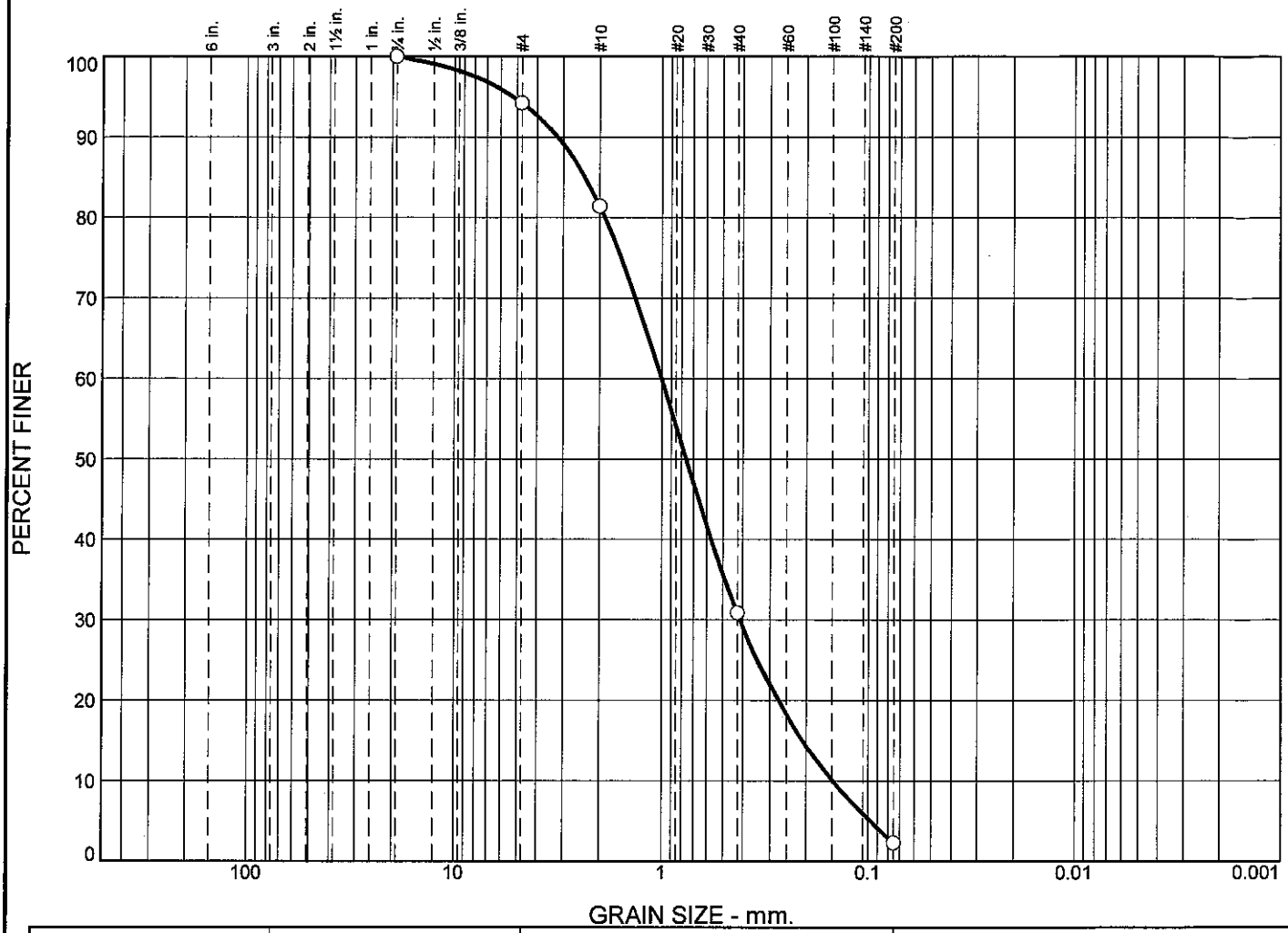
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	19.3	19.3	12.6	29.1	36.7	78.4			2.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.1074	0.1358	0.1718	0.2760	0.7342	1.2456	4.5157	6.4732	9.2774	13.2946

Fineness Modulus	C_u	C_c
3.04	11.59	0.57

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	5.8	12.8	50.5	28.6	2.3	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			2.3533	1.0004	0.7567	0.4121	0.2080	0.1485	1.14	6.73

Material Description	USCS	AASHTO
○	SW	

Project No. **Client:**
Project:

○ **Source of Sample:** L-51 **Sample Number:** L1503503-06

Remarks:

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Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L-51
Sample Number: L1503503-06
USCS Classification: SW

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 134.22
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
134.22	0.00	0.75	0.00	0.00	100.0
		#4	7.74	0.00	94.2
		#10	17.16	0.00	81.4
		#40	67.88	0.00	30.9
		#200	38.38	0.00	2.3

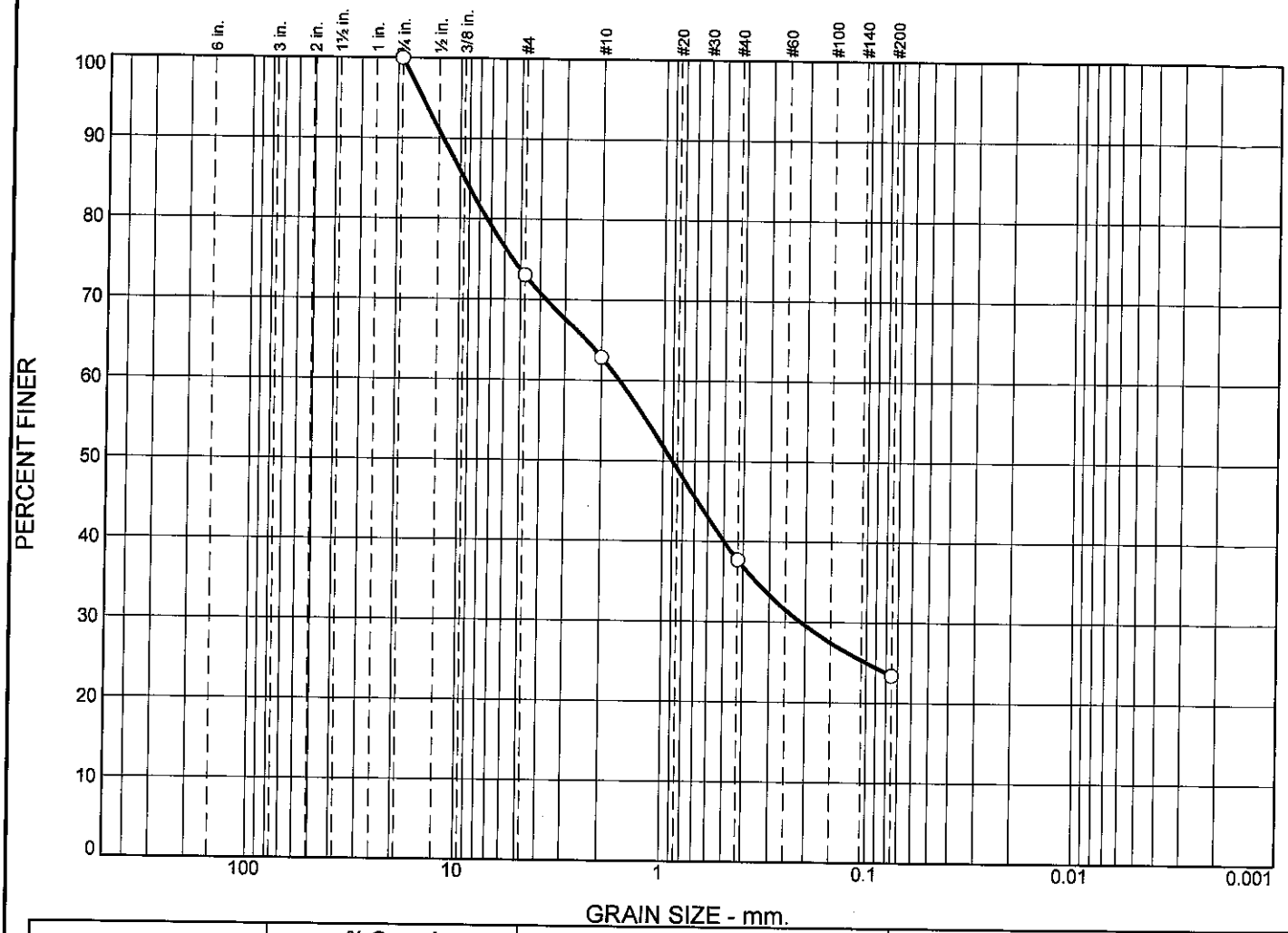
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	5.8	5.8	12.8	50.5	28.6	91.9			2.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.1485	0.2080	0.2724	0.4121	0.7567	1.0004	1.8863	2.3533	3.1867	5.2380

Fineness Modulus	C_u	C_c
2.83	6.73	1.14

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	27.0	10.1	25.2	14.3	23.4	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			9.4965	1.6327	0.8984	0.2102				

Material Description	USCS	AASHTO
○		

Project No. **Client:**
Project:

○ **Source of Sample:** L-62 **Sample Number:** L1503503-07

Remarks:

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Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L-62

Sample Number: L1503503-07

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 88.56
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
88.56	0.00	0.75	0.00	0.00	100.0
		#4	23.88	0.00	73.0
		#10	9.00	0.00	62.9
		#40	22.28	0.00	37.7
		#200	12.67	0.00	23.4

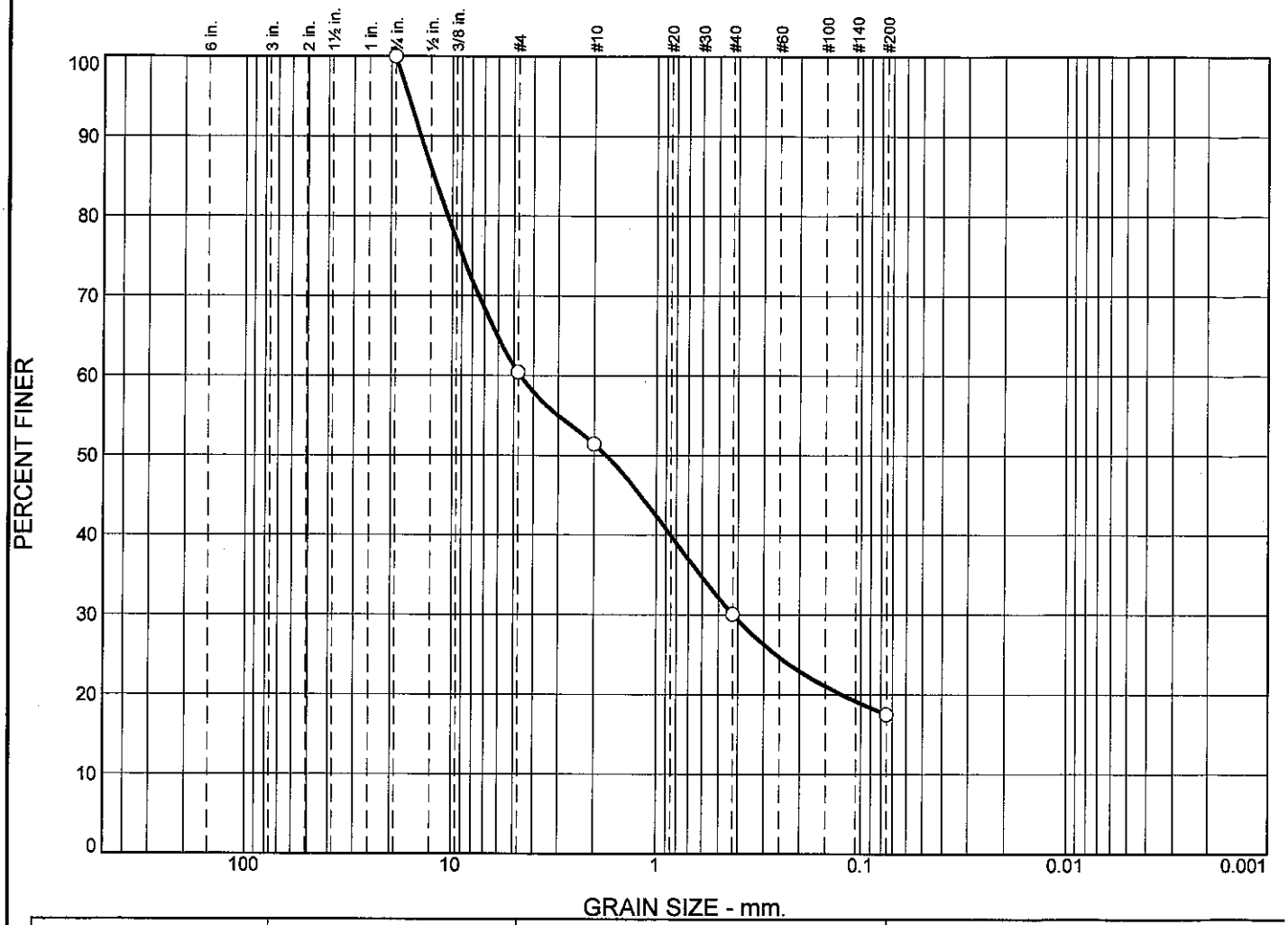
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	27.0	27.0	10.1	25.2	14.3	49.6			23.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.2102	0.8984	1.6327	7.3206	9.4965	12.0809	15.2065

Fineness Modulus
3.18

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	39.6	9.0	21.3	12.6	17.5	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			12.2505	4.6253	1.7499	0.4220				

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source of Sample:** L-62 **Sample Number:** WG766710-1

Remarks:

Alpha Analytical

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Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L-62

Sample Number: WG766710-1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 92.86
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
92.86	0.00	0.75	0.00	0.00	100.0
		#4	36.75	0.00	60.4
		#10	8.35	0.00	51.4
		#40	19.82	0.00	30.1
		#200	11.69	0.00	17.5

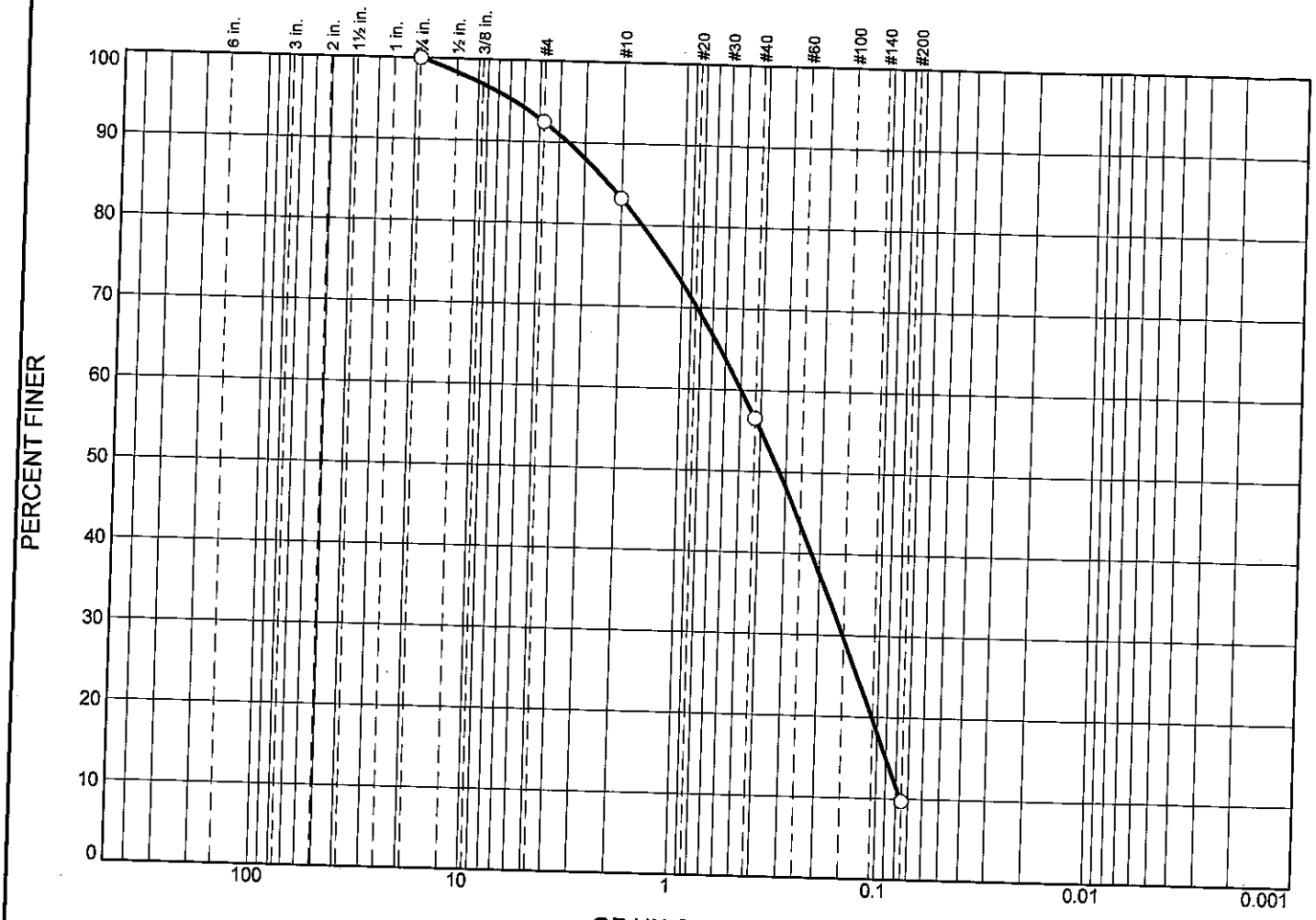
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	39.6	39.6	9.0	21.3	12.6	42.9			17.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.1243	0.4220	1.7499	4.6253	10.4790	12.2505	14.2352	16.4816

Fineness Modulus
3.83

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	7.5	9.2	26.8	46.8	9.7	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			2.2985	0.4978	0.3218	0.1514	0.0899	0.0758	0.61	6.57

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source of Sample:** L41 **Sample Number:** L1503503-08

Remarks:

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Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L41

Sample Number: L1503503-08

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 125.62
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
125.62	0.00	0.75	0.00	0.00	100.0
		#4	9.47	0.00	92.5
		#10	11.56	0.00	83.3
		#40	33.56	0.00	56.5
		#200	58.86	0.00	9.7

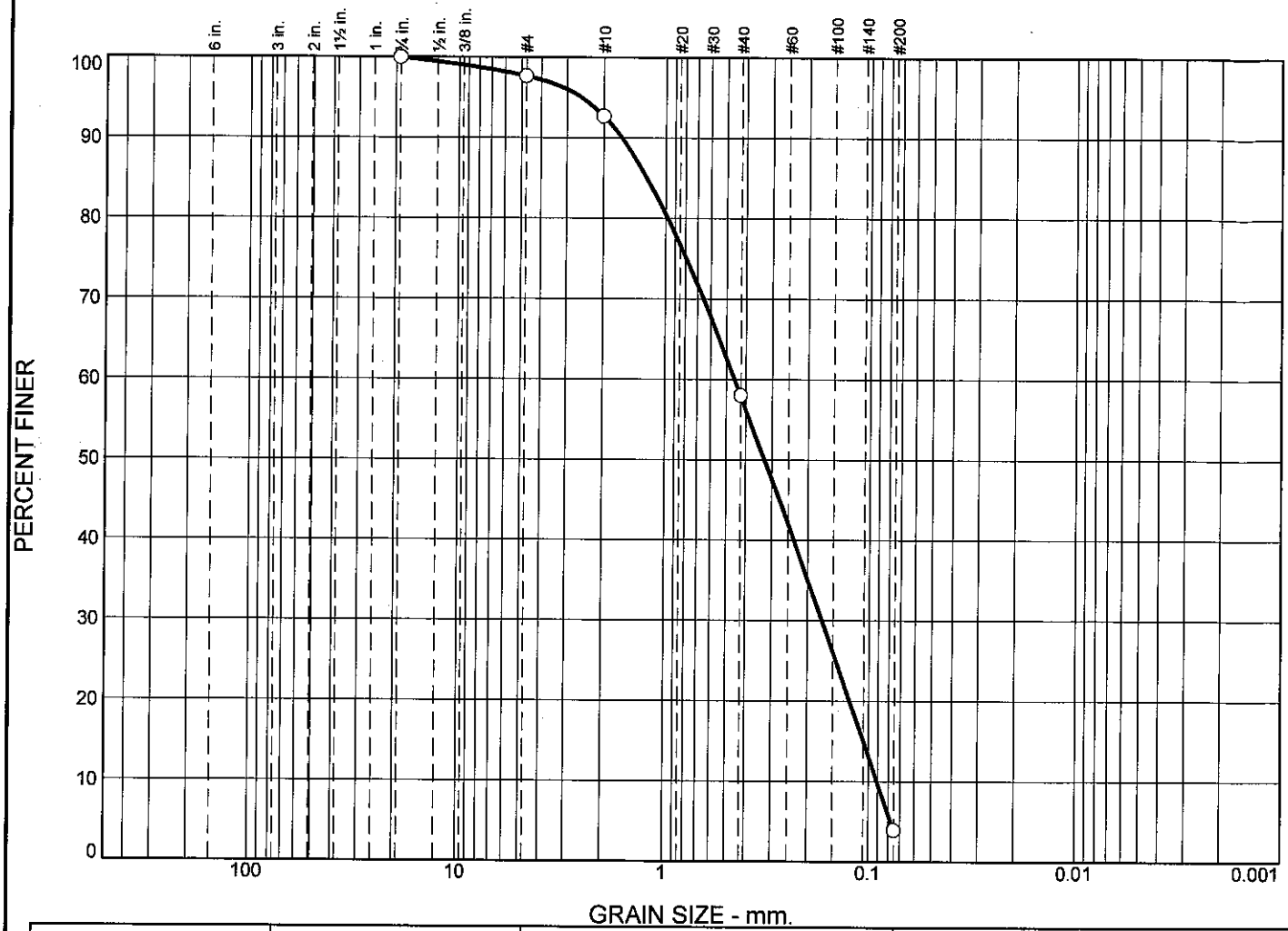
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	7.5	7.5	9.2	26.8	46.8	82.8			9.7

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0758	0.0899	0.1068	0.1514	0.3218	0.4978	1.5689	2.2985	3.6170	6.7385

Fineness Modulus	C_u	C_c
2.08	6.57	0.61

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	2.3	5.0	34.7	54.1	3.9	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.2283	0.4546	0.3240	0.1695	0.1058	0.0906	0.70	5.02

	Material Description	USCS	AASHTO
○		SP	

Project No. **Client:**
Project:

○ **Source of Sample:** L32 **Sample Number:** L1503503-09

Remarks:

Alpha Analytical

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Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L32
Sample Number: L1503503-09
USCS Classification: SP

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 119.69
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
119.69	0.00	0.75	0.00	0.00	100.0
		#4	2.79	0.00	97.7
		#10	5.93	0.00	92.7
		#40	41.50	0.00	58.0
		#200	64.77	0.00	3.9

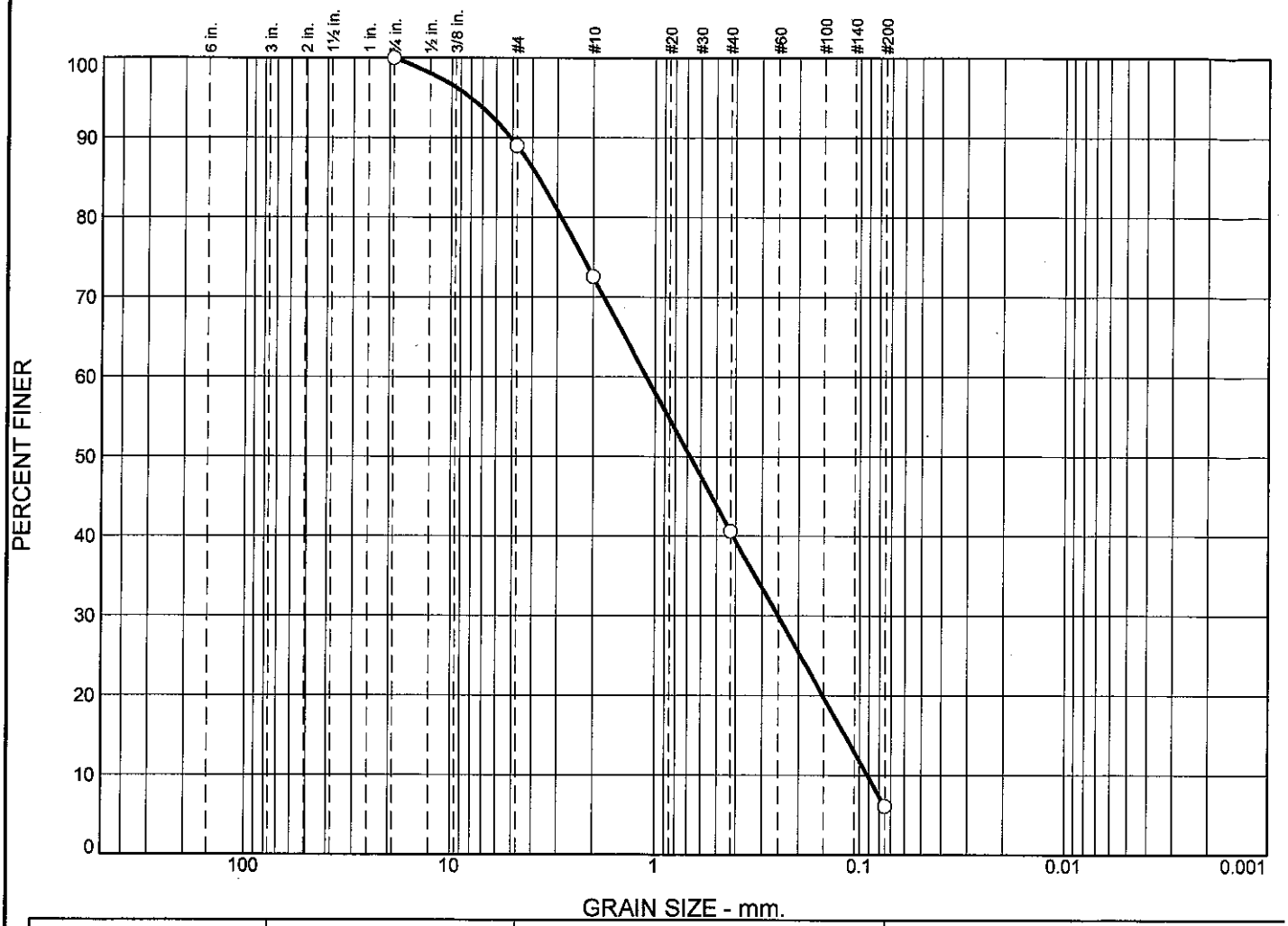
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	2.3	2.3	5.0	34.7	54.1	93.8			3.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0906	0.1058	0.1237	0.1695	0.3240	0.4546	0.9714	1.2283	1.6335	2.5516

Fineness Modulus	C_u	C_c
1.83	5.02	0.70

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	11.0	16.4	32.0	34.5	6.1	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			3.7187	1.0950	0.6738	0.2504	0.1176	0.0913	0.63	11.99

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** L35 **Sample Number:** L1503503-10

Remarks:

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Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L35

Sample Number: L1503503-10

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 127.73
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
127.73	0.00	0.75	0.00	0.00	100.0
		#4	14.02	0.00	89.0
		#10	21.01	0.00	72.6
		#40	40.81	0.00	40.6
		#200	44.08	0.00	6.1

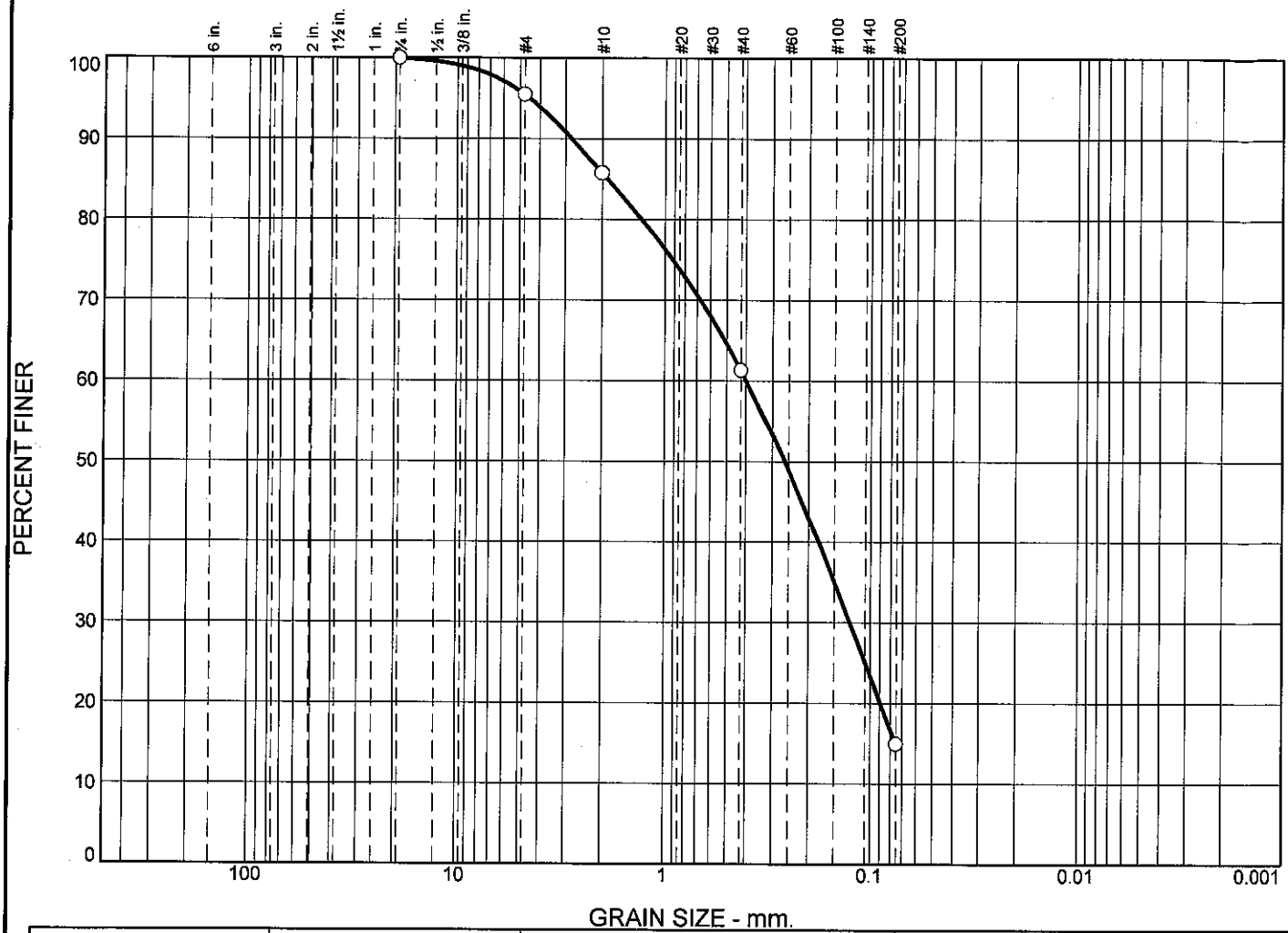
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	11.0	11.0	16.4	32.0	34.5	82.9			6.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0913	0.1176	0.1514	0.2504	0.6738	1.0950	2.8615	3.7187	5.0858	8.0318

Fineness Modulus	C_u	C_c
2.76	11.99	0.63

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	4.5	9.7	24.5	46.4	14.9	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.8844	0.3990	0.2607	0.1253	0.0752			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source of Sample:** L33 **Sample Number:** L1503503-11

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L33

Sample Number: L1503503-11

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 114.48
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
114.48	0.00	0.75	0.00	0.00	100.0
		#4	5.16	0.00	95.5
		#10	11.13	0.00	85.8
		#40	27.96	0.00	61.3
		#200	53.13	0.00	14.9

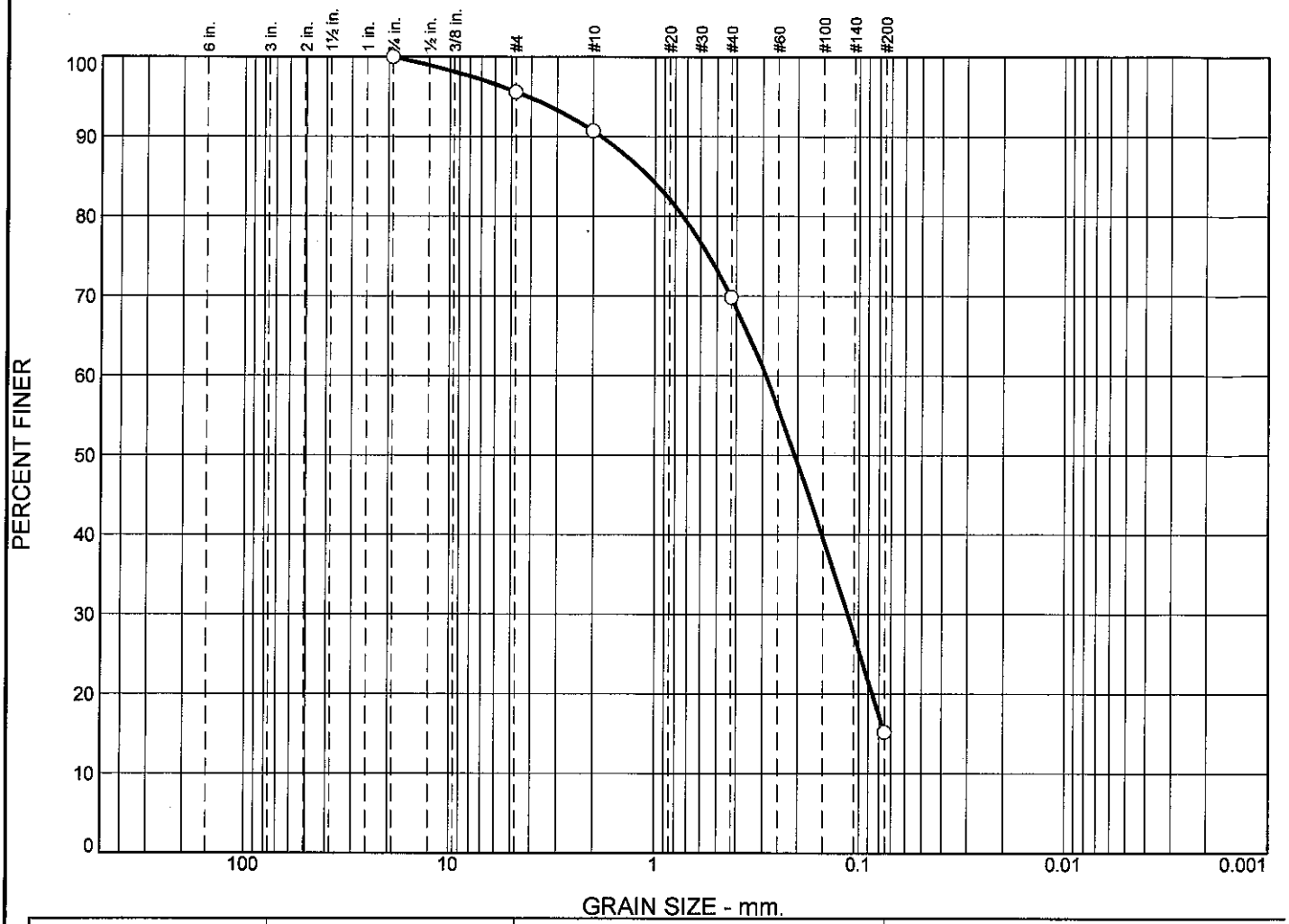
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	4.5	4.5	9.7	24.5	46.4	80.6			14.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0752	0.0890	0.1253	0.2607	0.3990	1.2932	1.8844	2.7970	4.4801

Fineness Modulus
1.82

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	4.4	4.9	20.8	54.7	15.2	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.0674	0.2879	0.2057	0.1134				

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source of Sample:** L31 **Sample Number:** L1503503-12

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L31

Sample Number: L1503503-12

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 118.70
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
118.70	0.00	0.75	0.00	0.00	100.0
		#4	5.20	0.00	95.6
		#10	5.84	0.00	90.7
		#40	24.73	0.00	69.9
		#200	64.86	0.00	15.2

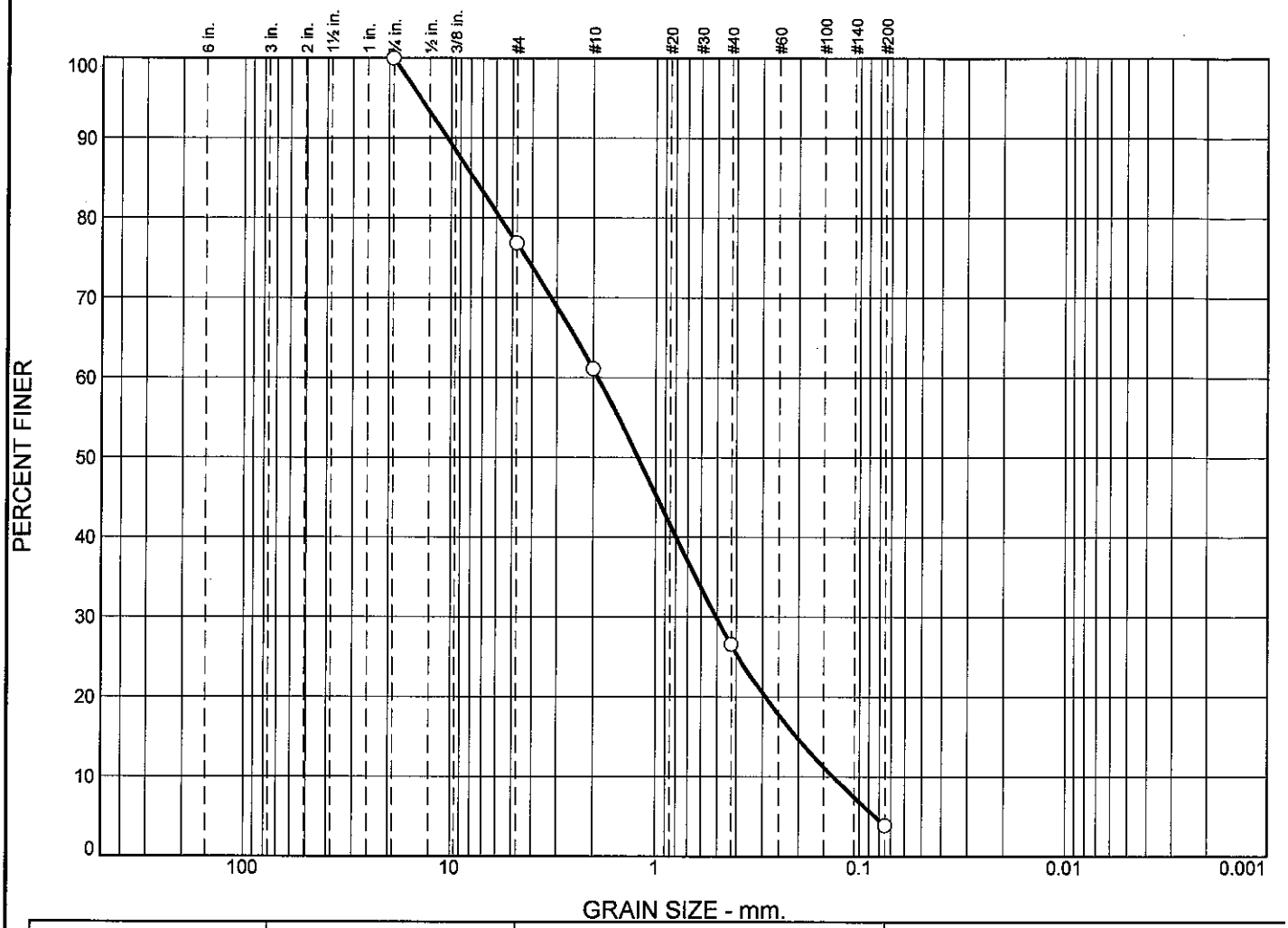
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	4.4	4.4	4.9	20.8	54.7	80.4			15.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0857	0.1134	0.2057	0.2879	0.7308	1.0674	1.8215	4.1422

Fineness Modulus
1.51

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	23.1	15.8	34.5	22.7	3.9	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			7.7136	1.8969	1.2138	0.5040	0.2039	0.1345	1.00	14.10

Material Description	USCS	AASHTO
○	SP	

Project No. **Client:**
Project:

○ **Location:** L34 **Sample Number:** L1503503-13

Remarks:

Alpha Analytical

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Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L34
Sample Number: L1503503-13
USCS Classification: SP

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 121.20
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
121.20	0.00	0.75	0.00	0.00	100.0
		#4	28.04	0.00	76.9
		#10	19.10	0.00	61.1
		#40	41.81	0.00	26.6
		#200	27.52	0.00	3.9

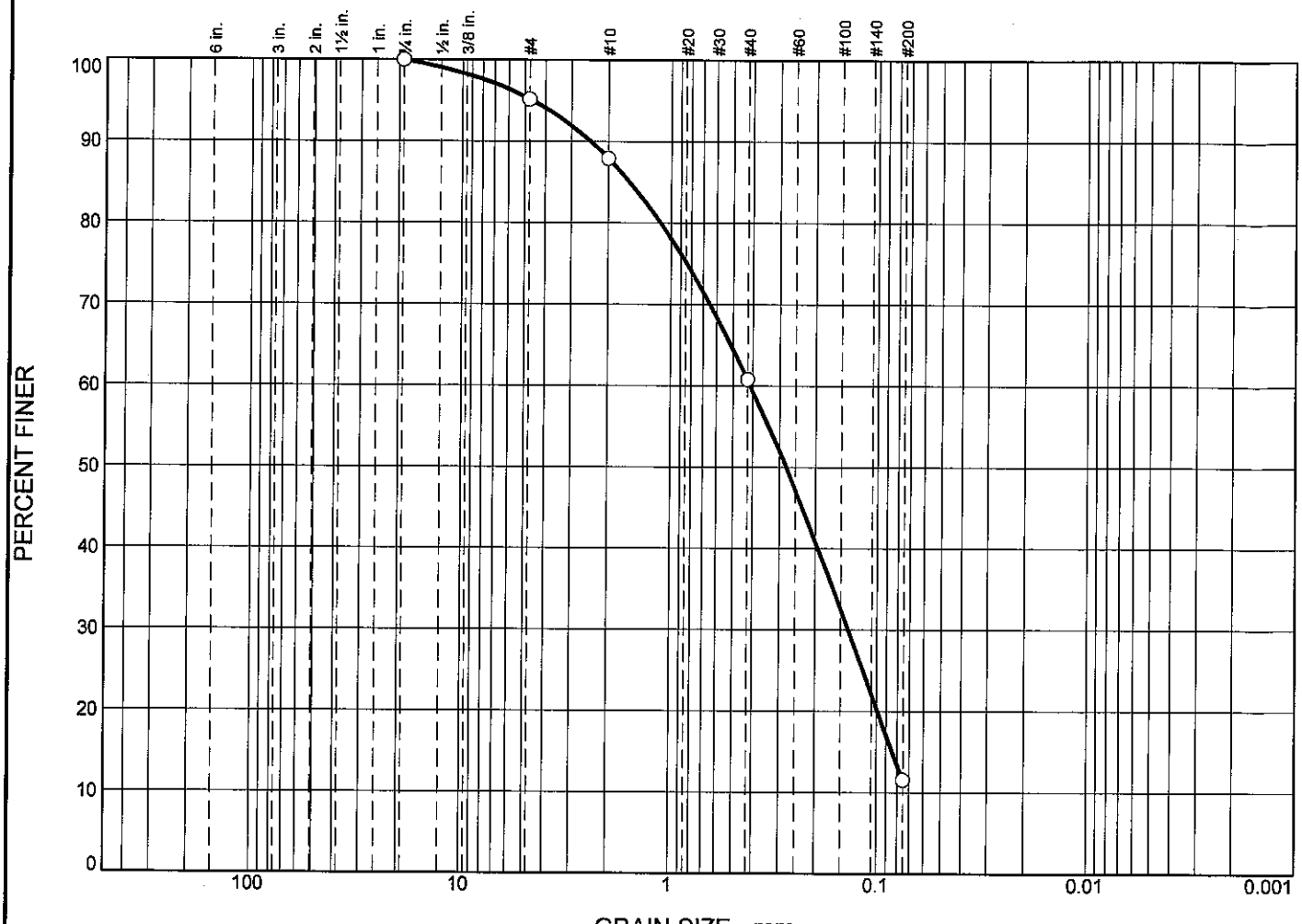
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	23.1	23.1	15.8	34.5	22.7	73.0			3.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.1345	0.2039	0.2896	0.5040	1.2138	1.8969	5.7220	7.7136	10.4163	14.0824

Fineness Modulus	C_u	C_c
3.55	14.10	1.00

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	4.8	7.3	27.1	49.3	11.5	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.5766	0.4112	0.2775	0.1375	0.0840			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source of Sample:** L36 **Sample Number:** L1503503-14

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L36

Sample Number: L1503503-14

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 132.90
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
132.90	0.00	0.75	0.00	0.00	100.0
		#4	6.39	0.00	95.2
		#10	9.65	0.00	87.9
		#40	36.07	0.00	60.8
		#200	65.46	0.00	11.5

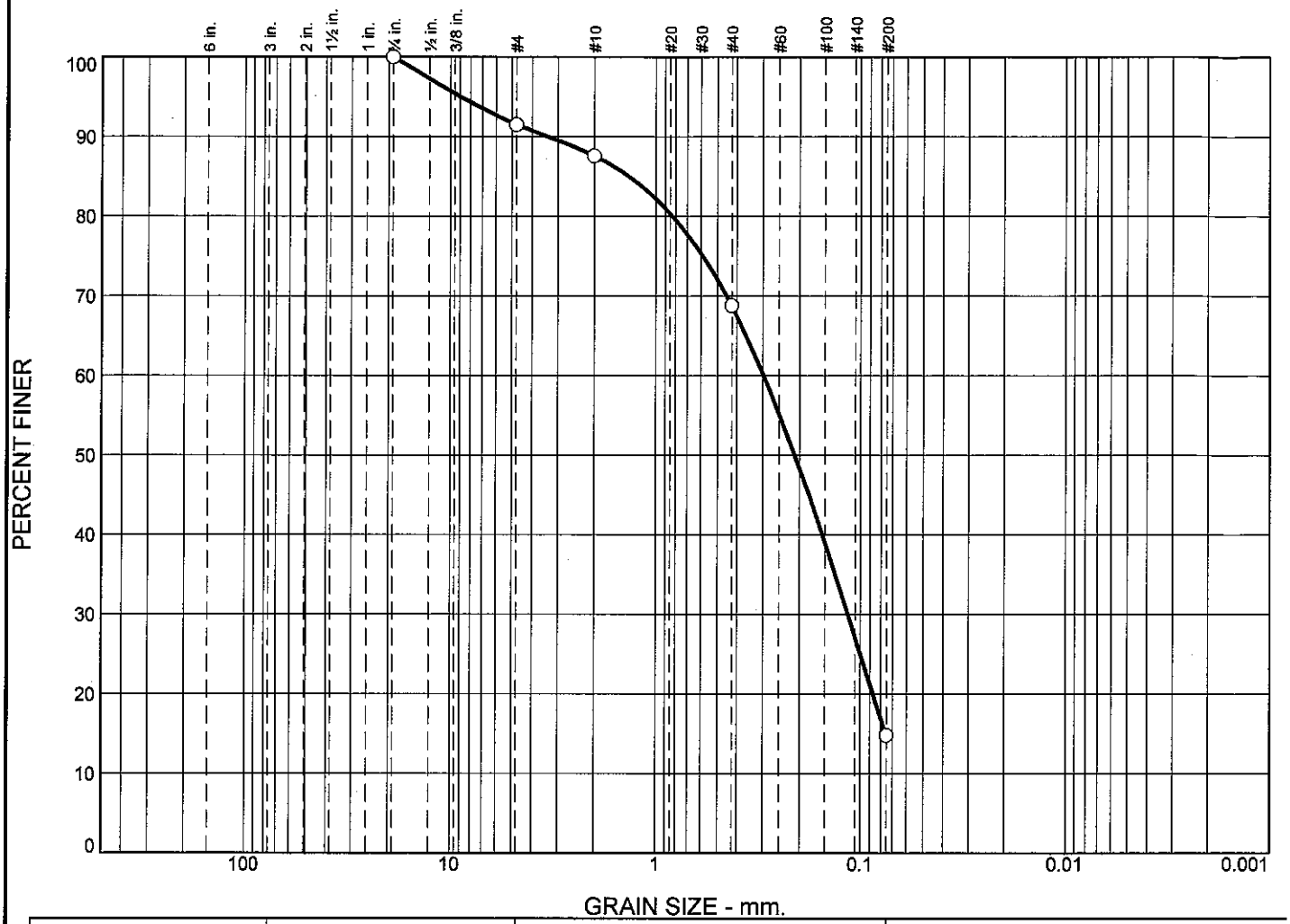
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	4.8	4.8	7.3	27.1	49.3	83.7			11.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0840	0.0988	0.1375	0.2775	0.4112	1.1197	1.5766	2.4292	4.5977

Fineness Modulus
1.83

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	8.5	3.9	18.8	54.0	14.8	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.3524	0.2966	0.2101	0.1150	0.0754			

Material Description	USCS	AASHTO
○		

Project No. **Client:**
Project:

○ **Source of Sample:** L37 **Sample Number:** L1503503-15

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L37

Sample Number: L1503503-15

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 150.64
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
150.64	0.00	0.75	0.00	0.00	100.0
		#4	12.76	0.00	91.5
		#10	5.94	0.00	87.6
		#40	28.30	0.00	68.8
		#200	81.34	0.00	14.8

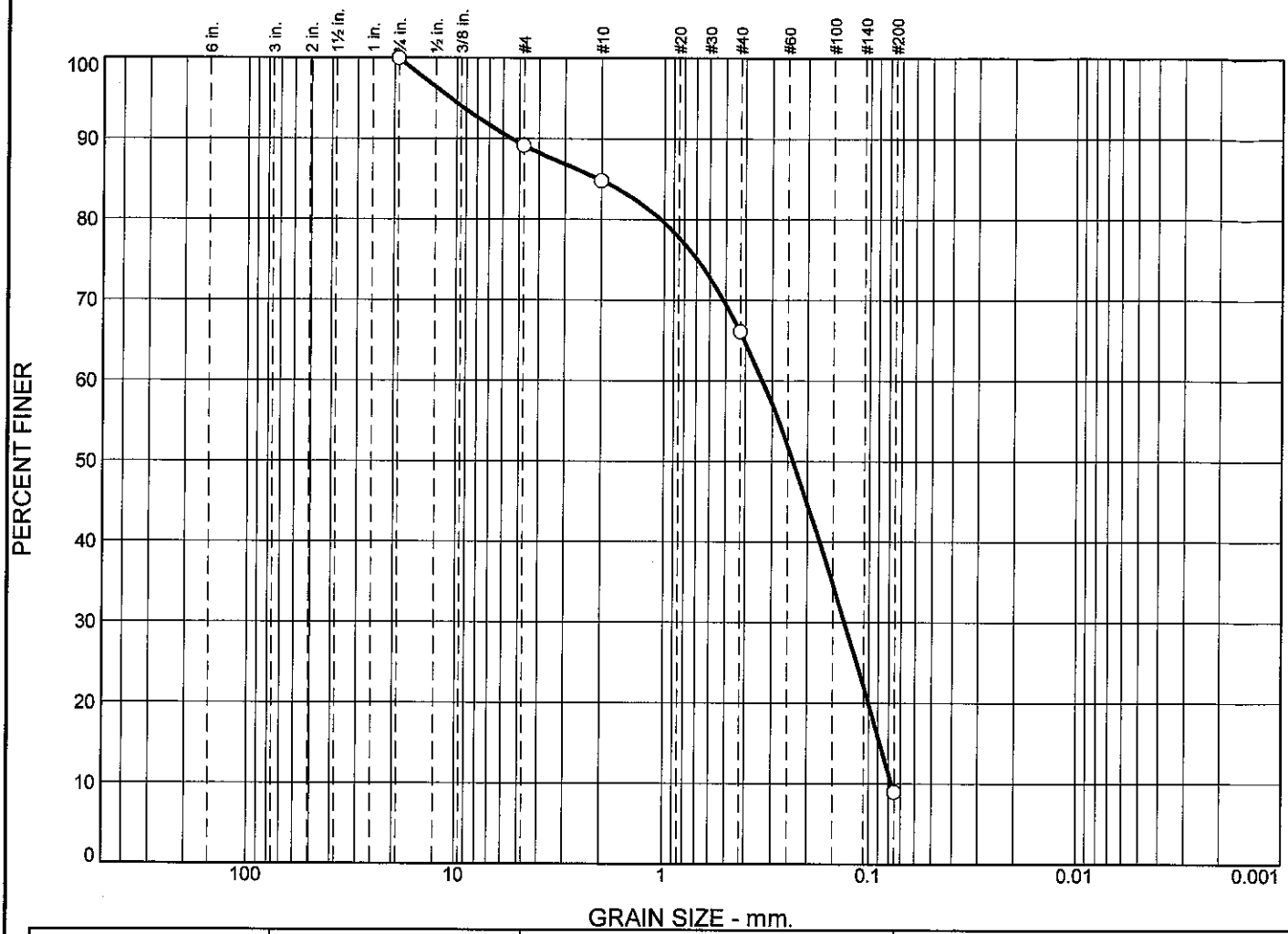
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	8.5	8.5	3.9	18.8	54.0	76.7			14.8

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0754	0.0867	0.1150	0.2101	0.2966	0.8246	1.3524	3.3538	8.9082

Fineness Modulus
1.66

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	10.8	4.4	18.7	57.1	9.0	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			2.0693	0.3314	0.2350	0.1311	0.0878	0.0771	0.67	4.30

Material Description	USCS	AASHTO
○		

Project No. **Client:**
Project:

○ **Source of Sample:** L38 **Sample Number:** L1503503-16

Remarks:

Alpha Analytical

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Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L38

Sample Number: L1503503-16

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 116.11
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
116.11	0.00	0.75	0.00	0.00	100.0
		#4	12.58	0.00	89.2
		#10	5.05	0.00	84.8
		#40	21.71	0.00	66.1
		#200	66.36	0.00	9.0

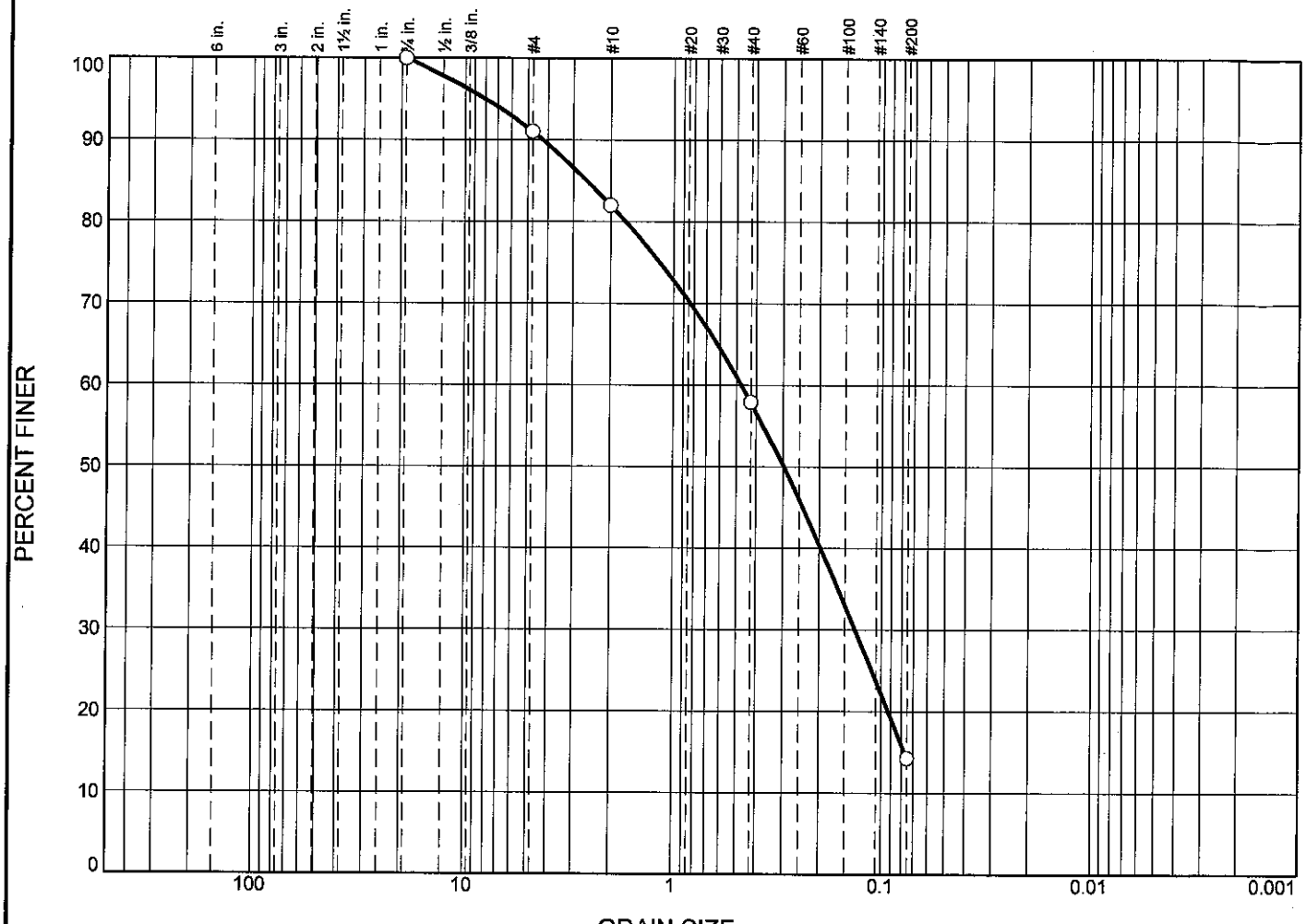
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	10.8	10.8	4.4	18.7	57.1	80.2			9.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0771	0.0878	0.1002	0.1311	0.2350	0.3314	1.0383	2.0693	5.4518	10.6819

Fineness Modulus	C_u	C_c
1.85	4.30	0.67

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	9.0	9.0	24.1	43.6	14.3	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			2.5912	0.4715	0.2958	0.1336	0.0770			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source of Sample:** L40 **Sample Number:** L1503503-17

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L40

Sample Number: L1503503-17

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 106.71
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
106.71	0.00	0.75	0.00	0.00	100.0
		#4	9.57	0.00	91.0
		#10	9.63	0.00	82.0
		#40	25.71	0.00	57.9
		#200	46.57	0.00	14.3

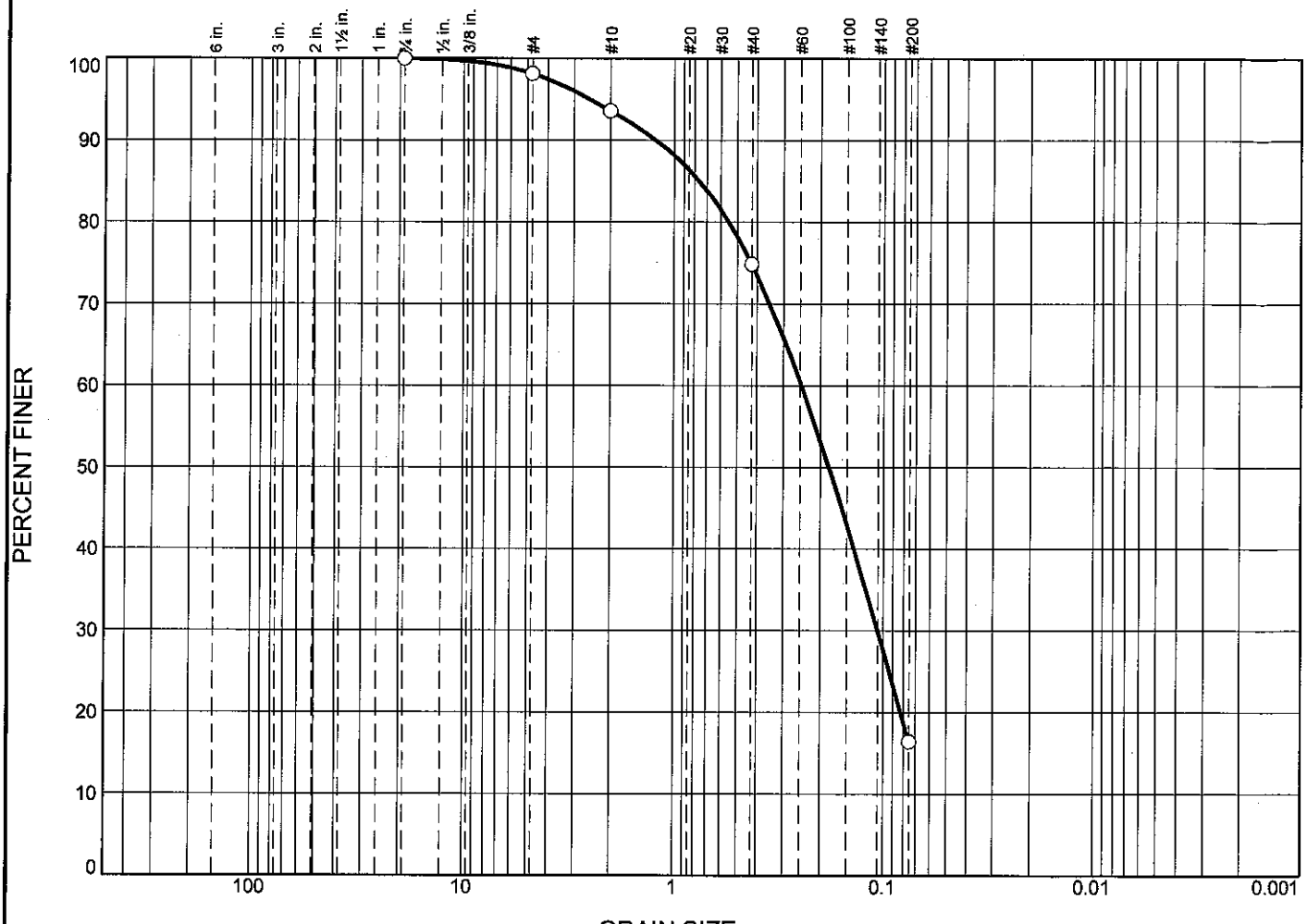
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	9.0	9.0	9.0	24.1	43.6	76.7			14.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0770	0.0924	0.1336	0.2958	0.4715	1.6969	2.5912	4.2309	8.0276

Fineness Modulus
2.06

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	1.9	4.5	18.7	58.5	16.4	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.7583	0.2460	0.1821	0.1062				

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source of Sample:** L39 **Sample Number:** L1503503-18

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L39

Sample Number: L1503503-18

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 116.42
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
116.42	0.00	0.75	0.00	0.00	100.0
		#4	2.16	0.00	98.1
		#10	5.32	0.00	93.6
		#40	21.76	0.00	74.9
		#200	68.08	0.00	16.4

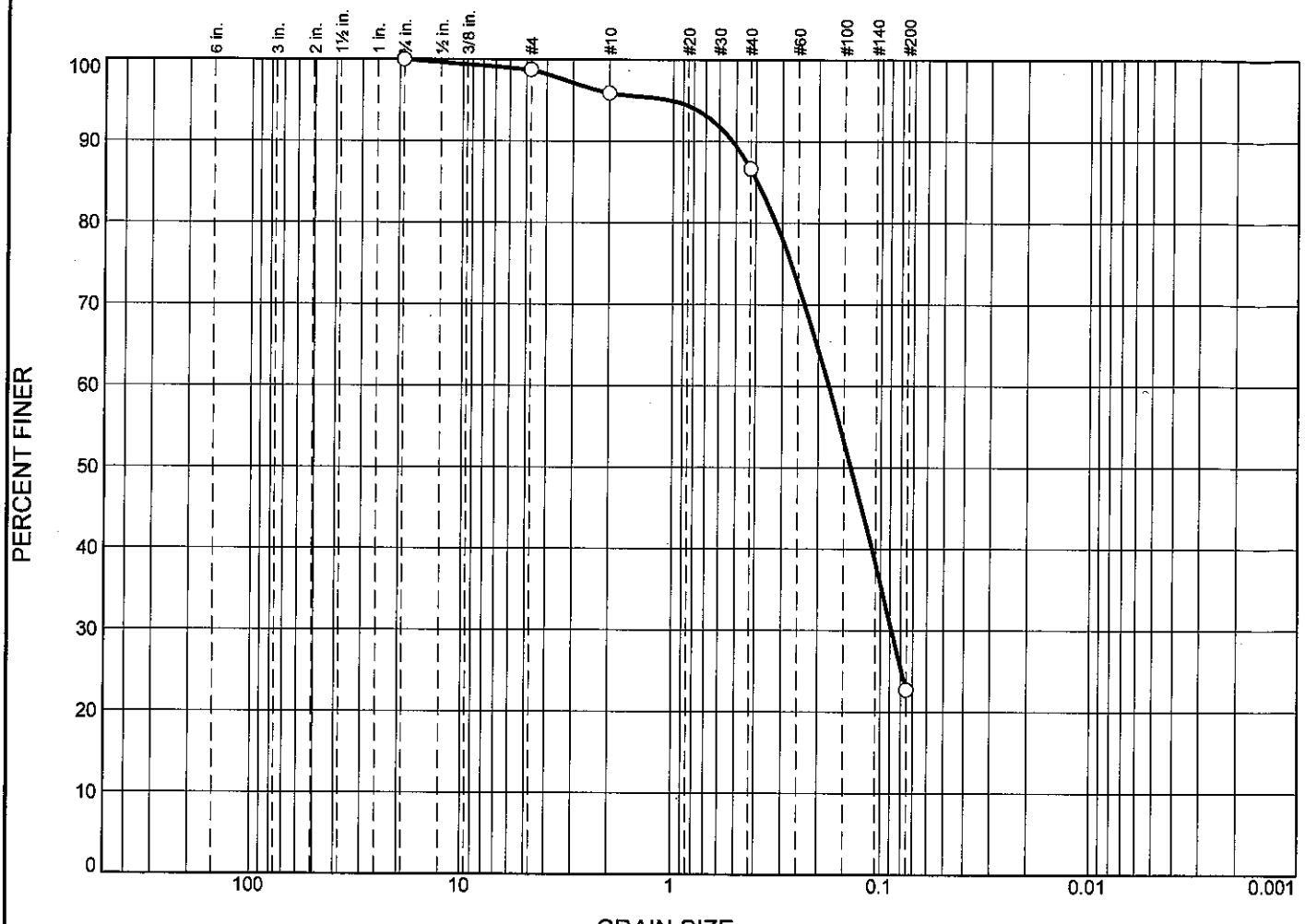
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	1.9	1.9	4.5	18.7	58.5	81.7			16.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0822	0.1062	0.1821	0.2460	0.5482	0.7583	1.2157	2.5177

Fineness Modulus
1.27

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	1.2	2.9	9.3	63.9	22.7	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3926	0.1772	0.1386	0.0880				

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source of Sample:** L26A **Sample Number:** L1503503-19

Remarks:

Alpha Analytical

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Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L26A

Sample Number: L1503503-19

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 109.08
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
109.08	0.00	0.75	0.00	0.00	100.0
		#4	1.34	0.00	98.8
		#10	3.13	0.00	95.9
		#40	10.10	0.00	86.6
		#200	69.73	0.00	22.7

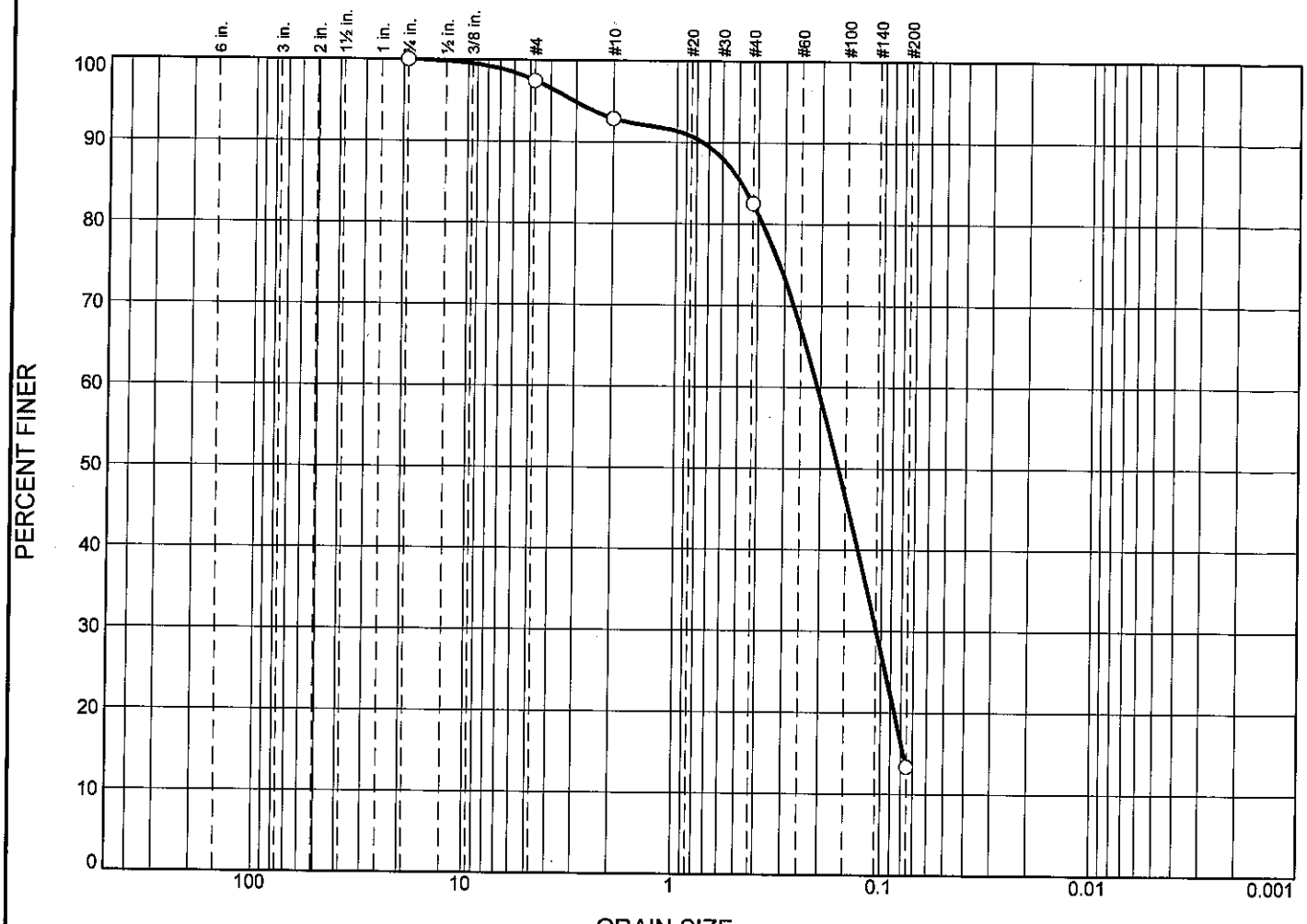
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	1.2	1.2	2.9	9.3	63.9	76.1			22.7

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0880	0.1386	0.1772	0.3206	0.3926	0.5194	1.0213

Fineness Modulus
0.87

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	2.5	4.6	10.3	69.2	13.4	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4832	0.2060	0.1622	0.1053	0.0775			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source of Sample:** L26B **Sample Number:** L1503503-20

Remarks:

Alpha Analytical

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Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L26B

Sample Number: L1503503-20

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 110.62
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
110.62	0.00	0.75	0.00	0.00	100.0
		#4	2.79	0.00	97.5
		#10	5.11	0.00	92.9
		#40	11.38	0.00	82.6
		#200	76.55	0.00	13.4

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	2.5	2.5	4.6	10.3	69.2	84.1			13.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0775	0.0858	0.1053	0.1622	0.2060	0.3796	0.4832	0.7465	3.0788

Fineness Modulus
1.10

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?	Yes
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?	Yes
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?	No – see Narrative
16. Were the matrix spike/matrix spike duplicates run at the required frequency and was the percent recovery/RPD within the acceptance criteria?	No – see Narrative
17. Were the duplicate samples analyzed and were the RPDs within the required acceptance criteria?	No –see Narrative
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?	Yes
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)	YES		Retained at Lab
Standard Reference Materials	Within the limits provided by vendor	YES	In House Limits 40%-140%	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%)	YES		In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)	NO	Acenaphthylene (58%), Phenanthrene (61%), Anthracene (44%), Fluoranthene (59%), Pyrene (52%), Benz(a)anthracene (65%), Chrysene (51%), Benzo(b)fluoranthene (68%), Benzo(k)fluoranthene (41%), Benzo(a)pyrene (57%), Indeno(1,2,3-cd)pyrene (55%), Dibenz(a,h)anthracene (64%), Benzo(ghi)perylene (58%).	In Data Package
Surrogate Recoveries	Calculate % recovery (30 to	YES		In Data Package

	150% recovery)			
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)	No	ICAL 10554: 4,4'-DDT Quadratic fit-column A ICAL 10776: 4,4'-DDE Quadratic fit-column A; 4,4'-DDT Quadratic fit-column A&B, Methoxychlor Quadratic fit-column B	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	WG766870-1, opening for L1503503-01 through -06, WG766032-1,-2 and -3: Hexachlorobenzene @ 15.2%-column B, alpha-Chlordane @ 19.7%-column B WG766870-2, closing for L1503503-01 through 06, WG766032-1,-2,-3 and opening for L1503503-08 through -12: -alpha-Chlordane @ 18.2%-column B WG766870-3, closing for L1503503-08 through -12: alpha-Chlordane @ 18.1%-column B WG766870-5, closing for L1503503-13 through -20 and -07, WG766870-5 and -6: gamma-BHC @ 15.1%-column A, Aldrin @ 15.3%-column A, 4,4'-DDD @16.5%-column A	Retained at Lab

			WG766870-6, opening for sample WG766870-4: gamma-BHC @ 15.4%-column A, Aldrin @ 15.4% -column A, Dieldrin @ 15.3 % -column A, 4,4'-DDD@ 15.7% -column A WG766870-7, closing for sample WG766032-4: gamma-BHC @ 16.4%-column A, Aldrin @ 16.5%-column A, Dieldrin @ 15.1%-column A	
Standard Reference Materials	Within the limits provided by vendor	No	SRM WG766032-7, Trans-nonachlor @ 316%	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%)	Yes		In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)	Yes		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)	YES		Retained at Lab
Standard Reference Materials	Within the limits provided by vendor	YES	In House limits 40%-140%	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%)	YES		In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)	YES		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		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		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%)	Yes		In Data Package
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-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%)	No	L1503503-07: Total gravel = 38% Total Fines = 29%	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.

Certification Information

Last revised December 16, 2014

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

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA 2540D: TSS
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.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F,**
EPA 353.2: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: 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: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

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

CHAIN OF CUSTODY

PAGE OF

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 2/26/15

ALPHA Job #: L1503503

Project Information

Project Name: LIS - USACoE RIM Dredge

Project Location: Eastern Long Island Sound

Project #:

Project Manager: James O'Donnell, UCONN

ALPHA Quote #: M2015009

Client Information

Client: University of Connecticut

Address: 1080 Shennecossett Road

Groton, CT 06340

Phone: 860-405-9171

Fax:

Email: james.odonnell@uconn.edu

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☑ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: MARCH 12 Time: 5:00pm

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: Compliant with USACE RIM

Criteria

Other Project Specific Requirements/Comments/Detection Limits:

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date 2015	Collection Time EST	Sample Matrix	Sampler's Initials	Grain Size (ASTM D422)	Total Solids (SM 2540C)	Total Org. Carbon (EPA 9060) 2 reps	Metals (As,Cd,Cr,Cu,Pb,Hg,Ni,Zn)	PAHs (8270D - SIM)	Pesticides (8081B)	PCB Congeners (8270D - SIM)						Sample Specific Comments	TOTAL # BOTTLES
03503.08	L41	2/26	0933	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
09	L32	2/26	1005	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
10	L35	2/26	1019	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
11	L33	2/26	1035	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
12	L31	2/26	1100	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
13	L34	2/26	1119	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
14	L36	2/26	1135	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
15	L37	2/26	1236	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
16	L38	2/26	1306	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
17	L40	2/26	1330	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
					Container Type	P	A	A	A	A	A	A	-	-	-	-	-		
					Preservative	-	-	-	-	-	-	-	-	-	-	-	-		

Relinquished By:	Date/Time	Received By:	Date/Time
[illegible] 2/26/15	2/26/15 1630 1800	[illegible]	2/26/15 1623 2/26/15 1888

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

FORM NO: 01-01(I-NJ) (rev. 5-JAN-12)

CHAIN OF CUSTODY

PAGE OF

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 2/26/15

ALPHA Job #: L1503503

Project Information

Project Name: LIS - USACoE RIM Dredge

Project Location: Eastern Long Island Sound

Project #:

Project Manager: James O'Donnell, UCONN

ALPHA Quote #: M2015009

Client Information

Client: University of Connecticut

Address: 1080 Shennecossett Road

Groton, CT 06340

Phone: 860-405-9171

Fax:

Email: james.odonnell@uconn.edu

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☑ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: MARCH 12 Time: 5:00pm

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
Compliant with USACE RIM	

Other Project Specific Requirements/Comments/Detection Limits:

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date 2015	Collection Time EST	Sample Matrix	Sampler's Initials	Grain Size (ASTM D422)	Total Solids (SM 2540C)	Total Org. Carbon (EPA 9060) 2 reps	Metals (As,Cd,Cr,Cu,Pb,Hg,Ni,Zn)	PAHs (8270D - SIM)	Pesticides (8081B)	PCB Congeners (8270D - SIM)						Sample Specific Comments	TOTAL # BOTTLES
03503.18	L39	2/26	1345	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
19	L26A	2/26	1424	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
20	L26B	2/26	1430	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
				Container Type		P	A	A	A	A	A	A	-	-	-	-	-		
				Preservative		-	-	-	-	-	-	-	-	-	-	-	-		

Relinquished By:	Date/Time	Received By:	Date/Time
Kathryn Stone	2/26/15 1630	Kelly Sullivan	2/26/15 1630
K Smith	2/26/15 18:15	[illegible]	2/26/15 18:15

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

FORM NO: 01-01(I-NJ) (rev. 5-JAN-12)

CHAIN OF CUSTODY

PAGE OF

ALPHA ANALYTICAL

Date Rec'd in Lab: 2/24/15

ALPHA Job #: L1503503

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

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

Project Information

Project Name: LIS - USACoE RIM Dredge

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Project #:

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Fax:

Email: james.odonnell@uconn.edu

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☑ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: MARCH 10 Time: 5:00pm

Report Information

☐ FAX ☒ EMAIL

☐ ADEx ☐ Add'l Deliverables

Data Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
Compliant with USACE RIM	

Other Project Specific Requirements/Comments/Detection Limits:

FOR L-62 MS & L-62 MSD, USE SEDIMENT FROM SAME BOTTLE AS FOR SAMPLE L-62.

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date 2015	Collection Time EST	Sample Matrix	Sampler's Initials	Grain Size (ASTM D422)	Total Solids (SM 2540C)	Total Org. Carbon (EPA 9060) 2 reps	Metals (As,Cd,Cr,Cu,Pb,Hg,Ni,Zn)	PAHs (8270D - SIM)	Pesticides (8081B)	PCB Congeners (8270D - SIM)						Sample Specific Comments	TOTAL # BOTTLES
03503, 01	L-56	2/24	1122	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
02	L-55	2/24	1201	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
03	L-54	2/24	1235	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
04	L-53	2/24	1301	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
05	L-52	2/24	1352	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
06	L-51	2/24	1420	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
07	L-62	2/24	1435	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
07	L-62 MS	2/24	1435	SE	KHS	☐	☐	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐	SAME BOTTLE AS L-62	0
07	L-62 MSD	2/24	1435	SE	KHS	☐	☐	☐	☑	☑	☑	☑	☐	☐	☐	☐	☐	SAME BOTTLE AS L-62	0
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
					Container Type	P	A	A	A	A	A	A	-	-	-	-	-		
					Preservative	-	-	-	-	-	-	-	-	-	-	-	-		

Relinquished By:	Date/Time	Received By:	Date/Time
[illegible]	2/24/15 1633	[illegible]	2/24/15 1633
[illegible]	2/24/15 1807	[illegible]	2/24/15 1807

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

FORM NO: 01-01(I-NJ)
(rev. 5-JAN-12)

Appendix 3

LABORATORY REPORT B: SAMPLING ON FEBRUARY 27

(including Chain of Custody forms)

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ANALYTICAL REPORT

Lab Number:	L1503772
Client:	University of Connecticut 1080 Shennecossett Road Marine Sciences Dept Groton, CT 06340
ATTN:	James O'Donnell
Phone:	(401) 932-5703
Project Name:	LIS-USACOE RIM DREDGE
Project Number:	Not Specified
Report Date:	03/16/15

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: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), ME (MA00030), PA (68-02089), VA (460194), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), USFWS (Permit #LE2069641), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

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

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1503772-01	L27	SEDIMENT	EASTERN LONG ISLAND SOUND	02/27/15 09:08	02/27/15
L1503772-02	L28	SEDIMENT	EASTERN LONG ISLAND SOUND	02/27/15 09:21	02/27/15
L1503772-03	L25A	SEDIMENT	EASTERN LONG ISLAND SOUND	02/27/15 09:48	02/27/15
L1503772-04	L25B	SEDIMENT	EASTERN LONG ISLAND SOUND	02/27/15 10:00	02/27/15
L1503772-05	L21	SEDIMENT	EASTERN LONG ISLAND SOUND	02/27/15 10:12	02/27/15
L1503772-06	L20	SEDIMENT	EASTERN LONG ISLAND SOUND	02/27/15 10:25	02/27/15
L1503772-07	L19	SEDIMENT	EASTERN LONG ISLAND SOUND	02/27/15 10:43	02/27/15
L1503772-08	L13	SEDIMENT	EASTERN LONG ISLAND SOUND	02/27/15 10:55	02/27/15
L1503772-09	L16	SEDIMENT	EASTERN LONG ISLAND SOUND	02/27/15 11:09	02/27/15
L1503772-10	L18	SEDIMENT	EASTERN LONG ISLAND SOUND	02/27/15 11:22	02/27/15
L1503772-11	L17	SEDIMENT	EASTERN LONG ISLAND SOUND	02/27/15 11:39	02/27/15
L1503772-12	L15	SEDIMENT	EASTERN LONG ISLAND SOUND	02/27/15 11:53	02/27/15
L1503772-13	L12	SEDIMENT	EASTERN LONG ISLAND SOUND	02/27/15 12:58	02/27/15
L1503772-14	L11	SEDIMENT	EASTERN LONG ISLAND SOUND	02/27/15 13:08	02/27/15
L1503772-15	L14	SEDIMENT	EASTERN LONG ISLAND SOUND	02/27/15 13:19	02/27/15
L1503772-16	L23A	SEDIMENT	EASTERN LONG ISLAND SOUND	02/27/15 13:35	02/27/15
L1503772-17	L23B	SEDIMENT	EASTERN LONG ISLAND SOUND	02/27/15 13:45	02/27/15
L1503772-18	L24A	SEDIMENT	EASTERN LONG ISLAND SOUND	02/27/15 13:58	02/27/15
L1503772-19	L24B	SEDIMENT	EASTERN LONG ISLAND SOUND	02/27/15 14:12	02/27/15
L1503772-20	L22A	SEDIMENT	EASTERN LONG ISLAND SOUND	02/27/15 14:30	02/27/15
L1503772-21	L22B	SEDIMENT	EASTERN LONG ISLAND SOUND	02/27/15 14:43	02/27/15
L1503772-22	L61	SEDIMENT	EASTERN LONG ISLAND SOUND	02/27/15 23:45	02/27/15

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503772
Project Number:	Not Specified	**Report Date:**	03/16/15

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 all of the requirements of NELAC, for all NELAC accredited parameters. 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. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

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

Please contact Client Services at 800-624-9220 with any questions.

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503772
Project Number:	Not Specified	**Report Date:**	03/16/15

Case Narrative (continued)

Report Submission

This report replaces the one issued on March 12, 2015. The report was amended to correct grain size analysis results.

Semivolatile Organics

PAHs and PCBs by GC/MS-SIM

The surrogate recovery for sample L1503772-13 is outside the individual acceptance criteria for 2-Methylnaphthalene-d10 (27%), but within the overall method allowances.

The WG766355-4 Standard Reference Material is outside the QC limits for CL3-BZ#28 (33%).

The WG766355-6 /-7MS/MSD RPD(s), associated with samples L1503772-13 through -22, are above the acceptance criteria for Benzo(b)fluoranthene (31%).

Pesticides

The Pesticide analysis was performed utilizing dual column confirmation with the higher of the two values reported. If the relative percent difference (RPD) was above the acceptance criteria the compound is reported with a "P" qualifier. Technical judgment was employed in the case of an observed interference. In the case that interference was observed on one column, the lower value is reported and qualified with an "I".

The laboratory control sample duplicate WG766344-3 recoveries, associated with L1503772-01 through -07, are above the acceptance criteria for 4,4'-DDD (135%) and Methoxychlor (128%); however, the associated samples are non-detect for these target compounds. The LCS recoveries were within criteria therefore no action was required.

The standard reference material (SRM) WG766345-4 had the compound trans-Nonachlor at 270%, and the Surrogate BZ #198 at 169% for Column B, recovered above the acceptance criteria, due to matrix interference. All other monitored compounds and surrogates were recovered within acceptance criteria. In addition the SRM

Case Narrative (continued)

has elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

The continuing calibration standard WG766869-1, associated to samples L1503772-08 through -12 and WG766345-5, had the response for Hexachlorobenzene (15.4%D - column B) and alpha-Chlordane (20.3%D-column B) outside the individual acceptance criteria but within allowance. The compound alpha-Chlordane was not detected above the reporting limit for column A; therefore no further action was taken.

The continuing calibration standard WG766869-2, associated to samples L1503772-08 through -19, WG766345-1, -2, -3 and -5, had the response for Hexachlorobenzene (19.2%D - Column B), Heptachlor (17.6%D-Column B), Heptachlor epoxide (B) (16.3%D-Column B), Oxychlordane (17.8%D-Column B), gamma-Chlordane (16.3%D-Column B), Endosulfan I (16.5%D-Column B), alpha-Chlordane (25.1%D-Column B), trans-Nonachlor (17.5%D-Column B), Endrin (18.6%D-Column B) and Endosulfan II (15.6%D-Column B) outside the individual acceptance criteria but within method allowance. The compound alpha-Chlordane was not detected above the reporting limit for column A; therefore no further action was taken.

The continuing calibration standard WG766869-3, associated to samples L1503772-13 through -22 as well as the associated QC WG766345-1, -2, -3, -4, -6 and -7 had the response for TMX (17.9%D-Column B), Hexachlorobenzene (19.1%D - Column B), Heptachlor (18.3%D-Column B), Heptachlor epoxide (B) (15.6%D-Column B), Oxychlordane (16.8%D-Column B), gamma-Chlordane (15.8%D-Column B), Endosulfan I (15.4%D-Column B), alpha-Chlordane (24.1%D-Column B), trans-Nonachlor (16.1%D-Column B), Endrin (19.4%D-Column B), Methoxychlor (17.4%D-Column B) and DCB (17.2%D-Column B) outside the individual acceptance criteria but within method allowance. The compound alpha-Chlordane was not detected above the reporting limit for column A; therefore no further action was taken.

The continuing calibration standard WG766869-4, associated to samples L1503772-20 through -22, WG766345-4, -6 and -7 had the response for Hexachlorobenzene (15.3%D - Column B), alpha-Chlordane (20.8%D-Column B), Endrin (15.8%D-Column B) and DCB (15.2%D-Column B) outside the individual

Case Narrative (continued)

acceptance criteria but within method allowance. The compound alpha-Chlordane was not detected above the reporting limit for column A; therefore no further action was taken.

The continuing calibration standard WG766869-7, associated to samples L1503772-01 through -07 had the response for gamma-BHC (15.1%D-Column A), Aldrin (15.3%D-Column A) and 4,4'-DDD (16.5%D-Column A) outside the individual acceptance criteria but within method allowance, therefore no further action was taken.

The continuing calibration standard WG766869-8, associated to samples L1503772-01 through -07 had the response for gamma-BHC (15.4%D-Column A), Aldrin (15.4%D-Column A), Dieldrin (15.3%D-Column A) and 4,4'-DDD (15.7%D-Column A) outside the individual acceptance criteria but within method allowance, therefore no further action was taken.

Metals

The CCB has a concentration above the reporting limit for Arsenic. Since the associated sample concentrations are greater than 10x the blank concentration for this analyte, no corrective action is required.

The WG766043-3 Laboratory Duplicate RPD, performed on L1503772-01, is above the acceptance criteria for Cadmium (34%); however, the sample and duplicate results are less than five times the reporting limit. Therefore, the RPD is valid.

The WG766048-3 Laboratory Duplicate RPD, performed on L1503772-22, is outside the acceptance criteria for Arsenic (27%) and Chromium (26%). The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

Total Organic Carbon

The WG767492-4 MS recovery for Total Organic Carbon (Rep2 - 73%), performed on L1503772-10, is outside the 75-125% acceptance criteria, possibly due to sample matrix. The associated SRM recoveries are within criteria indicating the sample batch was in control, and all sample results were accepted.

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772
Project Number: Not Specified **Report Date:** 03/16/15

Case Narrative (continued)

The WG767492-5 MS recovery for Total Organic Carbon (Rep2 - 192%), performed on L1503772-13, is outside the 75-125% acceptance criteria, possibly due to sample matrix. The associated SRM recoveries are within criteria indicating the sample batch was in control, and all sample results were accepted.

The WG767511-5 MSD recovery for Total Organic Carbon (Rep1 - 141%), performed on L1503772-22, is outside the 75-125% acceptance criteria, possibly due to sample matrix. The associated SRM recoveries are within criteria indicating the sample batch was in control, and all sample results were accepted. In addition, the WG767511-4/-5 MS/MSD RPD for Total Organic Carbon (Rep2 - 39%) is above the acceptance criteria.

Grain Size Analysis
The WG767551-1 Laboratory Duplicate RPD, performed on L1503772-01, is outside the acceptance criteria for Percent Total Gravel (119%), Percent Coarse Sand (48%) and Percent Medium Sand (27%). The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

The WG767555-1 Laboratory Duplicate RPD, performed on L1503772-22, is outside the acceptance criteria for Percent Total Gravel (25%). The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

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: Cynthia McQueen

Title: Technical Director/Representative Date: 03/16/15

ORGANICS

SEMIVOLATILES

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-01	Date Collected:	02/27/15 09:08
Client ID:	L27	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/05/15 11:50
Analytical Date:	03/06/15 17:58	Cleanup Method:	EPA 3630
Analyst:	JT	Cleanup Date:	03/06/15
Percent Solids:	72%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	13.6	--	1
Acenaphthylene	ND		ug/kg	13.6	--	1
Acenaphthene	ND		ug/kg	13.6	--	1
Fluorene	ND		ug/kg	13.6	--	1
Phenanthrene	ND		ug/kg	13.6	--	1
Anthracene	ND		ug/kg	13.6	--	1
Fluoranthene	ND		ug/kg	13.6	--	1
Pyrene	15.1		ug/kg	13.6	--	1
Benz(a)anthracene	ND		ug/kg	13.6	--	1
Chrysene	ND		ug/kg	13.6	--	1
Benzo(b)fluoranthene	ND		ug/kg	13.6	--	1
Benzo(k)fluoranthene	ND		ug/kg	13.6	--	1
Benzo(a)pyrene	ND		ug/kg	13.6	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	13.6	--	1
Dibenz(a,h)anthracene	ND		ug/kg	13.6	--	1
Benzo(ghi)perylene	ND		ug/kg	13.6	--	1
Cl2-BZ#8	ND		ug/kg	1.36	--	1
Cl3-BZ#18	ND		ug/kg	1.36	--	1
Cl3-BZ#28	ND		ug/kg	1.36	--	1
Cl4-BZ#44	ND		ug/kg	1.36	--	1
Cl4-BZ#49	ND		ug/kg	1.36	--	1
Cl4-BZ#52	ND		ug/kg	1.36	--	1
Cl4-BZ#66	ND		ug/kg	1.36	--	1
Cl5-BZ#87	ND		ug/kg	1.36	--	1
Cl5-BZ#101	ND		ug/kg	1.36	--	1
Cl5-BZ#105	ND		ug/kg	1.36	--	1
Cl5-BZ#118	ND		ug/kg	1.36	--	1
Cl6-BZ#128	ND		ug/kg	1.36	--	1
Cl6-BZ#138	ND		ug/kg	1.36	--	1
Cl6-BZ#153	ND		ug/kg	1.36	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-01 Date Collected: 02/27/15 09:08

Client ID: L27 Date Received: 02/27/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	1.36	--	1
Cl7-BZ#180	ND		ug/kg	1.36	--	1
Cl7-BZ#183	ND		ug/kg	1.36	--	1
Cl7-BZ#184	ND		ug/kg	1.36	--	1
Cl7-BZ#187	ND		ug/kg	1.36	--	1
Cl8-BZ#195	ND		ug/kg	1.36	--	1
Cl9-BZ#206	ND		ug/kg	1.36	--	1
Cl10-BZ#209	ND		ug/kg	1.36	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	48		30-150
Pyrene-d10	53		30-150
Benzo(b)fluoranthene-d12	54		30-150
DBOB	53		30-150
BZ 198	52		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-02	Date Collected:	02/27/15 09:21
Client ID:	L28	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/05/15 11:50
Analytical Date:	03/06/15 18:30	Cleanup Method:	EPA 3630
Analyst:	JT	Cleanup Date:	03/06/15
Percent Solids:	73%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	13.5	--	1
Acenaphthylene	ND		ug/kg	13.5	--	1
Acenaphthene	ND		ug/kg	13.5	--	1
Fluorene	ND		ug/kg	13.5	--	1
Phenanthrene	ND		ug/kg	13.5	--	1
Anthracene	ND		ug/kg	13.5	--	1
Fluoranthene	ND		ug/kg	13.5	--	1
Pyrene	ND		ug/kg	13.5	--	1
Benz(a)anthracene	ND		ug/kg	13.5	--	1
Chrysene	ND		ug/kg	13.5	--	1
Benzo(b)fluoranthene	ND		ug/kg	13.5	--	1
Benzo(k)fluoranthene	ND		ug/kg	13.5	--	1
Benzo(a)pyrene	ND		ug/kg	13.5	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	13.5	--	1
Dibenz(a,h)anthracene	ND		ug/kg	13.5	--	1
Benzo(ghi)perylene	ND		ug/kg	13.5	--	1
Cl2-BZ#8	ND		ug/kg	1.35	--	1
Cl3-BZ#18	ND		ug/kg	1.35	--	1
Cl3-BZ#28	ND		ug/kg	1.35	--	1
Cl4-BZ#44	ND		ug/kg	1.35	--	1
Cl4-BZ#49	ND		ug/kg	1.35	--	1
Cl4-BZ#52	ND		ug/kg	1.35	--	1
Cl4-BZ#66	ND		ug/kg	1.35	--	1
Cl5-BZ#87	ND		ug/kg	1.35	--	1
Cl5-BZ#101	ND		ug/kg	1.35	--	1
Cl5-BZ#105	ND		ug/kg	1.35	--	1
Cl5-BZ#118	ND		ug/kg	1.35	--	1
Cl6-BZ#128	ND		ug/kg	1.35	--	1
Cl6-BZ#138	ND		ug/kg	1.35	--	1
Cl6-BZ#153	ND		ug/kg	1.35	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-02 Date Collected: 02/27/15 09:21

Client ID: L28 Date Received: 02/27/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	1.35	--	1
Cl7-BZ#180	ND		ug/kg	1.35	--	1
Cl7-BZ#183	ND		ug/kg	1.35	--	1
Cl7-BZ#184	ND		ug/kg	1.35	--	1
Cl7-BZ#187	ND		ug/kg	1.35	--	1
Cl8-BZ#195	ND		ug/kg	1.35	--	1
Cl9-BZ#206	ND		ug/kg	1.35	--	1
Cl10-BZ#209	ND		ug/kg	1.35	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	41		30-150
Pyrene-d10	46		30-150
Benzo(b)fluoranthene-d12	48		30-150
DBOB	47		30-150
BZ 198	45		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-03	Date Collected:	02/27/15 09:48
Client ID:	L25A	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/05/15 11:50
Analytical Date:	03/06/15 19:04	Cleanup Method:	EPA 3630
Analyst:	JT	Cleanup Date:	03/06/15
Percent Solids:	72%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	14.2	--	1
Acenaphthylene	ND		ug/kg	14.2	--	1
Acenaphthene	ND		ug/kg	14.2	--	1
Fluorene	ND		ug/kg	14.2	--	1
Phenanthrene	ND		ug/kg	14.2	--	1
Anthracene	ND		ug/kg	14.2	--	1
Fluoranthene	ND		ug/kg	14.2	--	1
Pyrene	ND		ug/kg	14.2	--	1
Benz(a)anthracene	ND		ug/kg	14.2	--	1
Chrysene	ND		ug/kg	14.2	--	1
Benzo(b)fluoranthene	ND		ug/kg	14.2	--	1
Benzo(k)fluoranthene	ND		ug/kg	14.2	--	1
Benzo(a)pyrene	ND		ug/kg	14.2	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	14.2	--	1
Dibenz(a,h)anthracene	ND		ug/kg	14.2	--	1
Benzo(ghi)perylene	ND		ug/kg	14.2	--	1
Cl2-BZ#8	ND		ug/kg	1.42	--	1
Cl3-BZ#18	ND		ug/kg	1.42	--	1
Cl3-BZ#28	ND		ug/kg	1.42	--	1
Cl4-BZ#44	ND		ug/kg	1.42	--	1
Cl4-BZ#49	ND		ug/kg	1.42	--	1
Cl4-BZ#52	ND		ug/kg	1.42	--	1
Cl4-BZ#66	ND		ug/kg	1.42	--	1
Cl5-BZ#87	ND		ug/kg	1.42	--	1
Cl5-BZ#101	ND		ug/kg	1.42	--	1
Cl5-BZ#105	ND		ug/kg	1.42	--	1
Cl5-BZ#118	ND		ug/kg	1.42	--	1
Cl6-BZ#128	ND		ug/kg	1.42	--	1
Cl6-BZ#138	ND		ug/kg	1.42	--	1
Cl6-BZ#153	ND		ug/kg	1.42	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-03 Date Collected: 02/27/15 09:48

Client ID: L25A Date Received: 02/27/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	1.42	--	1
Cl7-BZ#180	ND		ug/kg	1.42	--	1
Cl7-BZ#183	ND		ug/kg	1.42	--	1
Cl7-BZ#184	ND		ug/kg	1.42	--	1
Cl7-BZ#187	ND		ug/kg	1.42	--	1
Cl8-BZ#195	ND		ug/kg	1.42	--	1
Cl9-BZ#206	ND		ug/kg	1.42	--	1
Cl10-BZ#209	ND		ug/kg	1.42	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	43		30-150
Pyrene-d10	51		30-150
Benzo(b)fluoranthene-d12	52		30-150
DBOB	50		30-150
BZ 198	48		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-04	Date Collected:	02/27/15 10:00
Client ID:	L25B	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/05/15 11:50
Analytical Date:	03/06/15 19:37	Cleanup Method:	EPA 3630
Analyst:	JT	Cleanup Date:	03/06/15
Percent Solids:	73%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	13.8	--	1
Acenaphthylene	ND		ug/kg	13.8	--	1
Acenaphthene	ND		ug/kg	13.8	--	1
Fluorene	ND		ug/kg	13.8	--	1
Phenanthrene	ND		ug/kg	13.8	--	1
Anthracene	ND		ug/kg	13.8	--	1
Fluoranthene	ND		ug/kg	13.8	--	1
Pyrene	ND		ug/kg	13.8	--	1
Benz(a)anthracene	ND		ug/kg	13.8	--	1
Chrysene	ND		ug/kg	13.8	--	1
Benzo(b)fluoranthene	ND		ug/kg	13.8	--	1
Benzo(k)fluoranthene	ND		ug/kg	13.8	--	1
Benzo(a)pyrene	ND		ug/kg	13.8	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	13.8	--	1
Dibenz(a,h)anthracene	ND		ug/kg	13.8	--	1
Benzo(ghi)perylene	ND		ug/kg	13.8	--	1
Cl2-BZ#8	ND		ug/kg	1.38	--	1
Cl3-BZ#18	ND		ug/kg	1.38	--	1
Cl3-BZ#28	ND		ug/kg	1.38	--	1
Cl4-BZ#44	ND		ug/kg	1.38	--	1
Cl4-BZ#49	ND		ug/kg	1.38	--	1
Cl4-BZ#52	ND		ug/kg	1.38	--	1
Cl4-BZ#66	ND		ug/kg	1.38	--	1
Cl5-BZ#87	ND		ug/kg	1.38	--	1
Cl5-BZ#101	ND		ug/kg	1.38	--	1
Cl5-BZ#105	ND		ug/kg	1.38	--	1
Cl5-BZ#118	ND		ug/kg	1.38	--	1
Cl6-BZ#128	ND		ug/kg	1.38	--	1
Cl6-BZ#138	ND		ug/kg	1.38	--	1
Cl6-BZ#153	ND		ug/kg	1.38	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-04 Date Collected: 02/27/15 10:00

Client ID: L25B Date Received: 02/27/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	1.38	--	1
Cl7-BZ#180	ND		ug/kg	1.38	--	1
Cl7-BZ#183	ND		ug/kg	1.38	--	1
Cl7-BZ#184	ND		ug/kg	1.38	--	1
Cl7-BZ#187	ND		ug/kg	1.38	--	1
Cl8-BZ#195	ND		ug/kg	1.38	--	1
Cl9-BZ#206	ND		ug/kg	1.38	--	1
Cl10-BZ#209	ND		ug/kg	1.38	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	41		30-150
Pyrene-d10	45		30-150
Benzo(b)fluoranthene-d12	45		30-150
DBOB	46		30-150
BZ 198	42		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-05	Date Collected:	02/27/15 10:12
Client ID:	L21	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/05/15 11:50
Analytical Date:	03/06/15 20:10	Cleanup Method:	EPA 3630
Analyst:	JT	Cleanup Date:	03/06/15
Percent Solids:	70%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	14.3	--	1
Acenaphthylene	ND		ug/kg	14.3	--	1
Acenaphthene	ND		ug/kg	14.3	--	1
Fluorene	ND		ug/kg	14.3	--	1
Phenanthrene	17.7		ug/kg	14.3	--	1
Anthracene	ND		ug/kg	14.3	--	1
Fluoranthene	50.6		ug/kg	14.3	--	1
Pyrene	61.5		ug/kg	14.3	--	1
Benz(a)anthracene	42.0		ug/kg	14.3	--	1
Chrysene	43.6		ug/kg	14.3	--	1
Benzo(b)fluoranthene	32.5		ug/kg	14.3	--	1
Benzo(k)fluoranthene	38.9		ug/kg	14.3	--	1
Benzo(a)pyrene	42.0		ug/kg	14.3	--	1
Indeno(1,2,3-cd)Pyrene	23.2		ug/kg	14.3	--	1
Dibenz(a,h)anthracene	ND		ug/kg	14.3	--	1
Benzo(ghi)perylene	24.1		ug/kg	14.3	--	1
Cl2-BZ#8	ND		ug/kg	1.43	--	1
Cl3-BZ#18	ND		ug/kg	1.43	--	1
Cl3-BZ#28	ND		ug/kg	1.43	--	1
Cl4-BZ#44	ND		ug/kg	1.43	--	1
Cl4-BZ#49	ND		ug/kg	1.43	--	1
Cl4-BZ#52	ND		ug/kg	1.43	--	1
Cl4-BZ#66	ND		ug/kg	1.43	--	1
Cl5-BZ#87	ND		ug/kg	1.43	--	1
Cl5-BZ#101	ND		ug/kg	1.43	--	1
Cl5-BZ#105	ND		ug/kg	1.43	--	1
Cl5-BZ#118	ND		ug/kg	1.43	--	1
Cl6-BZ#128	ND		ug/kg	1.43	--	1
Cl6-BZ#138	ND		ug/kg	1.43	--	1
Cl6-BZ#153	ND		ug/kg	1.43	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-05 Date Collected: 02/27/15 10:12

Client ID: L21 Date Received: 02/27/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	1.43	--	1
Cl7-BZ#180	ND		ug/kg	1.43	--	1
Cl7-BZ#183	ND		ug/kg	1.43	--	1
Cl7-BZ#184	ND		ug/kg	1.43	--	1
Cl7-BZ#187	ND		ug/kg	1.43	--	1
Cl8-BZ#195	ND		ug/kg	1.43	--	1
Cl9-BZ#206	ND		ug/kg	1.43	--	1
Cl10-BZ#209	ND		ug/kg	1.43	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	59		30-150
Pyrene-d10	64		30-150
Benzo(b)fluoranthene-d12	64		30-150
DBOB	64		30-150
BZ 198	60		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-06	Date Collected:	02/27/15 10:25
Client ID:	L20	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/05/15 11:50
Analytical Date:	03/06/15 20:43	Cleanup Method:	EPA 3630
Analyst:	JT	Cleanup Date:	03/06/15
Percent Solids:	74%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	13.9	--	1
Acenaphthylene	ND		ug/kg	13.9	--	1
Acenaphthene	ND		ug/kg	13.9	--	1
Fluorene	ND		ug/kg	13.9	--	1
Phenanthrene	ND		ug/kg	13.9	--	1
Anthracene	ND		ug/kg	13.9	--	1
Fluoranthene	ND		ug/kg	13.9	--	1
Pyrene	14.9		ug/kg	13.9	--	1
Benz(a)anthracene	ND		ug/kg	13.9	--	1
Chrysene	ND		ug/kg	13.9	--	1
Benzo(b)fluoranthene	ND		ug/kg	13.9	--	1
Benzo(k)fluoranthene	ND		ug/kg	13.9	--	1
Benzo(a)pyrene	ND		ug/kg	13.9	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	13.9	--	1
Dibenz(a,h)anthracene	ND		ug/kg	13.9	--	1
Benzo(ghi)perylene	ND		ug/kg	13.9	--	1
Cl2-BZ#8	ND		ug/kg	1.39	--	1
Cl3-BZ#18	ND		ug/kg	1.39	--	1
Cl3-BZ#28	ND		ug/kg	1.39	--	1
Cl4-BZ#44	ND		ug/kg	1.39	--	1
Cl4-BZ#49	ND		ug/kg	1.39	--	1
Cl4-BZ#52	ND		ug/kg	1.39	--	1
Cl4-BZ#66	ND		ug/kg	1.39	--	1
Cl5-BZ#87	ND		ug/kg	1.39	--	1
Cl5-BZ#101	ND		ug/kg	1.39	--	1
Cl5-BZ#105	ND		ug/kg	1.39	--	1
Cl5-BZ#118	ND		ug/kg	1.39	--	1
Cl6-BZ#128	ND		ug/kg	1.39	--	1
Cl6-BZ#138	ND		ug/kg	1.39	--	1
Cl6-BZ#153	ND		ug/kg	1.39	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-06 Date Collected: 02/27/15 10:25

Client ID: L20 Date Received: 02/27/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	1.39	--	1
Cl7-BZ#180	ND		ug/kg	1.39	--	1
Cl7-BZ#183	ND		ug/kg	1.39	--	1
Cl7-BZ#184	ND		ug/kg	1.39	--	1
Cl7-BZ#187	ND		ug/kg	1.39	--	1
Cl8-BZ#195	ND		ug/kg	1.39	--	1
Cl9-BZ#206	ND		ug/kg	1.39	--	1
Cl10-BZ#209	ND		ug/kg	1.39	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	44		30-150
Pyrene-d10	49		30-150
Benzo(b)fluoranthene-d12	51		30-150
DBOB	50		30-150
BZ 198	50		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-07	Date Collected:	02/27/15 10:43
Client ID:	L19	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/05/15 11:50
Analytical Date:	03/06/15 21:16	Cleanup Method:	EPA 3630
Analyst:	JT	Cleanup Date:	03/06/15
Percent Solids:	72%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	13.8	--	1
Acenaphthylene	ND		ug/kg	13.8	--	1
Acenaphthene	ND		ug/kg	13.8	--	1
Fluorene	ND		ug/kg	13.8	--	1
Phenanthrene	41.7		ug/kg	13.8	--	1
Anthracene	16.0		ug/kg	13.8	--	1
Fluoranthene	118		ug/kg	13.8	--	1
Pyrene	95.7		ug/kg	13.8	--	1
Benz(a)anthracene	66.7		ug/kg	13.8	--	1
Chrysene	67.0		ug/kg	13.8	--	1
Benzo(b)fluoranthene	62.0		ug/kg	13.8	--	1
Benzo(k)fluoranthene	50.0		ug/kg	13.8	--	1
Benzo(a)pyrene	57.2		ug/kg	13.8	--	1
Indeno(1,2,3-cd)Pyrene	39.7		ug/kg	13.8	--	1
Dibenz(a,h)anthracene	ND		ug/kg	13.8	--	1
Benzo(ghi)perylene	33.8		ug/kg	13.8	--	1
Cl2-BZ#8	ND		ug/kg	1.38	--	1
Cl3-BZ#18	ND		ug/kg	1.38	--	1
Cl3-BZ#28	ND		ug/kg	1.38	--	1
Cl4-BZ#44	ND		ug/kg	1.38	--	1
Cl4-BZ#49	ND		ug/kg	1.38	--	1
Cl4-BZ#52	ND		ug/kg	1.38	--	1
Cl4-BZ#66	ND		ug/kg	1.38	--	1
Cl5-BZ#87	ND		ug/kg	1.38	--	1
Cl5-BZ#101	ND		ug/kg	1.38	--	1
Cl5-BZ#105	ND		ug/kg	1.38	--	1
Cl5-BZ#118	ND		ug/kg	1.38	--	1
Cl6-BZ#128	ND		ug/kg	1.38	--	1
Cl6-BZ#138	ND		ug/kg	1.38	--	1
Cl6-BZ#153	ND		ug/kg	1.38	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-07 Date Collected: 02/27/15 10:43

Client ID: L19 Date Received: 02/27/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	1.38	--	1
Cl7-BZ#180	ND		ug/kg	1.38	--	1
Cl7-BZ#183	ND		ug/kg	1.38	--	1
Cl7-BZ#184	ND		ug/kg	1.38	--	1
Cl7-BZ#187	ND		ug/kg	1.38	--	1
Cl8-BZ#195	ND		ug/kg	1.38	--	1
Cl9-BZ#206	ND		ug/kg	1.38	--	1
Cl10-BZ#209	ND		ug/kg	1.38	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	43		30-150
Pyrene-d10	50		30-150
Benzo(b)fluoranthene-d12	51		30-150
DBOB	50		30-150
BZ 198	48		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-08	Date Collected:	02/27/15 10:55
Client ID:	L13	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/05/15 11:50
Analytical Date:	03/06/15 21:48	Cleanup Method:	EPA 3630
Analyst:	JT	Cleanup Date:	03/06/15
Percent Solids:	52%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	87.3		ug/kg	9.62	--	1
Acenaphthylene	32.5		ug/kg	9.62	--	1
Acenaphthene	84.4		ug/kg	9.62	--	1
Fluorene	174		ug/kg	9.62	--	1
Phenanthrene	1450		ug/kg	9.62	--	1
Anthracene	288		ug/kg	9.62	--	1
Fluoranthene	1640		ug/kg	9.62	--	1
Pyrene	1320		ug/kg	9.62	--	1
Benz(a)anthracene	591		ug/kg	9.62	--	1
Chrysene	586		ug/kg	9.62	--	1
Benzo(b)fluoranthene	553		ug/kg	9.62	--	1
Benzo(k)fluoranthene	458		ug/kg	9.62	--	1
Benzo(a)pyrene	571		ug/kg	9.62	--	1
Indeno(1,2,3-cd)Pyrene	414		ug/kg	9.62	--	1
Dibenz(a,h)anthracene	73.1		ug/kg	9.62	--	1
Benzo(ghi)perylene	381		ug/kg	9.62	--	1
Cl2-BZ#8	ND		ug/kg	0.962	--	1
Cl3-BZ#18	ND		ug/kg	0.962	--	1
Cl3-BZ#28	ND		ug/kg	0.962	--	1
Cl4-BZ#44	ND		ug/kg	0.962	--	1
Cl4-BZ#49	ND		ug/kg	0.962	--	1
Cl4-BZ#52	ND		ug/kg	0.962	--	1
Cl4-BZ#66	ND		ug/kg	0.962	--	1
Cl5-BZ#87	ND		ug/kg	0.962	--	1
Cl5-BZ#101	ND		ug/kg	0.962	--	1
Cl5-BZ#105	ND		ug/kg	0.962	--	1
Cl5-BZ#118	ND		ug/kg	0.962	--	1
Cl6-BZ#128	ND		ug/kg	0.962	--	1
Cl6-BZ#138	ND		ug/kg	0.962	--	1
Cl6-BZ#153	ND		ug/kg	0.962	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-08 Date Collected: 02/27/15 10:55

Client ID: L13 Date Received: 02/27/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	0.962	--	1
Cl7-BZ#180	ND		ug/kg	0.962	--	1
Cl7-BZ#183	ND		ug/kg	0.962	--	1
Cl7-BZ#184	ND		ug/kg	0.962	--	1
Cl7-BZ#187	ND		ug/kg	0.962	--	1
Cl8-BZ#195	ND		ug/kg	0.962	--	1
Cl9-BZ#206	ND		ug/kg	0.962	--	1
Cl10-BZ#209	ND		ug/kg	0.962	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	49		30-150
Pyrene-d10	54		30-150
Benzo(b)fluoranthene-d12	54		30-150
DBOB	55		30-150
BZ 198	56		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-09	Date Collected:	02/27/15 11:09
Client ID:	L16	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/05/15 11:50
Analytical Date:	03/06/15 22:22	Cleanup Method:	EPA 3630
Analyst:	JT	Cleanup Date:	03/06/15
Percent Solids:	54%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	9.25	--	1
Acenaphthylene	38.6		ug/kg	9.25	--	1
Acenaphthene	ND		ug/kg	9.25	--	1
Fluorene	ND		ug/kg	9.25	--	1
Phenanthrene	25.5		ug/kg	9.25	--	1
Anthracene	11.9		ug/kg	9.25	--	1
Fluoranthene	54.4		ug/kg	9.25	--	1
Pyrene	84.7		ug/kg	9.25	--	1
Benz(a)anthracene	50.5		ug/kg	9.25	--	1
Chrysene	59.9		ug/kg	9.25	--	1
Benzo(b)fluoranthene	75.6		ug/kg	9.25	--	1
Benzo(k)fluoranthene	66.3		ug/kg	9.25	--	1
Benzo(a)pyrene	90.4		ug/kg	9.25	--	1
Indeno(1,2,3-cd)Pyrene	60.6		ug/kg	9.25	--	1
Dibenz(a,h)anthracene	13.7		ug/kg	9.25	--	1
Benzo(ghi)perylene	53.5		ug/kg	9.25	--	1
Cl2-BZ#8	ND		ug/kg	0.925	--	1
Cl3-BZ#18	ND		ug/kg	0.925	--	1
Cl3-BZ#28	ND		ug/kg	0.925	--	1
Cl4-BZ#44	ND		ug/kg	0.925	--	1
Cl4-BZ#49	ND		ug/kg	0.925	--	1
Cl4-BZ#52	ND		ug/kg	0.925	--	1
Cl4-BZ#66	ND		ug/kg	0.925	--	1
Cl5-BZ#87	ND		ug/kg	0.925	--	1
Cl5-BZ#101	ND		ug/kg	0.925	--	1
Cl5-BZ#105	ND		ug/kg	0.925	--	1
Cl5-BZ#118	ND		ug/kg	0.925	--	1
Cl6-BZ#128	ND		ug/kg	0.925	--	1
Cl6-BZ#138	1.00		ug/kg	0.925	--	1
Cl6-BZ#153	ND		ug/kg	0.925	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-09 Date Collected: 02/27/15 11:09

Client ID: L16 Date Received: 02/27/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	0.925	--	1
Cl7-BZ#180	ND		ug/kg	0.925	--	1
Cl7-BZ#183	ND		ug/kg	0.925	--	1
Cl7-BZ#184	ND		ug/kg	0.925	--	1
Cl7-BZ#187	ND		ug/kg	0.925	--	1
Cl8-BZ#195	ND		ug/kg	0.925	--	1
Cl9-BZ#206	ND		ug/kg	0.925	--	1
Cl10-BZ#209	ND		ug/kg	0.925	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	33		30-150
Pyrene-d10	40		30-150
Benzo(b)fluoranthene-d12	41		30-150
DBOB	40		30-150
BZ 198	42		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-10	Date Collected:	02/27/15 11:22
Client ID:	L18	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/05/15 11:50
Analytical Date:	03/08/15 13:30	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/06/15
Percent Solids:	56%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	8.88	--	1
Acenaphthylene	ND		ug/kg	8.88	--	1
Acenaphthene	ND		ug/kg	8.88	--	1
Fluorene	ND		ug/kg	8.88	--	1
Phenanthrene	10.2		ug/kg	8.88	--	1
Anthracene	ND		ug/kg	8.88	--	1
Fluoranthene	29.8		ug/kg	8.88	--	1
Pyrene	41.2		ug/kg	8.88	--	1
Benz(a)anthracene	19.4		ug/kg	8.88	--	1
Chrysene	22.2		ug/kg	8.88	--	1
Benzo(b)fluoranthene	19.2		ug/kg	8.88	--	1
Benzo(k)fluoranthene	16.8		ug/kg	8.88	--	1
Benzo(a)pyrene	19.2		ug/kg	8.88	--	1
Indeno(1,2,3-cd)Pyrene	11.5		ug/kg	8.88	--	1
Dibenz(a,h)anthracene	ND		ug/kg	8.88	--	1
Benzo(ghi)perylene	12.6		ug/kg	8.88	--	1
Cl2-BZ#8	ND		ug/kg	0.888	--	1
Cl3-BZ#18	ND		ug/kg	0.888	--	1
Cl3-BZ#28	ND		ug/kg	0.888	--	1
Cl4-BZ#44	ND		ug/kg	0.888	--	1
Cl4-BZ#49	ND		ug/kg	0.888	--	1
Cl4-BZ#52	ND		ug/kg	0.888	--	1
Cl4-BZ#66	ND		ug/kg	0.888	--	1
Cl5-BZ#87	ND		ug/kg	0.888	--	1
Cl5-BZ#101	ND		ug/kg	0.888	--	1
Cl5-BZ#105	ND		ug/kg	0.888	--	1
Cl5-BZ#118	ND		ug/kg	0.888	--	1
Cl6-BZ#128	ND		ug/kg	0.888	--	1
Cl6-BZ#138	ND		ug/kg	0.888	--	1
Cl6-BZ#153	ND		ug/kg	0.888	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-10 Date Collected: 02/27/15 11:22

Client ID: L18 Date Received: 02/27/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	0.888	--	1
Cl7-BZ#180	ND		ug/kg	0.888	--	1
Cl7-BZ#183	ND		ug/kg	0.888	--	1
Cl7-BZ#184	ND		ug/kg	0.888	--	1
Cl7-BZ#187	ND		ug/kg	0.888	--	1
Cl8-BZ#195	ND		ug/kg	0.888	--	1
Cl9-BZ#206	ND		ug/kg	0.888	--	1
Cl10-BZ#209	ND		ug/kg	0.888	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	47		30-150
Pyrene-d10	55		30-150
Benzo(b)fluoranthene-d12	55		30-150
DBOB	53		30-150
BZ 198	51		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-11	Date Collected:	02/27/15 11:39
Client ID:	L17	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/05/15 11:50
Analytical Date:	03/08/15 14:03	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/06/15
Percent Solids:	72%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	13.6	--	1
Acenaphthylene	ND		ug/kg	13.6	--	1
Acenaphthene	ND		ug/kg	13.6	--	1
Fluorene	ND		ug/kg	13.6	--	1
Phenanthrene	ND		ug/kg	13.6	--	1
Anthracene	ND		ug/kg	13.6	--	1
Fluoranthene	13.6		ug/kg	13.6	--	1
Pyrene	16.6		ug/kg	13.6	--	1
Benz(a)anthracene	ND		ug/kg	13.6	--	1
Chrysene	ND		ug/kg	13.6	--	1
Benzo(b)fluoranthene	ND		ug/kg	13.6	--	1
Benzo(k)fluoranthene	ND		ug/kg	13.6	--	1
Benzo(a)pyrene	ND		ug/kg	13.6	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	13.6	--	1
Dibenz(a,h)anthracene	ND		ug/kg	13.6	--	1
Benzo(ghi)perylene	ND		ug/kg	13.6	--	1
Cl2-BZ#8	ND		ug/kg	1.36	--	1
Cl3-BZ#18	ND		ug/kg	1.36	--	1
Cl3-BZ#28	ND		ug/kg	1.36	--	1
Cl4-BZ#44	ND		ug/kg	1.36	--	1
Cl4-BZ#49	ND		ug/kg	1.36	--	1
Cl4-BZ#52	ND		ug/kg	1.36	--	1
Cl4-BZ#66	ND		ug/kg	1.36	--	1
Cl5-BZ#87	ND		ug/kg	1.36	--	1
Cl5-BZ#101	ND		ug/kg	1.36	--	1
Cl5-BZ#105	ND		ug/kg	1.36	--	1
Cl5-BZ#118	ND		ug/kg	1.36	--	1
Cl6-BZ#128	ND		ug/kg	1.36	--	1
Cl6-BZ#138	7.45		ug/kg	1.36	--	1
Cl6-BZ#153	7.27		ug/kg	1.36	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-11 Date Collected: 02/27/15 11:39

Client ID: L17 Date Received: 02/27/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	9.93		ug/kg	1.36	--	1
Cl7-BZ#180	17.8		ug/kg	1.36	--	1
Cl7-BZ#183	4.06		ug/kg	1.36	--	1
Cl7-BZ#184	ND		ug/kg	1.36	--	1
Cl7-BZ#187	7.37		ug/kg	1.36	--	1
Cl8-BZ#195	2.00		ug/kg	1.36	--	1
Cl9-BZ#206	ND		ug/kg	1.36	--	1
Cl10-BZ#209	ND		ug/kg	1.36	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	42		30-150
Pyrene-d10	47		30-150
Benzo(b)fluoranthene-d12	48		30-150
DBOB	46		30-150
BZ 198	46		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-12	Date Collected:	02/27/15 11:53
Client ID:	L15	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/05/15 11:50
Analytical Date:	03/08/15 14:36	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/06/15
Percent Solids:	66%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	7.61	--	1
Acenaphthylene	ND		ug/kg	7.61	--	1
Acenaphthene	ND		ug/kg	7.61	--	1
Fluorene	ND		ug/kg	7.61	--	1
Phenanthrene	ND		ug/kg	7.61	--	1
Anthracene	ND		ug/kg	7.61	--	1
Fluoranthene	ND		ug/kg	7.61	--	1
Pyrene	ND		ug/kg	7.61	--	1
Benz(a)anthracene	ND		ug/kg	7.61	--	1
Chrysene	ND		ug/kg	7.61	--	1
Benzo(b)fluoranthene	ND		ug/kg	7.61	--	1
Benzo(k)fluoranthene	ND		ug/kg	7.61	--	1
Benzo(a)pyrene	ND		ug/kg	7.61	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	7.61	--	1
Dibenz(a,h)anthracene	ND		ug/kg	7.61	--	1
Benzo(ghi)perylene	ND		ug/kg	7.61	--	1
Cl2-BZ#8	ND		ug/kg	0.761	--	1
Cl3-BZ#18	ND		ug/kg	0.761	--	1
Cl3-BZ#28	ND		ug/kg	0.761	--	1
Cl4-BZ#44	ND		ug/kg	0.761	--	1
Cl4-BZ#49	ND		ug/kg	0.761	--	1
Cl4-BZ#52	ND		ug/kg	0.761	--	1
Cl4-BZ#66	ND		ug/kg	0.761	--	1
Cl5-BZ#87	ND		ug/kg	0.761	--	1
Cl5-BZ#101	ND		ug/kg	0.761	--	1
Cl5-BZ#105	ND		ug/kg	0.761	--	1
Cl5-BZ#118	ND		ug/kg	0.761	--	1
Cl6-BZ#128	ND		ug/kg	0.761	--	1
Cl6-BZ#138	ND		ug/kg	0.761	--	1
Cl6-BZ#153	ND		ug/kg	0.761	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-12 Date Collected: 02/27/15 11:53

Client ID: L15 Date Received: 02/27/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	0.761	--	1
Cl7-BZ#180	ND		ug/kg	0.761	--	1
Cl7-BZ#183	ND		ug/kg	0.761	--	1
Cl7-BZ#184	ND		ug/kg	0.761	--	1
Cl7-BZ#187	ND		ug/kg	0.761	--	1
Cl8-BZ#195	ND		ug/kg	0.761	--	1
Cl9-BZ#206	ND		ug/kg	0.761	--	1
Cl10-BZ#209	ND		ug/kg	0.761	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	37		30-150
Pyrene-d10	43		30-150
Benzo(b)fluoranthene-d12	43		30-150
DBOB	43		30-150
BZ 198	42		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-13	Date Collected:	02/27/15 12:58
Client ID:	L12	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/05/15 11:50
Analytical Date:	03/08/15 15:09	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/06/15
Percent Solids:	63%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	7.93	--	1
Acenaphthylene	ND		ug/kg	7.93	--	1
Acenaphthene	ND		ug/kg	7.93	--	1
Fluorene	ND		ug/kg	7.93	--	1
Phenanthrene	14.2		ug/kg	7.93	--	1
Anthracene	ND		ug/kg	7.93	--	1
Fluoranthene	30.6		ug/kg	7.93	--	1
Pyrene	33.3		ug/kg	7.93	--	1
Benz(a)anthracene	19.5		ug/kg	7.93	--	1
Chrysene	21.9		ug/kg	7.93	--	1
Benzo(b)fluoranthene	24.8		ug/kg	7.93	--	1
Benzo(k)fluoranthene	23.0		ug/kg	7.93	--	1
Benzo(a)pyrene	22.8		ug/kg	7.93	--	1
Indeno(1,2,3-cd)Pyrene	16.5		ug/kg	7.93	--	1
Dibenz(a,h)anthracene	ND		ug/kg	7.93	--	1
Benzo(ghi)perylene	17.0		ug/kg	7.93	--	1
Cl2-BZ#8	ND		ug/kg	0.793	--	1
Cl3-BZ#18	ND		ug/kg	0.793	--	1
Cl3-BZ#28	ND		ug/kg	0.793	--	1
Cl4-BZ#44	ND		ug/kg	0.793	--	1
Cl4-BZ#49	ND		ug/kg	0.793	--	1
Cl4-BZ#52	ND		ug/kg	0.793	--	1
Cl4-BZ#66	ND		ug/kg	0.793	--	1
Cl5-BZ#87	ND		ug/kg	0.793	--	1
Cl5-BZ#101	ND		ug/kg	0.793	--	1
Cl5-BZ#105	ND		ug/kg	0.793	--	1
Cl5-BZ#118	ND		ug/kg	0.793	--	1
Cl6-BZ#128	ND		ug/kg	0.793	--	1
Cl6-BZ#138	ND		ug/kg	0.793	--	1
Cl6-BZ#153	ND		ug/kg	0.793	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-13 Date Collected: 02/27/15 12:58

Client ID: L12 Date Received: 02/27/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	0.793	--	1
Cl7-BZ#180	ND		ug/kg	0.793	--	1
Cl7-BZ#183	ND		ug/kg	0.793	--	1
Cl7-BZ#184	ND		ug/kg	0.793	--	1
Cl7-BZ#187	ND		ug/kg	0.793	--	1
Cl8-BZ#195	ND		ug/kg	0.793	--	1
Cl9-BZ#206	ND		ug/kg	0.793	--	1
Cl10-BZ#209	ND		ug/kg	0.793	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	**27**	Q	30-150
Pyrene-d10	32		30-150
Benzo(b)fluoranthene-d12	32		30-150
DBOB	31		30-150
BZ 198	31		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-14	Date Collected:	02/27/15 13:08
Client ID:	L11	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/05/15 11:50
Analytical Date:	03/08/15 15:42	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/06/15
Percent Solids:	64%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	12.3		ug/kg	7.80	--	1
Acenaphthylene	ND		ug/kg	7.80	--	1
Acenaphthene	ND		ug/kg	7.80	--	1
Fluorene	ND		ug/kg	7.80	--	1
Phenanthrene	14.2		ug/kg	7.80	--	1
Anthracene	ND		ug/kg	7.80	--	1
Fluoranthene	33.1		ug/kg	7.80	--	1
Pyrene	42.0		ug/kg	7.80	--	1
Benz(a)anthracene	23.3		ug/kg	7.80	--	1
Chrysene	32.0		ug/kg	7.80	--	1
Benzo(b)fluoranthene	49.9		ug/kg	7.80	--	1
Benzo(k)fluoranthene	41.0		ug/kg	7.80	--	1
Benzo(a)pyrene	36.5		ug/kg	7.80	--	1
Indeno(1,2,3-cd)Pyrene	30.0		ug/kg	7.80	--	1
Dibenz(a,h)anthracene	ND		ug/kg	7.80	--	1
Benzo(ghi)perylene	30.2		ug/kg	7.80	--	1
Cl2-BZ#8	ND		ug/kg	0.780	--	1
Cl3-BZ#18	ND		ug/kg	0.780	--	1
Cl3-BZ#28	ND		ug/kg	0.780	--	1
Cl4-BZ#44	ND		ug/kg	0.780	--	1
Cl4-BZ#49	ND		ug/kg	0.780	--	1
Cl4-BZ#52	ND		ug/kg	0.780	--	1
Cl4-BZ#66	ND		ug/kg	0.780	--	1
Cl5-BZ#87	ND		ug/kg	0.780	--	1
Cl5-BZ#101	ND		ug/kg	0.780	--	1
Cl5-BZ#105	ND		ug/kg	0.780	--	1
Cl5-BZ#118	ND		ug/kg	0.780	--	1
Cl6-BZ#128	ND		ug/kg	0.780	--	1
Cl6-BZ#138	ND		ug/kg	0.780	--	1
Cl6-BZ#153	ND		ug/kg	0.780	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-14 Date Collected: 02/27/15 13:08

Client ID: L11 Date Received: 02/27/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	0.780	--	1
Cl7-BZ#180	ND		ug/kg	0.780	--	1
Cl7-BZ#183	ND		ug/kg	0.780	--	1
Cl7-BZ#184	ND		ug/kg	0.780	--	1
Cl7-BZ#187	ND		ug/kg	0.780	--	1
Cl8-BZ#195	ND		ug/kg	0.780	--	1
Cl9-BZ#206	ND		ug/kg	0.780	--	1
Cl10-BZ#209	ND		ug/kg	0.780	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	58		30-150
Pyrene-d10	67		30-150
Benzo(b)fluoranthene-d12	66		30-150
DBOB	69		30-150
BZ 198	65		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-15	Date Collected:	02/27/15 13:19
Client ID:	L14	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/05/15 11:50
Analytical Date:	03/08/15 16:16	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/06/15
Percent Solids:	69%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	9.60		ug/kg	7.40	--	1
Acenaphthylene	10.3		ug/kg	7.40	--	1
Acenaphthene	ND		ug/kg	7.40	--	1
Fluorene	ND		ug/kg	7.40	--	1
Phenanthrene	26.1		ug/kg	7.40	--	1
Anthracene	9.54		ug/kg	7.40	--	1
Fluoranthene	71.0		ug/kg	7.40	--	1
Pyrene	78.5		ug/kg	7.40	--	1
Benz(a)anthracene	46.3		ug/kg	7.40	--	1
Chrysene	55.0		ug/kg	7.40	--	1
Benzo(b)fluoranthene	48.8		ug/kg	7.40	--	1
Benzo(k)fluoranthene	44.0		ug/kg	7.40	--	1
Benzo(a)pyrene	49.5		ug/kg	7.40	--	1
Indeno(1,2,3-cd)Pyrene	33.0		ug/kg	7.40	--	1
Dibenz(a,h)anthracene	ND		ug/kg	7.40	--	1
Benzo(ghi)perylene	31.2		ug/kg	7.40	--	1
Cl2-BZ#8	ND		ug/kg	0.740	--	1
Cl3-BZ#18	ND		ug/kg	0.740	--	1
Cl3-BZ#28	ND		ug/kg	0.740	--	1
Cl4-BZ#44	ND		ug/kg	0.740	--	1
Cl4-BZ#49	ND		ug/kg	0.740	--	1
Cl4-BZ#52	ND		ug/kg	0.740	--	1
Cl4-BZ#66	ND		ug/kg	0.740	--	1
Cl5-BZ#87	ND		ug/kg	0.740	--	1
Cl5-BZ#101	ND		ug/kg	0.740	--	1
Cl5-BZ#105	ND		ug/kg	0.740	--	1
Cl5-BZ#118	ND		ug/kg	0.740	--	1
Cl6-BZ#128	ND		ug/kg	0.740	--	1
Cl6-BZ#138	ND		ug/kg	0.740	--	1
Cl6-BZ#153	ND		ug/kg	0.740	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-15 Date Collected: 02/27/15 13:19

Client ID: L14 Date Received: 02/27/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	0.740	--	1
Cl7-BZ#180	ND		ug/kg	0.740	--	1
Cl7-BZ#183	ND		ug/kg	0.740	--	1
Cl7-BZ#184	ND		ug/kg	0.740	--	1
Cl7-BZ#187	ND		ug/kg	0.740	--	1
Cl8-BZ#195	ND		ug/kg	0.740	--	1
Cl9-BZ#206	ND		ug/kg	0.740	--	1
Cl10-BZ#209	ND		ug/kg	0.740	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	48		30-150
Pyrene-d10	55		30-150
Benzo(b)fluoranthene-d12	56		30-150
DBOB	55		30-150
BZ 198	55		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-16	Date Collected:	02/27/15 13:35
Client ID:	L23A	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/05/15 11:50
Analytical Date:	03/08/15 16:49	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/06/15
Percent Solids:	68%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	7.44	--	1
Acenaphthylene	ND		ug/kg	7.44	--	1
Acenaphthene	ND		ug/kg	7.44	--	1
Fluorene	ND		ug/kg	7.44	--	1
Phenanthrene	12.9		ug/kg	7.44	--	1
Anthracene	ND		ug/kg	7.44	--	1
Fluoranthene	49.3		ug/kg	7.44	--	1
Pyrene	77.7		ug/kg	7.44	--	1
Benz(a)anthracene	52.2		ug/kg	7.44	--	1
Chrysene	56.8		ug/kg	7.44	--	1
Benzo(b)fluoranthene	45.5		ug/kg	7.44	--	1
Benzo(k)fluoranthene	41.1		ug/kg	7.44	--	1
Benzo(a)pyrene	60.5		ug/kg	7.44	--	1
Indeno(1,2,3-cd)Pyrene	35.2		ug/kg	7.44	--	1
Dibenz(a,h)anthracene	7.75		ug/kg	7.44	--	1
Benzo(ghi)perylene	38.2		ug/kg	7.44	--	1
Cl2-BZ#8	ND		ug/kg	0.744	--	1
Cl3-BZ#18	ND		ug/kg	0.744	--	1
Cl3-BZ#28	ND		ug/kg	0.744	--	1
Cl4-BZ#44	ND		ug/kg	0.744	--	1
Cl4-BZ#49	ND		ug/kg	0.744	--	1
Cl4-BZ#52	ND		ug/kg	0.744	--	1
Cl4-BZ#66	ND		ug/kg	0.744	--	1
Cl5-BZ#87	ND		ug/kg	0.744	--	1
Cl5-BZ#101	ND		ug/kg	0.744	--	1
Cl5-BZ#105	ND		ug/kg	0.744	--	1
Cl5-BZ#118	ND		ug/kg	0.744	--	1
Cl6-BZ#128	ND		ug/kg	0.744	--	1
Cl6-BZ#138	ND		ug/kg	0.744	--	1
Cl6-BZ#153	ND		ug/kg	0.744	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-16 Date Collected: 02/27/15 13:35

Client ID: L23A Date Received: 02/27/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	0.744	--	1
Cl7-BZ#180	ND		ug/kg	0.744	--	1
Cl7-BZ#183	ND		ug/kg	0.744	--	1
Cl7-BZ#184	ND		ug/kg	0.744	--	1
Cl7-BZ#187	ND		ug/kg	0.744	--	1
Cl8-BZ#195	ND		ug/kg	0.744	--	1
Cl9-BZ#206	ND		ug/kg	0.744	--	1
Cl10-BZ#209	ND		ug/kg	0.744	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	49		30-150
Pyrene-d10	57		30-150
Benzo(b)fluoranthene-d12	57		30-150
DBOB	56		30-150
BZ 198	57		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-17	Date Collected:	02/27/15 13:45
Client ID:	L23B	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/05/15 11:50
Analytical Date:	03/08/15 17:22	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/06/15
Percent Solids:	68%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	7.38	--	1
Acenaphthylene	ND		ug/kg	7.38	--	1
Acenaphthene	ND		ug/kg	7.38	--	1
Fluorene	ND		ug/kg	7.38	--	1
Phenanthrene	18.3		ug/kg	7.38	--	1
Anthracene	8.21		ug/kg	7.38	--	1
Fluoranthene	39.4		ug/kg	7.38	--	1
Pyrene	46.8		ug/kg	7.38	--	1
Benz(a)anthracene	32.2		ug/kg	7.38	--	1
Chrysene	35.6		ug/kg	7.38	--	1
Benzo(b)fluoranthene	31.3		ug/kg	7.38	--	1
Benzo(k)fluoranthene	28.8		ug/kg	7.38	--	1
Benzo(a)pyrene	35.5		ug/kg	7.38	--	1
Indeno(1,2,3-cd)Pyrene	24.0		ug/kg	7.38	--	1
Dibenz(a,h)anthracene	ND		ug/kg	7.38	--	1
Benzo(ghi)perylene	23.3		ug/kg	7.38	--	1
Cl2-BZ#8	ND		ug/kg	0.738	--	1
Cl3-BZ#18	ND		ug/kg	0.738	--	1
Cl3-BZ#28	ND		ug/kg	0.738	--	1
Cl4-BZ#44	ND		ug/kg	0.738	--	1
Cl4-BZ#49	ND		ug/kg	0.738	--	1
Cl4-BZ#52	ND		ug/kg	0.738	--	1
Cl4-BZ#66	ND		ug/kg	0.738	--	1
Cl5-BZ#87	ND		ug/kg	0.738	--	1
Cl5-BZ#101	ND		ug/kg	0.738	--	1
Cl5-BZ#105	ND		ug/kg	0.738	--	1
Cl5-BZ#118	ND		ug/kg	0.738	--	1
Cl6-BZ#128	ND		ug/kg	0.738	--	1
Cl6-BZ#138	ND		ug/kg	0.738	--	1
Cl6-BZ#153	ND		ug/kg	0.738	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-17 Date Collected: 02/27/15 13:45

Client ID: L23B Date Received: 02/27/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	0.738	--	1
Cl7-BZ#180	ND		ug/kg	0.738	--	1
Cl7-BZ#183	ND		ug/kg	0.738	--	1
Cl7-BZ#184	ND		ug/kg	0.738	--	1
Cl7-BZ#187	ND		ug/kg	0.738	--	1
Cl8-BZ#195	ND		ug/kg	0.738	--	1
Cl9-BZ#206	ND		ug/kg	0.738	--	1
Cl10-BZ#209	ND		ug/kg	0.738	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	40		30-150
Pyrene-d10	46		30-150
Benzo(b)fluoranthene-d12	47		30-150
DBOB	44		30-150
BZ 198	46		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-18	Date Collected:	02/27/15 13:58
Client ID:	L24A	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/05/15 11:50
Analytical Date:	03/08/15 17:55	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/06/15
Percent Solids:	70%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	13.9	--	1
Acenaphthylene	ND		ug/kg	13.9	--	1
Acenaphthene	ND		ug/kg	13.9	--	1
Fluorene	ND		ug/kg	13.9	--	1
Phenanthrene	ND		ug/kg	13.9	--	1
Anthracene	ND		ug/kg	13.9	--	1
Fluoranthene	23.4		ug/kg	13.9	--	1
Pyrene	25.4		ug/kg	13.9	--	1
Benz(a)anthracene	14.4		ug/kg	13.9	--	1
Chrysene	16.6		ug/kg	13.9	--	1
Benzo(b)fluoranthene	18.4		ug/kg	13.9	--	1
Benzo(k)fluoranthene	16.8		ug/kg	13.9	--	1
Benzo(a)pyrene	15.9		ug/kg	13.9	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	13.9	--	1
Dibenz(a,h)anthracene	ND		ug/kg	13.9	--	1
Benzo(ghi)perylene	ND		ug/kg	13.9	--	1
Cl2-BZ#8	ND		ug/kg	1.39	--	1
Cl3-BZ#18	ND		ug/kg	1.39	--	1
Cl3-BZ#28	ND		ug/kg	1.39	--	1
Cl4-BZ#44	ND		ug/kg	1.39	--	1
Cl4-BZ#49	ND		ug/kg	1.39	--	1
Cl4-BZ#52	ND		ug/kg	1.39	--	1
Cl4-BZ#66	ND		ug/kg	1.39	--	1
Cl5-BZ#87	ND		ug/kg	1.39	--	1
Cl5-BZ#101	ND		ug/kg	1.39	--	1
Cl5-BZ#105	ND		ug/kg	1.39	--	1
Cl5-BZ#118	ND		ug/kg	1.39	--	1
Cl6-BZ#128	ND		ug/kg	1.39	--	1
Cl6-BZ#138	ND		ug/kg	1.39	--	1
Cl6-BZ#153	ND		ug/kg	1.39	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-18 Date Collected: 02/27/15 13:58

Client ID: L24A Date Received: 02/27/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	1.39	--	1
Cl7-BZ#180	ND		ug/kg	1.39	--	1
Cl7-BZ#183	ND		ug/kg	1.39	--	1
Cl7-BZ#184	ND		ug/kg	1.39	--	1
Cl7-BZ#187	ND		ug/kg	1.39	--	1
Cl8-BZ#195	ND		ug/kg	1.39	--	1
Cl9-BZ#206	ND		ug/kg	1.39	--	1
Cl10-BZ#209	ND		ug/kg	1.39	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	51		30-150
Pyrene-d10	62		30-150
Benzo(b)fluoranthene-d12	64		30-150
DBOB	58		30-150
BZ 198	62		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-19	Date Collected:	02/27/15 14:12
Client ID:	L24B	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/05/15 11:50
Analytical Date:	03/08/15 18:28	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/06/15
Percent Solids:	68%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	7.27	--	1
Acenaphthylene	ND		ug/kg	7.27	--	1
Acenaphthene	7.49		ug/kg	7.27	--	1
Fluorene	8.41		ug/kg	7.27	--	1
Phenanthrene	80.8		ug/kg	7.27	--	1
Anthracene	15.0		ug/kg	7.27	--	1
Fluoranthene	106		ug/kg	7.27	--	1
Pyrene	89.6		ug/kg	7.27	--	1
Benz(a)anthracene	43.6		ug/kg	7.27	--	1
Chrysene	46.7		ug/kg	7.27	--	1
Benzo(b)fluoranthene	45.0		ug/kg	7.27	--	1
Benzo(k)fluoranthene	37.9		ug/kg	7.27	--	1
Benzo(a)pyrene	42.8		ug/kg	7.27	--	1
Indeno(1,2,3-cd)Pyrene	32.3		ug/kg	7.27	--	1
Dibenz(a,h)anthracene	ND		ug/kg	7.27	--	1
Benzo(ghi)perylene	29.5		ug/kg	7.27	--	1
Cl2-BZ#8	ND		ug/kg	0.727	--	1
Cl3-BZ#18	ND		ug/kg	0.727	--	1
Cl3-BZ#28	ND		ug/kg	0.727	--	1
Cl4-BZ#44	ND		ug/kg	0.727	--	1
Cl4-BZ#49	ND		ug/kg	0.727	--	1
Cl4-BZ#52	ND		ug/kg	0.727	--	1
Cl4-BZ#66	ND		ug/kg	0.727	--	1
Cl5-BZ#87	ND		ug/kg	0.727	--	1
Cl5-BZ#101	ND		ug/kg	0.727	--	1
Cl5-BZ#105	ND		ug/kg	0.727	--	1
Cl5-BZ#118	ND		ug/kg	0.727	--	1
Cl6-BZ#128	ND		ug/kg	0.727	--	1
Cl6-BZ#138	ND		ug/kg	0.727	--	1
Cl6-BZ#153	ND		ug/kg	0.727	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-19 Date Collected: 02/27/15 14:12

Client ID: L24B Date Received: 02/27/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	0.727	--	1
Cl7-BZ#180	ND		ug/kg	0.727	--	1
Cl7-BZ#183	ND		ug/kg	0.727	--	1
Cl7-BZ#184	ND		ug/kg	0.727	--	1
Cl7-BZ#187	ND		ug/kg	0.727	--	1
Cl8-BZ#195	ND		ug/kg	0.727	--	1
Cl9-BZ#206	ND		ug/kg	0.727	--	1
Cl10-BZ#209	ND		ug/kg	0.727	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	51		30-150
Pyrene-d10	59		30-150
Benzo(b)fluoranthene-d12	60		30-150
DBOB	59		30-150
BZ 198	59		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-20	Date Collected:	02/27/15 14:30
Client ID:	L22A	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/05/15 11:50
Analytical Date:	03/08/15 19:01	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/06/15
Percent Solids:	64%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	7.75	--	1
Acenaphthylene	ND		ug/kg	7.75	--	1
Acenaphthene	ND		ug/kg	7.75	--	1
Fluorene	ND		ug/kg	7.75	--	1
Phenanthrene	13.0		ug/kg	7.75	--	1
Anthracene	ND		ug/kg	7.75	--	1
Fluoranthene	33.4		ug/kg	7.75	--	1
Pyrene	34.2		ug/kg	7.75	--	1
Benz(a)anthracene	17.6		ug/kg	7.75	--	1
Chrysene	22.4		ug/kg	7.75	--	1
Benzo(b)fluoranthene	22.4		ug/kg	7.75	--	1
Benzo(k)fluoranthene	18.5		ug/kg	7.75	--	1
Benzo(a)pyrene	19.1		ug/kg	7.75	--	1
Indeno(1,2,3-cd)Pyrene	14.2		ug/kg	7.75	--	1
Dibenz(a,h)anthracene	ND		ug/kg	7.75	--	1
Benzo(ghi)perylene	15.4		ug/kg	7.75	--	1
Cl2-BZ#8	ND		ug/kg	0.775	--	1
Cl3-BZ#18	ND		ug/kg	0.775	--	1
Cl3-BZ#28	ND		ug/kg	0.775	--	1
Cl4-BZ#44	ND		ug/kg	0.775	--	1
Cl4-BZ#49	ND		ug/kg	0.775	--	1
Cl4-BZ#52	ND		ug/kg	0.775	--	1
Cl4-BZ#66	ND		ug/kg	0.775	--	1
Cl5-BZ#87	ND		ug/kg	0.775	--	1
Cl5-BZ#101	ND		ug/kg	0.775	--	1
Cl5-BZ#105	ND		ug/kg	0.775	--	1
Cl5-BZ#118	ND		ug/kg	0.775	--	1
Cl6-BZ#128	ND		ug/kg	0.775	--	1
Cl6-BZ#138	ND		ug/kg	0.775	--	1
Cl6-BZ#153	ND		ug/kg	0.775	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-20 Date Collected: 02/27/15 14:30

Client ID: L22A Date Received: 02/27/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	0.775	--	1
Cl7-BZ#180	ND		ug/kg	0.775	--	1
Cl7-BZ#183	ND		ug/kg	0.775	--	1
Cl7-BZ#184	ND		ug/kg	0.775	--	1
Cl7-BZ#187	ND		ug/kg	0.775	--	1
Cl8-BZ#195	ND		ug/kg	0.775	--	1
Cl9-BZ#206	ND		ug/kg	0.775	--	1
Cl10-BZ#209	ND		ug/kg	0.775	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	55		30-150
Pyrene-d10	66		30-150
Benzo(b)fluoranthene-d12	66		30-150
DBOB	67		30-150
BZ 198	68		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-21	Date Collected:	02/27/15 14:43
Client ID:	L22B	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/05/15 11:50
Analytical Date:	03/08/15 19:34	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/06/15
Percent Solids:	67%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	7.41	--	1
Acenaphthylene	ND		ug/kg	7.41	--	1
Acenaphthene	ND		ug/kg	7.41	--	1
Fluorene	ND		ug/kg	7.41	--	1
Phenanthrene	25.0		ug/kg	7.41	--	1
Anthracene	14.8		ug/kg	7.41	--	1
Fluoranthene	68.7		ug/kg	7.41	--	1
Pyrene	92.5		ug/kg	7.41	--	1
Benz(a)anthracene	40.5		ug/kg	7.41	--	1
Chrysene	42.6		ug/kg	7.41	--	1
Benzo(b)fluoranthene	25.4		ug/kg	7.41	--	1
Benzo(k)fluoranthene	37.4		ug/kg	7.41	--	1
Benzo(a)pyrene	43.5		ug/kg	7.41	--	1
Indeno(1,2,3-cd)Pyrene	24.3		ug/kg	7.41	--	1
Dibenz(a,h)anthracene	ND		ug/kg	7.41	--	1
Benzo(ghi)perylene	24.5		ug/kg	7.41	--	1
Cl2-BZ#8	ND		ug/kg	0.741	--	1
Cl3-BZ#18	ND		ug/kg	0.741	--	1
Cl3-BZ#28	ND		ug/kg	0.741	--	1
Cl4-BZ#44	ND		ug/kg	0.741	--	1
Cl4-BZ#49	ND		ug/kg	0.741	--	1
Cl4-BZ#52	ND		ug/kg	0.741	--	1
Cl4-BZ#66	ND		ug/kg	0.741	--	1
Cl5-BZ#87	ND		ug/kg	0.741	--	1
Cl5-BZ#101	ND		ug/kg	0.741	--	1
Cl5-BZ#105	ND		ug/kg	0.741	--	1
Cl5-BZ#118	ND		ug/kg	0.741	--	1
Cl6-BZ#128	ND		ug/kg	0.741	--	1
Cl6-BZ#138	ND		ug/kg	0.741	--	1
Cl6-BZ#153	ND		ug/kg	0.741	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-21 Date Collected: 02/27/15 14:43

Client ID: L22B Date Received: 02/27/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	0.741	--	1
Cl7-BZ#180	ND		ug/kg	0.741	--	1
Cl7-BZ#183	ND		ug/kg	0.741	--	1
Cl7-BZ#184	ND		ug/kg	0.741	--	1
Cl7-BZ#187	ND		ug/kg	0.741	--	1
Cl8-BZ#195	ND		ug/kg	0.741	--	1
Cl9-BZ#206	ND		ug/kg	0.741	--	1
Cl10-BZ#209	ND		ug/kg	0.741	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	55		30-150
Pyrene-d10	61		30-150
Benzo(b)fluoranthene-d12	62		30-150
DBOB	60		30-150
BZ 198	58		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-22	Date Collected:	02/27/15 23:45
Client ID:	L61	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	03/05/15 11:50
Analytical Date:	03/08/15 20:07	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	03/06/15
Percent Solids:	71%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	14.1	--	1
Acenaphthylene	ND		ug/kg	14.1	--	1
Acenaphthene	ND		ug/kg	14.1	--	1
Fluorene	ND		ug/kg	14.1	--	1
Phenanthrene	ND		ug/kg	14.1	--	1
Anthracene	ND		ug/kg	14.1	--	1
Fluoranthene	ND		ug/kg	14.1	--	1
Pyrene	ND		ug/kg	14.1	--	1
Benz(a)anthracene	ND		ug/kg	14.1	--	1
Chrysene	ND		ug/kg	14.1	--	1
Benzo(b)fluoranthene	ND		ug/kg	14.1	--	1
Benzo(k)fluoranthene	ND		ug/kg	14.1	--	1
Benzo(a)pyrene	ND		ug/kg	14.1	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	14.1	--	1
Dibenz(a,h)anthracene	ND		ug/kg	14.1	--	1
Benzo(ghi)perylene	ND		ug/kg	14.1	--	1
Cl2-BZ#8	ND		ug/kg	1.41	--	1
Cl3-BZ#18	ND		ug/kg	1.41	--	1
Cl3-BZ#28	ND		ug/kg	1.41	--	1
Cl4-BZ#44	ND		ug/kg	1.41	--	1
Cl4-BZ#49	ND		ug/kg	1.41	--	1
Cl4-BZ#52	ND		ug/kg	1.41	--	1
Cl4-BZ#66	ND		ug/kg	1.41	--	1
Cl5-BZ#87	ND		ug/kg	1.41	--	1
Cl5-BZ#101	ND		ug/kg	1.41	--	1
Cl5-BZ#105	ND		ug/kg	1.41	--	1
Cl5-BZ#118	ND		ug/kg	1.41	--	1
Cl6-BZ#128	ND		ug/kg	1.41	--	1
Cl6-BZ#138	ND		ug/kg	1.41	--	1
Cl6-BZ#153	ND		ug/kg	1.41	--	1

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-22 Date Collected: 02/27/15 23:45

Client ID: L61 Date Received: 02/27/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	1.41	--	1
Cl7-BZ#180	ND		ug/kg	1.41	--	1
Cl7-BZ#183	ND		ug/kg	1.41	--	1
Cl7-BZ#184	ND		ug/kg	1.41	--	1
Cl7-BZ#187	ND		ug/kg	1.41	--	1
Cl8-BZ#195	ND		ug/kg	1.41	--	1
Cl9-BZ#206	ND		ug/kg	1.41	--	1
Cl10-BZ#209	ND		ug/kg	1.41	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	43		30-150
Pyrene-d10	55		30-150
Benzo(b)fluoranthene-d12	57		30-150
DBOB	52		30-150
BZ 198	53		30-150

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 03/06/15 16:18
Analyst: JT

Extraction Method: EPA 3570
Extraction Date: 03/05/15 11:50
Cleanup Method: EPA 3630
Cleanup Date: 03/06/15

Parameter	Result	Qualifier	Units	RL	MDL
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab for sample(s): 01-12 Batch: WG766354-1					
Naphthalene	ND		ug/kg	10.0	--
Acenaphthylene	ND		ug/kg	10.0	--
Acenaphthene	ND		ug/kg	10.0	--
Fluorene	ND		ug/kg	10.0	--
Phenanthrene	ND		ug/kg	10.0	--
Anthracene	ND		ug/kg	10.0	--
Fluoranthene	ND		ug/kg	10.0	--
Pyrene	ND		ug/kg	10.0	--
Benz(a)anthracene	ND		ug/kg	10.0	--
Chrysene	ND		ug/kg	10.0	--
Benzo(b)fluoranthene	ND		ug/kg	10.0	--
Benzo(k)fluoranthene	ND		ug/kg	10.0	--
Benzo(a)pyrene	ND		ug/kg	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	10.0	--
Dibenz(a,h)anthracene	ND		ug/kg	10.0	--
Benzo(ghi)perylene	ND		ug/kg	10.0	--
Cl2-BZ#8	ND		ug/kg	1.00	--
Cl3-BZ#18	ND		ug/kg	1.00	--
Cl3-BZ#28	ND		ug/kg	1.00	--
Cl4-BZ#44	ND		ug/kg	1.00	--
Cl4-BZ#49	ND		ug/kg	1.00	--
Cl4-BZ#52	ND		ug/kg	1.00	--
Cl4-BZ#66	ND		ug/kg	1.00	--
Cl5-BZ#87	ND		ug/kg	1.00	--
Cl5-BZ#101	ND		ug/kg	1.00	--
Cl5-BZ#105	ND		ug/kg	1.00	--
Cl5-BZ#118	ND		ug/kg	1.00	--
Cl6-BZ#128	ND		ug/kg	1.00	--
Cl6-BZ#138	ND		ug/kg	1.00	--

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 03/06/15 16:18
Analyst: JT

Extraction Method: EPA 3570
Extraction Date: 03/05/15 11:50
Cleanup Method: EPA 3630
Cleanup Date: 03/06/15

Parameter	Result	Qualifier	Units	RL	MDL
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab for sample(s): 01-12 Batch: WG766354-1					
Cl6-BZ#153	ND		ug/kg	1.00	--
Cl7-BZ#170	ND		ug/kg	1.00	--
Cl7-BZ#180	ND		ug/kg	1.00	--
Cl7-BZ#183	ND		ug/kg	1.00	--
Cl7-BZ#184	ND		ug/kg	1.00	--
Cl7-BZ#187	ND		ug/kg	1.00	--
Cl8-BZ#195	ND		ug/kg	1.00	--
Cl9-BZ#206	ND		ug/kg	1.00	--
Cl10-BZ#209	ND		ug/kg	1.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	50		30-150
Pyrene-d10	55		30-150
Benzo(b)fluoranthene-d12	55		30-150
DBOB	60		30-150
BZ 198	57		30-150

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 03/08/15 11:52
Analyst: CM

Extraction Method: EPA 3570
Extraction Date: 03/05/15 11:50
Cleanup Method: EPA 3630
Cleanup Date: 03/06/15

Parameter	Result	Qualifier	Units	RL	MDL
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab for sample(s): 13-22 Batch: WG766355-1					
Naphthalene	ND		ug/kg	10.0	--
Acenaphthylene	ND		ug/kg	10.0	--
Acenaphthene	ND		ug/kg	10.0	--
Fluorene	ND		ug/kg	10.0	--
Phenanthrene	ND		ug/kg	10.0	--
Anthracene	ND		ug/kg	10.0	--
Fluoranthene	ND		ug/kg	10.0	--
Pyrene	ND		ug/kg	10.0	--
Benz(a)anthracene	ND		ug/kg	10.0	--
Chrysene	ND		ug/kg	10.0	--
Benzo(b)fluoranthene	ND		ug/kg	10.0	--
Benzo(k)fluoranthene	ND		ug/kg	10.0	--
Benzo(a)pyrene	ND		ug/kg	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	10.0	--
Dibenz(a,h)anthracene	ND		ug/kg	10.0	--
Benzo(ghi)perylene	ND		ug/kg	10.0	--
Cl2-BZ#8	ND		ug/kg	1.00	--
Cl3-BZ#18	ND		ug/kg	1.00	--
Cl3-BZ#28	ND		ug/kg	1.00	--
Cl4-BZ#44	ND		ug/kg	1.00	--
Cl4-BZ#49	ND		ug/kg	1.00	--
Cl4-BZ#52	ND		ug/kg	1.00	--
Cl4-BZ#66	ND		ug/kg	1.00	--
Cl5-BZ#87	ND		ug/kg	1.00	--
Cl5-BZ#101	ND		ug/kg	1.00	--
Cl5-BZ#105	ND		ug/kg	1.00	--
Cl5-BZ#118	ND		ug/kg	1.00	--
Cl6-BZ#128	ND		ug/kg	1.00	--
Cl6-BZ#138	ND		ug/kg	1.00	--

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 03/08/15 11:52
Analyst: CM

Extraction Method: EPA 3570
Extraction Date: 03/05/15 11:50
Cleanup Method: EPA 3630
Cleanup Date: 03/06/15

Parameter	Result	Qualifier	Units	RL	MDL
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab for sample(s): 13-22 Batch: WG766355-1					
Cl6-BZ#153	ND		ug/kg	1.00	--
Cl7-BZ#170	ND		ug/kg	1.00	--
Cl7-BZ#180	ND		ug/kg	1.00	--
Cl7-BZ#183	ND		ug/kg	1.00	--
Cl7-BZ#184	ND		ug/kg	1.00	--
Cl7-BZ#187	ND		ug/kg	1.00	--
Cl8-BZ#195	ND		ug/kg	1.00	--
Cl9-BZ#206	ND		ug/kg	1.00	--
Cl10-BZ#209	ND		ug/kg	1.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	62		30-150
Pyrene-d10	68		30-150
Benzo(b)fluoranthene-d12	71		30-150
DBOB	69		30-150
BZ 198	66		30-150

Lab Control Sample Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

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): 01-12 Batch: WG766354-2 WG766354-3								
Naphthalene	62		56		50-120	10		30
Acenaphthylene	61		56		50-120	9		30
Acenaphthene	62		57		50-120	8		30
Fluorene	61		56		50-120	9		30
Phenanthrene	62		58		50-120	7		30
Anthracene	61		57		50-120	7		30
Fluoranthene	64		60		50-120	6		30
Pyrene	64		60		50-120	6		30
Benz(a)anthracene	65		62		50-120	5		30
Chrysene	64		61		50-120	5		30
Benzo(b)fluoranthene	66		64		50-120	3		30
Benzo(k)fluoranthene	71		67		50-120	6		30
Benzo(a)pyrene	64		61		50-120	5		30
Indeno(1,2,3-cd)Pyrene	60		57		50-120	5		30
Dibenz(a,h)anthracene	64		61		50-120	5		30
Benzo(ghi)perylene	62		59		50-120	5		30
Cl2-BZ#8	60		56		50-120	7		30
Cl3-BZ#18	58		54		50-120	7		30
Cl3-BZ#28	62		58		50-120	7		30
Cl4-BZ#44	64		59		50-120	8		30
Cl4-BZ#49	62		57		50-120	8		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

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): 01-12 Batch: WG766354-2 WG766354-3								
Cl4-BZ#52	60		57		50-120	5		30
Cl4-BZ#66	63		60		50-120	5		30
Cl5-BZ#87	65		60		50-120	8		30
Cl5-BZ#101	63		60		50-120	5		30
Cl5-BZ#105	64		60		50-120	6		30
Cl5-BZ#118	64		60		50-120	6		30
Cl6-BZ#128	62		59		50-120	5		30
Cl6-BZ#138	64		61		50-120	5		30
Cl6-BZ#153	63		59		50-120	7		30
Cl7-BZ#170	64		61		50-120	5		30
Cl7-BZ#180	62		58		50-120	7		30
Cl7-BZ#183	62		60		50-120	3		30
Cl7-BZ#184	64		60		50-120	6		30
Cl7-BZ#187	62		59		50-120	5		30
Cl8-BZ#195	60		57		50-120	5		30
Cl9-BZ#206	61		57		50-120	7		30
Cl10-BZ#209	60		56		50-120	7		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE

Project Number: Not Specified

Lab Number: L1503772

Report Date: 03/16/15

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): 01-12 Batch: WG766354-2 WG766354-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Methylnaphthalene-d10	58		53		30-150
Pyrene-d10	64		60		30-150
Benzo(b)fluoranthene-d12	65		61		30-150
DBOB	62		59		30-150
BZ 198	60		57		30-150

Lab Control Sample Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

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): 13-22 Batch: WG766355-2 WG766355-3								
Naphthalene	80		68		50-120	16		30
Acenaphthylene	80		69		50-120	15		30
Acenaphthene	80		70		50-120	13		30
Fluorene	79		69		50-120	14		30
Phenanthrene	79		72		50-120	9		30
Anthracene	77		71		50-120	8		30
Fluoranthene	80		74		50-120	8		30
Pyrene	79		72		50-120	9		30
Benz(a)anthracene	82		74		50-120	10		30
Chrysene	80		74		50-120	8		30
Benzo(b)fluoranthene	84		77		50-120	9		30
Benzo(k)fluoranthene	92		84		50-120	9		30
Benzo(a)pyrene	80		75		50-120	6		30
Indeno(1,2,3-cd)Pyrene	80		72		50-120	11		30
Dibenz(a,h)anthracene	81		73		50-120	10		30
Benzo(ghi)perylene	79		73		50-120	8		30
Cl2-BZ#8	81		66		50-120	20		30
Cl3-BZ#18	76		64		50-120	17		30
Cl3-BZ#28	82		69		50-120	17		30
Cl4-BZ#44	84		71		50-120	17		30
Cl4-BZ#49	81		70		50-120	15		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE

Project Number: Not Specified

Lab Number: L1503772

Report Date: 03/16/15

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): 13-22 Batch: WG766355-2 WG766355-3								
Cl4-BZ#52	79		67		50-120	16		30
Cl4-BZ#66	83		71		50-120	16		30
Cl5-BZ#87	85		73		50-120	15		30
Cl5-BZ#101	82		72		50-120	13		30
Cl5-BZ#105	82		73		50-120	12		30
Cl5-BZ#118	82		72		50-120	13		30
Cl6-BZ#128	82		72		50-120	13		30
Cl6-BZ#138	83		73		50-120	13		30
Cl6-BZ#153	82		71		50-120	14		30
Cl7-BZ#170	85		74		50-120	14		30
Cl7-BZ#180	80		72		50-120	11		30
Cl7-BZ#183	82		72		50-120	13		30
Cl7-BZ#184	83		72		50-120	14		30
Cl7-BZ#187	81		71		50-120	13		30
Cl8-BZ#195	79		69		50-120	14		30
Cl9-BZ#206	81		69		50-120	16		30
Cl10-BZ#209	78		68		50-120	14		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE

Project Number: Not Specified

Lab Number: L1503772

Report Date: 03/16/15

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): 13-22 Batch: WG766355-2 WG766355-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Methylnaphthalene-d10	74		64		30-150
Pyrene-d10	79		72		30-150
Benzo(b)fluoranthene-d12	82		76		30-150
DBOB	83		72		30-150
BZ 198	78		69		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 13-22 QC Batch ID: WG766355-6 WG766355-7 QC Sample: L1503772-22 Client ID: L61												
Naphthalene	ND	714	445	62		548	77		50-120	21		30
Acenaphthylene	ND	714	443	62		549	77		50-120	21		30
Acenaphthene	ND	714	451	63		551	77		50-120	20		30
Fluorene	ND	714	471	66		557	78		50-120	17		30
Phenanthrene	ND	714	468	66		571	80		50-120	20		30
Anthracene	ND	714	435	61		549	77		50-120	23		30
Fluoranthene	ND	714	473	66		614	86		50-120	26		30
Pyrene	ND	714	478	67		597	84		50-120	22		30
Benz(a)anthracene	ND	714	482	68		616	86		50-120	24		30
Chrysene	ND	714	483	68		598	84		50-120	21		30
Benzo(b)fluoranthene	ND	714	489	69		667	94		50-120	**31**	Q	30
Benzo(k)fluoranthene	ND	714	514	72		612	86		50-120	17		30
Benzo(a)pyrene	ND	714	462	65		605	85		50-120	27		30
Indeno(1,2,3-cd)Pyrene	ND	714	464	65		533	75		50-120	14		30
Dibenz(a,h)anthracene	ND	714	461	65		582	82		50-120	23		30
Benzo(ghi)perylene	ND	714	460	65		592	83		50-120	25		30
Cl2-BZ#8	ND	143	86.4	61		116	81		50-120	29		30
Cl3-BZ#18	ND	143	84.3	59		111	78		50-120	27		30
Cl3-BZ#28	ND	143	90.6	64		120	84		50-120	28		30
Cl4-BZ#44	ND	143	93.8	66		122	86		50-120	26		30
Cl4-BZ#49	ND	143	90.8	64		119	83		50-120	27		30

Matrix Spike Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 13-22 QC Batch ID: WG766355-6 WG766355-7 QC Sample: L1503772-22 Client ID: L61												
Cl4-BZ#52	ND	143	89.2	63		119	83		50-120	29		30
Cl4-BZ#66	ND	143	92.9	65		123	86		50-120	28		30
Cl5-BZ#87	ND	143	96.3	68		126	88		50-120	27		30
Cl5-BZ#101	ND	143	93.1	65		123	86		50-120	28		30
Cl5-BZ#105	ND	143	94.9	67		122	86		50-120	25		30
Cl5-BZ#118	ND	143	93.6	66		122	86		50-120	26		30
Cl6-BZ#128	ND	143	93.8	66		122	86		50-120	26		30
Cl6-BZ#138	ND	143	95.4	67		124	87		50-120	26		30
Cl6-BZ#153	ND	143	93.6	66		122	86		50-120	26		30
Cl7-BZ#170	ND	143	96.6	68		128	90		50-120	28		30
Cl7-BZ#180	ND	143	90.5	63		119	83		50-120	27		30
Cl7-BZ#183	ND	143	93.3	65		121	85		50-120	26		30
Cl7-BZ#184	ND	143	94.4	66		124	87		50-120	27		30
Cl7-BZ#187	ND	143	93.0	65		123	86		50-120	28		30
Cl8-BZ#195	ND	143	89.0	62		121	85		50-120	30		30
Cl9-BZ#206	ND	143	89.1	62		120	84		50-120	30		30
Cl10-BZ#209	ND	143	89.0	62		119	83		50-120	29		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	58		70		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 13-22 QC Batch ID: WG766355-6 WG766355-7 QC Sample: L1503772-22 Client ID: L61												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
BZ 198	63		83		30-150
Benzo(b)fluoranthene-d12	64		81		30-150
DBOB	65		85		30-150
Pyrene-d10	64		80		30-150

Lab Duplicate Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 13-22 QC Batch ID: WG766355-5 QC Sample: L1503772-22 Client ID: L61						
Naphthalene	ND	ND	ug/kg	NC		30
Acenaphthylene	ND	ND	ug/kg	NC		30
Acenaphthene	ND	ND	ug/kg	NC		30
Fluorene	ND	ND	ug/kg	NC		30
Phenanthrene	ND	ND	ug/kg	NC		30
Anthracene	ND	ND	ug/kg	NC		30
Fluoranthene	ND	25.0	ug/kg	NC		30
Pyrene	ND	22.5	ug/kg	NC		30
Benz(a)anthracene	ND	ND	ug/kg	NC		30
Chrysene	ND	ND	ug/kg	NC		30
Benzo(b)fluoranthene	ND	ND	ug/kg	NC		30
Benzo(k)fluoranthene	ND	ND	ug/kg	NC		30
Benzo(a)pyrene	ND	ND	ug/kg	NC		30
Indeno(1,2,3-cd)Pyrene	ND	ND	ug/kg	NC		30
Dibenz(a,h)anthracene	ND	ND	ug/kg	NC		30
Benzo(ghi)perylene	ND	ND	ug/kg	NC		30
Cl2-BZ#8	ND	ND	ug/kg	NC		30
Cl3-BZ#18	ND	ND	ug/kg	NC		30
Cl3-BZ#28	ND	ND	ug/kg	NC		30

Lab Duplicate Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 13-22 QC Batch ID: WG766355-5 QC Sample: L1503772-22 Client ID: L61					
Cl4-BZ#44	ND	ND	ug/kg	NC	30
Cl4-BZ#49	ND	ND	ug/kg	NC	30
Cl4-BZ#52	ND	ND	ug/kg	NC	30
Cl4-BZ#66	ND	ND	ug/kg	NC	30
Cl5-BZ#87	ND	ND	ug/kg	NC	30
Cl5-BZ#101	ND	ND	ug/kg	NC	30
Cl5-BZ#105	ND	ND	ug/kg	NC	30
Cl5-BZ#118	ND	ND	ug/kg	NC	30
Cl6-BZ#128	ND	ND	ug/kg	NC	30
Cl6-BZ#138	ND	ND	ug/kg	NC	30
Cl6-BZ#153	ND	ND	ug/kg	NC	30
Cl7-BZ#170	ND	ND	ug/kg	NC	30
Cl7-BZ#180	ND	ND	ug/kg	NC	30
Cl7-BZ#183	ND	ND	ug/kg	NC	30
Cl7-BZ#184	ND	ND	ug/kg	NC	30
Cl7-BZ#187	ND	ND	ug/kg	NC	30
Cl8-BZ#195	ND	ND	ug/kg	NC	30
Cl9-BZ#206	ND	ND	ug/kg	NC	30
Cl10-BZ#209	ND	ND	ug/kg	NC	30

Lab Duplicate Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits

RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 13-22 QC Batch ID: WG766355-5 QC Sample: L1503772-22 Client ID: L61

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	43		47		30-150
Pyrene-d10	55		52		30-150
Benzo(b)fluoranthene-d12	57		53		30-150
DBOB	52		54		30-150
BZ 198	53		50		30-150

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG766355-4

Parameter	% Recovery	Qual	QC Criteria
Phenanthrene	52		40-140
Fluoranthene	51		40-140
Pyrene	46		40-140
Benz(a)anthracene	50		40-140
Chrysene	64		40-140
Benzo(b)fluoranthene	53		40-140
Benzo(k)fluoranthene	91		40-140
Benzo(a)pyrene	41		40-140
Indeno(1,2,3-cd)Pyrene	55		40-140
Dibenz(a,h)anthracene	102		40-140
Benzo(ghi)perylene	53		40-140
Cl2-BZ#8	52		40-140
Cl3-BZ#18	55		40-140
Cl3-BZ#28	33	Q	40-140
Cl4-BZ#44	63		40-140
Cl4-BZ#49	55		40-140
Cl4-BZ#52	46		40-140
Cl4-BZ#66	41		40-140
Cl5-BZ#87	58		40-140
Cl5-BZ#101	56		40-140
Cl5-BZ#105	55		40-140
Cl5-BZ#118	52		40-140
Cl6-BZ#128	87		40-140
Cl6-BZ#138	64		40-140
Cl6-BZ#153	46		40-140
Cl7-BZ#170	62		40-140
Cl7-BZ#180	54		40-140
Cl7-BZ#183	51		40-140
Cl7-BZ#187	60		40-140
Cl9-BZ#206	45		40-140
Cl10-BZ#209	48		40-140
2-Methylnaphthalene-d10 (Surrogate)	48		30-150
Pyrene-d10 (Surrogate)	60		30-150
Benzo(b)fluoranthene-d12 (Surrogate)	57		30-150
DBOB (Surrogate)	55		30-150
BZ 198 (Surrogate)	57		30-150

PESTICIDES

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-01	Date Collected:	02/27/15 09:08
Client ID:	L27	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/05/15 11:50
Analytical Date:	03/10/15 01:01	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/06/15
Percent Solids:	72%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.36	--	1	A
gamma-BHC	ND		ug/kg	0.678	--	1	A
Heptachlor	ND		ug/kg	0.678	--	1	A
Aldrin	ND		ug/kg	0.678	--	1	A
Heptachlor epoxide	ND		ug/kg	1.36	--	1	B
Oxychlordane	ND		ug/kg	1.36	--	1	B
trans-Chlordane	ND		ug/kg	0.678	--	1	A
Endosulfan I	ND		ug/kg	0.678	--	1	A
cis-Chlordane	ND		ug/kg	0.678	--	1	A
trans-Nonachlor	ND		ug/kg	0.678	--	1	A
4,4'-DDE	ND		ug/kg	0.678	--	1	A
Dieldrin	ND		ug/kg	0.678	--	1	A
Endrin	ND		ug/kg	0.678	--	1	A
Endosulfan II	ND		ug/kg	0.678	--	1	A
4,4'-DDD	ND		ug/kg	0.678	--	1	A
cis-Nonachlor	ND		ug/kg	0.678	--	1	A
4,4'-DDT	ND		ug/kg	0.678	--	1	A
Methoxychlor	ND		ug/kg	6.78	--	1	A
Toxaphene	ND		ug/kg	34.0	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	77		30-150	A
BZ 198	89		30-150	A
DBOB	75		30-150	B
BZ 198	90		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-02	Date Collected:	02/27/15 09:21
Client ID:	L28	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/05/15 11:50
Analytical Date:	03/10/15 01:34	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/06/15
Percent Solids:	73%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.35	--	1	A
gamma-BHC	ND		ug/kg	0.674	--	1	A
Heptachlor	ND		ug/kg	0.674	--	1	A
Aldrin	ND		ug/kg	0.674	--	1	A
Heptachlor epoxide	ND		ug/kg	1.35	--	1	B
Oxychlordane	ND		ug/kg	1.35	--	1	B
trans-Chlordane	ND		ug/kg	0.674	--	1	A
Endosulfan I	ND		ug/kg	0.674	--	1	A
cis-Chlordane	ND		ug/kg	0.674	--	1	A
trans-Nonachlor	ND		ug/kg	0.674	--	1	A
4,4'-DDE	ND		ug/kg	0.674	--	1	A
Dieldrin	ND		ug/kg	0.674	--	1	A
Endrin	ND		ug/kg	0.674	--	1	A
Endosulfan II	ND		ug/kg	0.674	--	1	A
4,4'-DDD	ND		ug/kg	0.674	--	1	A
cis-Nonachlor	ND		ug/kg	0.674	--	1	A
4,4'-DDT	ND		ug/kg	0.674	--	1	A
Methoxychlor	ND		ug/kg	6.74	--	1	A
Toxaphene	ND		ug/kg	33.8	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	99		30-150	A
BZ 198	112		30-150	A
DBOB	97		30-150	B
BZ 198	112		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-03	Date Collected:	02/27/15 09:48
Client ID:	L25A	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/05/15 11:50
Analytical Date:	03/10/15 02:06	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/06/15
Percent Solids:	72%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.42	--	1	A
gamma-BHC	ND		ug/kg	0.712	--	1	A
Heptachlor	ND		ug/kg	0.712	--	1	A
Aldrin	ND		ug/kg	0.712	--	1	A
Heptachlor epoxide	ND		ug/kg	1.42	--	1	B
Oxychlordane	ND		ug/kg	1.42	--	1	B
trans-Chlordane	ND		ug/kg	0.712	--	1	A
Endosulfan I	ND		ug/kg	0.712	--	1	A
cis-Chlordane	ND		ug/kg	0.712	--	1	A
trans-Nonachlor	ND		ug/kg	0.712	--	1	A
4,4'-DDE	ND		ug/kg	0.712	--	1	A
Dieldrin	ND		ug/kg	0.712	--	1	A
Endrin	ND		ug/kg	0.712	--	1	A
Endosulfan II	ND		ug/kg	0.712	--	1	A
4,4'-DDD	ND		ug/kg	0.712	--	1	A
cis-Nonachlor	ND		ug/kg	0.712	--	1	A
4,4'-DDT	ND		ug/kg	0.712	--	1	A
Methoxychlor	ND		ug/kg	7.12	--	1	A
Toxaphene	ND		ug/kg	35.8	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	80		30-150	A
BZ 198	96		30-150	A
DBOB	78		30-150	B
BZ 198	96		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-04	Date Collected:	02/27/15 10:00
Client ID:	L25B	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/05/15 11:50
Analytical Date:	03/10/15 02:39	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/06/15
Percent Solids:	73%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.38	--	1	A
gamma-BHC	ND		ug/kg	0.690	--	1	A
Heptachlor	ND		ug/kg	0.690	--	1	A
Aldrin	ND		ug/kg	0.690	--	1	A
Heptachlor epoxide	ND		ug/kg	1.38	--	1	B
Oxychlordane	ND		ug/kg	1.38	--	1	B
trans-Chlordane	ND		ug/kg	0.690	--	1	A
Endosulfan I	ND		ug/kg	0.690	--	1	A
cis-Chlordane	ND		ug/kg	0.690	--	1	A
trans-Nonachlor	ND		ug/kg	0.690	--	1	A
4,4'-DDE	ND		ug/kg	0.690	--	1	A
Dieldrin	ND		ug/kg	0.690	--	1	A
Endrin	ND		ug/kg	0.690	--	1	A
Endosulfan II	ND		ug/kg	0.690	--	1	A
4,4'-DDD	ND		ug/kg	0.690	--	1	A
cis-Nonachlor	ND		ug/kg	0.690	--	1	A
4,4'-DDT	ND		ug/kg	0.690	--	1	A
Methoxychlor	ND		ug/kg	6.90	--	1	A
Toxaphene	ND		ug/kg	34.6	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	104		30-150	A
BZ 198	110		30-150	A
DBOB	103		30-150	B
BZ 198	111		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-05	Date Collected:	02/27/15 10:12
Client ID:	L21	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/05/15 11:50
Analytical Date:	03/10/15 03:11	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/06/15
Percent Solids:	70%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.43	--	1	A
gamma-BHC	ND		ug/kg	0.716	--	1	A
Heptachlor	ND		ug/kg	0.716	--	1	A
Aldrin	ND		ug/kg	0.716	--	1	A
Heptachlor epoxide	ND		ug/kg	1.43	--	1	B
Oxychlordane	ND		ug/kg	1.43	--	1	B
trans-Chlordane	ND		ug/kg	0.716	--	1	A
Endosulfan I	ND		ug/kg	0.716	--	1	A
cis-Chlordane	ND		ug/kg	0.716	--	1	A
trans-Nonachlor	ND		ug/kg	0.716	--	1	A
4,4'-DDE	ND		ug/kg	0.716	--	1	A
Dieldrin	ND		ug/kg	0.716	--	1	A
Endrin	ND		ug/kg	0.716	--	1	A
Endosulfan II	ND		ug/kg	0.716	--	1	A
4,4'-DDD	ND		ug/kg	0.716	--	1	A
cis-Nonachlor	ND		ug/kg	0.716	--	1	A
4,4'-DDT	ND		ug/kg	0.716	--	1	A
Methoxychlor	ND		ug/kg	7.16	--	1	A
Toxaphene	ND		ug/kg	35.9	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	79		30-150	A
BZ 198	92		30-150	A
DBOB	77		30-150	B
BZ 198	92		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-06	Date Collected:	02/27/15 10:25
Client ID:	L20	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/05/15 11:50
Analytical Date:	03/10/15 03:43	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/06/15
Percent Solids:	74%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.39	--	1	A
gamma-BHC	ND		ug/kg	0.694	--	1	A
Heptachlor	ND		ug/kg	0.694	--	1	A
Aldrin	ND		ug/kg	0.694	--	1	A
Heptachlor epoxide	ND		ug/kg	1.39	--	1	B
Oxychlordane	ND		ug/kg	1.39	--	1	B
trans-Chlordane	ND		ug/kg	0.694	--	1	A
Endosulfan I	ND		ug/kg	0.694	--	1	A
cis-Chlordane	ND		ug/kg	0.694	--	1	A
trans-Nonachlor	ND		ug/kg	0.694	--	1	A
4,4'-DDE	ND		ug/kg	0.694	--	1	A
Dieldrin	ND		ug/kg	0.694	--	1	A
Endrin	ND		ug/kg	0.694	--	1	A
Endosulfan II	ND		ug/kg	0.694	--	1	A
4,4'-DDD	ND		ug/kg	0.694	--	1	A
cis-Nonachlor	ND		ug/kg	0.694	--	1	A
4,4'-DDT	ND		ug/kg	0.694	--	1	A
Methoxychlor	ND		ug/kg	6.94	--	1	A
Toxaphene	ND		ug/kg	34.8	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	103		30-150	A
BZ 198	111		30-150	A
DBOB	100		30-150	B
BZ 198	110		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-07	Date Collected:	02/27/15 10:43
Client ID:	L19	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/05/15 11:50
Analytical Date:	03/10/15 04:16	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/06/15
Percent Solids:	72%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.38	--	1	A
gamma-BHC	ND		ug/kg	0.692	--	1	A
Heptachlor	ND		ug/kg	0.692	--	1	A
Aldrin	ND		ug/kg	0.692	--	1	A
Heptachlor epoxide	ND		ug/kg	1.38	--	1	B
Oxychlordane	ND		ug/kg	1.38	--	1	B
trans-Chlordane	ND		ug/kg	0.692	--	1	A
Endosulfan I	ND		ug/kg	0.692	--	1	A
cis-Chlordane	ND		ug/kg	0.692	--	1	A
trans-Nonachlor	ND		ug/kg	0.692	--	1	A
4,4'-DDE	ND		ug/kg	0.692	--	1	A
Dieldrin	ND		ug/kg	0.692	--	1	A
Endrin	ND		ug/kg	0.692	--	1	A
Endosulfan II	ND		ug/kg	0.692	--	1	A
4,4'-DDD	ND		ug/kg	0.692	--	1	A
cis-Nonachlor	ND		ug/kg	0.692	--	1	A
4,4'-DDT	ND		ug/kg	0.692	--	1	A
Methoxychlor	ND		ug/kg	6.92	--	1	A
Toxaphene	ND		ug/kg	34.8	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	83		30-150	A
BZ 198	99		30-150	A
DBOB	81		30-150	B
BZ 198	99		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-08	Date Collected:	02/27/15 10:55
Client ID:	L13	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/05/15 11:50
Analytical Date:	03/07/15 00:07	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/06/15
Percent Solids:	52%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.962	--	1	A
gamma-BHC	ND		ug/kg	0.481	--	1	A
Heptachlor	ND		ug/kg	0.481	--	1	A
Aldrin	ND		ug/kg	0.481	--	1	A
Heptachlor epoxide	ND		ug/kg	0.962	--	1	B
Oxychlordane	5.27		ug/kg	0.962	--	1	B
trans-Chlordane	ND		ug/kg	0.481	--	1	A
Endosulfan I	ND		ug/kg	0.481	--	1	A
cis-Chlordane	ND		ug/kg	0.481	--	1	A
trans-Nonachlor	ND		ug/kg	0.481	--	1	A
4,4'-DDE	0.561		ug/kg	0.481	--	1	A
Dieldrin	ND		ug/kg	0.481	--	1	A
Endrin	ND		ug/kg	0.481	--	1	A
Endosulfan II	ND		ug/kg	0.481	--	1	A
4,4'-DDD	0.607		ug/kg	0.481	--	1	B
cis-Nonachlor	ND		ug/kg	0.481	--	1	A
4,4'-DDT	0.528	IP	ug/kg	0.481	--	1	A
Methoxychlor	ND		ug/kg	4.81	--	1	A
Toxaphene	ND		ug/kg	24.1	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	57		30-150	A
BZ 198	73		30-150	A
DBOB	49		30-150	B
BZ 198	77		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-09	Date Collected:	02/27/15 11:09
Client ID:	L16	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/05/15 11:50
Analytical Date:	03/07/15 00:40	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/06/15
Percent Solids:	54%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.925	--	1	A
gamma-BHC	ND		ug/kg	0.462	--	1	A
Heptachlor	ND		ug/kg	0.462	--	1	A
Aldrin	ND		ug/kg	0.462	--	1	A
Heptachlor epoxide	ND		ug/kg	0.925	--	1	B
Oxychlordane	1.49		ug/kg	0.925	--	1	B
trans-Chlordane	ND		ug/kg	0.462	--	1	A
Endosulfan I	ND		ug/kg	0.462	--	1	A
cis-Chlordane	ND		ug/kg	0.462	--	1	A
trans-Nonachlor	ND		ug/kg	0.462	--	1	A
4,4'-DDE	ND		ug/kg	0.462	--	1	A
Dieldrin	ND		ug/kg	0.462	--	1	A
Endrin	ND		ug/kg	0.462	--	1	A
Endosulfan II	ND		ug/kg	0.462	--	1	A
4,4'-DDD	ND		ug/kg	0.462	--	1	A
cis-Nonachlor	ND		ug/kg	0.462	--	1	A
4,4'-DDT	ND		ug/kg	0.462	--	1	A
Methoxychlor	ND		ug/kg	4.62	--	1	A
Toxaphene	ND		ug/kg	23.2	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	65		30-150	A
BZ 198	83		30-150	A
DBOB	58		30-150	B
BZ 198	83		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-10	Date Collected:	02/27/15 11:22
Client ID:	L18	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/05/15 11:50
Analytical Date:	03/07/15 01:12	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/06/15
Percent Solids:	56%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.888	--	1	A
gamma-BHC	ND		ug/kg	0.444	--	1	A
Heptachlor	ND		ug/kg	0.444	--	1	A
Aldrin	ND		ug/kg	0.444	--	1	A
Heptachlor epoxide	ND		ug/kg	0.888	--	1	B
Oxychlordane	ND		ug/kg	0.888	--	1	B
trans-Chlordane	ND		ug/kg	0.444	--	1	A
Endosulfan I	ND		ug/kg	0.444	--	1	A
cis-Chlordane	ND		ug/kg	0.444	--	1	A
trans-Nonachlor	ND		ug/kg	0.444	--	1	A
4,4'-DDE	ND		ug/kg	0.444	--	1	A
Dieldrin	ND		ug/kg	0.444	--	1	A
Endrin	ND		ug/kg	0.444	--	1	A
Endosulfan II	ND		ug/kg	0.444	--	1	A
4,4'-DDD	0.526		ug/kg	0.444	--	1	B
cis-Nonachlor	ND		ug/kg	0.444	--	1	A
4,4'-DDT	ND		ug/kg	0.444	--	1	A
Methoxychlor	ND		ug/kg	4.44	--	1	A
Toxaphene	ND		ug/kg	22.3	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	79		30-150	A
BZ 198	94		30-150	A
DBOB	72		30-150	B
BZ 198	100		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-11	Date Collected:	02/27/15 11:39
Client ID:	L17	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/05/15 11:50
Analytical Date:	03/07/15 01:45	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/06/15
Percent Solids:	72%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.36	--	1	A
gamma-BHC	ND		ug/kg	0.679	--	1	A
Heptachlor	ND		ug/kg	0.679	--	1	A
Aldrin	ND		ug/kg	0.679	--	1	A
Heptachlor epoxide	ND		ug/kg	1.36	--	1	B
Oxychlordane	ND		ug/kg	1.36	--	1	B
trans-Chlordane	ND		ug/kg	0.679	--	1	A
Endosulfan I	ND		ug/kg	0.679	--	1	A
cis-Chlordane	ND		ug/kg	0.679	--	1	A
trans-Nonachlor	ND		ug/kg	0.679	--	1	A
4,4'-DDE	ND		ug/kg	0.679	--	1	A
Dieldrin	ND		ug/kg	0.679	--	1	A
Endrin	ND		ug/kg	0.679	--	1	A
Endosulfan II	ND		ug/kg	0.679	--	1	A
4,4'-DDD	ND		ug/kg	0.679	--	1	A
cis-Nonachlor	ND		ug/kg	0.679	--	1	A
4,4'-DDT	1.48	IP	ug/kg	0.679	--	1	A
Methoxychlor	ND		ug/kg	6.79	--	1	A
Toxaphene	ND		ug/kg	34.1	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	71		30-150	A
BZ 198	101		30-150	A
DBOB	65		30-150	B
BZ 198	102		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-12	Date Collected:	02/27/15 11:53
Client ID:	L15	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/05/15 11:50
Analytical Date:	03/07/15 02:17	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/06/15
Percent Solids:	66%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.761	--	1	A
gamma-BHC	ND		ug/kg	0.381	--	1	A
Heptachlor	ND		ug/kg	0.381	--	1	A
Aldrin	ND		ug/kg	0.381	--	1	A
Heptachlor epoxide	ND		ug/kg	0.761	--	1	B
Oxychlordane	ND		ug/kg	0.761	--	1	B
trans-Chlordane	ND		ug/kg	0.381	--	1	A
Endosulfan I	ND		ug/kg	0.381	--	1	A
cis-Chlordane	ND		ug/kg	0.381	--	1	A
trans-Nonachlor	ND		ug/kg	0.381	--	1	A
4,4'-DDE	ND		ug/kg	0.381	--	1	A
Dieldrin	ND		ug/kg	0.381	--	1	A
Endrin	ND		ug/kg	0.381	--	1	A
Endosulfan II	ND		ug/kg	0.381	--	1	A
4,4'-DDD	ND		ug/kg	0.381	--	1	A
cis-Nonachlor	ND		ug/kg	0.381	--	1	A
4,4'-DDT	ND		ug/kg	0.381	--	1	A
Methoxychlor	ND		ug/kg	3.81	--	1	A
Toxaphene	ND		ug/kg	19.1	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	72		30-150	A
BZ 198	98		30-150	A
DBOB	70		30-150	B
BZ 198	103		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-13	Date Collected:	02/27/15 12:58
Client ID:	L12	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/05/15 11:50
Analytical Date:	03/07/15 06:37	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/06/15
Percent Solids:	63%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.793	--	1	A
gamma-BHC	ND		ug/kg	0.396	--	1	A
Heptachlor	ND		ug/kg	0.396	--	1	A
Aldrin	ND		ug/kg	0.396	--	1	A
Heptachlor epoxide	ND		ug/kg	0.793	--	1	B
Oxychlordane	ND		ug/kg	0.793	--	1	B
trans-Chlordane	ND		ug/kg	0.396	--	1	A
Endosulfan I	ND		ug/kg	0.396	--	1	A
cis-Chlordane	ND		ug/kg	0.396	--	1	A
trans-Nonachlor	ND		ug/kg	0.396	--	1	A
4,4'-DDE	ND		ug/kg	0.396	--	1	A
Dieldrin	ND		ug/kg	0.396	--	1	A
Endrin	ND		ug/kg	0.396	--	1	A
Endosulfan II	ND		ug/kg	0.396	--	1	A
4,4'-DDD	ND		ug/kg	0.396	--	1	A
cis-Nonachlor	ND		ug/kg	0.396	--	1	A
4,4'-DDT	ND		ug/kg	0.396	--	1	A
Methoxychlor	ND		ug/kg	3.96	--	1	A
Toxaphene	ND		ug/kg	19.9	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	60		30-150	A
BZ 198	80		30-150	A
DBOB	54		30-150	B
BZ 198	84		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-14	Date Collected:	02/27/15 13:08
Client ID:	L11	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/05/15 11:50
Analytical Date:	03/07/15 07:09	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/06/15
Percent Solids:	64%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.780	--	1	A
gamma-BHC	ND		ug/kg	0.390	--	1	A
Heptachlor	ND		ug/kg	0.390	--	1	A
Aldrin	ND		ug/kg	0.390	--	1	A
Heptachlor epoxide	ND		ug/kg	0.780	--	1	B
Oxychlordane	ND		ug/kg	0.780	--	1	B
trans-Chlordane	ND		ug/kg	0.390	--	1	A
Endosulfan I	ND		ug/kg	0.390	--	1	A
cis-Chlordane	ND		ug/kg	0.390	--	1	A
trans-Nonachlor	ND		ug/kg	0.390	--	1	A
4,4'-DDE	ND		ug/kg	0.390	--	1	A
Dieldrin	ND		ug/kg	0.390	--	1	A
Endrin	ND		ug/kg	0.390	--	1	A
Endosulfan II	ND		ug/kg	0.390	--	1	A
4,4'-DDD	ND		ug/kg	0.390	--	1	A
cis-Nonachlor	ND		ug/kg	0.390	--	1	A
4,4'-DDT	ND		ug/kg	0.390	--	1	A
Methoxychlor	ND		ug/kg	3.90	--	1	A
Toxaphene	ND		ug/kg	19.6	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	63		30-150	A
BZ 198	77		30-150	A
DBOB	56		30-150	B
BZ 198	78		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-15	Date Collected:	02/27/15 13:19
Client ID:	L14	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/05/15 11:50
Analytical Date:	03/07/15 07:41	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/06/15
Percent Solids:	69%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.740	--	1	A
gamma-BHC	ND		ug/kg	0.370	--	1	A
Heptachlor	ND		ug/kg	0.370	--	1	A
Aldrin	ND		ug/kg	0.370	--	1	A
Heptachlor epoxide	ND		ug/kg	0.740	--	1	B
Oxychlordane	ND		ug/kg	0.740	--	1	B
trans-Chlordane	ND		ug/kg	0.370	--	1	A
Endosulfan I	ND		ug/kg	0.370	--	1	A
cis-Chlordane	ND		ug/kg	0.370	--	1	A
trans-Nonachlor	ND		ug/kg	0.370	--	1	A
4,4'-DDE	ND		ug/kg	0.370	--	1	A
Dieldrin	ND		ug/kg	0.370	--	1	A
Endrin	ND		ug/kg	0.370	--	1	A
Endosulfan II	ND		ug/kg	0.370	--	1	A
4,4'-DDD	ND		ug/kg	0.370	--	1	A
cis-Nonachlor	ND		ug/kg	0.370	--	1	A
4,4'-DDT	ND		ug/kg	0.370	--	1	A
Methoxychlor	ND		ug/kg	3.70	--	1	A
Toxaphene	ND		ug/kg	18.6	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	59		30-150	A
BZ 198	79		30-150	A
DBOB	52		30-150	B
BZ 198	80		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-16	Date Collected:	02/27/15 13:35
Client ID:	L23A	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/05/15 11:50
Analytical Date:	03/07/15 08:14	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/06/15
Percent Solids:	68%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.744	--	1	A
gamma-BHC	ND		ug/kg	0.372	--	1	A
Heptachlor	ND		ug/kg	0.372	--	1	A
Aldrin	ND		ug/kg	0.372	--	1	A
Heptachlor epoxide	ND		ug/kg	0.744	--	1	B
Oxychlordane	ND		ug/kg	0.744	--	1	B
trans-Chlordane	ND		ug/kg	0.372	--	1	A
Endosulfan I	ND		ug/kg	0.372	--	1	A
cis-Chlordane	ND		ug/kg	0.372	--	1	A
trans-Nonachlor	ND		ug/kg	0.372	--	1	A
4,4'-DDE	ND		ug/kg	0.372	--	1	A
Dieldrin	ND		ug/kg	0.372	--	1	A
Endrin	ND		ug/kg	0.372	--	1	A
Endosulfan II	ND		ug/kg	0.372	--	1	A
4,4'-DDD	ND		ug/kg	0.372	--	1	A
cis-Nonachlor	ND		ug/kg	0.372	--	1	A
4,4'-DDT	ND		ug/kg	0.372	--	1	A
Methoxychlor	ND		ug/kg	3.72	--	1	A
Toxaphene	ND		ug/kg	18.7	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	70		30-150	A
BZ 198	89		30-150	A
DBOB	63		30-150	B
BZ 198	90		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-17	Date Collected:	02/27/15 13:45
Client ID:	L23B	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/05/15 11:50
Analytical Date:	03/07/15 08:46	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/06/15
Percent Solids:	68%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.738	--	1	A
gamma-BHC	ND		ug/kg	0.369	--	1	A
Heptachlor	ND		ug/kg	0.369	--	1	A
Aldrin	ND		ug/kg	0.369	--	1	A
Heptachlor epoxide	ND		ug/kg	0.738	--	1	B
Oxychlordane	ND		ug/kg	0.738	--	1	B
trans-Chlordane	ND		ug/kg	0.369	--	1	A
Endosulfan I	ND		ug/kg	0.369	--	1	A
cis-Chlordane	ND		ug/kg	0.369	--	1	A
trans-Nonachlor	ND		ug/kg	0.369	--	1	A
4,4'-DDE	ND		ug/kg	0.369	--	1	A
Dieldrin	ND		ug/kg	0.369	--	1	A
Endrin	ND		ug/kg	0.369	--	1	A
Endosulfan II	ND		ug/kg	0.369	--	1	A
4,4'-DDD	ND		ug/kg	0.369	--	1	A
cis-Nonachlor	ND		ug/kg	0.369	--	1	A
4,4'-DDT	ND		ug/kg	0.369	--	1	A
Methoxychlor	ND		ug/kg	3.69	--	1	A
Toxaphene	ND		ug/kg	18.5	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	76		30-150	A
BZ 198	93		30-150	A
DBOB	69		30-150	B
BZ 198	96		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-18	Date Collected:	02/27/15 13:58
Client ID:	L24A	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/05/15 11:50
Analytical Date:	03/07/15 09:19	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/06/15
Percent Solids:	70%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.39	--	1	A
gamma-BHC	ND		ug/kg	0.694	--	1	A
Heptachlor	ND		ug/kg	0.694	--	1	A
Aldrin	ND		ug/kg	0.694	--	1	A
Heptachlor epoxide	ND		ug/kg	1.39	--	1	B
Oxychlordane	ND		ug/kg	1.39	--	1	B
trans-Chlordane	ND		ug/kg	0.694	--	1	A
Endosulfan I	ND		ug/kg	0.694	--	1	A
cis-Chlordane	ND		ug/kg	0.694	--	1	A
trans-Nonachlor	ND		ug/kg	0.694	--	1	A
4,4'-DDE	ND		ug/kg	0.694	--	1	A
Dieldrin	ND		ug/kg	0.694	--	1	A
Endrin	ND		ug/kg	0.694	--	1	A
Endosulfan II	ND		ug/kg	0.694	--	1	A
4,4'-DDD	ND		ug/kg	0.694	--	1	A
cis-Nonachlor	ND		ug/kg	0.694	--	1	A
4,4'-DDT	ND		ug/kg	0.694	--	1	A
Methoxychlor	ND		ug/kg	6.94	--	1	A
Toxaphene	ND		ug/kg	34.8	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	56		30-150	A
BZ 198	76		30-150	A
DBOB	51		30-150	B
BZ 198	77		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-19	Date Collected:	02/27/15 14:12
Client ID:	L24B	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/05/15 11:50
Analytical Date:	03/07/15 09:51	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/06/15
Percent Solids:	68%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.727	--	1	A
gamma-BHC	ND		ug/kg	0.364	--	1	A
Heptachlor	ND		ug/kg	0.364	--	1	A
Aldrin	ND		ug/kg	0.364	--	1	A
Heptachlor epoxide	ND		ug/kg	0.727	--	1	B
Oxychlordane	ND		ug/kg	0.727	--	1	B
trans-Chlordane	ND		ug/kg	0.364	--	1	A
Endosulfan I	ND		ug/kg	0.364	--	1	A
cis-Chlordane	ND		ug/kg	0.364	--	1	A
trans-Nonachlor	ND		ug/kg	0.364	--	1	A
4,4'-DDE	ND		ug/kg	0.364	--	1	A
Dieldrin	ND		ug/kg	0.364	--	1	A
Endrin	ND		ug/kg	0.364	--	1	A
Endosulfan II	ND		ug/kg	0.364	--	1	A
4,4'-DDD	ND		ug/kg	0.364	--	1	A
cis-Nonachlor	ND		ug/kg	0.364	--	1	A
4,4'-DDT	ND		ug/kg	0.364	--	1	A
Methoxychlor	ND		ug/kg	3.64	--	1	A
Toxaphene	ND		ug/kg	18.2	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	56		30-150	A
BZ 198	73		30-150	A
DBOB	51		30-150	B
BZ 198	74		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-20	Date Collected:	02/27/15 14:30
Client ID:	L22A	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/05/15 11:50
Analytical Date:	03/07/15 12:01	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/06/15
Percent Solids:	64%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.775	--	1	A
gamma-BHC	ND		ug/kg	0.387	--	1	A
Heptachlor	ND		ug/kg	0.387	--	1	A
Aldrin	ND		ug/kg	0.387	--	1	A
Heptachlor epoxide	ND		ug/kg	0.775	--	1	B
Oxychlordane	ND		ug/kg	0.775	--	1	B
trans-Chlordane	ND		ug/kg	0.387	--	1	A
Endosulfan I	ND		ug/kg	0.387	--	1	A
cis-Chlordane	ND		ug/kg	0.387	--	1	A
trans-Nonachlor	ND		ug/kg	0.387	--	1	A
4,4'-DDE	ND		ug/kg	0.387	--	1	A
Dieldrin	ND		ug/kg	0.387	--	1	A
Endrin	ND		ug/kg	0.387	--	1	A
Endosulfan II	ND		ug/kg	0.387	--	1	A
4,4'-DDD	ND		ug/kg	0.387	--	1	A
cis-Nonachlor	ND		ug/kg	0.387	--	1	A
4,4'-DDT	ND		ug/kg	0.387	--	1	A
Methoxychlor	ND		ug/kg	3.87	--	1	A
Toxaphene	ND		ug/kg	19.4	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	54		30-150	A
BZ 198	71		30-150	A
DBOB	48		30-150	B
BZ 198	74		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-21	Date Collected:	02/27/15 14:43
Client ID:	L22B	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/05/15 11:50
Analytical Date:	03/07/15 12:33	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/06/15
Percent Solids:	67%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.741	--	1	A
gamma-BHC	ND		ug/kg	0.370	--	1	A
Heptachlor	ND		ug/kg	0.370	--	1	A
Aldrin	ND		ug/kg	0.370	--	1	A
Heptachlor epoxide	ND		ug/kg	0.741	--	1	B
Oxychlordane	ND		ug/kg	0.741	--	1	B
trans-Chlordane	ND		ug/kg	0.370	--	1	A
Endosulfan I	ND		ug/kg	0.370	--	1	A
cis-Chlordane	ND		ug/kg	0.370	--	1	A
trans-Nonachlor	ND		ug/kg	0.370	--	1	A
4,4'-DDE	ND		ug/kg	0.370	--	1	A
Dieldrin	ND		ug/kg	0.370	--	1	A
Endrin	ND		ug/kg	0.370	--	1	A
Endosulfan II	ND		ug/kg	0.370	--	1	A
4,4'-DDD	ND		ug/kg	0.370	--	1	A
cis-Nonachlor	ND		ug/kg	0.370	--	1	A
4,4'-DDT	ND		ug/kg	0.370	--	1	A
Methoxychlor	ND		ug/kg	3.70	--	1	A
Toxaphene	ND		ug/kg	18.6	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	50		30-150	A
BZ 198	67		30-150	A
DBOB	48		30-150	B
BZ 198	68		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-22	Date Collected:	02/27/15 23:45
Client ID:	L61	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	03/05/15 11:50
Analytical Date:	03/07/15 13:06	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	03/06/15
Percent Solids:	71%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.41	--	1	A
gamma-BHC	ND		ug/kg	0.704	--	1	A
Heptachlor	ND		ug/kg	0.704	--	1	A
Aldrin	ND		ug/kg	0.704	--	1	A
Heptachlor epoxide	ND		ug/kg	1.41	--	1	B
Oxychlordane	ND		ug/kg	1.41	--	1	B
trans-Chlordane	ND		ug/kg	0.704	--	1	A
Endosulfan I	ND		ug/kg	0.704	--	1	A
cis-Chlordane	ND		ug/kg	0.704	--	1	A
trans-Nonachlor	ND		ug/kg	0.704	--	1	A
4,4'-DDE	ND		ug/kg	0.704	--	1	A
Dieldrin	ND		ug/kg	0.704	--	1	A
Endrin	ND		ug/kg	0.704	--	1	A
Endosulfan II	ND		ug/kg	0.704	--	1	A
4,4'-DDD	ND		ug/kg	0.704	--	1	A
cis-Nonachlor	ND		ug/kg	0.704	--	1	A
4,4'-DDT	ND		ug/kg	0.704	--	1	A
Methoxychlor	ND		ug/kg	7.04	--	1	A
Toxaphene	ND		ug/kg	35.3	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	55		30-150	A
BZ 198	82		30-150	A
DBOB	53		30-150	B
BZ 198	82		30-150	B

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 03/09/15 13:08
Analyst: SF

Extraction Method: EPA 3570
Extraction Date: 03/05/15 11:50
Cleanup Method: EPA 3630
Cleanup Date: 03/06/15

Parameter	Result	Qualifier	Units	RL	MDL	Column
RIM Organochlorine Pesticides - Mansfield Lab for sample(s): 01-12 Batch: WG766344-1						
Hexachlorobenzene	ND		ug/kg	1.00	--	A
gamma-BHC	ND		ug/kg	0.500	--	A
Heptachlor	ND		ug/kg	0.500	--	A
Aldrin	ND		ug/kg	0.500	--	A
trans-Chlordane	ND		ug/kg	0.500	--	A
Endosulfan I	ND		ug/kg	0.500	--	A
cis-Chlordane	ND		ug/kg	0.500	--	A
trans-Nonachlor	ND		ug/kg	0.500	--	A
4,4'-DDE	ND		ug/kg	0.500	--	A
Dieldrin	ND		ug/kg	0.500	--	A
Endrin	ND		ug/kg	0.500	--	A
Endosulfan II	ND		ug/kg	0.500	--	A
4,4'-DDD	ND		ug/kg	0.500	--	A
cis-Nonachlor	ND		ug/kg	0.500	--	A
4,4'-DDT	ND		ug/kg	0.500	--	A
Methoxychlor	ND		ug/kg	5.00	--	A
Toxaphene	ND		ug/kg	25.1	--	A
Heptachlor epoxide	ND		ug/kg	1.00	--	B
Oxychlordane	ND		ug/kg	1.00	--	B

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DBOB	95		30-150	A
BZ 198	105		30-150	A
DBOB	92		30-150	B
BZ 198	104		30-150	B

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 03/07/15 04:59
Analyst: SF

Extraction Method: EPA 3570
Extraction Date: 03/05/15 11:50
Cleanup Method: EPA 3630
Cleanup Date: 03/06/15

Parameter	Result	Qualifier	Units	RL	MDL	Column
RIM Organochlorine Pesticides - Mansfield Lab for sample(s): 13-22 Batch: WG766345-1						
Hexachlorobenzene	ND		ug/kg	1.00	--	A
gamma-BHC	ND		ug/kg	0.500	--	A
Heptachlor	ND		ug/kg	0.500	--	A
Aldrin	ND		ug/kg	0.500	--	A
trans-Chlordane	ND		ug/kg	0.500	--	A
Endosulfan I	ND		ug/kg	0.500	--	A
cis-Chlordane	ND		ug/kg	0.500	--	A
trans-Nonachlor	ND		ug/kg	0.500	--	A
4,4'-DDE	ND		ug/kg	0.500	--	A
Dieldrin	ND		ug/kg	0.500	--	A
Endrin	ND		ug/kg	0.500	--	A
Endosulfan II	ND		ug/kg	0.500	--	A
4,4'-DDD	ND		ug/kg	0.500	--	A
cis-Nonachlor	ND		ug/kg	0.500	--	A
4,4'-DDT	ND		ug/kg	0.500	--	A
Methoxychlor	ND		ug/kg	5.00	--	A
Toxaphene	ND		ug/kg	25.1	--	A
Heptachlor epoxide	ND		ug/kg	1.00	--	B
Oxychlordane	ND		ug/kg	1.00	--	B

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DBOB	63		30-150	A
BZ 198	79		30-150	A
DBOB	57		30-150	B
BZ 198	83		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE

Project Number: Not Specified

Lab Number: L1503772

Report Date: 03/16/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-12 Batch: WG766344-2 WG766344-3									
Hexachlorobenzene	78		86		50-120	10		30	A
gamma-BHC	86		95		50-120	10		30	A
Heptachlor	92		101		50-120	9		30	A
Aldrin	92		102		50-120	10		30	A
trans-Chlordane	100		114		50-120	13		30	A
Endosulfan I	98		113		50-120	14		30	A
cis-Chlordane	98		112		50-120	13		30	A
trans-Nonachlor	100		115		50-120	14		30	A
4,4'-DDE	100		117		50-120	16		30	A
Dieldrin	104		119		50-120	13		30	A
Endrin	100		115		50-120	14		30	A
4,4'-DDD	115		**135**	Q	50-120	16		30	A
cis-Nonachlor	98		114		50-120	15		30	A
4,4'-DDT	98		111		50-120	12		30	A
Methoxychlor	105		**128**	Q	50-120	20		30	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE

Project Number: Not Specified

Lab Number: L1503772

Report Date: 03/16/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-12 Batch: WG766344-2 WG766344-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DBOB	82		88		30-150	A
BZ 198	102		116		30-150	A
DBOB	78		84		30-150	B
BZ 198	100		111		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE

Project Number: Not Specified

Lab Number: L1503772

Report Date: 03/16/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-12 Batch: WG766344-2 WG766344-3									
Heptachlor epoxide	91		102		50-120	11		30	B
Oxychlordane	91		102		50-120	11		30	B
Endosulfan II	94		107		50-120	13		30	B

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DBOB	82		88		30-150	A
BZ 198	102		116		30-150	A
DBOB	78		84		30-150	B
BZ 198	100		111		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 13-22 Batch: WG766345-2 WG766345-3									
Hexachlorobenzene	64		64		50-120	0		30	A
gamma-BHC	69		72		50-120	4		30	A
Heptachlor	74		76		50-120	3		30	A
Aldrin	74		75		50-120	1		30	A
trans-Chlordane	81		87		50-120	7		30	A
Endosulfan I	81		86		50-120	6		30	A
cis-Chlordane	80		84		50-120	5		30	A
trans-Nonachlor	83		88		50-120	6		30	A
4,4'-DDE	94		102		50-120	8		30	A
Dieldrin	86		89		50-120	3		30	A
Endrin	80		82		50-120	2		30	A
4,4'-DDD	92		100		50-120	8		30	A
cis-Nonachlor	80		86		50-120	7		30	A
4,4'-DDT	78		84		50-120	7		30	A
Methoxychlor	77		74		50-120	4		30	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE

Project Number: Not Specified

Lab Number: L1503772

Report Date: 03/16/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 13-22 Batch: WG766345-2 WG766345-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DBOB	66		65		30-150	A
BZ 198	83		89		30-150	A
DBOB	58		57		30-150	B
BZ 198	84		88		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE

Project Number: Not Specified

Lab Number: L1503772

Report Date: 03/16/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 13-22 Batch: WG766345-2 WG766345-3									
Heptachlor epoxide	65		70		50-120	7		30	B
Oxychlordane	67		71		50-120	6		30	B
Endosulfan II	68		69		50-120	1		30	B

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DBOB	66		65		30-150	A
BZ 198	83		89		30-150	A
DBOB	58		57		30-150	B
BZ 198	84		88		30-150	B

Matrix Spike Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits	Column
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 13-22 QC Batch ID: WG766345-6 WG766345-7 QC Sample: L1503772-22 Client ID: L61													
Hexachlorobenzene	ND	142	83.4	59		93.4	66		50-120	11		30	A
gamma-BHC	ND	142	91.2	64		101	72		50-120	10		30	A
Heptachlor	ND	142	95.7	68		107	76		50-120	11		30	A
Aldrin	ND	142	94.0	66		107	76		50-120	13		30	A
Heptachlor epoxide	ND	142	99.0	70		104	74		50-120	5		30	B
Oxychlordane	ND	142	103	73		109	77		50-120	6		30	B
trans-Chlordane	ND	142	102	72		119	84		50-120	15		30	A
Endosulfan I	ND	142	101	71		115	81		50-120	13		30	A
cis-Chlordane	ND	142	100	71		116	82		50-120	15		30	A
trans-Nonachlor	ND	142	104	74		121	86		50-120	15		30	A
4,4'-DDE	ND	142	116	82		138	98		50-120	17		30	A
Dieldrin	ND	142	103	73		117	83		50-120	13		30	A
Endrin	ND	142	95.8	68		109	77		50-120	13		30	A
Endosulfan II	ND	142	100	71		102	72		50-120	2		30	B
4,4'-DDD	ND	142	115	81		134	95		50-120	15		30	A
cis-Nonachlor	ND	142	99.0	70		116	82		50-120	16		30	A
4,4'-DDT	ND	142	97.6	69		112	79		50-120	14		30	A
Methoxychlor	ND	142	100	71		104	74		50-120	4		30	A

Matrix Spike Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 13-22 QC Batch ID: WG766345-6 WG766345-7 QC Sample: L1503772-22 Client ID: L61												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria	Column
BZ 198	81		88		30-150	A
DBOB	62		66		30-150	A
BZ 198	78		86		30-150	B
DBOB	60		63		30-150	B

Lab Duplicate Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits	
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 13-22 QC Batch ID: WG766345-5 QC Sample: L1503772-22 Client ID: L61							
Hexachlorobenzene	ND	ND	ug/kg	NC		30	A
gamma-BHC	ND	ND	ug/kg	NC		30	A
Heptachlor	ND	ND	ug/kg	NC		30	A
Aldrin	ND	ND	ug/kg	NC		30	A
Heptachlor epoxide	ND	ND	ug/kg	NC		30	B
Oxychlordane	ND	ND	ug/kg	NC		30	B
trans-Chlordane	ND	ND	ug/kg	NC		30	A
Endosulfan I	ND	ND	ug/kg	NC		30	A
cis-Chlordane	ND	ND	ug/kg	NC		30	A
trans-Nonachlor	ND	ND	ug/kg	NC		30	A
4,4'-DDE	ND	ND	ug/kg	NC		30	A
Dieldrin	ND	ND	ug/kg	NC		30	A
Endrin	ND	ND	ug/kg	NC		30	A
Endosulfan II	ND	ND	ug/kg	NC		30	A
4,4'-DDD	ND	ND	ug/kg	NC		30	A
cis-Nonachlor	ND	ND	ug/kg	NC		30	A
4,4'-DDT	ND	ND	ug/kg	NC		30	A
Methoxychlor	ND	ND	ug/kg	NC		30	A
Toxaphene	ND	ND	ug/kg	NC		30	A

Lab Duplicate Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits

RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 13-22 QC Batch ID: WG766345-5 QC Sample: L1503772-22 Client ID: L61

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria	Column
DBOB	55		60		30-150	A
BZ 198	82		71		30-150	A
DBOB	53		56		30-150	B
BZ 198	82		76		30-150	B

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG766345-4

Parameter	% Recovery	Qual	QC Criteria
Hexachlorobenzene	71		40-140
cis-Chlordane	96		40-140
trans-Nonachlor	270	Q	40-140
DBOB (Surrogate)	58		30-150
DBOB (Surrogate)	66		30-150
BZ 198 (Surrogate)	96		30-150
BZ 198 (Surrogate)	169	Q	30-150

METALS

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503772
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-01	Date Collected:	02/27/15 09:08
Client ID:	L27	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	72%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	3.78		mg/kg	0.067	--	2	03/04/15 15:08	03/06/15 15:12	EPA 3050B	1,6020A	PD
Cadmium, Total	0.069		mg/kg	0.027	--	2	03/04/15 15:08	03/06/15 15:12	EPA 3050B	1,6020A	PD
Chromium, Total	11.0		mg/kg	0.266	--	2	03/04/15 15:08	03/06/15 15:12	EPA 3050B	1,6020A	PD
Copper, Total	5.80		mg/kg	0.266	--	2	03/04/15 15:08	03/06/15 15:12	EPA 3050B	1,6020A	PD
Lead, Total	7.24		mg/kg	0.080	--	2	03/04/15 15:08	03/06/15 15:12	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.016	--	5	03/04/15 15:49	03/06/15 15:07	EPA 7474	1,7474	PD
Nickel, Total	6.84		mg/kg	0.133	--	2	03/04/15 15:08	03/06/15 15:12	EPA 3050B	1,6020A	PD
Zinc, Total	38.8		mg/kg	1.33	--	2	03/04/15 15:08	03/06/15 15:12	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503772
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-02	Date Collected:	02/27/15 09:21
Client ID:	L28	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	73%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.32		mg/kg	0.063	--	2	03/04/15 15:08	03/06/15 15:21	EPA 3050B	1,6020A	PD
Cadmium, Total	0.046		mg/kg	0.025	--	2	03/04/15 15:08	03/06/15 15:21	EPA 3050B	1,6020A	PD
Chromium, Total	5.42		mg/kg	0.253	--	2	03/04/15 15:08	03/06/15 15:21	EPA 3050B	1,6020A	PD
Copper, Total	2.66		mg/kg	0.253	--	2	03/04/15 15:08	03/06/15 15:21	EPA 3050B	1,6020A	PD
Lead, Total	4.38		mg/kg	0.076	--	2	03/04/15 15:08	03/06/15 15:21	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.016	--	5	03/04/15 15:49	03/06/15 15:17	EPA 7474	1,7474	PD
Nickel, Total	3.19		mg/kg	0.126	--	2	03/04/15 15:08	03/06/15 15:21	EPA 3050B	1,6020A	PD
Zinc, Total	18.7		mg/kg	1.26	--	2	03/04/15 15:08	03/06/15 15:21	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503772
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-03	Date Collected:	02/27/15 09:48
Client ID:	L25A	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	72%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	1.89		mg/kg	0.063	--	2	03/04/15 15:08	03/06/15 15:22	EPA 3050B	1,6020A	PD
Cadmium, Total	0.036		mg/kg	0.025	--	2	03/04/15 15:08	03/06/15 15:22	EPA 3050B	1,6020A	PD
Chromium, Total	6.34		mg/kg	0.252	--	2	03/04/15 15:08	03/06/15 15:22	EPA 3050B	1,6020A	PD
Copper, Total	3.30		mg/kg	0.252	--	2	03/04/15 15:08	03/06/15 15:22	EPA 3050B	1,6020A	PD
Lead, Total	4.48		mg/kg	0.076	--	2	03/04/15 15:08	03/06/15 15:22	EPA 3050B	1,6020A	PD
Mercury, Total	0.016		mg/kg	0.016	--	5	03/04/15 15:49	03/06/15 15:20	EPA 7474	1,7474	PD
Nickel, Total	3.82		mg/kg	0.126	--	2	03/04/15 15:08	03/06/15 15:22	EPA 3050B	1,6020A	PD
Zinc, Total	17.2		mg/kg	1.26	--	2	03/04/15 15:08	03/06/15 15:22	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503772
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-04	Date Collected:	02/27/15 10:00
Client ID:	L25B	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	73%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.23		mg/kg	0.067	--	2	03/04/15 15:08	03/06/15 15:23	EPA 3050B	1,6020A	PD
Cadmium, Total	ND		mg/kg	0.027	--	2	03/04/15 15:08	03/06/15 15:23	EPA 3050B	1,6020A	PD
Chromium, Total	5.88		mg/kg	0.267	--	2	03/04/15 15:08	03/06/15 15:23	EPA 3050B	1,6020A	PD
Copper, Total	3.03		mg/kg	0.267	--	2	03/04/15 15:08	03/06/15 15:23	EPA 3050B	1,6020A	PD
Lead, Total	4.10		mg/kg	0.080	--	2	03/04/15 15:08	03/06/15 15:23	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.015	--	5	03/04/15 15:49	03/06/15 15:22	EPA 7474	1,7474	PD
Nickel, Total	3.70		mg/kg	0.134	--	2	03/04/15 15:08	03/06/15 15:23	EPA 3050B	1,6020A	PD
Zinc, Total	16.8		mg/kg	1.34	--	2	03/04/15 15:08	03/06/15 15:23	EPA 3050B	1,6020A	PD

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-05 Date Collected: 02/27/15 10:12

Client ID: L21 Date Received: 02/27/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Matrix: Sediment

Percent Solids: 70%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.08		mg/kg	0.067	--	2	03/04/15 15:08	03/06/15 15:24	EPA 3050B	1,6020A	PD
Cadmium, Total	0.041		mg/kg	0.027	--	2	03/04/15 15:08	03/06/15 15:24	EPA 3050B	1,6020A	PD
Chromium, Total	8.22		mg/kg	0.266	--	2	03/04/15 15:08	03/06/15 15:24	EPA 3050B	1,6020A	PD
Copper, Total	5.11		mg/kg	0.266	--	2	03/04/15 15:08	03/06/15 15:24	EPA 3050B	1,6020A	PD
Lead, Total	7.64		mg/kg	0.080	--	2	03/04/15 15:08	03/06/15 15:24	EPA 3050B	1,6020A	PD
Mercury, Total	0.022		mg/kg	0.017	--	5	03/04/15 15:49	03/06/15 15:25	EPA 7474	1,7474	PD
Nickel, Total	4.91		mg/kg	0.133	--	2	03/04/15 15:08	03/06/15 15:24	EPA 3050B	1,6020A	PD
Zinc, Total	21.0		mg/kg	1.33	--	2	03/04/15 15:08	03/06/15 15:24	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503772
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-06	Date Collected:	02/27/15 10:25
Client ID:	L20	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	74%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	1.73		mg/kg	0.066	--	2	03/04/15 15:08	03/06/15 15:26	EPA 3050B	1,6020A	PD
Cadmium, Total	0.032		mg/kg	0.027	--	2	03/04/15 15:08	03/06/15 15:26	EPA 3050B	1,6020A	PD
Chromium, Total	6.88		mg/kg	0.265	--	2	03/04/15 15:08	03/06/15 15:26	EPA 3050B	1,6020A	PD
Copper, Total	3.83		mg/kg	0.265	--	2	03/04/15 15:08	03/06/15 15:26	EPA 3050B	1,6020A	PD
Lead, Total	5.16		mg/kg	0.080	--	2	03/04/15 15:08	03/06/15 15:26	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.015	--	5	03/04/15 15:49	03/06/15 15:32	EPA 7474	1,7474	PD
Nickel, Total	4.14		mg/kg	0.132	--	2	03/04/15 15:08	03/06/15 15:26	EPA 3050B	1,6020A	PD
Zinc, Total	19.3		mg/kg	1.32	--	2	03/04/15 15:08	03/06/15 15:26	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503772
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-07	Date Collected:	02/27/15 10:43
Client ID:	L19	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	72%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.16		mg/kg	0.064	--	2	03/04/15 15:08	03/06/15 15:27	EPA 3050B	1,6020A	PD
Cadmium, Total	0.034		mg/kg	0.025	--	2	03/04/15 15:08	03/06/15 15:27	EPA 3050B	1,6020A	PD
Chromium, Total	7.79		mg/kg	0.254	--	2	03/04/15 15:08	03/06/15 15:27	EPA 3050B	1,6020A	PD
Copper, Total	4.68		mg/kg	0.254	--	2	03/04/15 15:08	03/06/15 15:27	EPA 3050B	1,6020A	PD
Lead, Total	5.50		mg/kg	0.076	--	2	03/04/15 15:08	03/06/15 15:27	EPA 3050B	1,6020A	PD
Mercury, Total	0.017		mg/kg	0.016	--	5	03/04/15 15:49	03/06/15 15:35	EPA 7474	1,7474	PD
Nickel, Total	4.43		mg/kg	0.127	--	2	03/04/15 15:08	03/06/15 15:27	EPA 3050B	1,6020A	PD
Zinc, Total	23.1		mg/kg	1.27	--	2	03/04/15 15:08	03/06/15 15:27	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503772
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-08	Date Collected:	02/27/15 10:55
Client ID:	L13	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	52%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	3.60		mg/kg	0.087	--	2	03/04/15 15:08	03/06/15 15:28	EPA 3050B	1,6020A	PD
Cadmium, Total	0.261		mg/kg	0.035	--	2	03/04/15 15:08	03/06/15 15:28	EPA 3050B	1,6020A	PD
Chromium, Total	17.4		mg/kg	0.348	--	2	03/04/15 15:08	03/06/15 15:28	EPA 3050B	1,6020A	PD
Copper, Total	44.8		mg/kg	0.348	--	2	03/04/15 15:08	03/06/15 15:28	EPA 3050B	1,6020A	PD
Lead, Total	20.8		mg/kg	0.104	--	2	03/04/15 15:08	03/06/15 15:28	EPA 3050B	1,6020A	PD
Mercury, Total	0.139		mg/kg	0.022	--	5	03/04/15 15:49	03/06/15 15:37	EPA 7474	1,7474	PD
Nickel, Total	8.81		mg/kg	0.174	--	2	03/04/15 15:08	03/06/15 15:28	EPA 3050B	1,6020A	PD
Zinc, Total	52.9		mg/kg	1.74	--	2	03/04/15 15:08	03/06/15 15:28	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503772
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-09	Date Collected:	02/27/15 11:09
Client ID:	L16	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	54%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	7.72		mg/kg	0.088	--	2	03/04/15 15:08	03/06/15 15:30	EPA 3050B	1,6020A	PD
Cadmium, Total	0.175		mg/kg	0.035	--	2	03/04/15 15:08	03/06/15 15:30	EPA 3050B	1,6020A	PD
Chromium, Total	28.3		mg/kg	0.353	--	2	03/04/15 15:08	03/06/15 15:30	EPA 3050B	1,6020A	PD
Copper, Total	40.5		mg/kg	0.353	--	2	03/04/15 15:08	03/06/15 15:30	EPA 3050B	1,6020A	PD
Lead, Total	43.3		mg/kg	0.106	--	2	03/04/15 15:08	03/06/15 15:30	EPA 3050B	1,6020A	PD
Mercury, Total	0.053		mg/kg	0.021	--	5	03/04/15 15:49	03/06/15 15:40	EPA 7474	1,7474	PD
Nickel, Total	20.8		mg/kg	0.177	--	2	03/04/15 15:08	03/06/15 15:30	EPA 3050B	1,6020A	PD
Zinc, Total	150		mg/kg	1.77	--	2	03/04/15 15:08	03/06/15 15:30	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503772
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-10	Date Collected:	02/27/15 11:22
Client ID:	L18	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	56%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	5.68		mg/kg	0.086	--	2	03/04/15 15:08	03/06/15 15:33	EPA 3050B	1,6020A	PD
Cadmium, Total	0.109		mg/kg	0.034	--	2	03/04/15 15:08	03/06/15 15:33	EPA 3050B	1,6020A	PD
Chromium, Total	23.1		mg/kg	0.343	--	2	03/04/15 15:08	03/06/15 15:33	EPA 3050B	1,6020A	PD
Copper, Total	12.8		mg/kg	0.343	--	2	03/04/15 15:08	03/06/15 15:33	EPA 3050B	1,6020A	PD
Lead, Total	6.64		mg/kg	0.103	--	2	03/04/15 15:08	03/06/15 15:33	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.021	--	5	03/04/15 15:49	03/06/15 15:42	EPA 7474	1,7474	PD
Nickel, Total	15.5		mg/kg	0.172	--	2	03/04/15 15:08	03/06/15 15:33	EPA 3050B	1,6020A	PD
Zinc, Total	44.7		mg/kg	1.72	--	2	03/04/15 15:08	03/06/15 15:33	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503772
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-11	Date Collected:	02/27/15 11:39
Client ID:	L17	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	72%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	1.66		mg/kg	0.065	--	2	03/04/15 15:08	03/06/15 15:35	EPA 3050B	1,6020A	PD
Cadmium, Total	0.035		mg/kg	0.026	--	2	03/04/15 15:08	03/06/15 15:35	EPA 3050B	1,6020A	PD
Chromium, Total	6.31		mg/kg	0.259	--	2	03/04/15 15:08	03/06/15 15:35	EPA 3050B	1,6020A	PD
Copper, Total	4.79		mg/kg	0.259	--	2	03/04/15 15:08	03/06/15 15:35	EPA 3050B	1,6020A	PD
Lead, Total	6.01		mg/kg	0.078	--	2	03/04/15 15:08	03/06/15 15:35	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.016	--	5	03/04/15 15:49	03/06/15 15:44	EPA 7474	1,7474	PD
Nickel, Total	4.09		mg/kg	0.129	--	2	03/04/15 15:08	03/06/15 15:35	EPA 3050B	1,6020A	PD
Zinc, Total	16.2		mg/kg	1.29	--	2	03/04/15 15:08	03/06/15 15:35	EPA 3050B	1,6020A	PD

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-12 Date Collected: 02/27/15 11:53

Client ID: L15 Date Received: 02/27/15

Sample Location: EASTERN LONG ISLAND SOUND Field Prep: Not Specified

Matrix: Sediment

Percent Solids: 66%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.23		mg/kg	0.072	--	2	03/04/15 15:08	03/06/15 15:36	EPA 3050B	1,6020A	PD
Cadmium, Total	0.039		mg/kg	0.029	--	2	03/04/15 15:08	03/06/15 15:36	EPA 3050B	1,6020A	PD
Chromium, Total	6.42		mg/kg	0.288	--	2	03/04/15 15:08	03/06/15 15:36	EPA 3050B	1,6020A	PD
Copper, Total	4.50		mg/kg	0.288	--	2	03/04/15 15:08	03/06/15 15:36	EPA 3050B	1,6020A	PD
Lead, Total	7.20		mg/kg	0.086	--	2	03/04/15 15:08	03/06/15 15:36	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.018	--	5	03/04/15 15:49	03/06/15 15:47	EPA 7474	1,7474	PD
Nickel, Total	4.68		mg/kg	0.144	--	2	03/04/15 15:08	03/06/15 15:36	EPA 3050B	1,6020A	PD
Zinc, Total	24.1		mg/kg	1.44	--	2	03/04/15 15:08	03/06/15 15:36	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503772
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-13	Date Collected:	02/27/15 12:58
Client ID:	L12	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	63%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.79		mg/kg	0.074	--	2	03/04/15 15:08	03/06/15 15:37	EPA 3050B	1,6020A	PD
Cadmium, Total	0.057		mg/kg	0.030	--	2	03/04/15 15:08	03/06/15 15:37	EPA 3050B	1,6020A	PD
Chromium, Total	17.0		mg/kg	0.298	--	2	03/04/15 15:08	03/06/15 15:37	EPA 3050B	1,6020A	PD
Copper, Total	12.0		mg/kg	0.298	--	2	03/04/15 15:08	03/06/15 15:37	EPA 3050B	1,6020A	PD
Lead, Total	10.6		mg/kg	0.089	--	2	03/04/15 15:08	03/06/15 15:37	EPA 3050B	1,6020A	PD
Mercury, Total	0.031		mg/kg	0.019	--	5	03/04/15 15:49	03/06/15 15:49	EPA 7474	1,7474	PD
Nickel, Total	8.04		mg/kg	0.149	--	2	03/04/15 15:08	03/06/15 15:37	EPA 3050B	1,6020A	PD
Zinc, Total	49.8		mg/kg	1.49	--	2	03/04/15 15:08	03/06/15 15:37	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503772
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-14	Date Collected:	02/27/15 13:08
Client ID:	L11	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	64%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	3.72		mg/kg	0.074	--	2	03/04/15 15:08	03/06/15 15:38	EPA 3050B	1,6020A	PD
Cadmium, Total	0.10		mg/kg	0.030	--	2	03/04/15 15:08	03/06/15 15:38	EPA 3050B	1,6020A	PD
Chromium, Total	14.9		mg/kg	0.298	--	2	03/04/15 15:08	03/06/15 15:38	EPA 3050B	1,6020A	PD
Copper, Total	8.08		mg/kg	0.298	--	2	03/04/15 15:08	03/06/15 15:38	EPA 3050B	1,6020A	PD
Lead, Total	6.56		mg/kg	0.089	--	2	03/04/15 15:08	03/06/15 15:38	EPA 3050B	1,6020A	PD
Mercury, Total	0.027		mg/kg	0.018	--	5	03/04/15 15:49	03/06/15 15:52	EPA 7474	1,7474	PD
Nickel, Total	8.85		mg/kg	0.149	--	2	03/04/15 15:08	03/06/15 15:38	EPA 3050B	1,6020A	PD
Zinc, Total	32.4		mg/kg	1.49	--	2	03/04/15 15:08	03/06/15 15:38	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503772
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-15	Date Collected:	02/27/15 13:19
Client ID:	L14	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	69%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.69		mg/kg	0.066	--	2	03/04/15 15:08	03/06/15 15:40	EPA 3050B	1,6020A	PD
Cadmium, Total	0.060		mg/kg	0.027	--	2	03/04/15 15:08	03/06/15 15:40	EPA 3050B	1,6020A	PD
Chromium, Total	11.1		mg/kg	0.265	--	2	03/04/15 15:08	03/06/15 15:40	EPA 3050B	1,6020A	PD
Copper, Total	19.1		mg/kg	0.265	--	2	03/04/15 15:08	03/06/15 15:40	EPA 3050B	1,6020A	PD
Lead, Total	11.3		mg/kg	0.079	--	2	03/04/15 15:08	03/06/15 15:40	EPA 3050B	1,6020A	PD
Mercury, Total	0.024		mg/kg	0.018	--	5	03/04/15 15:49	03/06/15 15:54	EPA 7474	1,7474	PD
Nickel, Total	7.72		mg/kg	0.132	--	2	03/04/15 15:08	03/06/15 15:40	EPA 3050B	1,6020A	PD
Zinc, Total	37.1		mg/kg	1.32	--	2	03/04/15 15:08	03/06/15 15:40	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503772
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-16	Date Collected:	02/27/15 13:35
Client ID:	L23A	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	68%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	3.06		mg/kg	0.070	--	2	03/04/15 15:08	03/06/15 15:41	EPA 3050B	1,6020A	PD
Cadmium, Total	0.085		mg/kg	0.028	--	2	03/04/15 15:08	03/06/15 15:41	EPA 3050B	1,6020A	PD
Chromium, Total	13.8		mg/kg	0.280	--	2	03/04/15 15:08	03/06/15 15:41	EPA 3050B	1,6020A	PD
Copper, Total	10.8		mg/kg	0.280	--	2	03/04/15 15:08	03/06/15 15:41	EPA 3050B	1,6020A	PD
Lead, Total	10.0		mg/kg	0.084	--	2	03/04/15 15:08	03/06/15 15:41	EPA 3050B	1,6020A	PD
Mercury, Total	0.043		mg/kg	0.017	--	5	03/04/15 15:49	03/06/15 16:02	EPA 7474	1,7474	PD
Nickel, Total	7.80		mg/kg	0.140	--	2	03/04/15 15:08	03/06/15 15:41	EPA 3050B	1,6020A	PD
Zinc, Total	37.6		mg/kg	1.40	--	2	03/04/15 15:08	03/06/15 15:41	EPA 3050B	1,6020A	PD

Project Name: LIS-USACOE RIM DREDGE
Lab Number: L1503772
Project Number: Not Specified
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-17
Date Collected: 02/27/15 13:45
Client ID: L23B
Date Received: 02/27/15
Sample Location: EASTERN LONG ISLAND SOUND
Field Prep: Not Specified
Matrix: Sediment
Percent Solids: 68%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.50		mg/kg	0.071	--	2	03/04/15 15:08	03/06/15 15:42	EPA 3050B	1,6020A	PD
Cadmium, Total	0.069		mg/kg	0.029	--	2	03/04/15 15:08	03/06/15 15:42	EPA 3050B	1,6020A	PD
Chromium, Total	12.2		mg/kg	0.286	--	2	03/04/15 15:08	03/06/15 15:42	EPA 3050B	1,6020A	PD
Copper, Total	7.88		mg/kg	0.286	--	2	03/04/15 15:08	03/06/15 15:42	EPA 3050B	1,6020A	PD
Lead, Total	7.96		mg/kg	0.086	--	2	03/04/15 15:08	03/06/15 15:42	EPA 3050B	1,6020A	PD
Mercury, Total	0.024		mg/kg	0.018	--	5	03/04/15 15:49	03/06/15 16:04	EPA 7474	1,7474	PD
Nickel, Total	6.83		mg/kg	0.143	--	2	03/04/15 15:08	03/06/15 15:42	EPA 3050B	1,6020A	PD
Zinc, Total	34.0		mg/kg	1.43	--	2	03/04/15 15:08	03/06/15 15:42	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503772
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-18	Date Collected:	02/27/15 13:58
Client ID:	L24A	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	70%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.03		mg/kg	0.065	--	2	03/04/15 15:08	03/06/15 15:44	EPA 3050B	1,6020A	PD
Cadmium, Total	0.058		mg/kg	0.026	--	2	03/04/15 15:08	03/06/15 15:44	EPA 3050B	1,6020A	PD
Chromium, Total	10.6		mg/kg	0.259	--	2	03/04/15 15:08	03/06/15 15:44	EPA 3050B	1,6020A	PD
Copper, Total	6.12		mg/kg	0.259	--	2	03/04/15 15:08	03/06/15 15:44	EPA 3050B	1,6020A	PD
Lead, Total	6.84		mg/kg	0.078	--	2	03/04/15 15:08	03/06/15 15:44	EPA 3050B	1,6020A	PD
Mercury, Total	0.019		mg/kg	0.017	--	5	03/04/15 15:49	03/06/15 16:07	EPA 7474	1,7474	PD
Nickel, Total	5.96		mg/kg	0.130	--	2	03/04/15 15:08	03/06/15 15:44	EPA 3050B	1,6020A	PD
Zinc, Total	29.6		mg/kg	1.30	--	2	03/04/15 15:08	03/06/15 15:44	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503772
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-19	Date Collected:	02/27/15 14:12
Client ID:	L24B	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	68%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.46		mg/kg	0.071	--	2	03/04/15 15:48	03/06/15 15:55	EPA 3050B	1,6020A	PD
Cadmium, Total	0.081		mg/kg	0.028	--	2	03/04/15 15:48	03/06/15 15:55	EPA 3050B	1,6020A	PD
Chromium, Total	9.78		mg/kg	0.283	--	2	03/04/15 15:48	03/06/15 15:55	EPA 3050B	1,6020A	PD
Copper, Total	5.85		mg/kg	0.283	--	2	03/04/15 15:48	03/06/15 15:55	EPA 3050B	1,6020A	PD
Lead, Total	6.59		mg/kg	0.085	--	2	03/04/15 15:48	03/06/15 15:55	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.017	--	5	03/04/15 15:50	03/09/15 11:16	EPA 7474	1,7474	PD
Nickel, Total	5.62		mg/kg	0.141	--	2	03/04/15 15:48	03/06/15 15:55	EPA 3050B	1,6020A	PD
Zinc, Total	29.3		mg/kg	1.41	--	2	03/04/15 15:48	03/06/15 15:55	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503772
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-20	Date Collected:	02/27/15 14:30
Client ID:	L22A	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	64%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.22		mg/kg	0.072	--	2	03/04/15 15:48	03/06/15 15:56	EPA 3050B	1,6020A	PD
Cadmium, Total	0.070		mg/kg	0.029	--	2	03/04/15 15:48	03/06/15 15:56	EPA 3050B	1,6020A	PD
Chromium, Total	10.0		mg/kg	0.288	--	2	03/04/15 15:48	03/06/15 15:56	EPA 3050B	1,6020A	PD
Copper, Total	6.04		mg/kg	0.288	--	2	03/04/15 15:48	03/06/15 15:56	EPA 3050B	1,6020A	PD
Lead, Total	6.13		mg/kg	0.086	--	2	03/04/15 15:48	03/06/15 15:56	EPA 3050B	1,6020A	PD
Mercury, Total	0.019		mg/kg	0.019	--	5	03/04/15 15:50	03/09/15 11:19	EPA 7474	1,7474	PD
Nickel, Total	5.72		mg/kg	0.144	--	2	03/04/15 15:48	03/06/15 15:56	EPA 3050B	1,6020A	PD
Zinc, Total	31.2		mg/kg	1.44	--	2	03/04/15 15:48	03/06/15 15:56	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503772
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-21	Date Collected:	02/27/15 14:43
Client ID:	L22B	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	67%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	1.89		mg/kg	0.067	--	2	03/04/15 15:48	03/06/15 15:57	EPA 3050B	1,6020A	PD
Cadmium, Total	0.049		mg/kg	0.027	--	2	03/04/15 15:48	03/06/15 15:57	EPA 3050B	1,6020A	PD
Chromium, Total	9.20		mg/kg	0.267	--	2	03/04/15 15:48	03/06/15 15:57	EPA 3050B	1,6020A	PD
Copper, Total	5.17		mg/kg	0.267	--	2	03/04/15 15:48	03/06/15 15:57	EPA 3050B	1,6020A	PD
Lead, Total	5.41		mg/kg	0.080	--	2	03/04/15 15:48	03/06/15 15:57	EPA 3050B	1,6020A	PD
Mercury, Total	0.020		mg/kg	0.017	--	5	03/04/15 15:50	03/09/15 11:21	EPA 7474	1,7474	PD
Nickel, Total	5.28		mg/kg	0.134	--	2	03/04/15 15:48	03/06/15 15:57	EPA 3050B	1,6020A	PD
Zinc, Total	26.1		mg/kg	1.34	--	2	03/04/15 15:48	03/06/15 15:57	EPA 3050B	1,6020A	PD

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503772
Project Number:	Not Specified	**Report Date:**	03/16/15

SAMPLE RESULTS

Lab ID:	L1503772-22	Date Collected:	02/27/15 23:45
Client ID:	L61	Date Received:	02/27/15
Sample Location:	EASTERN LONG ISLAND SOUND	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	71%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.92		mg/kg	0.064	--	2	03/04/15 15:48	03/06/15 15:59	EPA 3050B	1,6020A	PD
Cadmium, Total	ND		mg/kg	0.026	--	2	03/04/15 15:48	03/06/15 15:59	EPA 3050B	1,6020A	PD
Chromium, Total	9.14		mg/kg	0.258	--	2	03/04/15 15:48	03/06/15 15:59	EPA 3050B	1,6020A	PD
Copper, Total	4.76		mg/kg	0.258	--	2	03/04/15 15:48	03/06/15 15:59	EPA 3050B	1,6020A	PD
Lead, Total	5.15		mg/kg	0.077	--	2	03/04/15 15:48	03/06/15 15:59	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.016	--	5	03/04/15 15:50	03/09/15 11:24	EPA 7474	1,7474	PD
Nickel, Total	5.02		mg/kg	0.129	--	2	03/04/15 15:48	03/06/15 15:59	EPA 3050B	1,6020A	PD
Zinc, Total	18.9		mg/kg	1.29	--	2	03/04/15 15:48	03/06/15 15:59	EPA 3050B	1,6020A	PD

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

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: WG766043-1										
Arsenic, Total	ND		mg/kg	0.050	--	2	03/04/15 15:08	03/06/15 15:09	1,6020A	PD
Cadmium, Total	ND		mg/kg	0.020	--	2	03/04/15 15:08	03/06/15 15:09	1,6020A	PD
Chromium, Total	ND		mg/kg	0.200	--	2	03/04/15 15:08	03/06/15 15:09	1,6020A	PD
Copper, Total	ND		mg/kg	0.200	--	2	03/04/15 15:08	03/06/15 15:09	1,6020A	PD
Lead, Total	ND		mg/kg	0.060	--	2	03/04/15 15:08	03/06/15 15:09	1,6020A	PD
Nickel, Total	ND		mg/kg	0.100	--	2	03/04/15 15:08	03/06/15 15:09	1,6020A	PD
Zinc, Total	ND		mg/kg	1.00	--	2	03/04/15 15:08	03/06/15 15:09	1,6020A	PD

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): 01-18 Batch: WG766045-1										
Mercury, Total	ND		mg/kg	0.013	--	5	03/04/15 15:49	03/06/15 15:02	1,7474	PD

Prep Information

Digestion Method: EPA 7474

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 19-22 Batch: WG766048-1										
Arsenic, Total	ND		mg/kg	0.050	--	2	03/04/15 15:48	03/06/15 15:52	1,6020A	PD
Cadmium, Total	ND		mg/kg	0.020	--	2	03/04/15 15:48	03/06/15 15:52	1,6020A	PD
Chromium, Total	ND		mg/kg	0.200	--	2	03/04/15 15:48	03/06/15 15:52	1,6020A	PD
Copper, Total	ND		mg/kg	0.200	--	2	03/04/15 15:48	03/06/15 15:52	1,6020A	PD
Lead, Total	ND		mg/kg	0.060	--	2	03/04/15 15:48	03/06/15 15:52	1,6020A	PD
Nickel, Total	ND		mg/kg	0.100	--	2	03/04/15 15:48	03/06/15 15:52	1,6020A	PD
Zinc, Total	ND		mg/kg	1.00	--	2	03/04/15 15:48	03/06/15 15:52	1,6020A	PD

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

Method Blank Analysis
Batch Quality Control

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): 19-22 Batch: WG766050-1										
Mercury, Total	ND		mg/kg	0.013	--	5	03/04/15 15:50	03/09/15 11:11	1,7474	PD

Prep Information

Digestion Method: EPA 7474

Lab Control Sample Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-18 Batch: WG766043-2 SRM Lot Number: A2METSPIKE								
Arsenic, Total	88		-		75-125	-		20
Cadmium, Total	85		-		75-125	-		20
Chromium, Total	96		-		75-125	-		20
Copper, Total	90		-		75-125	-		20
Lead, Total	90		-		75-125	-		20
Nickel, Total	86		-		75-125	-		20
Zinc, Total	84		-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-18 Batch: WG766045-2 SRM Lot Number: HPHGAF								
Mercury, Total	84		-		80-120	-		20
Total Metals - Mansfield Lab Associated sample(s): 19-22 Batch: WG766048-2 SRM Lot Number: A2METSPIKE								
Arsenic, Total	90		-		75-125	-		20
Cadmium, Total	88		-		75-125	-		20
Chromium, Total	97		-		75-125	-		20
Copper, Total	93		-		75-125	-		20
Lead, Total	96		-		75-125	-		20
Nickel, Total	84		-		75-125	-		20
Zinc, Total	85		-		75-125	-		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 19-22 Batch: WG766050-2 SRM Lot Number: HPHGAF					
Mercury, Total	92	-	80-120	-	20

Matrix Spike Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

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: WG766043-4 WG766043-5 QC Sample: L1503772-01 Client ID: L27												
Arsenic, Total	3.78	261	241	91		238	87		75-125	1		20
Cadmium, Total	0.069	130	115	88		114	85		75-125	1		20
Chromium, Total	11.0	261	256	94		258	92		75-125	1		20
Copper, Total	5.80	261	239	89		241	88		75-125	1		20
Lead, Total	7.24	261	222	82		223	80		75-125	0		20
Nickel, Total	6.84	261	225	84		227	82		75-125	1		20
Zinc, Total	38.8	261	253	82		249	78		75-125	2		20
Total Metals - Mansfield Lab Associated sample(s): 01-18 QC Batch ID: WG766045-4 WG766045-5 QC Sample: L1503772-01 Client ID: L27												
Mercury, Total	ND	0.801	0.698	87		0.688	87		80-120	1		20
Total Metals - Mansfield Lab Associated sample(s): 19-22 QC Batch ID: WG766048-4 WG766048-5 QC Sample: L1503772-22 Client ID: L61												
Arsenic, Total	2.92	260	228	86		244	91		75-125	7		20
Cadmium, Total	ND	130	112	86		117	88		75-125	4		20
Chromium, Total	9.14	260	255	94		270	98		75-125	6		20
Copper, Total	4.76	260	235	88		253	94		75-125	7		20
Lead, Total	5.15	260	228	86		238	88		75-125	4		20
Nickel, Total	5.02	260	217	82		228	84		75-125	5		20
Zinc, Total	18.9	260	240	85		256	89		75-125	6		20
Total Metals - Mansfield Lab Associated sample(s): 19-22 QC Batch ID: WG766050-4 WG766050-5 QC Sample: L1503772-22 Client ID: L61												
Mercury, Total	ND	0.82	0.766	93		0.736	91		80-120	4		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-18 QC Batch ID: WG766043-3 QC Sample: L1503772-01 Client ID: L27						
Arsenic, Total	3.78	3.30	mg/kg	14		20
Cadmium, Total	0.069	0.049	mg/kg	**34**	Q	20
Chromium, Total	11.0	11.2	mg/kg	2		20
Copper, Total	5.80	5.97	mg/kg	3		20
Lead, Total	7.24	7.39	mg/kg	2		20
Nickel, Total	6.84	6.79	mg/kg	1		20
Zinc, Total	38.8	36.8	mg/kg	5		20
Total Metals - Mansfield Lab Associated sample(s): 01-18 QC Batch ID: WG766045-3 QC Sample: L1503772-01 Client ID: L27						
Mercury, Total	ND	ND	mg/kg	NC		20
Total Metals - Mansfield Lab Associated sample(s): 19-22 QC Batch ID: WG766048-3 QC Sample: L1503772-22 Client ID: L61						
Arsenic, Total	2.92	3.84	mg/kg	**27**	Q	20
Cadmium, Total	ND	ND	mg/kg	NC		20
Chromium, Total	9.14	7.06	mg/kg	**26**	Q	20
Copper, Total	4.76	5.30	mg/kg	11		20
Lead, Total	5.15	5.04	mg/kg	2		20
Nickel, Total	5.02	4.95	mg/kg	1		20
Zinc, Total	18.9	18.9	mg/kg	0		20
Total Metals - Mansfield Lab Associated sample(s): 19-22 QC Batch ID: WG766050-3 QC Sample: L1503772-22 Client ID: L61						
Mercury, Total	ND	ND	mg/kg	NC		20

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG766043-7

Parameter	% Recovery	Qual	QC Criteria
Arsenic, Total	95		81-120
Cadmium, Total	96		82-118
Chromium, Total	93		79-120
Copper, Total	95		81-119
Lead, Total	90		81-118
Nickel, Total	96		82-118
Zinc, Total	95		80-120

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG766045-6

Parameter	% Recovery	Qual	QC Criteria
Mercury, Total	90		71-129

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG766048-7

Parameter	% Recovery	Qual	QC Criteria
Arsenic, Total	94		81-120
Cadmium, Total	98		82-118
Chromium, Total	95		79-120
Copper, Total	94		81-119
Lead, Total	94		81-118
Nickel, Total	96		82-118
Zinc, Total	95		80-120

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG766050-6

Parameter	% Recovery	Qual	QC Criteria
Mercury, Total	96		71-129

INORGANICS
&
MISCELLANEOUS

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-01
Client ID: L27
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/27/15 09:08
Date Received: 02/27/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.448		%	0.010	--	1	-	03/09/15 10:20	1,9060	CM
Total Organic Carbon (Rep2)	0.499		%	0.010	--	1	-	03/09/15 10:20	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	2.60		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Coarse Sand	0.800		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Medium Sand	9.20		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Fine Sand	72.0		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Total Fines	15.4		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
General Chemistry - Mansfield Lab										
Solids, Total	71.6		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC
Moisture	28.4		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-02
Client ID: L28
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/27/15 09:21
Date Received: 02/27/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.808		%	0.010	--	1	-	03/09/15 12:13	1,9060	CM
Total Organic Carbon (Rep2)	0.720		%	0.010	--	1	-	03/09/15 12:13	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	2.40		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Coarse Sand	4.80		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Medium Sand	17.0		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Fine Sand	67.4		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Total Fines	8.40		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
General Chemistry - Mansfield Lab										
Solids, Total	72.6		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC
Moisture	27.4		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-03
Client ID: L25A
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/27/15 09:48
Date Received: 02/27/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.555		%	0.010	--	1	-	03/09/15 10:35	1,9060	CM
Total Organic Carbon (Rep2)	0.432		%	0.010	--	1	-	03/09/15 10:35	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	0.400		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Coarse Sand	2.70		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Medium Sand	16.9		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Fine Sand	69.6		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Total Fines	10.4		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
General Chemistry - Mansfield Lab										
Solids, Total	72.2		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC
Moisture	27.8		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-04
Client ID: L25B
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/27/15 10:00
Date Received: 02/27/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.487		%	0.010	--	1	-	03/09/15 12:28	1,9060	CM
Total Organic Carbon (Rep2)	0.420		%	0.010	--	1	-	03/09/15 12:28	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	2.00		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Coarse Sand	2.90		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Medium Sand	19.2		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Fine Sand	67.6		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Total Fines	8.30		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
General Chemistry - Mansfield Lab										
Solids, Total	72.6		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC
Moisture	27.4		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-05
Client ID: L21
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/27/15 10:12
Date Received: 02/27/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.848		%	0.010	--	1	-	03/09/15 12:38	1,9060	CM
Total Organic Carbon (Rep2)	0.870		%	0.010	--	1	-	03/09/15 12:38	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	4.50		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Coarse Sand	3.70		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Medium Sand	20.7		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Fine Sand	55.9		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Total Fines	15.2		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
General Chemistry - Mansfield Lab										
Solids, Total	70.3		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC
Moisture	29.7		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-06
Client ID: L20
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/27/15 10:25
Date Received: 02/27/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.342		%	0.010	--	1	-	03/09/15 11:21	1,9060	CM
Total Organic Carbon (Rep2)	0.318		%	0.010	--	1	-	03/09/15 11:21	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	2.30		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Coarse Sand	1.20		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Medium Sand	16.8		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Fine Sand	67.2		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Total Fines	12.5		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
General Chemistry - Mansfield Lab										
Solids, Total	74.0		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC
Moisture	26.0		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-07
Client ID: L19
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/27/15 10:43
Date Received: 02/27/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.406		%	0.010	--	1	-	03/09/15 12:43	1,9060	CM
Total Organic Carbon (Rep2)	0.498		%	0.010	--	1	-	03/09/15 12:43	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	1.90		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Coarse Sand	1.50		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Medium Sand	12.9		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Fine Sand	67.2		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Total Fines	16.5		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
General Chemistry - Mansfield Lab										
Solids, Total	72.2		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC
Moisture	27.8		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-08
Client ID: L13
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/27/15 10:55
Date Received: 02/27/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.45		%	0.010	--	1	-	03/09/15 11:41	1,9060	CM
Total Organic Carbon (Rep2)	1.91		%	0.010	--	1	-	03/09/15 11:41	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	ND		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Coarse Sand	1.00		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Medium Sand	8.30		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Fine Sand	42.4		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Total Fines	48.3		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
General Chemistry - Mansfield Lab										
Solids, Total	52.2		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC
Moisture	47.8		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-09
Client ID: L16
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/27/15 11:09
Date Received: 02/27/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.68		%	0.010	--	1	-	03/09/15 12:58	1,9060	CM
Total Organic Carbon (Rep2)	1.61		%	0.010	--	1	-	03/09/15 12:58	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	0.900		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Coarse Sand	2.20		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Medium Sand	12.1		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Fine Sand	41.6		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Total Fines	43.2		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
General Chemistry - Mansfield Lab										
Solids, Total	53.9		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC
Moisture	46.1		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-10
Client ID: L18
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/27/15 11:22
Date Received: 02/27/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	3.64		%	0.010	--	1	-	03/09/15 13:16	1,9060	CM
Total Organic Carbon (Rep2)	3.44		%	0.010	--	1	-	03/09/15 13:16	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	1.20		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Coarse Sand	1.90		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Medium Sand	4.90		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Fine Sand	13.8		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Total Fines	78.2		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
General Chemistry - Mansfield Lab										
Solids, Total	56.0		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC
Moisture	44.0		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-11
Client ID: L17
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/27/15 11:39
Date Received: 02/27/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.50		%	0.010	--	1	-	03/09/15 13:51	1,9060	CM
Total Organic Carbon (Rep2)	1.26		%	0.010	--	1	-	03/09/15 13:51	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	1.90		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Coarse Sand	6.20		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Medium Sand	33.9		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Fine Sand	51.6		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Total Fines	6.40		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
General Chemistry - Mansfield Lab										
Solids, Total	71.6		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC
Moisture	28.4		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-12
Client ID: L15
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/27/15 11:53
Date Received: 02/27/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.243		%	0.010	--	1	-	03/09/15 13:56	1,9060	CM
Total Organic Carbon (Rep2)	0.297		%	0.010	--	1	-	03/09/15 13:56	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	51.4		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Coarse Sand	3.90		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Medium Sand	15.2		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Fine Sand	24.5		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Total Fines	5.00		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
General Chemistry - Mansfield Lab										
Solids, Total	65.6		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC
Moisture	34.4		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-13
Client ID: L12
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/27/15 12:58
Date Received: 02/27/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.30		%	0.010	--	1	-	03/09/15 14:18	1,9060	CM
Total Organic Carbon (Rep2)	1.23		%	0.010	--	1	-	03/09/15 14:18	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	7.80		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Coarse Sand	5.10		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Medium Sand	10.0		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Fine Sand	50.7		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Total Fines	26.4		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
General Chemistry - Mansfield Lab										
Solids, Total	63.4		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC
Moisture	36.6		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-14
Client ID: L11
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/27/15 13:08
Date Received: 02/27/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.32		%	0.010	--	1	-	03/09/15 14:38	1,9060	CM
Total Organic Carbon (Rep2)	1.13		%	0.010	--	1	-	03/09/15 14:38	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	2.80		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Coarse Sand	2.30		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Medium Sand	11.2		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Fine Sand	36.1		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Total Fines	47.6		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
General Chemistry - Mansfield Lab										
Solids, Total	64.0		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC
Moisture	36.0		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-15
Client ID: L14
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/27/15 13:19
Date Received: 02/27/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	2.83		%	0.010	--	1	-	03/11/15 09:38	1,9060	JK
Total Organic Carbon (Rep2)	2.65		%	0.010	--	1	-	03/11/15 09:38	1,9060	JK
Grain Size Analysis - Mansfield Lab										
% Total Gravel	9.00		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Coarse Sand	4.40		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Medium Sand	12.4		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Fine Sand	41.9		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Total Fines	32.3		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
General Chemistry - Mansfield Lab										
Solids, Total	68.7		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC
Moisture	31.3		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-16
Client ID: L23A
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/27/15 13:35
Date Received: 02/27/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.598		%	0.010	--	1	-	03/11/15 09:53	1,9060	JK
Total Organic Carbon (Rep2)	0.477		%	0.010	--	1	-	03/11/15 09:53	1,9060	JK
Grain Size Analysis - Mansfield Lab										
% Total Gravel	ND		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Coarse Sand	0.200		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Medium Sand	1.20		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Fine Sand	62.6		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Total Fines	36.0		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
General Chemistry - Mansfield Lab										
Solids, Total	67.9		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC
Moisture	32.1		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-17
Client ID: L23B
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/27/15 13:45
Date Received: 02/27/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.391		%	0.010	--	1	-	03/11/15 09:58	1,9060	JK
Total Organic Carbon (Rep2)	0.392		%	0.010	--	1	-	03/11/15 09:58	1,9060	JK
Grain Size Analysis - Mansfield Lab										
% Total Gravel	ND		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Coarse Sand	0.200		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Medium Sand	8.70		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Fine Sand	72.7		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Total Fines	18.4		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
General Chemistry - Mansfield Lab										
Solids, Total	68.0		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC
Moisture	32.0		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-18
Client ID: L24A
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/27/15 13:58
Date Received: 02/27/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.354		%	0.010	--	1	-	03/11/15 10:08	1,9060	JK
Total Organic Carbon (Rep2)	0.377		%	0.010	--	1	-	03/11/15 10:08	1,9060	JK
Grain Size Analysis - Mansfield Lab										
% Total Gravel	ND		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Coarse Sand	ND		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Medium Sand	0.200		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Fine Sand	71.5		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Total Fines	28.3		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
General Chemistry - Mansfield Lab										
Solids, Total	70.2		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC
Moisture	29.8		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-19
Client ID: L24B
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/27/15 14:12
Date Received: 02/27/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.399		%	0.010	--	1	-	03/11/15 10:18	1,9060	JK
Total Organic Carbon (Rep2)	0.360		%	0.010	--	1	-	03/11/15 10:18	1,9060	JK
Grain Size Analysis - Mansfield Lab										
% Total Gravel	ND		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Coarse Sand	0.100		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Medium Sand	0.100		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Fine Sand	74.0		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Total Fines	25.8		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
General Chemistry - Mansfield Lab										
Solids, Total	68.0		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC
Moisture	32.0		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-20
Client ID: L22A
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/27/15 14:30
Date Received: 02/27/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.513		%	0.010	--	1	-	03/11/15 10:39	1,9060	JK
Total Organic Carbon (Rep2)	0.464		%	0.010	--	1	-	03/11/15 10:39	1,9060	JK
Grain Size Analysis - Mansfield Lab										
% Total Gravel	ND		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Coarse Sand	0.100		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Medium Sand	1.10		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Fine Sand	67.1		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Total Fines	31.7		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
General Chemistry - Mansfield Lab										
Solids, Total	64.4		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC
Moisture	35.6		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-21
Client ID: L22B
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/27/15 14:43
Date Received: 02/27/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.543		%	0.010	--	1	-	03/11/15 10:49	1,9060	JK
Total Organic Carbon (Rep2)	0.456		%	0.010	--	1	-	03/11/15 10:49	1,9060	JK
Grain Size Analysis - Mansfield Lab										
% Total Gravel	2.60		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Coarse Sand	0.200		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Medium Sand	1.10		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Fine Sand	69.8		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Total Fines	26.3		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
General Chemistry - Mansfield Lab										
Solids, Total	67.4		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC
Moisture	32.6		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

SAMPLE RESULTS

Lab ID: L1503772-22
Client ID: L61
Sample Location: EASTERN LONG ISLAND SOUND
Matrix: Sediment

Date Collected: 02/27/15 23:45
Date Received: 02/27/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.356		%	0.010	--	1	-	03/11/15 10:59	1,9060	JK
Total Organic Carbon (Rep2)	0.339		%	0.010	--	1	-	03/11/15 10:59	1,9060	JK
Grain Size Analysis - Mansfield Lab										
% Total Gravel	27.9		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Coarse Sand	5.30		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Medium Sand	22.8		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Fine Sand	36.6		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
% Total Fines	7.40		%	0.100	NA	1	-	03/11/15 00:00	12,D422	JK
General Chemistry - Mansfield Lab										
Solids, Total	71.2		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC
Moisture	28.8		%	0.100	--	1	-	03/04/15 13:00	30,2540G	LC

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 01-14 Batch: WG767492-1										
Total Organic Carbon (Rep1)	ND		%	0.010	--	1	-	03/09/15 10:09	1,9060	CM
Total Organic Carbon (Rep2)	ND		%	0.010	--	1	-	03/09/15 10:09	1,9060	CM
Total Organic Carbon - Mansfield Lab for sample(s): 15-22 Batch: WG767511-1										
Total Organic Carbon (Rep1)	ND		%	0.010	--	1	-	03/10/15 20:43	1,9060	JK
Total Organic Carbon (Rep2)	ND		%	0.010	--	1	-	03/10/15 20:43	1,9060	JK

Matrix Spike Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-14 QC Batch ID: WG767492-4 QC Sample: L1503772-10 Client ID: L18												
Total Organic Carbon (Rep1)	3.64	1.17	4.67	88		-	-		75-125	-		25
Total Organic Carbon (Rep2)	3.44	2.33	5.14	**73**	Q	-	-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-14 QC Batch ID: WG767492-5 QC Sample: L1503772-13 Client ID: L12												
Total Organic Carbon (Rep1)	1.30	1.55	3.08	115		-	-		75-125	-		25
Total Organic Carbon (Rep2)	1.23	0.918	2.99	**192**	Q	-	-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 15-22 QC Batch ID: WG767511-4 WG767511-5 QC Sample: L1503772-22 Client ID: L61												
Total Organic Carbon (Rep1)	0.356	1.27	1.68	104		1.58	**141**	Q	75-125	6		25
Total Organic Carbon (Rep2)	0.339	0.942	1.34	106		1.99	100		75-125	**39**	Q	25

Lab Duplicate Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG766077-1 QC Sample: L1503772-20 Client ID: L22A						
Solids, Total	64.4	63.8	%	1		10
Moisture	35.6	36.2	%	2		10
General Chemistry - Mansfield Lab Associated sample(s): 21-22 QC Batch ID: WG766078-1 QC Sample: L1503772-22 Client ID: L61						
Solids, Total	71.2	71.6	%	1		10
Moisture	28.8	28.4	%	1		10
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-14 QC Batch ID: WG767492-3 QC Sample: L1503772-10 Client ID: L18						
Total Organic Carbon (Rep1)	3.64	3.24	%	12		25
Total Organic Carbon (Rep2)	3.44	3.59	%	4		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 15-22 QC Batch ID: WG767511-3 QC Sample: L1503772-22 Client ID: L61						
Total Organic Carbon (Rep1)	0.356	0.294	%	19		25
Total Organic Carbon (Rep2)	0.339	0.344	%	1		25
Grain Size Analysis - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG767551-1 QC Sample: L1503772-01 Client ID: L27						
% Total Gravel	2.60	10.2	%	**119**	Q	20
% Coarse Sand	0.800	1.30	%	**48**	Q	20
% Medium Sand	9.20	7.00	%	**27**	Q	20
% Fine Sand	72.0	66.1	%	9		20
% Total Fines	15.4	15.4	%	0		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Parameter	Native Sample	Duplicate Sample	Units	RPD		RPD Limits
Grain Size Analysis - Mansfield Lab Associated sample(s): 21-22 QC Batch ID: WG767555-1 QC Sample: L1503772-22 Client ID: L61						
% Total Gravel	27.9	35.7	%	**25**	Q	20
% Coarse Sand	5.30	4.50	%	16		20
% Medium Sand	22.8	20.3	%	12		20
% Fine Sand	36.6	33.1	%	10		20
% Total Fines	7.40	6.40	%	14		20

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG767492-2

Parameter	% Recovery	Qual	QC Criteria
Total Organic Carbon (Rep1)	96		75-125
Total Organic Carbon (Rep2)	112		75-125

Project Name: LIS-USACOE RIM DREDGE **Lab Number:** L1503772

Project Number: Not Specified **Report Date:** 03/16/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG767511-2

Parameter	% Recovery	Qual	QC Criteria
Total Organic Carbon (Rep1)	105		75-125
Total Organic Carbon (Rep2)	94		75-125

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1503772-01A	Glass 250ml/8oz unpreserved	A	N/A	4.1	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503772-01B	Plastic 8oz unpreserved for Grai	A	N/A	4.1	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503772-02A	Glass 250ml/8oz unpreserved	A	N/A	4.1	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503772-02B	Plastic 8oz unpreserved for Grai	A	N/A	4.1	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()

*Values in parentheses indicate holding time in days

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1503772-03A	Glass 250ml/8oz unpreserved	A	N/A	4.1	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503772-03B	Plastic 8oz unpreserved for Grai	A	N/A	4.1	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503772-04A	Glass 250ml/8oz unpreserved	A	N/A	4.1	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503772-04B	Plastic 8oz unpreserved for Grai	A	N/A	4.1	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503772-05A	Glass 250ml/8oz unpreserved	A	N/A	4.1	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503772-05B	Plastic 8oz unpreserved for Grai	A	N/A	4.1	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()

*Values in parentheses indicate holding time in days

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1503772-06A	Glass 250ml/8oz unpreserved	A	N/A	4.1	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503772-06B	Plastic 8oz unpreserved for Grai	A	N/A	4.1	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503772-07A	Glass 250ml/8oz unpreserved	A	N/A	4.1	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503772-07B	Plastic 8oz unpreserved for Grai	A	N/A	4.1	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503772-08A	Glass 250ml/8oz unpreserved	A	N/A	4.1	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503772-08B	Plastic 8oz unpreserved for Grai	A	N/A	4.1	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()

*Values in parentheses indicate holding time in days

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1503772-09A	Glass 250ml/8oz unpreserved	A	N/A	4.1	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503772-09B	Plastic 8oz unpreserved for Grai	A	N/A	4.1	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503772-10A	Glass 250ml/8oz unpreserved	A	N/A	4.1	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503772-10B	Plastic 8oz unpreserved for Grai	A	N/A	4.1	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503772-11A	Glass 250ml/8oz unpreserved	A	N/A	4.1	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503772-11B	Plastic 8oz unpreserved for Grai	A	N/A	4.1	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()

*Values in parentheses indicate holding time in days

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1503772-12A	Glass 250ml/8oz unpreserved	A	N/A	4.1	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503772-12B	Plastic 8oz unpreserved for Grai	A	N/A	4.1	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503772-13A	Glass 250ml/8oz unpreserved	A	N/A	4.1	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503772-13B	Plastic 8oz unpreserved for Grai	A	N/A	4.1	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503772-14A	Glass 250ml/8oz unpreserved	A	N/A	4.1	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503772-14B	Plastic 8oz unpreserved for Grai	A	N/A	4.1	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()

*Values in parentheses indicate holding time in days

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1503772-15A	Glass 250ml/8oz unpreserved	A	N/A	4.1	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503772-15B	Plastic 8oz unpreserved for Grai	A	N/A	4.1	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503772-16A	Glass 250ml/8oz unpreserved	A	N/A	4.1	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503772-16B	Plastic 8oz unpreserved for Grai	A	N/A	4.1	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503772-17A	Glass 250ml/8oz unpreserved	A	N/A	4.1	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503772-17B	Plastic 8oz unpreserved for Grai	A	N/A	4.1	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()

*Values in parentheses indicate holding time in days

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1503772-18A	Glass 250ml/8oz unpreserved	A	N/A	4.1	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503772-18B	Plastic 8oz unpreserved for Grai	A	N/A	4.1	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503772-19A	Glass 250ml/8oz unpreserved	A	N/A	4.1	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503772-19B	Plastic 8oz unpreserved for Grai	A	N/A	4.1	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503772-20A	Glass 250ml/8oz unpreserved	A	N/A	4.1	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503772-20B	Plastic 8oz unpreserved for Grai	A	N/A	4.1	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()

*Values in parentheses indicate holding time in days

Project Name: LIS-USACOE RIM DREDGE
Project Number: Not Specified

Lab Number: L1503772
Report Date: 03/16/15

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1503772-21A	Glass 250ml/8oz unpreserved	A	N/A	4.1	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503772-21B	Plastic 8oz unpreserved for Grai	A	N/A	4.1	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1503772-22A	Glass 250ml/8oz unpreserved	A	N/A	4.1	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),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-RIM FORMS(),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1503772-22B	Plastic 8oz unpreserved for Grai	A	N/A	4.1	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()

Container Comments

L1503772-02A

L1503772-03A

*Values in parentheses indicate holding time in days

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503772
Project Number:	Not Specified	**Report Date:**	03/16/15

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
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.

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

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.

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.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

Report Format: Data Usability Report

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503772
Project Number:	Not Specified	**Report Date:**	03/16/15

Data Qualifiers

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

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

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

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

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

Report Format: Data Usability Report

Project Name:	LIS-USACOE RIM DREDGE	**Lab Number:**	L1503772
Project Number:	Not Specified	**Report Date:**	03/16/15

REFERENCES

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

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

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

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.

LIMITATION OF LIABILITIES

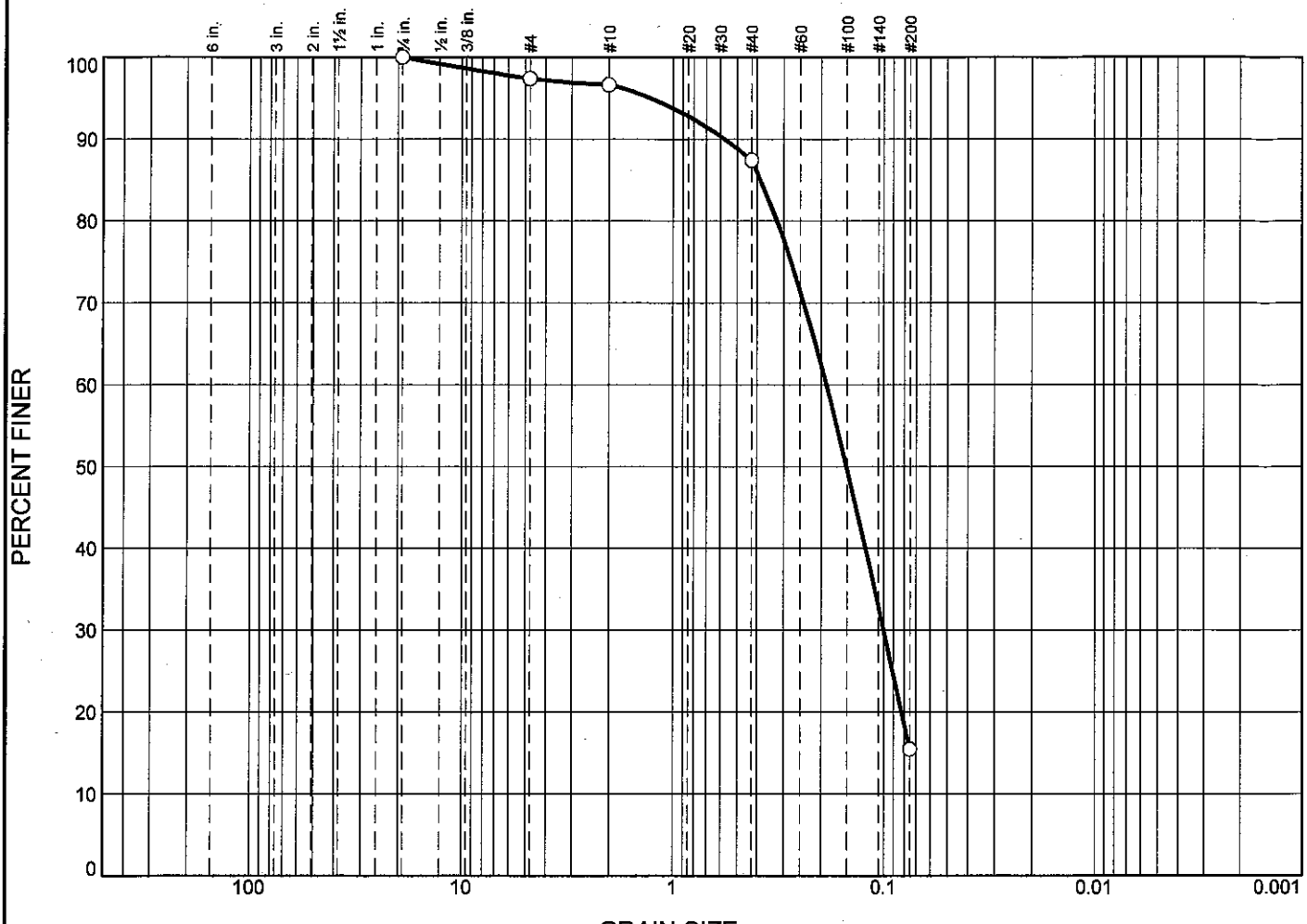
Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held 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 D422-63

GRAIN SIZE ANALYSIS

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	2.6	0.8	9.2	72.0	15.4	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3840	0.1881	0.1505	0.0998				

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** L27 **Sample Number:** L1503772-01

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L27

Sample Number: L1503772-01

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 91.12
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
91.12	0.00	0.75	0.00	0.00	100.0
		#4	2.38	0.00	97.4
		#10	0.68	0.00	96.6
		#40	8.41	0.00	87.4
		#200	65.58	0.00	15.4

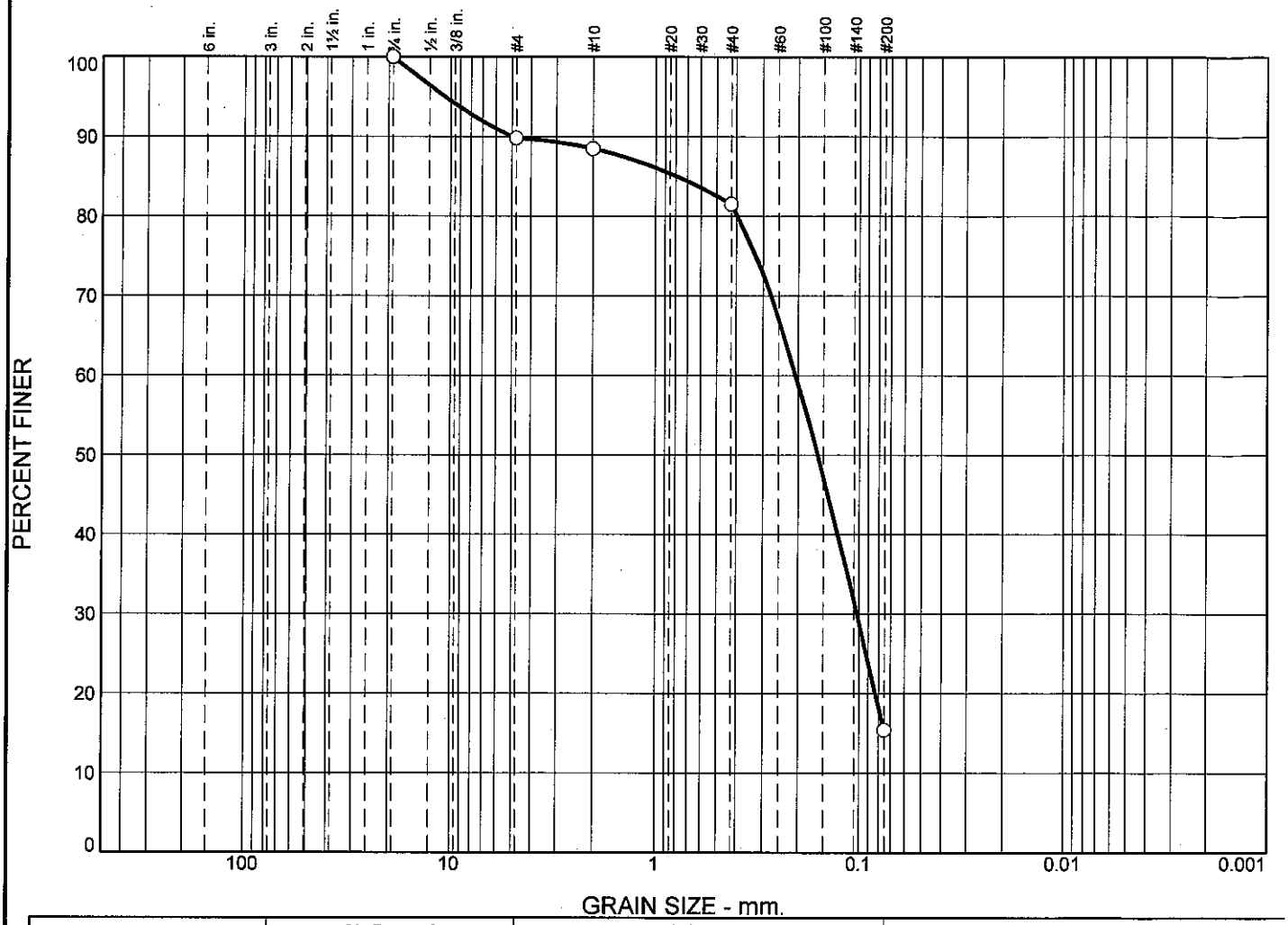
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	2.6	2.6	0.8	9.2	72.0	82.0			15.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0820	0.0998	0.1505	0.1881	0.3215	0.3840	0.5743	1.2741

Fineness Modulus
0.95

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	10.2	1.3	7.0	66.1	15.4	

☒	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.7865	0.2053	0.1601	0.1022				

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** L27 **Sample Number:** WG767551-1

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L27

Sample Number: WG767551-1

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 105.04
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
105.04	0.00	0.75	0.00	0.00	100.0
		#4	10.69	0.00	89.8
		#10	1.41	0.00	88.5
		#40	7.28	0.00	81.5
		#200	69.46	0.00	15.4

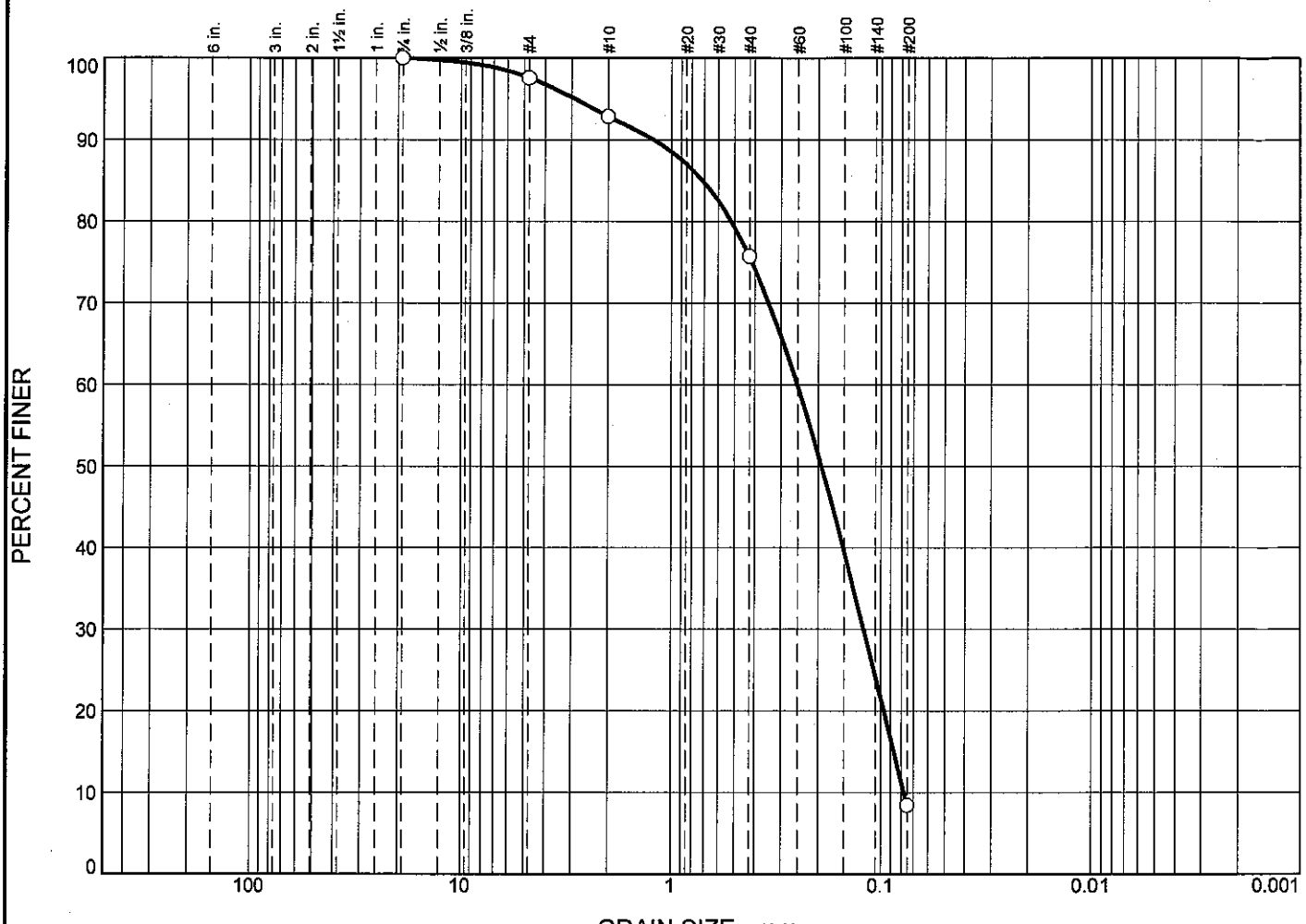
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	10.2	10.2	1.3	7.0	66.1	74.4			15.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0826	0.1022	0.1601	0.2053	0.3945	0.7865	4.9457	10.6475

Fineness Modulus
1.37

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	2.4	4.8	17.0	67.4	8.4	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.7118	0.2512	0.1925	0.1202	0.0865	0.0776	0.74	3.24

Material Description	USCS	AASHTO
○		

Project No. **Client:**
Project:

○ **Source of Sample:** L28 **Sample Number:** L1503772-02

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L28

Sample Number: L1503772-02

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 101.79
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
101.79	0.00	0.75	0.00	0.00	100.0
		#4	2.46	0.00	97.6
		#10	4.83	0.00	92.8
		#40	17.39	0.00	75.8
		#200	68.55	0.00	8.4

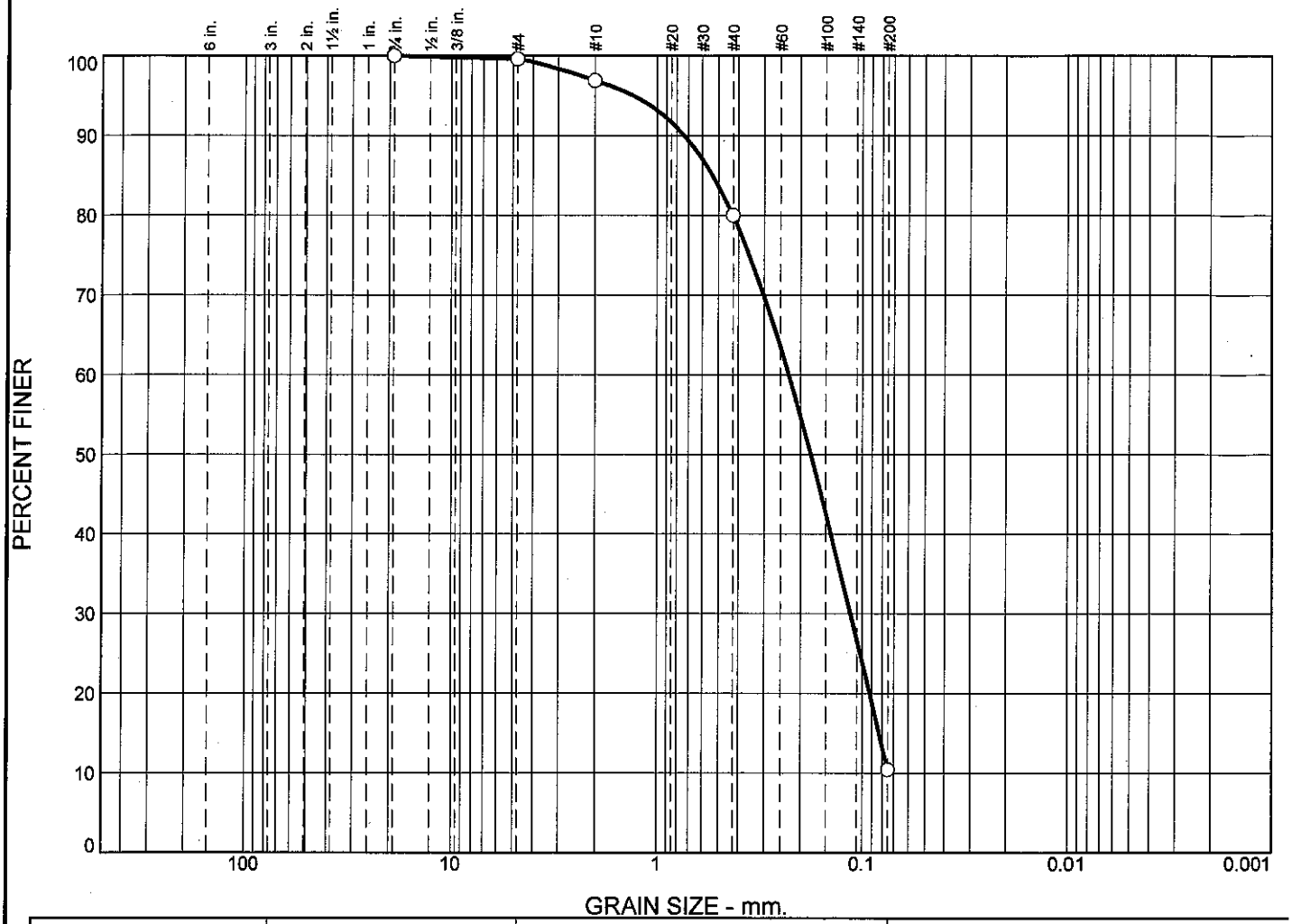
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	2.4	2.4	4.8	17.0	67.4	89.2			8.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0776	0.0865	0.0964	0.1202	0.1925	0.2512	0.5185	0.7118	1.2184	2.9007

Fineness Modulus	C_u	C_c
1.31	3.24	0.74

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.4	2.7	16.9	69.6	10.4	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.5342	0.2276	0.1776	0.1134	0.0825			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source of Sample:** L25A **Sample Number:** L1503772-03

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L25A

Sample Number: L1503772-03

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 112.99
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
112.99	0.00	0.75	0.00	0.00	100.0
		#4	0.43	0.00	99.6
		#10	3.11	0.00	96.9
		#40	19.05	0.00	80.0
		#200	78.63	0.00	10.4

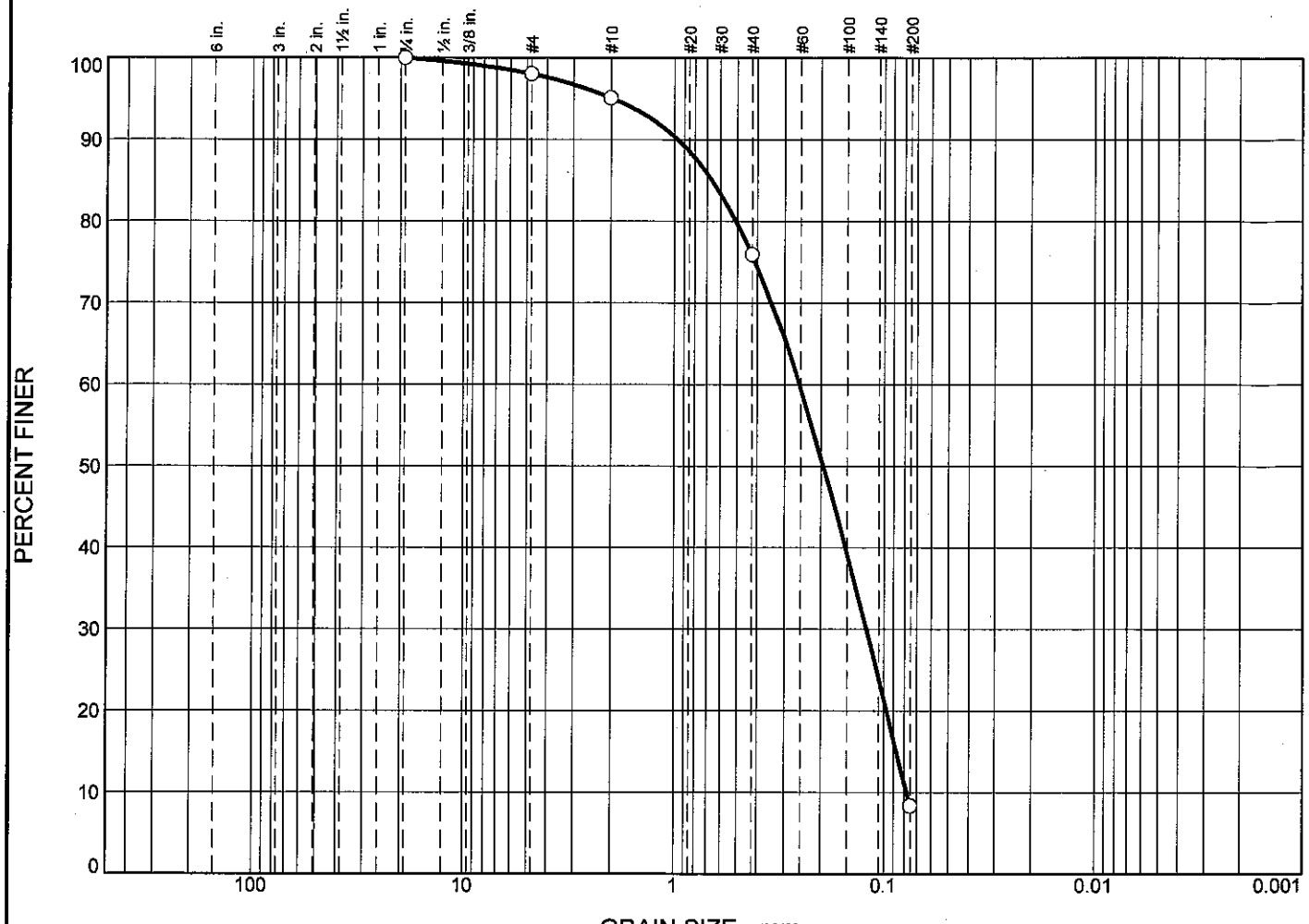
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.4	0.4	2.7	16.9	69.6	89.2			10.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0825	0.0917	0.1134	0.1776	0.2276	0.4249	0.5342	0.7339	1.3099

Fineness Modulus
1.09

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	2.0	2.9	19.2	67.6	8.3	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.6598	0.2535	0.1945	0.1210	0.0867	0.0778	0.74	3.26

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source of Sample:** L25B **Sample Number:** L1503772-04

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L25B

Sample Number: L1503772-04

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 104.94
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
104.94	0.00	0.75	0.00	0.00	100.0
		#4	2.06	0.00	98.0
		#10	3.09	0.00	95.1
		#40	20.10	0.00	75.9
		#200	70.93	0.00	8.3

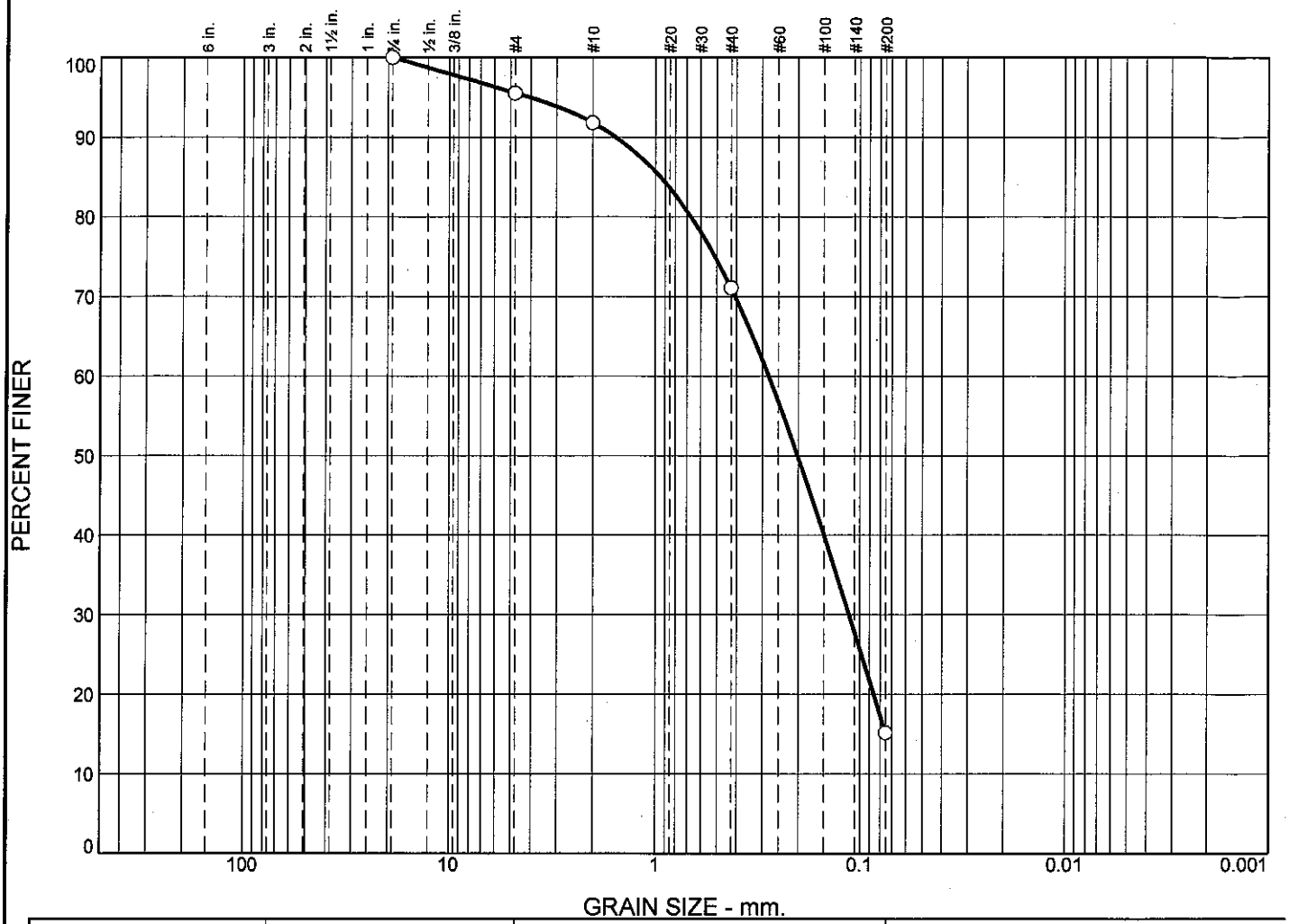
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	2.0	2.0	2.9	19.2	67.6	89.7			8.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0778	0.0867	0.0968	0.1210	0.1945	0.2535	0.5057	0.6598	0.9632	1.9607

Fineness Modulus	C_u	C_c
1.27	3.26	0.74

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	4.5	3.7	20.7	55.9	15.2	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.9418	0.2783	0.2010	0.1125				

Material Description	USCS	AASHTO
○		

Project No. **Client:**
Project:

○ **Source of Sample:** L21 **Sample Number:** L1503772-05

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L21

Sample Number: L1503772-05

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 111.02
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
111.02	0.00	0.75	0.00	0.00	100.0
		#4	4.95	0.00	95.5
		#10	4.15	0.00	91.8
		#40	23.00	0.00	71.1
		#200	62.06	0.00	15.2

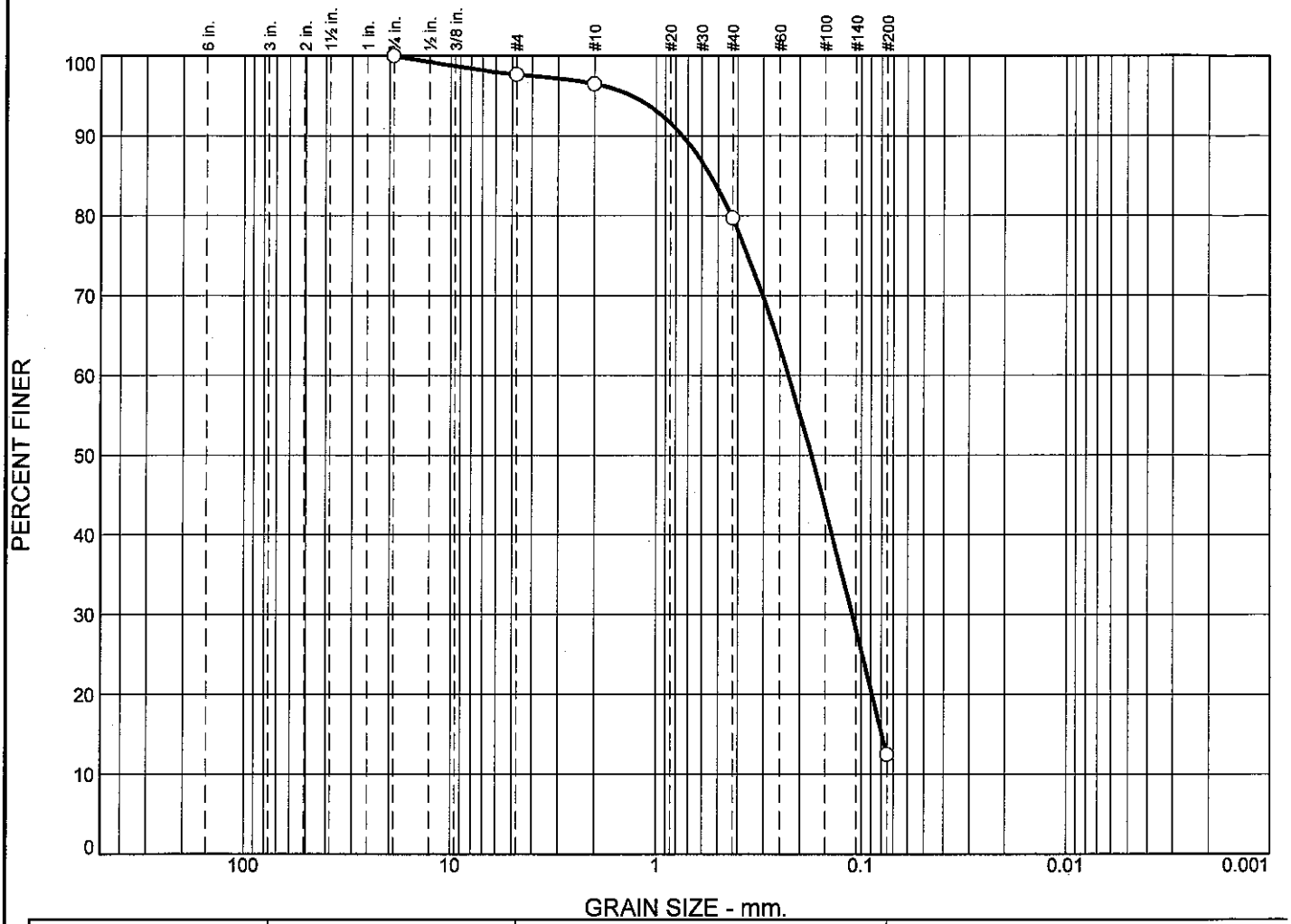
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	4.5	4.5	3.7	20.7	55.9	80.3			15.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0855	0.1125	0.2010	0.2783	0.6673	0.9418	1.5455	4.0512

Fineness Modulus
1.46

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	2.3	1.2	16.8	67.2	12.5	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.5417	0.2264	0.1753	0.1102	0.0792			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** L20 **Sample Number:** L1503772-06

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L20

Sample Number: L1503772-06

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 117.97
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
117.97	0.00	0.75	0.00	0.00	100.0
		#4	2.73	0.00	97.7
		#10	1.43	0.00	96.5
		#40	19.74	0.00	79.7
		#200	79.33	0.00	12.5

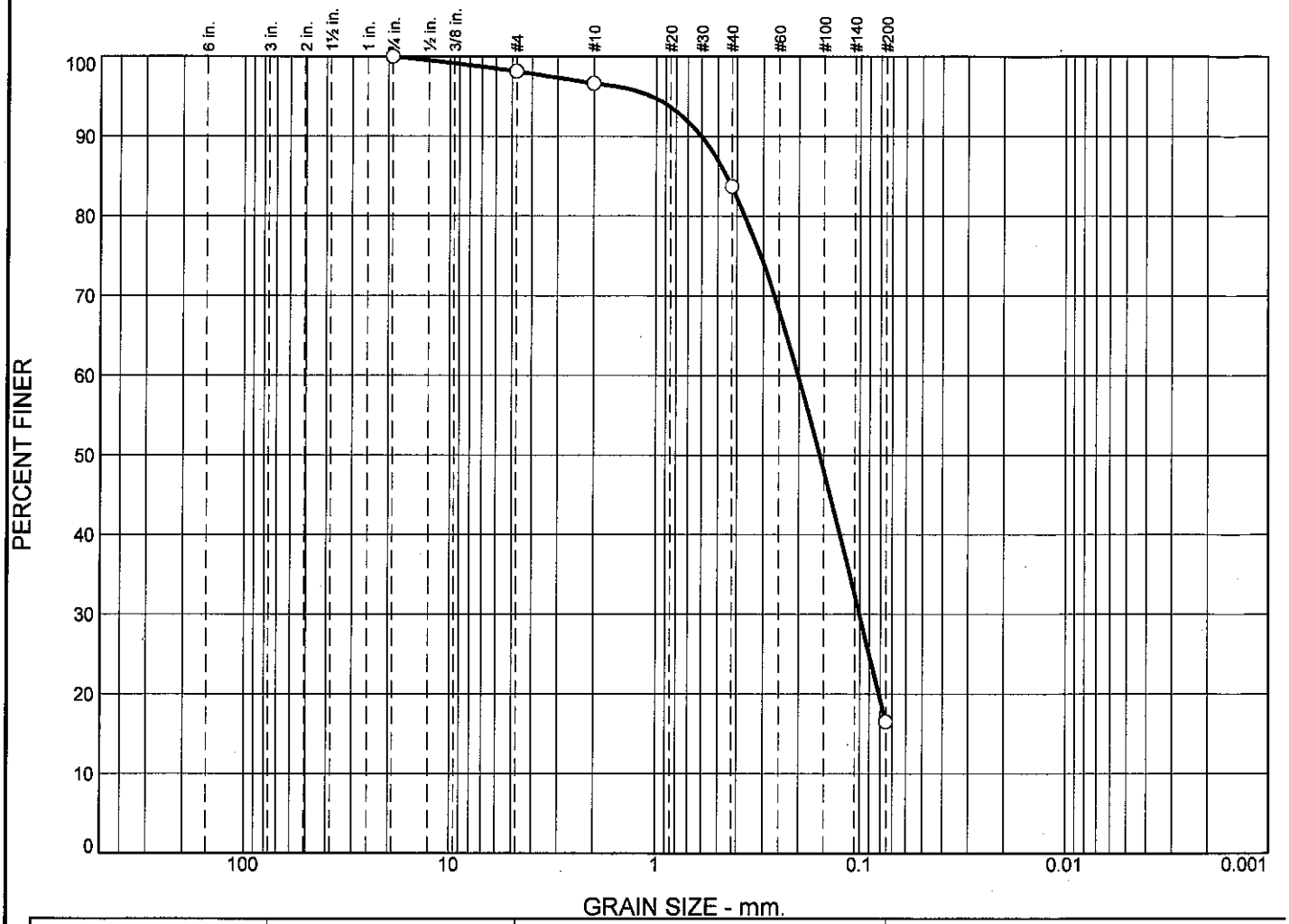
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	2.3	2.3	1.2	16.8	67.2	85.2			12.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0792	0.0883	0.1102	0.1753	0.2264	0.4295	0.5417	0.7433	1.3260

Fineness Modulus
1.12

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	1.9	1.5	12.9	67.2	16.5	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4509	0.2005	0.1569	0.1002				

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source of Sample:** L19 **Sample Number:** L1503772-07

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L19

Sample Number: L1503772-07

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 112.31
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
112.31	0.00	0.75	0.00	0.00	100.0
		#4	2.09	0.00	98.1
		#10	1.68	0.00	96.6
		#40	14.52	0.00	83.7
		#200	75.49	0.00	16.5

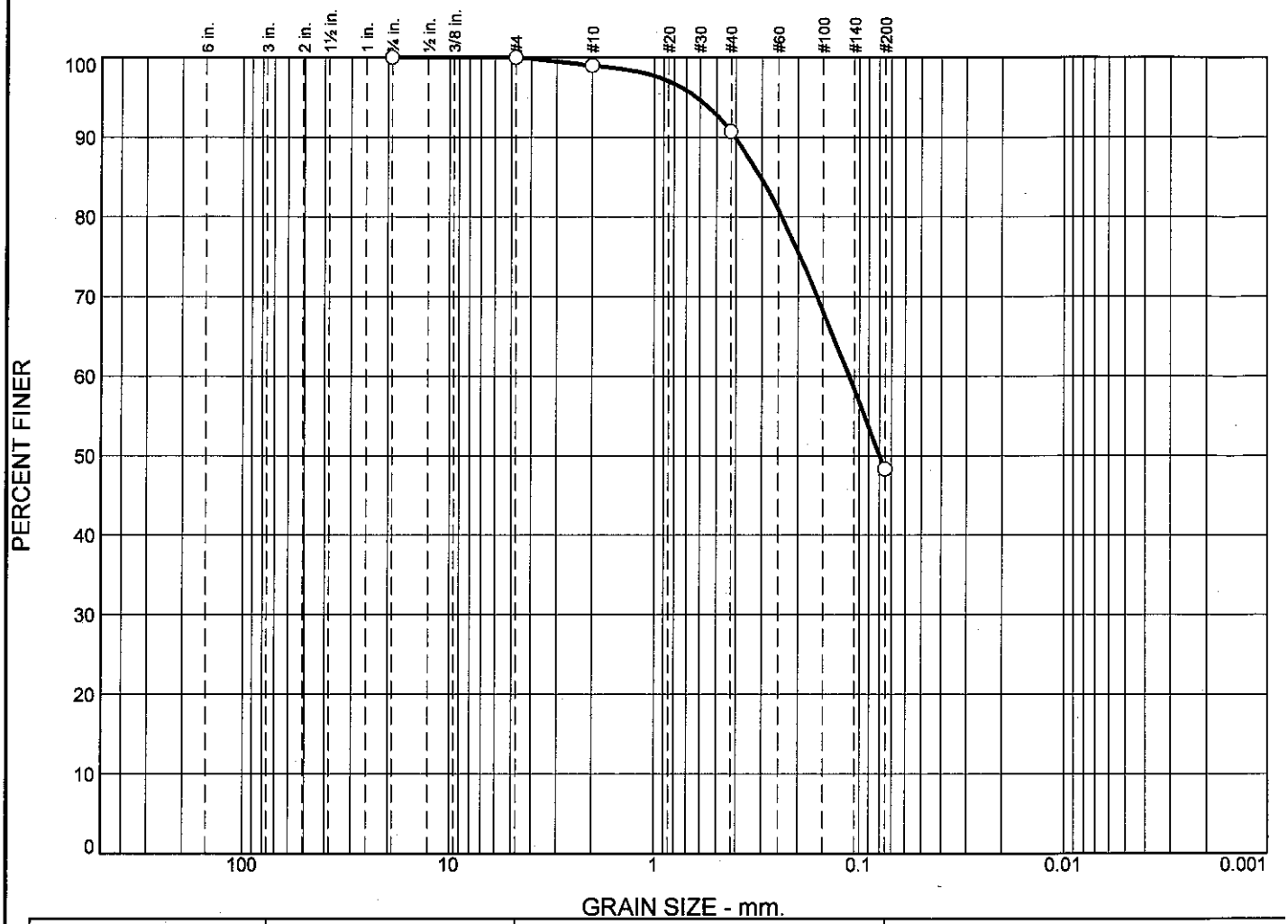
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	1.9	1.9	1.5	12.9	67.2	81.6			16.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0808	0.1002	0.1569	0.2005	0.3655	0.4509	0.6017	1.0546

Fineness Modulus
0.98

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	1.0	8.3	42.4	48.3	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3036	0.1118	0.0794					

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** L13 **Sample Number:** L1503772-08

Remarks:

Alpha Analytical

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Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L13

Sample Number: L1503772-08

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 76.52
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
76.52	0.00	0.75	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#10	0.79	0.00	99.0
		#40	6.31	0.00	90.7
		#200	32.46	0.00	48.3

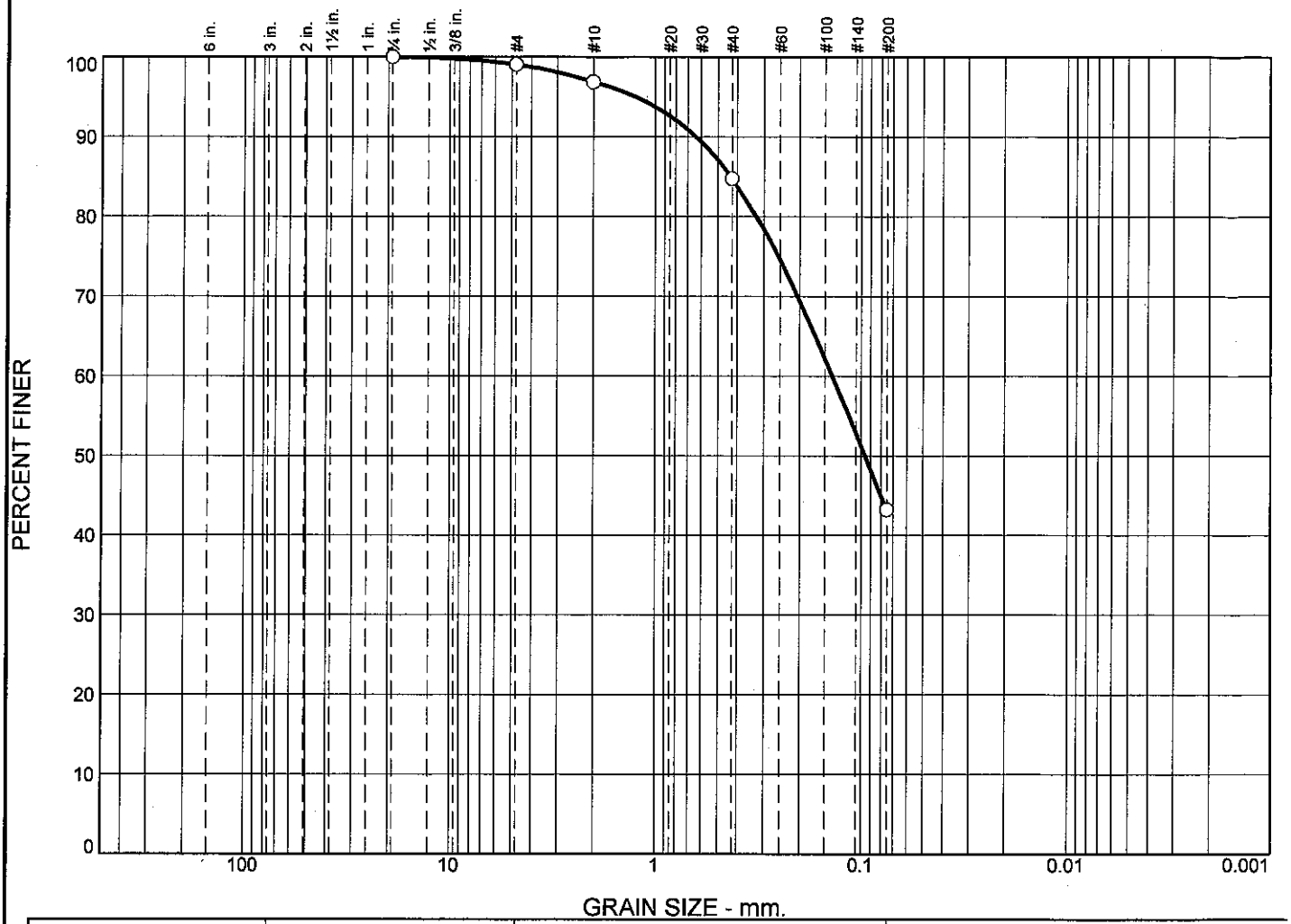
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	1.0	8.3	42.4	51.7			48.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0794	0.1118	0.2398	0.3036	0.4046	0.6243

Fineness Modulus
0.55

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.9	2.2	12.1	41.6	43.2	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4311	0.1377	0.0955					

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source of Sample:** L16 **Sample Number:** L1503772-09

Remarks:

Alpha Analytical

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Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L16

Sample Number: L1503772-09

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 75.56
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
75.56	0.00	0.75	0.00	0.00	100.0
		#4	0.71	0.00	99.1
		#10	1.65	0.00	96.9
		#40	9.14	0.00	84.8
		#200	31.40	0.00	43.2

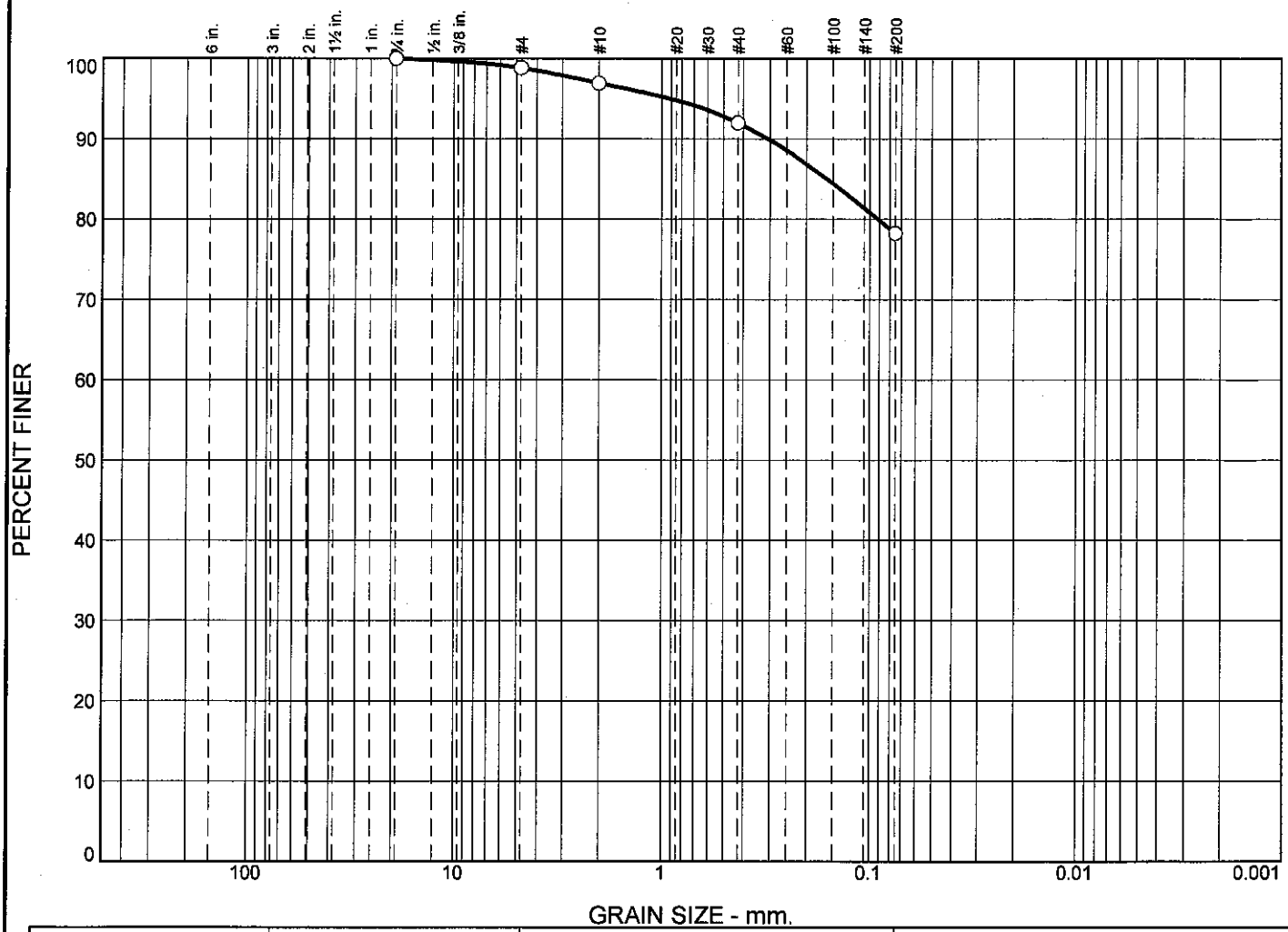
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.9	0.9	2.2	12.1	41.6	55.9			43.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0955	0.1377	0.3234	0.4311	0.6356	1.2462

Fineness Modulus
0.79

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	1.2	1.9	4.9	13.8	78.2	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.1594							

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source of Sample:** L18 **Sample Number:** L1503772-10

Remarks:

Alpha Analytical

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Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L18

Sample Number: L1503772-10

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 93.96
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
93.96	0.00	0.75	0.00	0.00	100.0
		#4	1.09	0.00	98.8
		#10	1.79	0.00	96.9
		#40	4.65	0.00	92.0
		#200	12.92	0.00	78.2

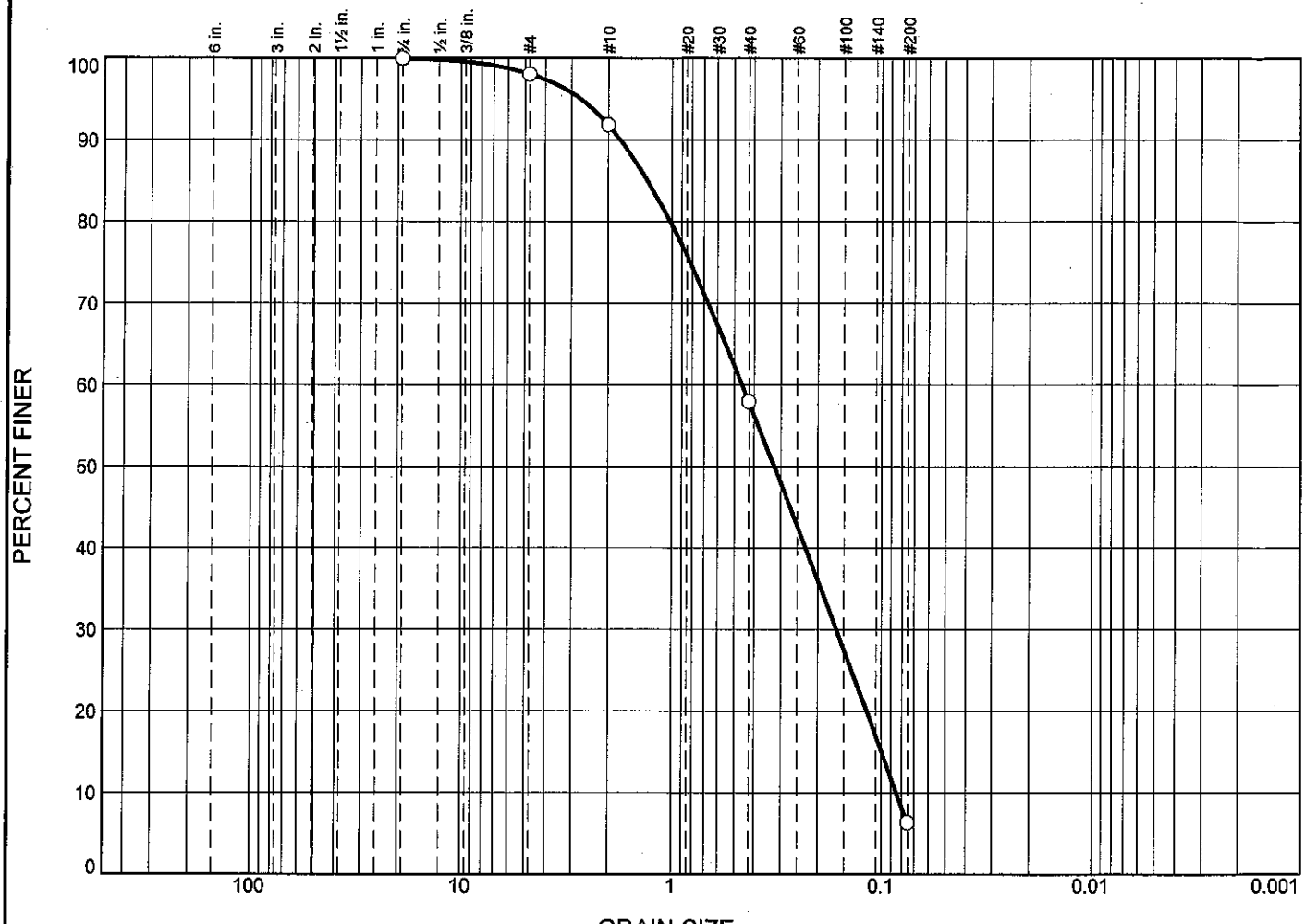
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	1.2	1.2	1.9	4.9	13.8	20.6			78.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
						0.0909	0.1594	0.3059	0.9071

Fineness Modulus
0.41

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	1.9	6.2	33.9	51.6	6.4	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.2974	0.4572	0.3205	0.1627	0.0994	0.0844	0.69	5.42

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** L17 **Sample Number:** L1503772-11

Remarks:

Alpha Analytical

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Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L17

Sample Number: L1503772-11

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 110.10
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
110.10	0.00	0.75	0.00	0.00	100.0
		#4	2.14	0.00	98.1
		#10	6.83	0.00	91.9
		#40	37.30	0.00	58.0
		#200	56.82	0.00	6.4

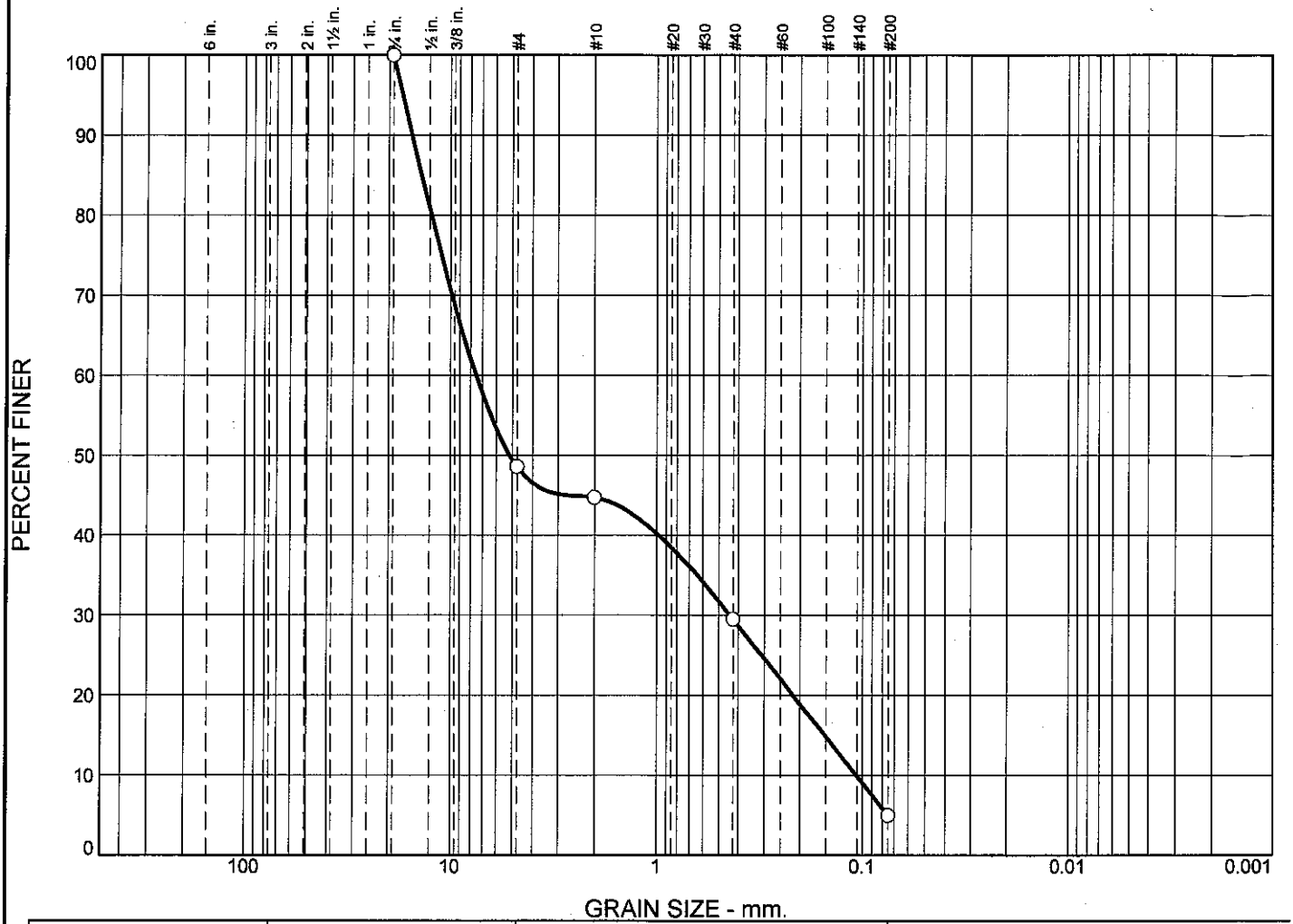
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	1.9	1.9	6.2	33.9	51.6	91.7			6.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0844	0.0994	0.1170	0.1627	0.3205	0.4572	1.0146	1.2974	1.7459	2.7187

Fineness Modulus	C_u	C_c
1.83	5.42	0.69

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	51.4	3.9	15.2	24.5	5.0	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			13.8542	7.4880	5.1399	0.4408	0.1517	0.1067	0.24	70.16

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source of Sample:** L15 **Sample Number:** L1503772-12

Remarks:

Alpha Analytical

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Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L15

Sample Number: L1503772-12

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 171.60
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
171.60	0.00	0.75	0.00	0.00	100.0
		#4	88.16	0.00	48.6
		#10	6.66	0.00	44.7
		#40	26.17	0.00	29.5
		#200	42.08	0.00	5.0

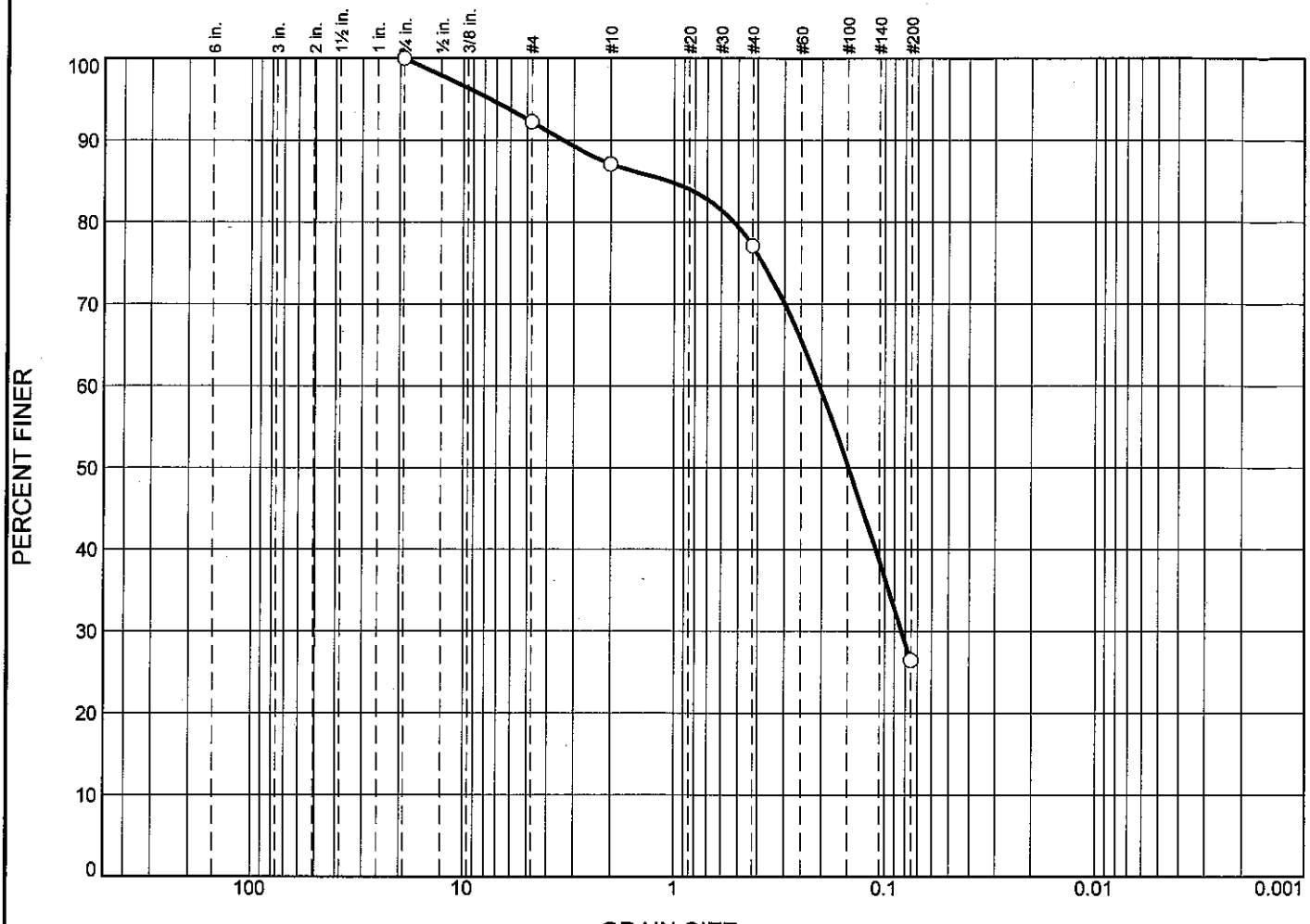
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	51.4	51.4	3.9	15.2	24.5	43.6			5.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.1067	0.1517	0.2159	0.4408	5.1399	7.4880	12.4072	13.8542	15.4276	17.1504

Fineness Modulus	C_u	C_c
4.22	70.16	0.24

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	7.8	5.1	10.0	50.7	26.4	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.0618	0.2040	0.1479	0.0829				

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source of Sample:** L12 **Sample Number:** L1503772-13

Remarks:

Alpha Analytical

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Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L12

Sample Number: L1503772-13

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 130.32
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
130.32	0.00	0.75	0.00	0.00	100.0
		#4	10.11	0.00	92.2
		#10	6.71	0.00	87.1
		#40	13.02	0.00	77.1
		#200	66.02	0.00	26.4

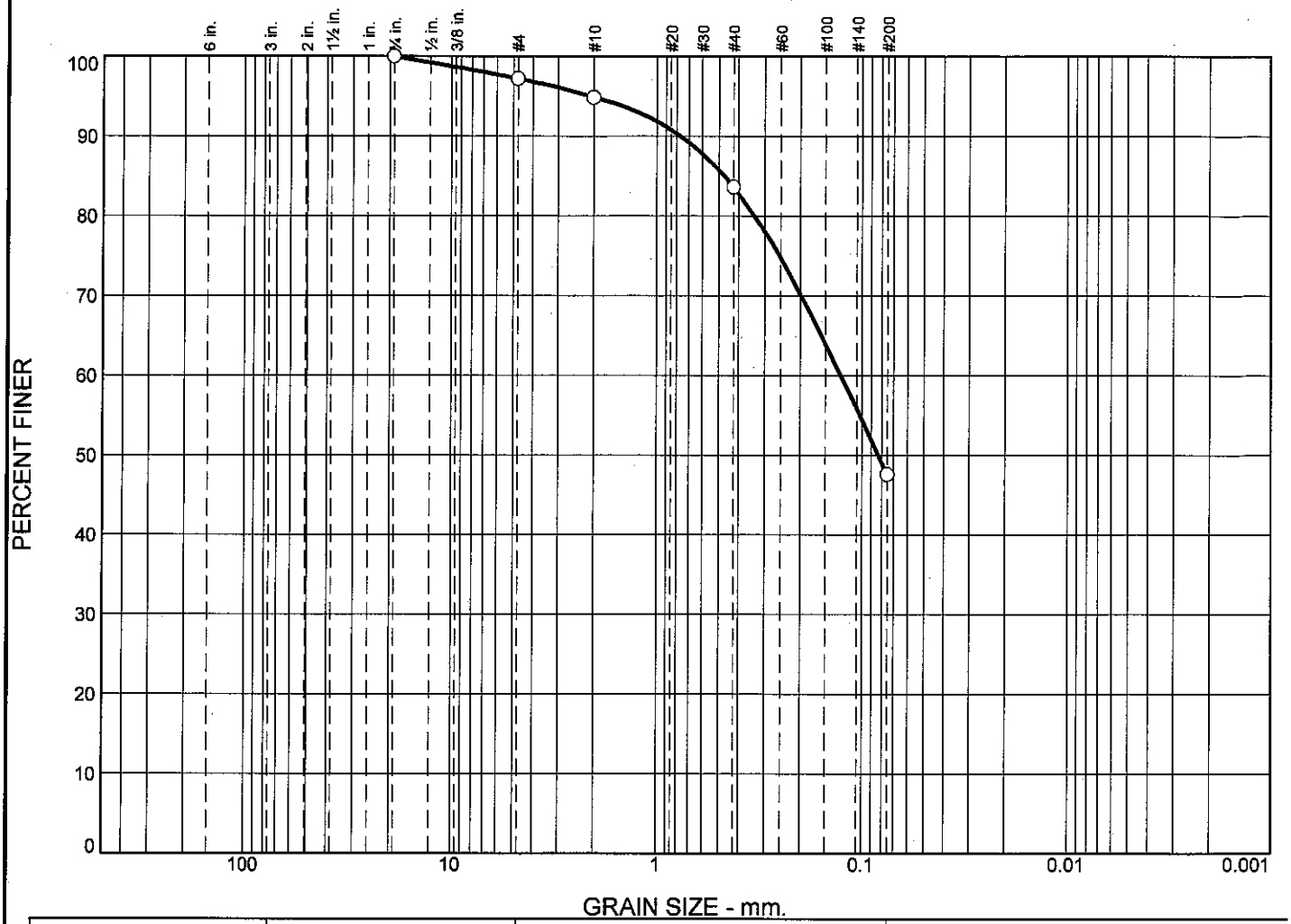
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	7.8	7.8	5.1	10.0	50.7	65.8			26.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0829	0.1479	0.2040	0.5222	1.0618	3.3709	7.4892

Fineness Modulus
1.36

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	2.8	2.3	11.2	36.1	47.6	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4701	0.1259	0.0828					

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source of Sample:** L11 **Sample Number:** L1503772-14

Remarks:

Alpha Analytical

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Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L11

Sample Number: L1503772-14

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 95.16
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
95.16	0.00	0.75	0.00	0.00	100.0
		#4	2.66	0.00	97.2
		#10	2.19	0.00	94.9
		#40	10.70	0.00	83.7
		#200	34.32	0.00	47.6

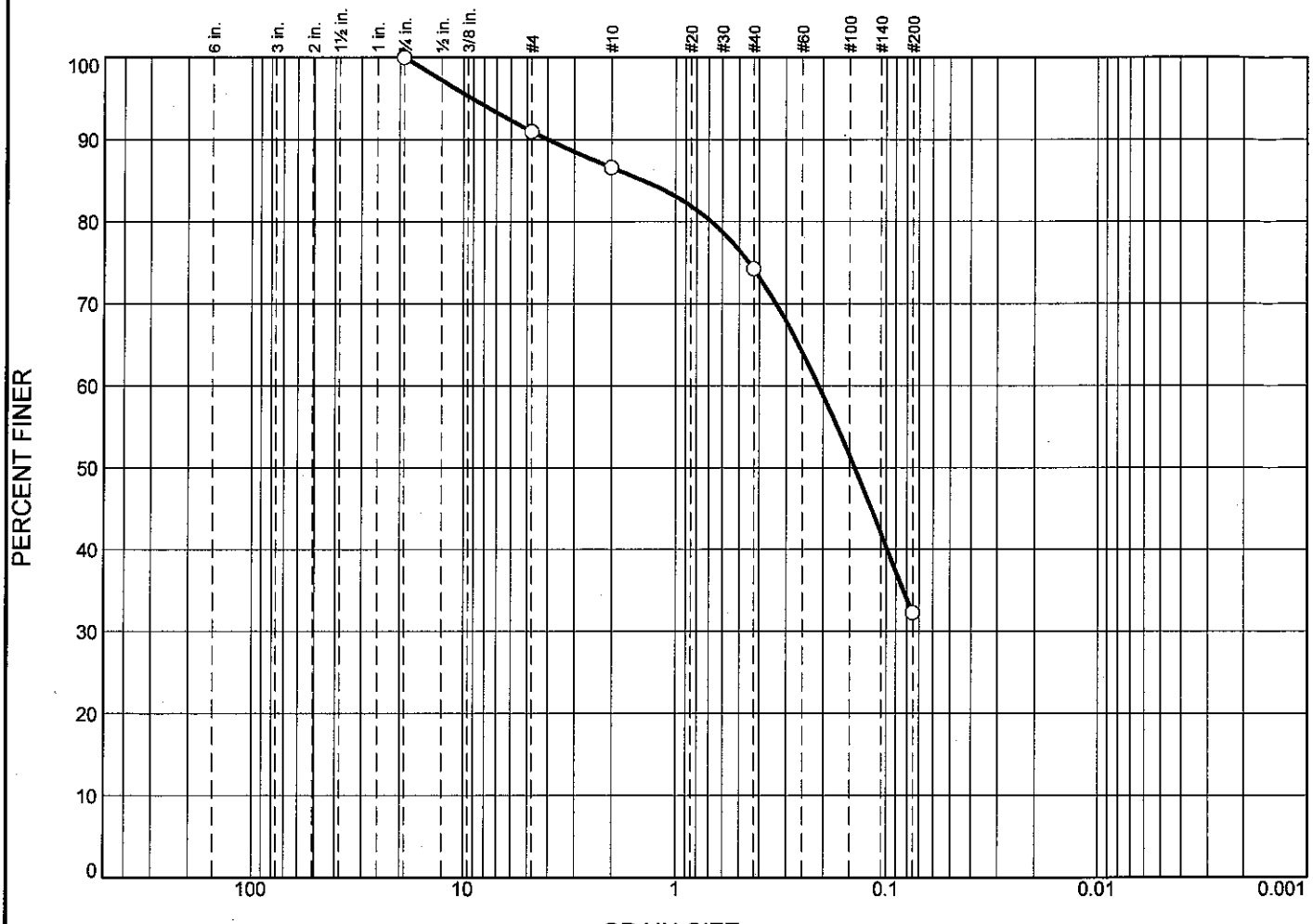
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	2.8	2.8	2.3	11.2	36.1	49.6			47.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0828	0.1259	0.3344	0.4701	0.7668	2.0609

Fineness Modulus
0.86

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	9.0	4.4	12.4	41.9	32.3	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.4184	0.2093	0.1414					

Material Description	USCS	AASHTO
○		

Project No. **Client:**
Project:

○ **Source of Sample:** L14 **Sample Number:** L1503772-15

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L14

Sample Number: L1503772-15

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 112.79
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
112.79	0.00	0.75	0.00	0.00	100.0
		#4	10.17	0.00	91.0
		#10	4.96	0.00	86.6
		#40	13.93	0.00	74.2
		#200	47.33	0.00	32.3

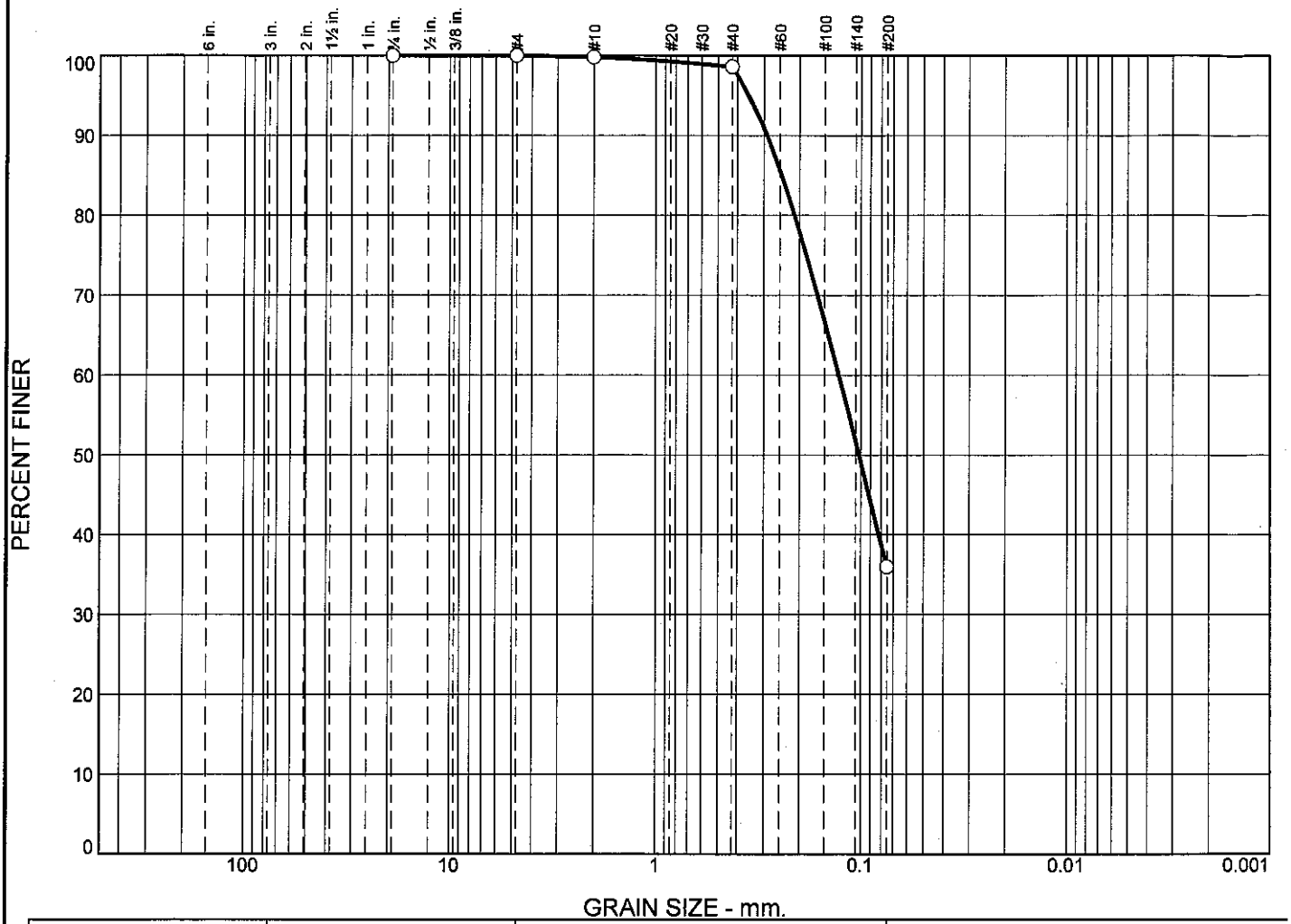
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	9.0	9.0	4.4	12.4	41.9	58.7			32.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.1414	0.2093	0.6774	1.4184	3.9803	9.1058

Fineness Modulus
1.44

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.2	1.2	62.6	36.0	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.2445	0.1276	0.1018					

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source of Sample:** L23A **Sample Number:** L1503772-16

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L23A

Sample Number: L1503772-16

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 109.69
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
109.69	0.00	0.75	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#10	0.20	0.00	99.8
		#40	1.36	0.00	98.6
		#200	68.64	0.00	36.0

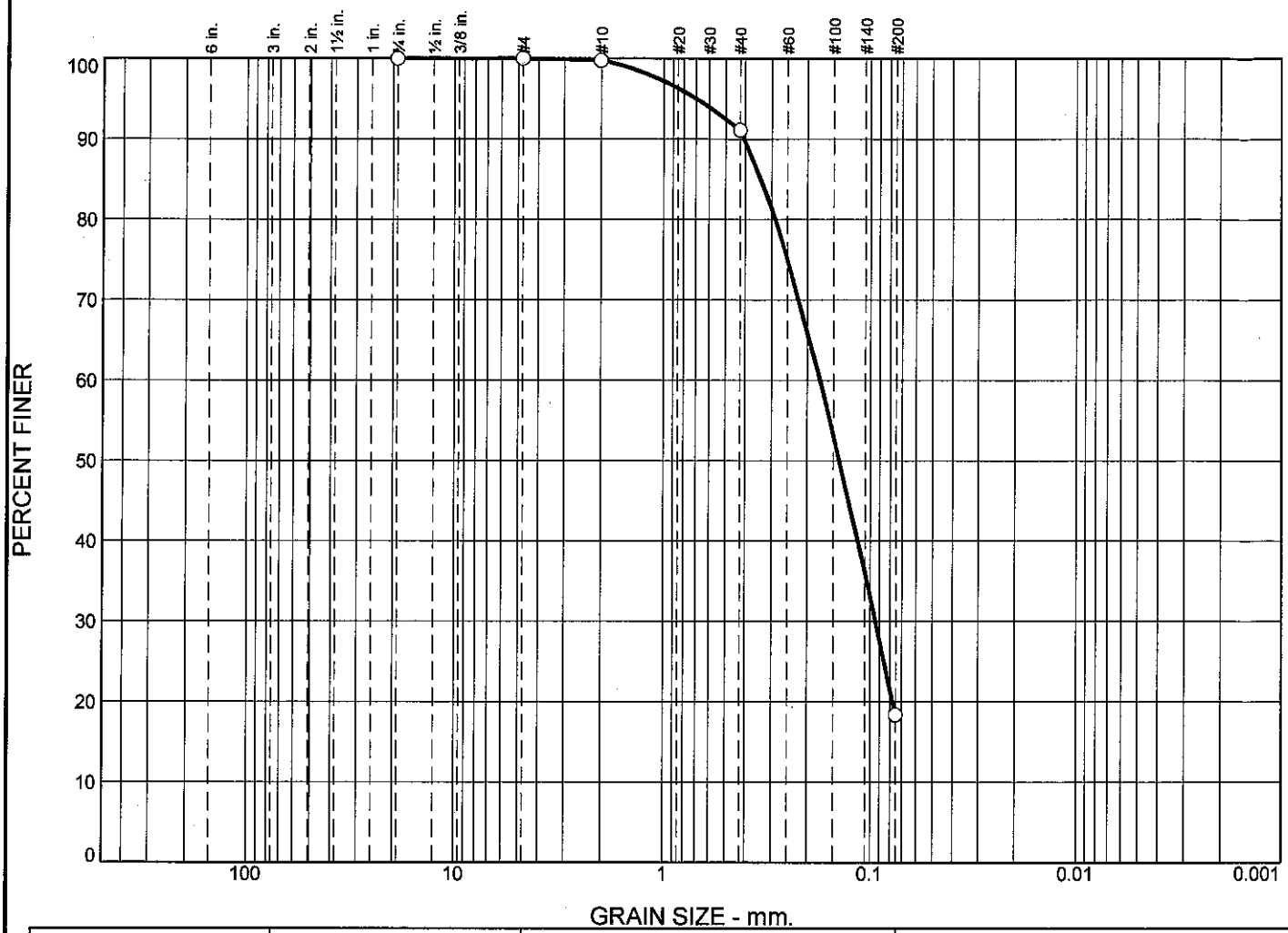
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.2	1.2	62.6	64.0			36.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.1018	0.1276	0.2109	0.2445	0.2887	0.3524

Fineness Modulus
0.44

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.2	8.7	72.7	18.4	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3359	0.1739	0.1402	0.0939				

Material Description	USCS	AASHTO
○		

Project No. **Client:**
Project:

○ **Source of Sample:** L23B **Sample Number:** L1503772-17

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L23B

Sample Number: L1503772-17

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 105.54
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
105.54	0.00	0.75	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#10	0.25	0.00	99.8
		#40	9.14	0.00	91.1
		#200	76.76	0.00	18.4

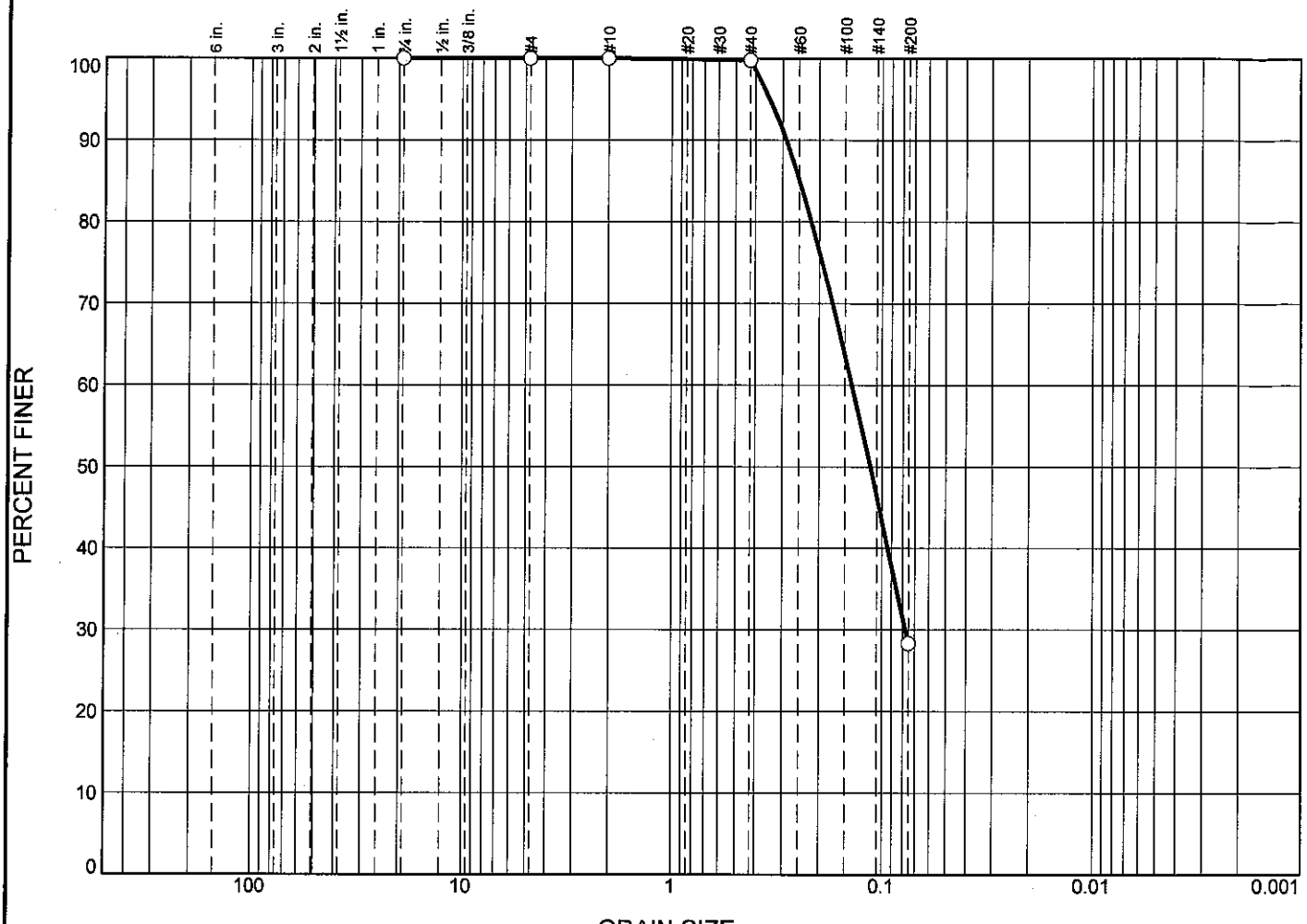
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.2	8.7	72.7	81.6			18.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0774	0.0939	0.1402	0.1739	0.2872	0.3359	0.4050	0.6952

Fineness Modulus
0.74

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.0	0.2	71.5	28.3	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.2483	0.1388	0.1135	0.0774				

Material Description	USCS	AASHTO
○		

Project No. **Client:**
Project:

○ **Source of Sample:** L24A **Sample Number:** L1503772-18

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L24A

Sample Number: L1503772-18

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 112.39
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
112.39	0.00	0.75	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#10	0.00	0.00	100.0
		#40	0.25	0.00	99.8
		#200	80.30	0.00	28.3

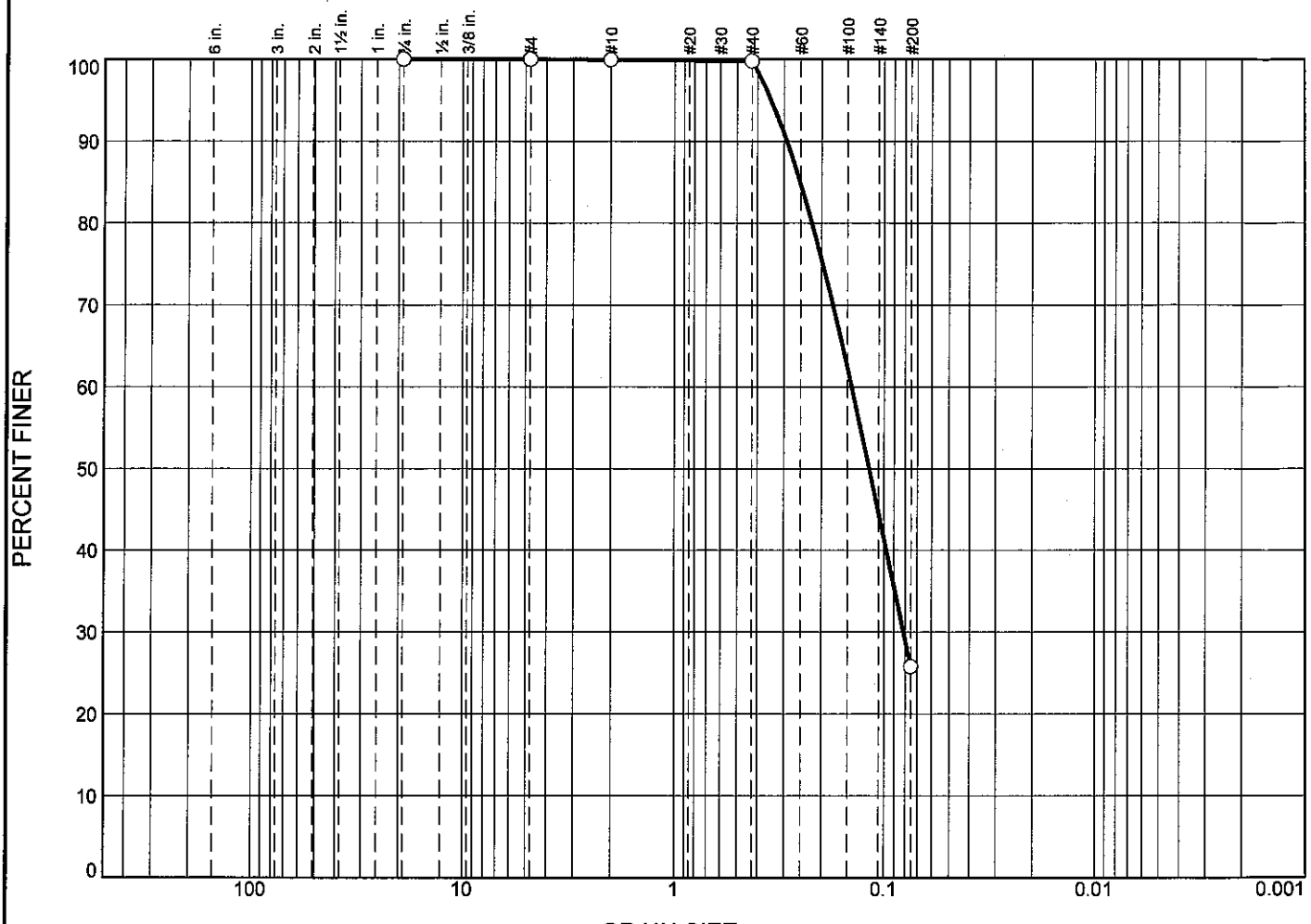
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.2	71.5	71.7			28.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0774	0.1135	0.1388	0.2176	0.2483	0.2876	0.3418

Fineness Modulus
0.45

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.1	0.1	74.0	25.8	

╳	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.2516	0.1427	0.1174	0.0810				

Material Description	USCS	AASHTO
○		

Project No. **Client:**
Project:

○ **Source of Sample:** L24B **Sample Number:** L1503772-19

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L24B

Sample Number: L1503772-19

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 107.13
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
107.13	0.00	0.75	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#10	0.08	0.00	99.9
		#40	0.15	0.00	99.8
		#200	79.27	0.00	25.8

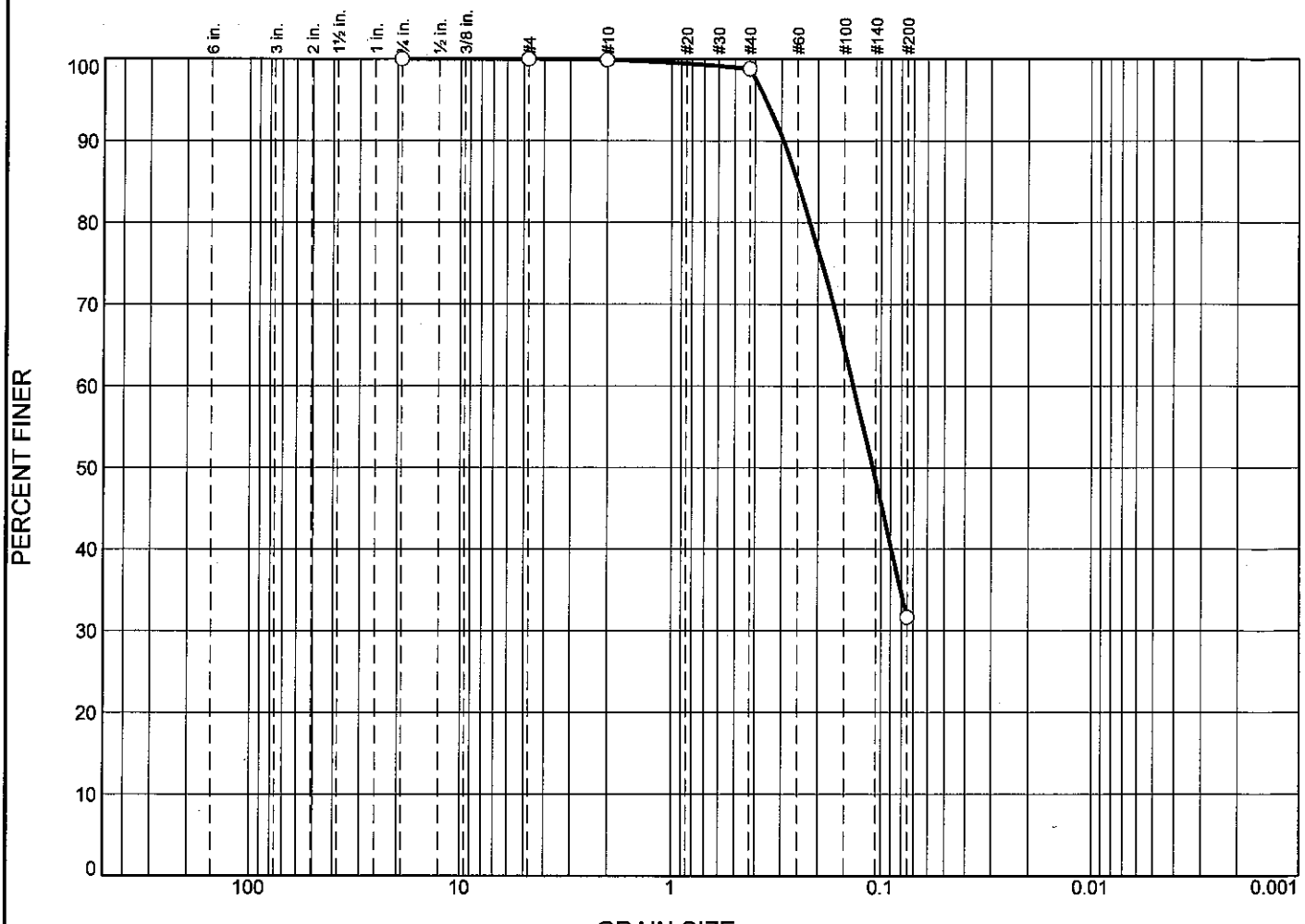
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.1	0.1	74.0	74.2			25.8

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0810	0.1174	0.1427	0.2212	0.2516	0.2904	0.3437

Fineness Modulus
0.47

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.1	1.1	67.1	31.7	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.2499	0.1349	0.1090					

Material Description	USCS	AASHTO
○		

Project No. **Client:**
Project:

○ **Source of Sample:** L22A **Sample Number:** L1503772-20

Remarks:

Alpha Analytical

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Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L22A

Sample Number: L1503772-20

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 98.47
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
98.47	0.00	0.75	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#10	0.09	0.00	99.9
		#40	1.10	0.00	98.8
		#200	66.11	0.00	31.7

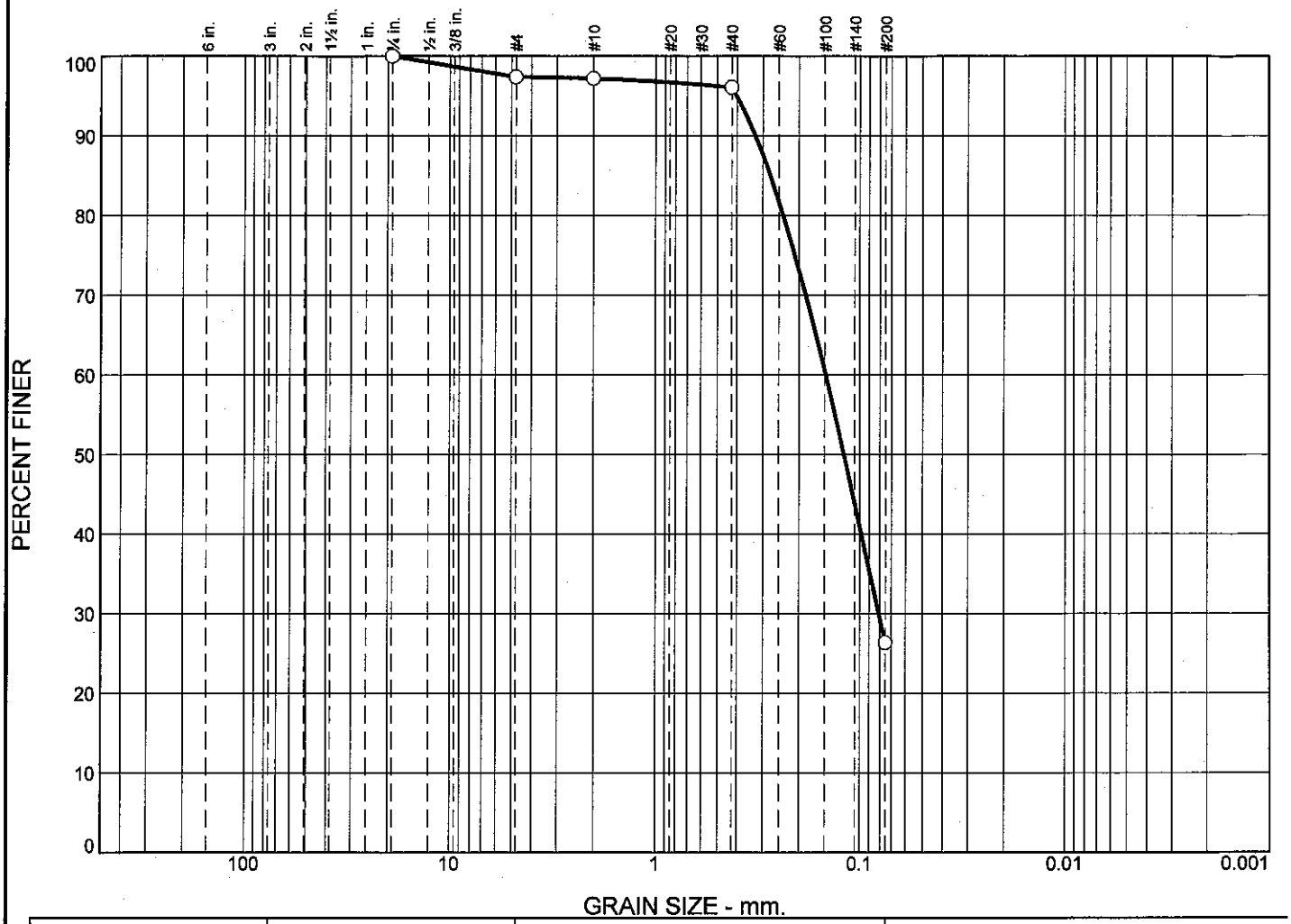
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.1	1.1	67.1	68.3			31.7

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.1090	0.1349	0.2172	0.2499	0.2925	0.3529

Fineness Modulus
0.46

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	2.6	0.2	1.1	69.8	26.3	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.2750	0.1475	0.1197	0.0805				

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source of Sample:** L22B **Sample Number:** L1503772-21

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L22B

Sample Number: L1503772-21

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 124.86
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
124.86	0.00	0.75	0.00	0.00	100.0
		#4	3.26	0.00	97.4
		#10	0.23	0.00	97.2
		#40	1.38	0.00	96.1
		#200	87.11	0.00	26.3

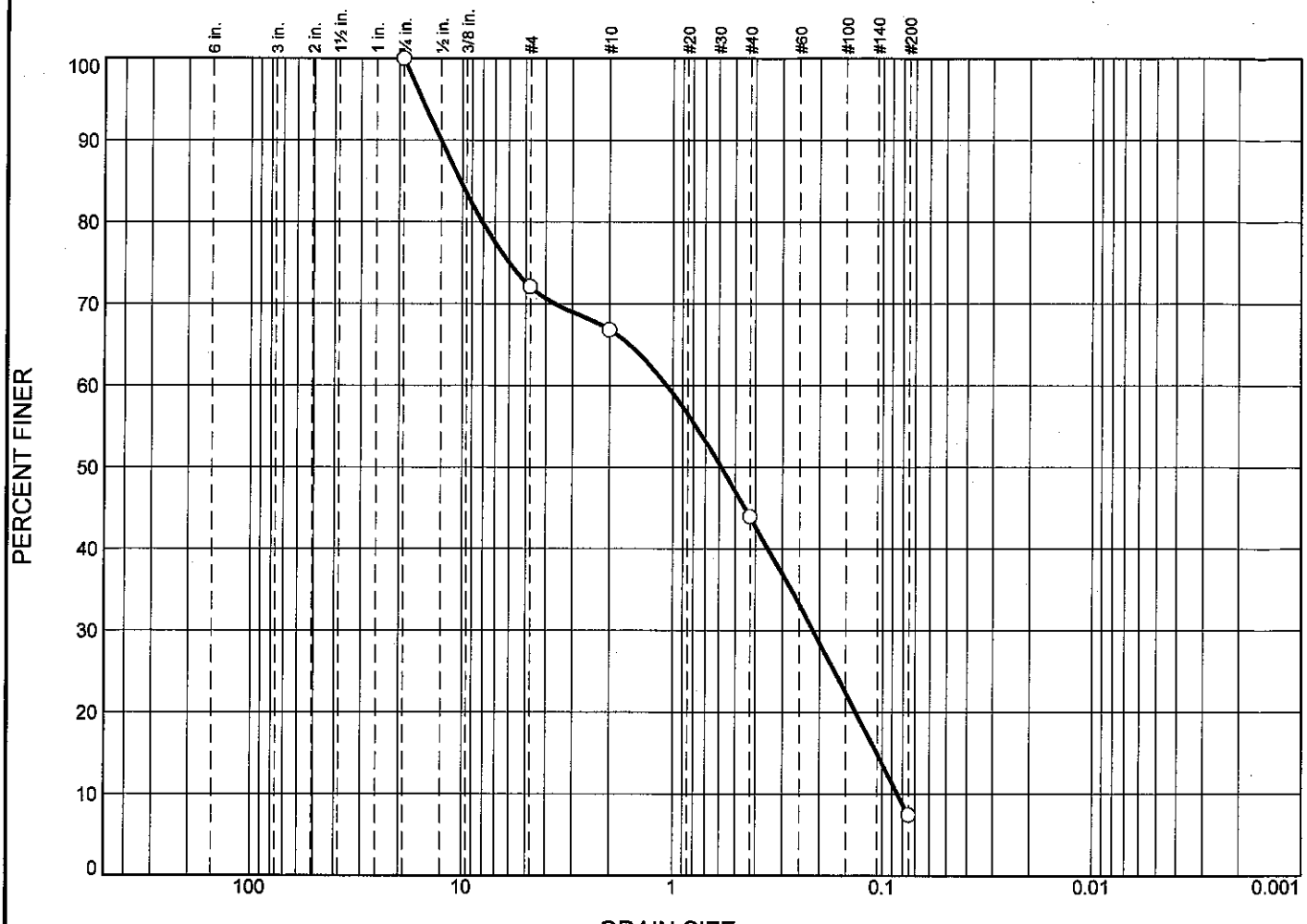
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	2.6	2.6	0.2	1.1	69.8	71.1			26.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0805	0.1197	0.1475	0.2379	0.2750	0.3248	0.4009

Fineness Modulus
0.65

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	27.9	5.3	22.8	36.6	7.4	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			10.1903	1.0669	0.5830	0.2140	0.1062	0.0844	0.51	12.64

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** L61 **Sample Number:** L1503772-22

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L61

Sample Number: L1503772-22

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 150.47
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
150.47	0.00	0.75	0.00	0.00	100.0
		#4	41.94	0.00	72.1
		#10	7.98	0.00	66.8
		#40	34.39	0.00	44.0
		#200	54.98	0.00	7.4

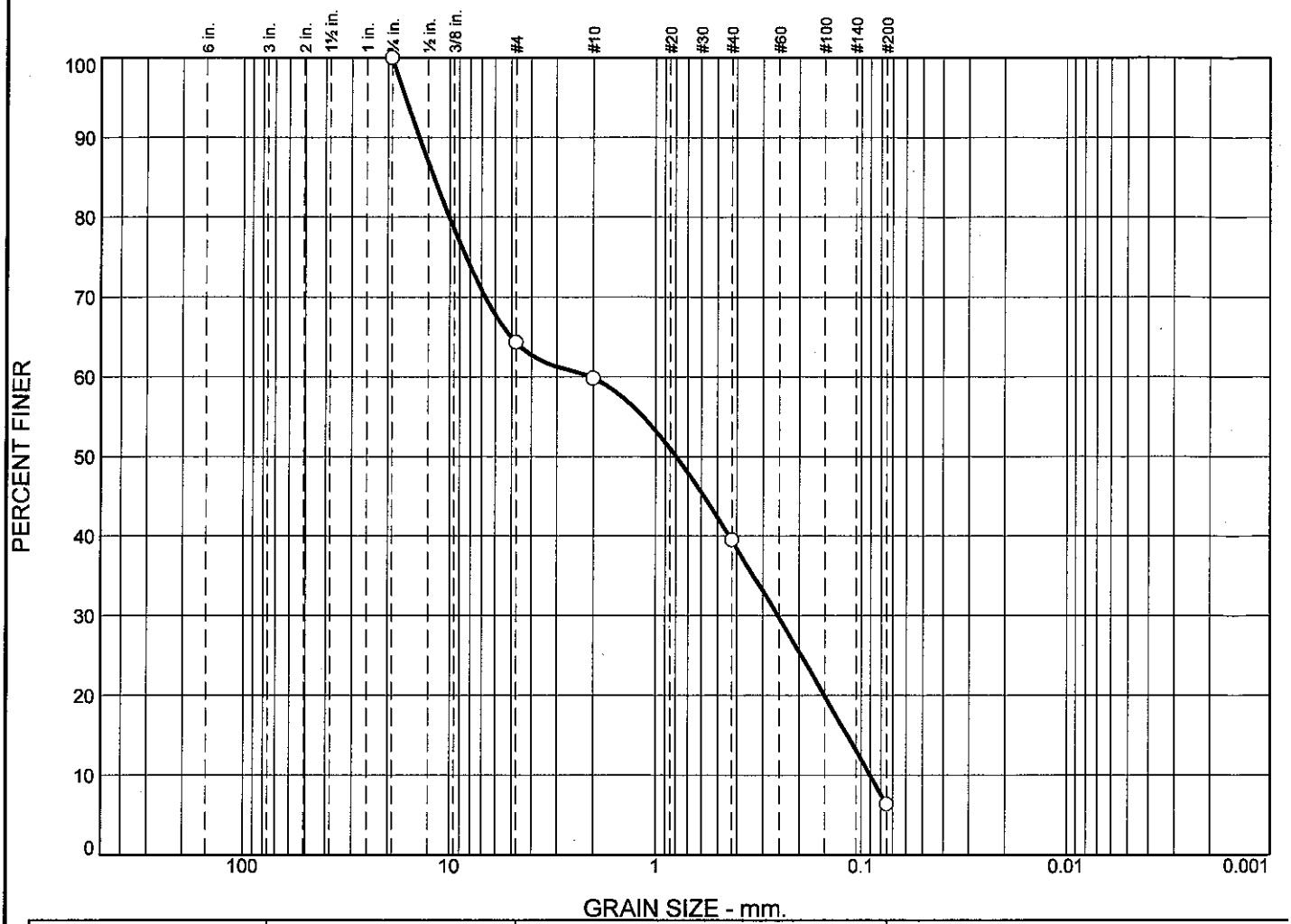
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	27.9	27.9	5.3	22.8	36.6	64.7			7.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0844	0.1062	0.1338	0.2140	0.5830	1.0669	8.0022	10.1903	12.6761	15.5802

Fineness Modulus	C_u	C_c
3.05	12.64	0.51

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	35.7	4.5	20.3	33.1	6.4	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			11.8872	2.0756	0.7944	0.2532	0.1163	0.0901	0.34	23.03

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source of Sample:** L61 **Sample Number:** WG767555-1

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

3/16/2015

Location: L61

Sample Number: WG767555-1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 146.17
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
146.17	0.00	0.75	0.00	0.00	100.0
		#4	52.11	0.00	64.3
		#10	6.62	0.00	59.8
		#40	29.66	0.00	39.5
		#200	48.46	0.00	6.4

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	35.7	35.7	4.5	20.3	33.1	57.9			6.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0901	0.1163	0.1502	0.2532	0.7944	2.0756	10.0182	11.8872	13.9725	16.3352

Fineness Modulus	C_u	C_c
3.43	23.03	0.34

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?	Yes
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?	Yes
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?	No – see Narrative
16. Were the matrix spike/matrix spike duplicates run at the required frequency and was the percent recovery/RPD within the acceptance criteria?	No – see Narrative
17. Were the duplicate samples analyzed and were the RPDs within the required acceptance criteria?	No –see Narrative
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?	No – see Narrative

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?	Yes
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)	Yes		Retained at Lab
Standard Reference Materials	Within the limits provided by vendor	Yes	In house limit 40%-140%	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%)	No	MS/MSD RPD for Benzo(b)fluoranthene (31%)	In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)	Yes		In Data Package
Surrogate Recoveries	Calculate % recovery (30 to 150% recovery)	No	Sample L1503772-13 recovery out for 2-Methylnaphthalene-d10 (27%)	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)	No	ICAL 10554: 4,4'-DDT Quadratic fit-column A ICAL 10776: 4,4'-DDE Quadratic fit-column A; 4,4'-DDT Quadratic fit-column A&B, Methoxychlor Quadratic fit-column B	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	WG766869-1, opening for L1503772-08 through -12 and WG766345-5: Hexachlorobenzene (15.4%D - column B), alpha-Chlordane (20.3%D-column B) WG766869-2, closing for L1503772-08 through -12 and WG766345-5 and opening for L1503772-13 through -19, WG766345-1, -2 and -3: Hexachlorobenzene (19.2%D - Column B), Heptachlor (17.6%D-Column B), Heptachlor epoxide (B) (16.3%D-Column B), Oxychlordane (17.8%D-Column B), gamma-Chlordane (16.3%D-Column B), Endosulfan I (16.5%D-Column B), alpha-Chlordane (25.1%D-Column B), trans-Nonachlor (17.5%D-Column B), Endrin (18.6%D-Column B), Endosulfan II (15.6%D-Column B)	Retained at Lab

			WG766869-3, closing for L1503772-13 through -19, WG766345-1, -2 and -3 and opening for L1503772-20 through -22, WG766345-4, -6 and -7: TMX (17.9%D-Column B), Hexachlorobenzene (19.1%D - Column B), Heptachlor (18.3%D-Column B), Heptachlor epoxide (B) (15.6%D-Column B), Oxychlordane (16.8%D-Column B), gamma-Chlordane (15.8%D-Column B), Endosulfan I (15.4%D-Column B), alpha-Chlordane (24.1%D-Column B), trans-Nonachlor (16.1%D-Column B), Endrin (19.4%D-Column B), Methoxychlor (17.4%D-Column B), DCB (17.2%D-Column B) WG766869-4, closing for L1503772-20 through -22, WG766345-4, -6 and -7: for Hexachlorobenzene (15.3%D - Column B), alpha-Chlordane (20.8%D-Column B), Endrin (15.8%D-Column B), DCB (15.2%D-Column B) WG766869-7, opening for L1503772-01 through -07: gamma-BHC (15.1%D-Column A), Aldrin (15.3%D-Column A), 4,4'-DDD (16.5%D-Column A) WG766869-8, closing for L1503772-01 through -07: gamma-BHC (15.4%D-Column A), Aldrin (15.4%D-Column A), Dieldrin (15.3%D-Column A), 4,4'-DDD (15.7%D-Column A)	
Standard Reference Materials	Within the limits provided by vendor	No	SRM WG766345-4, trans-Nonachlor @270%	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	Yes		In Data Package

	120%; RPD <30%)			
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)	Yes		In Data Package
Surrogate Recoveries	Calculate % recovery (30 to 150% recovery)	No	SRM WG766345-4, BZ #198 @169%	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)	Yes		Retained at Lab
Standard Reference Materials	Within the limits provided by vendor	No	SRM WG766355-4 CL3-BZ#28(33%) In house limits - 40-140%	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%)	Yes		In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)	Yes		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		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		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%)	Yes		In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)	No	WG766043-3=Cadmium (34%); WG766048-3=Arsenic (27%) and Chromium (26%)	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%)	No	L1503772-01: % Total gravel = 119% % Coarse sand = 48% % Medium Sand = 27% L1503772-22: % Total gravel = 25%	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.

Certification Information

Last revised December 16, 2014

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

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA 2540D: TSS
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.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F,**
EPA 353.2: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: 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: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

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

CHAIN OF CUSTODY

PAGE OF

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 2/27/15

ALPHA Job #: L1503772

Project Information

Project Name: LIS - USACoE RIM Dredge

Project Location: Eastern Long Island Sound

Project #:

Project Manager: James O'Donnell, UCONN

ALPHA Quote #: M2015009

Client Information

Client: University of Connecticut

Address: 1080 Shennecossett Road

Groton, CT 06340

Phone: 860-405-9171

Fax:

Email: james.odonnell@uconn.edu

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☑ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: MARCH 13 Time: 5:00pm

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: Compliant with USACE RIM

Criteria

Other Project Specific Requirements/Comments/Detection Limits:

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date 2015	Collection Time EST	Sample Matrix	Sampler's Initials	Grain Size (ASTM D422)	Total Solids (SM 2540C)	Total Org. Carbon (EPA 9060) 2 reps	Metals (As,Cd,Cr,Cu,Pb,Hg,Ni,Zn)	PAHs (8270D - SIM)	Pesticides (8081B)	PCB Congeners (8270D - SIM)						Sample Specific Comments	TOTAL # BOTTLES
03772-01	L27	2/27	0908	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
-02	L28	2/27	0921	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
-03	L25A	2/27	0948	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
-04	L25B	2/27	1000	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
-05	L21	2/27	1012	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
-06	L20	2/27	1025	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
-07	L19	2/27	1043	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
-08	L13	2/27	1055	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
-09	L16	2/27	1109	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
-10	L18	2/27	1122	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
					Container Type	P	A	A	A	A	A	A	-	-	-	-	-		
					Preservative	-	-	-	-	-	-	-	-	-	-	-	-		

Relinquished By:	Date/Time	Received By:	Date/Time
Kathy St.	2/27/15 1638	T. Huddleston	2/27/15 1638
T. Huddleston	2/27/15 1825		2/27/15 1825

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

FORM NO: 01-01(I-NJ) (rev. 5-JAN-12)

CHAIN OF CUSTODY

PAGE OF

ALPHA ANALYTICAL

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Project Location: Eastern Long Island Sound

Project #:

Project Manager: James O'Donnell, UCONN

ALPHA Quote #: M2015009

Report Information / Data Deliverables

- ☐ FAX
- ☒ EMAIL
- ☐ ADEx
- ☐ Add'l Deliverables

Billing Information

- ☒ Same as Client info
- PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
Complianht with USACE RIM	

Client Information

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Groton, CT 06340
Phone: 860-405-9171
Fax:
Email: james.odonnell@uconn.edu

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Turn-Around Time

☑ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: MARCH 13 Time: 5:00pm

Other Project Specific Requirements/Comments/Detection Limits:

ANALYSIS

SAMPLE HANDLING
Filtration
- ☐ Done
- ☒ Not Needed
- ☐ Lab to do

Preservation
- ☐ Lab to do

(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date 2015	Collection Time EST	Sample Matrix	Sampler's Initials	Grain Size (ASTM D422)	Total Solids (SM 2540C)	Total Org. Carbon (EPA 9060) 2 reps	Metals (As,Cd,Cr,Cu,Pb,Hg,Ni,Zn)	PAHs (8270D - SIM)	Pesticides (8081B)	PCB Congeners (8270D - SIM)						Sample Specific Comments	TOTAL # BOTTLES
03772-11	L17	2/27	1139	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
-12	L15	2/27	1153	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
-13	L12	2/27	1258	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
-14	L11	2/27	1308	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
-15	L14	2/27	1319	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
-16	L23A	2/27	1335	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
-17	L23B	2/27	1345	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
-18	L24A	2/27	1358	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
-19	L24B	2/27	1412	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
-20	L22A	2/27	1430	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
					Container Type	P	A	A	A	A	A	A	-	-	-	-	-		
					Preservative	-	-	-	-	-	-	-	-	-	-	-	-		

Relinquished By:	Date/Time	Received By:	Date/Time
Kay Hart	2/27/15 1630	[illegible]	2/27/15 1630
T. Hudak	2/27/15 1825	[illegible]	2/27/15 1825

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

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CHAIN OF CUSTODY

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ALPHA ANALYTICAL

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Fax:

Email: james.odonnell@uconn.edu

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Project Location: Eastern Long Island Sound

Project #:

Project Manager: James O'Donnell, UCONN

ALPHA Quote #: M2015009

Turn-Around Time

☐ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: MARCH 13 Time: 5:00pm

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: Complianht with USACE RIM

Criteria:

Other Project Specific Requirements/Comments/Detection Limits:

FOR L61 MS & L61 MSD USE SAME SEDIMENT FROM BOTTLE AS FOR L61.

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date 2015	Collection Time EST	Sample Matrix	Sampler's Initials	Grain Size (ASTM D422)	Total Solids (SM 2540C)	Total Org. Carbon (EPA 9060) 2 reps	Metals (As,Cd,Cr,Cu,Pb,Hg,Ni,Zn)	PAHs (8270D - SIM)	Pesticides (8081B)	PCB Congeners (8270D - SIM)						Sample Specific Comments	TOTAL # BOTTLES
03772-21	L22B	2/27	1443	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
-22	L61	2/27	2345	SE	KHS	☑	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐		2
	L61 MS	2/27	2345	SE	KHS	☐	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐	SAME BOTTLE AS L61	0
	L61 MSD	2/2	2345	SE	KHS	☐	☐	☐	☑	☑	☑	☑	☐	☐	☐	☐	☐	SAME BOTT AS L61	0
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		

Container Type	P	A	A	A	A	A	A	-	-	-	-	-	
Preservative	-	-	-	-	-	-	-	-	-	-	-	-	

Relinquished By:	Date/Time	Received By:	Date/Time
Kay Hanson	2/27/15 1638	T. Hudelle	2/27/15 1638
T. Hudelle	2/27/15 1825		2/27/15 1825

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